



# CONTRA COSTA COUNTY

## AGENDA

### Sustainability Committee

Supervisor Ken Carlson, Chair  
Supervisor John Gioia, Vice Chair

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Monday, March 10, 2025

1:00 PM

11780 San Pablo Ave., Ste. D,  
El Cerrito, CA 94530 |

2255 Contra Costa Blvd., Ste. 202  
Pleasant Hill, CA 94523

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#### ZOOM LINK

<https://cccounty-us.zoom.us/j/81614339223>

| Dial: 888-278-0254 |

ACCESS CODE: 841892

The public may attend this meeting in person at either above location. The public may also attend this meeting remotely via ZOOM or call-in.

*AGENDA ITEMS: Items may be taken out of order based on the business of the day and preference of the Committee.*

1. INTRODUCTIONS Call to order and roll call.
2. PUBLIC COMMENT on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to two (2) minutes).
3. APPROVE Record of Action from December 12, 2024, meeting of the Sustainability Committee. [25-771](#)  
**Attachments:** [Meeting Minutes 12.12.24](#)  
[City of Richmond, BC Presentation](#)
4. APPROVE Record of Action from February 10, 2025, meeting of the Sustainability Committee. [25-772](#)  
**Attachments:** [Meeting Minutes 02.10.25](#)  
[Public Comment Email 2.10.25](#)

5. RECEIVE Report on the County's Draft Clean Energy Roadmap for Existing Buildings and PROVIDE DIRECTION, as needed. [25-773](#)  
**Attachments:** [CCC Clean Energy Roadmap Presentation to Sustainability Committee 3-10-25\\_Final](#)  
[County Clean Energy Roadmap for Existing Buildings\\_DRAFT 3-5-25\\_Final](#)
6. RECEIVE update 2024 Climate Action Plan Progress Report. [25-774](#)  
**Attachments:** [ATTACHMENT A - 2023-24 CAP Interim Work Plan - final](#)  
[ATTACHMENT B - 2024 Interim Climate Action Plan Progress Report 2025-03-10](#)
7. RECEIVE report from the Sustainability Commission Chair, or Designee. [25-775](#)
8. RECEIVE report on staff activities that support sustainability goals. [25-776](#)  
**Attachments:** [03.10.25 Sustainability Staff Report to Sustainability Committee](#)
9. **ADJOURN until the next Sustainability Committee Meeting to be held on, Monday, May 12, 2025, at 1:00pm.**

#### GENERAL INFORMATION

This meeting provides reasonable accommodations for persons with disabilities planning to attend a the meetings. Contact the staff person listed below at least 72 hours before the meeting.

Any public records subject to disclosure related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the Committee less than 96 hours prior to that meeting are available for public inspection at:

30 Muir Rd., 1st Floor, Martinez, CA 94553

#### HOURS:

Monday through Friday  
8 a.m. to 5 p.m.

Staff reports related to items on the agenda are also accessible on line at [www.co.contra-costa.ca.us](http://www.co.contra-costa.ca.us).

HOW TO PROVIDE PUBLIC COMMENT

Persons who wish to address the Committee during public comment on matters within the jurisdiction of the Committee that are not on the agenda, or who wish to comment with respect to an item on the agenda, may comment in person, via Zoom, or via call-in. Those participating in person should offer comments when invited by the Committee Chair. Those participating via Zoom should indicate they wish to speak by using the “raise your hand” feature in the Zoom app. Those calling in should indicate they wish to speak by pushing \*9 on their phones.

Public comments generally will be limited to two (2) minutes per speaker. In the interest of facilitating the business of the Board Committee, the total amount of time that a member of the public may use in addressing the Board Committee on all agenda items is 10 minutes. Your patience is appreciated.

Public comments may also be submitted to Committee staff before the meeting by email or by voicemail. Comments submitted by email or voicemail will be included in the record of the meeting but will not be read or played aloud during the meeting.

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

Jody London  
(925) 655-2815



# CONTRA COSTA COUNTY

1025 ESCOBAR STREET  
MARTINEZ, CA 94553

## Staff Report

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**File #:** 25-771

**Agenda Date:** 3/10/2025

**Agenda #:** 3.

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### **SUSTAINABILITY COMMITTEE**

**Meeting Date:** March 10, 2025

**Subject:** APPROVE Record of Action from the December 12, 2024, meeting of the Sustainability Committee

**Submitted For:** SUSTAINABILITY COMMITTEE

**Department:** DEPARTMENT OF CONSERVATION & DEVELOPMENT

**Presenter:** Jody London || DCD | Sustainability Coordinator

**Contact:** Jody London (925) 655-2815

### **Referral History:**

This is a standing item of the Committee.

### **Referral Update:**

PLEASE SEE ATTACHMENT.

### **Recommendation(s)/Next Step(s):**

APPROVE Record of Action from the December 12, 2024, meeting of the Sustainability Committee.

### **Fiscal Impact (if any):**

None.



# CONTRA COSTA COUNTY

## Committee Meeting Minutes - Draft

### Sustainability Committee

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Thursday, December 12, 2024

1:00 PM

**\*\* SPECIAL MEETING \*\***

11780 San Pablo Ave., Ste. D,  
El Cerrito, CA 94530 |

190 East 4th Street,  
Pittsburg, CA 94565

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#### ZOOM LINK

<https://cccouny-us.zoom.us/j/85829571760>

| Dial: 888-278-0254 |

ACCESS CODE: 841892

The public may attend this meeting in person at either above locations and/or remotely via call-in or ZOOM.

*AGENDA ITEMS may be taken out of order based on the business of the day and preference of the Committee.*

1. INTRODUCTIONS Call to order and roll call.

***Chair called meeting to order at 1:02 p.m.***

#### **Staff Present:**

Jody London, Sustainability Coordinator, Dept. of Conservation and Development;  
Brendan Havenar-Daughton, Energy Manager, Dept. of Public Works;  
Raquel De La Torre, Secretary, Dept. of Conservation and Development;  
Emily Groth, Planner, Dept. of Conservation and Development;  
Jennifer Quallick, Chief of Staff, District 2 Supervisor's Office

#### **Attendees:**

Marcos A. Badra, City of Richmond;  
Mike Moore;  
Candice Rankin Mumby;  
Sophia Jacobs;  
Jan Warren;  
Chiara Fields;  
Ben Machol

**Present:** District I Supervisor John Gioia and District V Supervisor Federal D. Glover

2. PUBLIC COMMENT on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to two (2) minutes).

*There was no public comment.*

3. APPROVE Record of Action from September 16, 2024, meeting of the Sustainability Committee.

**Attachments:** [Sustainability Committee Minutes\\_09-16-24](#)

*The Record of Action was approved unanimously.*

4. RECEIVE report on the Circular City Strategy employed the City of Richmond, British Columbia.

*Jody London from the Department of Conservation and Development introduced Marcos A. Badra from the City of Richmond, British Columbia, who presented at the Urban Sustainability Directors Network Annual Meeting. The County's new General Plan and Climate Action and Adaptation Plan (CAAP) include looking towards a circular economy to reduce waste and boost local economies.*

*Badra gave an overview of the City of Richmond's circular economy. A circular economy is a new model of using natural resources to satisfy the needs of the community that is focused on eliminating waste and pollution; creating products and materials that last long in the economy; and regenerating nature and ecosystems. This is important because 70% of global emissions are connected with how materials are used to provide services and products. Badra provided graphics on how circular economies can achieve emissions reduction goals and a material flow analysis with the City of Boulder to track embodied emissions - emissions connected with material use from extraction to end of life. A circular economy is a systems thinking approach that provides the following benefits: connecting different economic sectors, creating new and better products and services, creating jobs, reducing dependency on natural resources, and increasing efficiency and affordability.*

*Richmond began developing its circular economy strategy by identifying existing policies and plans that impact material flow. Then, the City created a vision for a circular economy based on maximizing the value of resources. The purposes of Richmond's circular economy include economic opportunities, natural regeneration, social equity and benefits, and innovation. Five principles guide sectors' implementation of the circular economy: design clean, keep using, collaborate to co-create, regenerate, and maximize value. Richmond's circular city strategy includes six non-industry specific directions to move toward a circular economy. The strategy also includes key goals and actions to be implemented in the coming years. This approach is based on collaboration, learning by doing, innovation, and centering people.*

*Richmond is the first municipality in Canada to integrate circular economy criteria into its Procurement Policy, acknowledging the City's ability to influence the market with its purchases. The City created Canada's first vendor-focused Circular Economy Engagement Workshop, with*

*over 70 participants. Richmond began pilot projects to reduce waste in the food sector, saving over \$2 million and diverting over 414,000 tons of food from the landfill, and is the first Canadian city to apply 40% recycled asphalt pavement in City roads. The City's Community Energy and Emission Plan recognizes circular economy as a critical action to achieve climate goals. The City created a resource called TOP 10 Strategies to Implement Circular Economy Into Your Project Activities and hosts Circular Learning Hubs for city staff and vendors to access learning resources to build internal capacity. Additionally, Richmond is updating its bylaw requiring 70% demolition waste be recycled or reused, which includes a House Moving and Salvage Program. The City has implemented its circular economy work into a number of City projects, including the South Dike Upgrade Project, Synthetic Sports Surfacing Replacement in Hugh Boyd Park, and its furniture procurement and management operations, which have significantly reduced the amount of material sent to the landfill and led to cost savings.*

**COMMITTEE DISCUSSION:**

*The Committee asked about the City's collaboration with the Province of British Columbia, federal government, and other cities in Canada. The City participates in many working groups and projects with these entities, such as the Circular Cities & Regions Initiative, and ensures its work is integrated with their approaches. The Committee also asked how long the City has been working on circular economy. Richmond started its circular economy work in 2018 at its Council's direction.*

*The Committee asked staff how the County is looking at circular economy. The Board approved the County's Environmentally Preferable Purchasing Policy in 2023 and its relation to circular economy could be explored. Circular economy is mentioned in the County's new CAAP and General Plan and could be incorporated into the County's work on the Green Empowerment Zone and Just Transition. The County's new administration building has done numerous strategies pursued by the City of Richmond, including the use of low-carbon concrete and reusing materials. Staff recommended picking one area of circular economy to start to focus on.*

**PUBLIC COMMENT:**

*An attendee asked via Zoom Q&A if the circular economy presentation would be shared later as it was not included in the agenda packet. The presentation will be posted on the County website and included in the meeting minutes.*

*A question asked about specific barriers faced and lessons learned by the City. The City faced some barriers in communicating with the public due to some polarization around the topic and found that identifying different stakeholders' needs and talking about benefits for both climate and business goals was successful in bringing different groups to a common foundation on which to collaborate.*

5. RECEIVE report on Strategic Energy Management Program in County Facilities and RECOMMEND ADOPTION to the Board of Supervisors.

**Attachments:** [Strategic Energy Management Plan Final](#)

*Brendan Havenar-Daughton from the Public Works Department gave an overview of the final Strategic Energy Management (SEM) Program to be recommended for Board approval. The*

*Committee provided feedback on the SEM Program at its previous meeting.*

*The SEM Program consolidates goals and initiatives in five County plans: the CAAP, General Plan, Facility Masterwide Plan, Distributed Energy Resource Plan, and Energy Reduction Plan. The goal is to advance clean energy utilization, reduce energy costs, and improve quality of life, health, and comfort in County facilities.*

**COMMITTEE DISCUSSION:**

*The Committee expressed appreciation for the work that has taken place since the last meeting and asked for clarification on the process of developing the SEM Program and next steps. Staff noted that multiple versions of the SEM Program were reviewed internally and the current version is very similar to the version reviewed by the Committee in September, with the SEM Program being brought to the full Board as the next step if recommended by the Committee.*

**PUBLIC COMMENT:**

*There was no public comment.*

*The Committee recommended adoption of the SEM Program to the Board of Supervisors.*

6. RECEIVE report from the Sustainability Commission Chair, or Designee.

*London gave an update on the December 9 Sustainability Commission meeting as the Sustainability Commission Chair was not in attendance at the Committee meeting. The meeting was primarily administrative, with the Commission discussing its work plan, annual report, and upcoming leadership transition. Several members of the Commission have expiring terms, and the application process was discussed. The Commission began discussing how to best advise staff on implementation of the new CAAP.*

**PUBLIC COMMENT:**

*There was no public comment.*

7. RECEIVE report on staff activities that support sustainability goals.

**Attachments:**      [2024\\_12\\_12 Sust. Staff Report to Sust. CMTE](#)

*Supervisor Gioia and London expressed gratitude for Supervisor Glover's service on the Sustainability Committee. Supervisor Glover expressed gratitude for Supervisor Gioia's leadership in getting the Committee started and to London for the Sustainability Team's work and looked forward to future sustainability work in the County.*

*London provided updates on grants recently awarded to the County, including an U.S. Environmental Protection Agency (EPA) Community Change Grant with a coalition of community groups in North Richmond, which was announced in an EPA press release that morning; a State award to develop an urban forest management plan; work with the Ocean Protection Council to get in contract for the Senate Bill 1 Grant to develop a resilient shoreline plan; the receipt of Energy Efficiency and Conservation Block Grant funds; and the Public Works Department's submittal of grant applications for bicycle and pedestrian network improvements. London also noted the Board approved the updated CAAP and General Plan on November 5; the County is working with the Bay Area Air Quality Management District on a Bay Area Regional Climate Action Plan, which was discussed at the most recent Sustainability*

*Exchange; a Spanish-language induction workshop in Brentwood hosted by the County in October; participation in the SunShares program to help residents install solar on their roofs; and the Green Business Program's Spanish-language outreach.*

***PUBLIC COMMENT:***

*Jan Warren expressed appreciation for Supervisor Glover's leadership on the Committee and asked if there was a website with information about the EPA Community Change Grants.*

*Supervisor Glover expressed appreciation for Warren's advocacy for the sustainability program. London will share the EPA Community Change Grant press release link.*

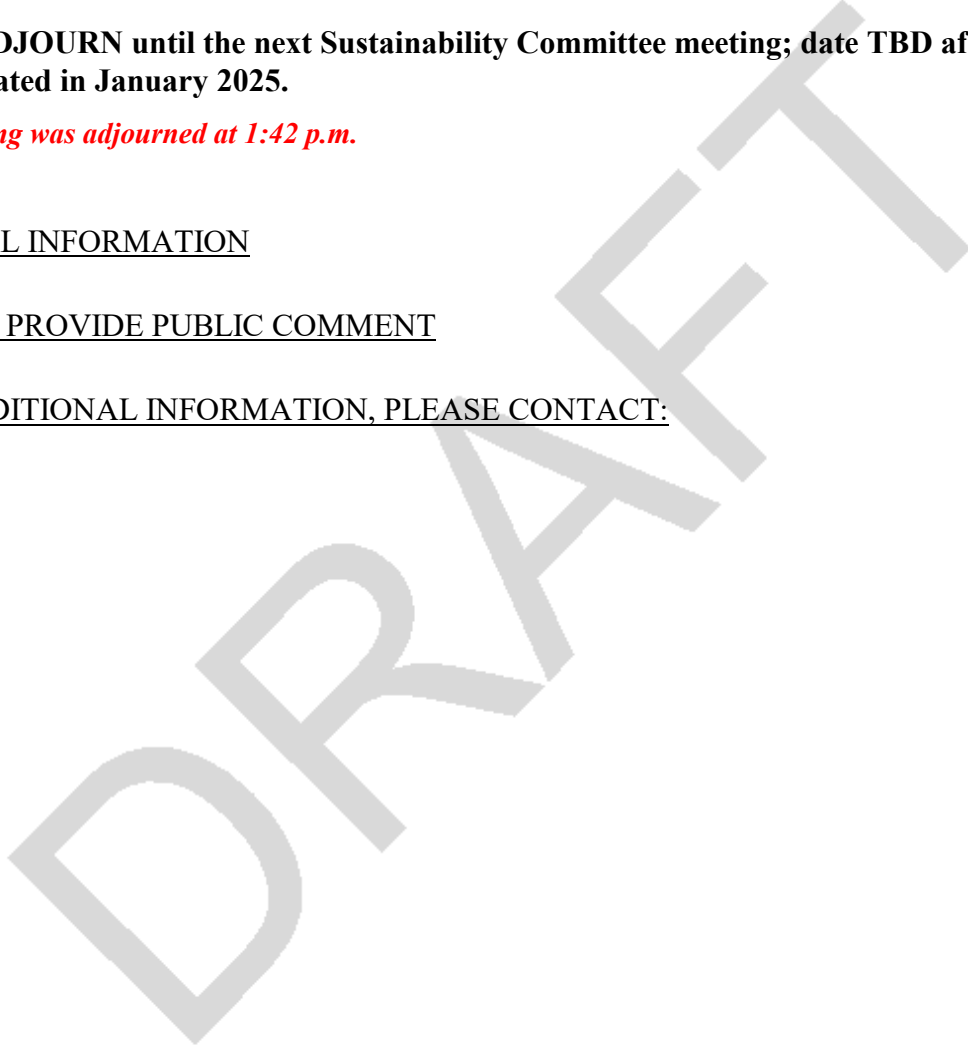
- 8. ADJOURN until the next Sustainability Committee meeting; date TBD after new Board is seated in January 2025.**

*The meeting was adjourned at 1:42 p.m.*

GENERAL INFORMATION

HOW TO PROVIDE PUBLIC COMMENT

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:





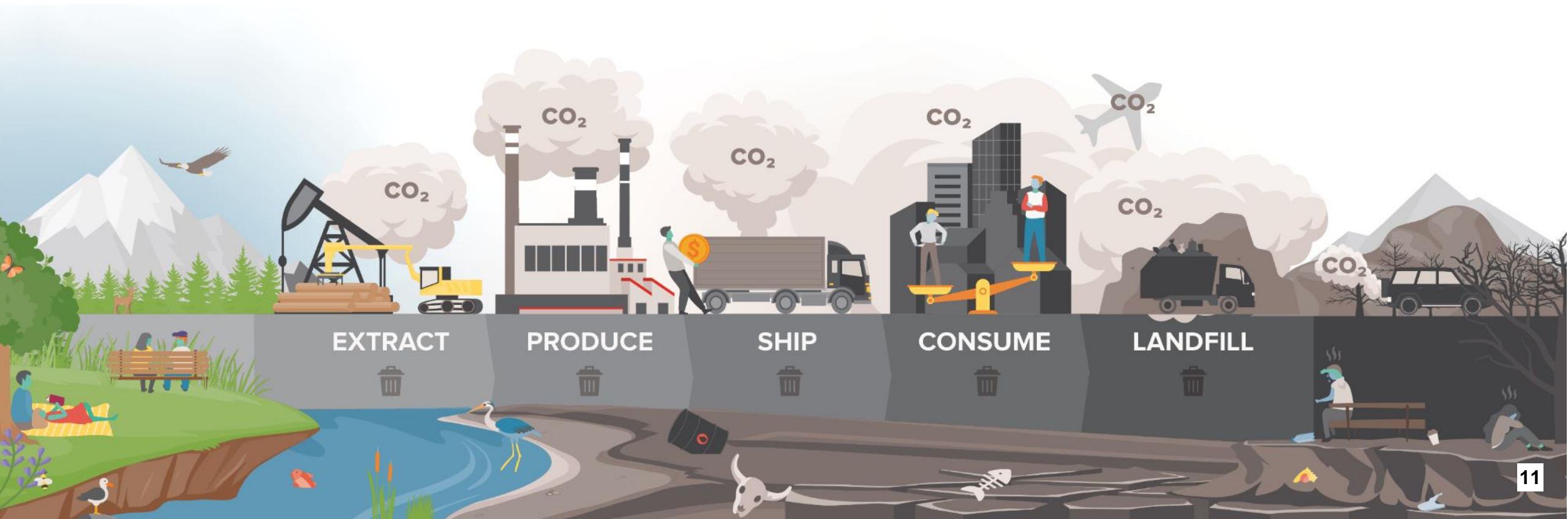
# **CIRCULAR ECONOMY IN PRACTICE**

**PRACTICAL IMPLEMENTATION OF  
CIRCULAR ECONOMY PRINCIPLES FOR  
CLIMATE LEADERS**

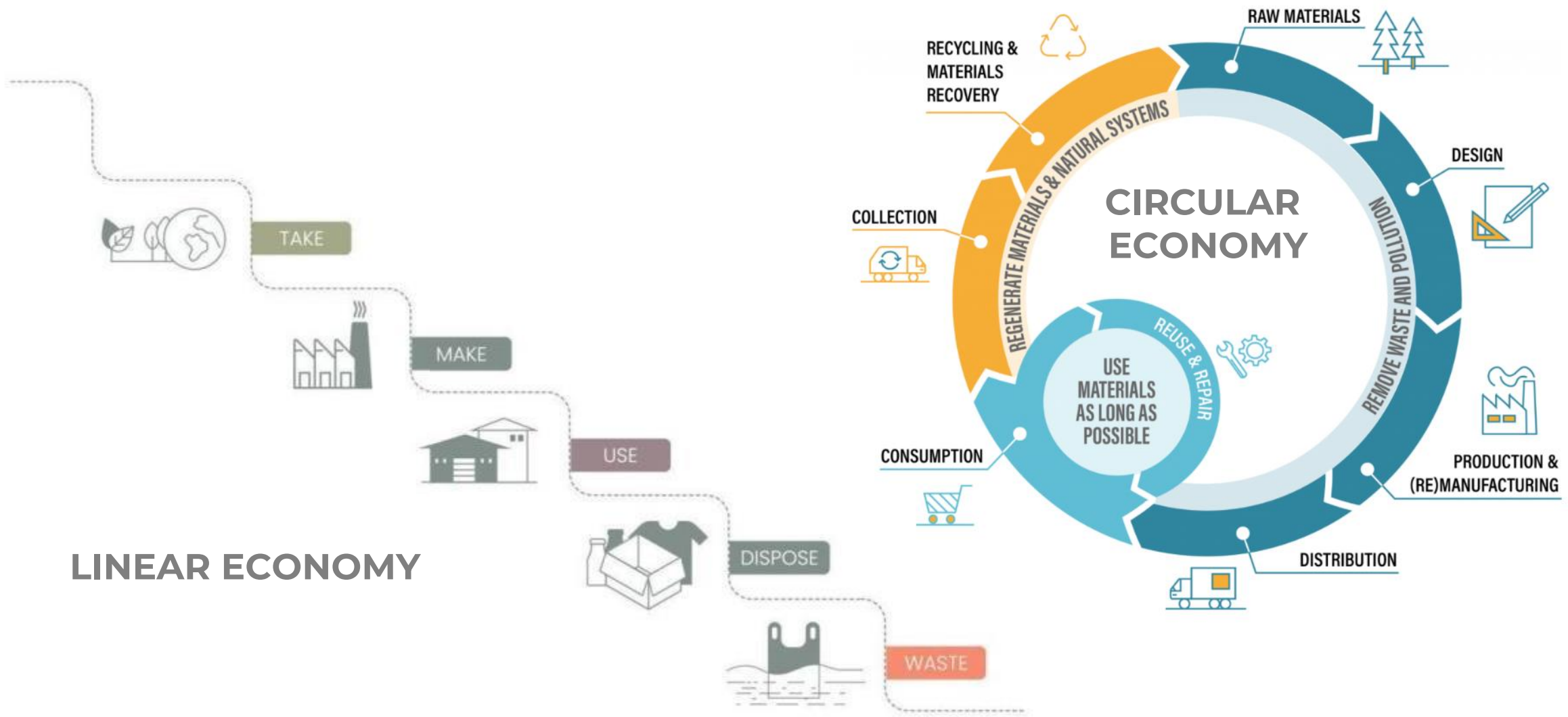


# WHAT IS A **CIRCULAR** ECONOMY?

"In our current economy, we take materials from the Earth, make products from them, and eventually throw them away as waste—the process is linear. In a circular economy, by contrast, we stop waste being produced in the first place."



# THE DIFFERENCE BETWEEN LINEAR & CIRCULAR ECONOMY



## **ELIMINATE WASTE & POLLUTION**

The first principle of the circular economy is to eliminate waste and pollution.

Currently, our economy works in a take-make-waste system. We take raw materials from the Earth, we make products from them, and eventually we throw them away as waste.

Much of this waste ends up in landfills or incinerators and is lost. This system can not work in the long term because the resources on our planet are finite.

## **CIRCULATE PRODUCTS & MATERIALS**

The second principle of the circular economy is to circulate products and materials at their highest value.

This means keeping materials in use, either as a product or, when that can no longer be used, as components or raw materials.

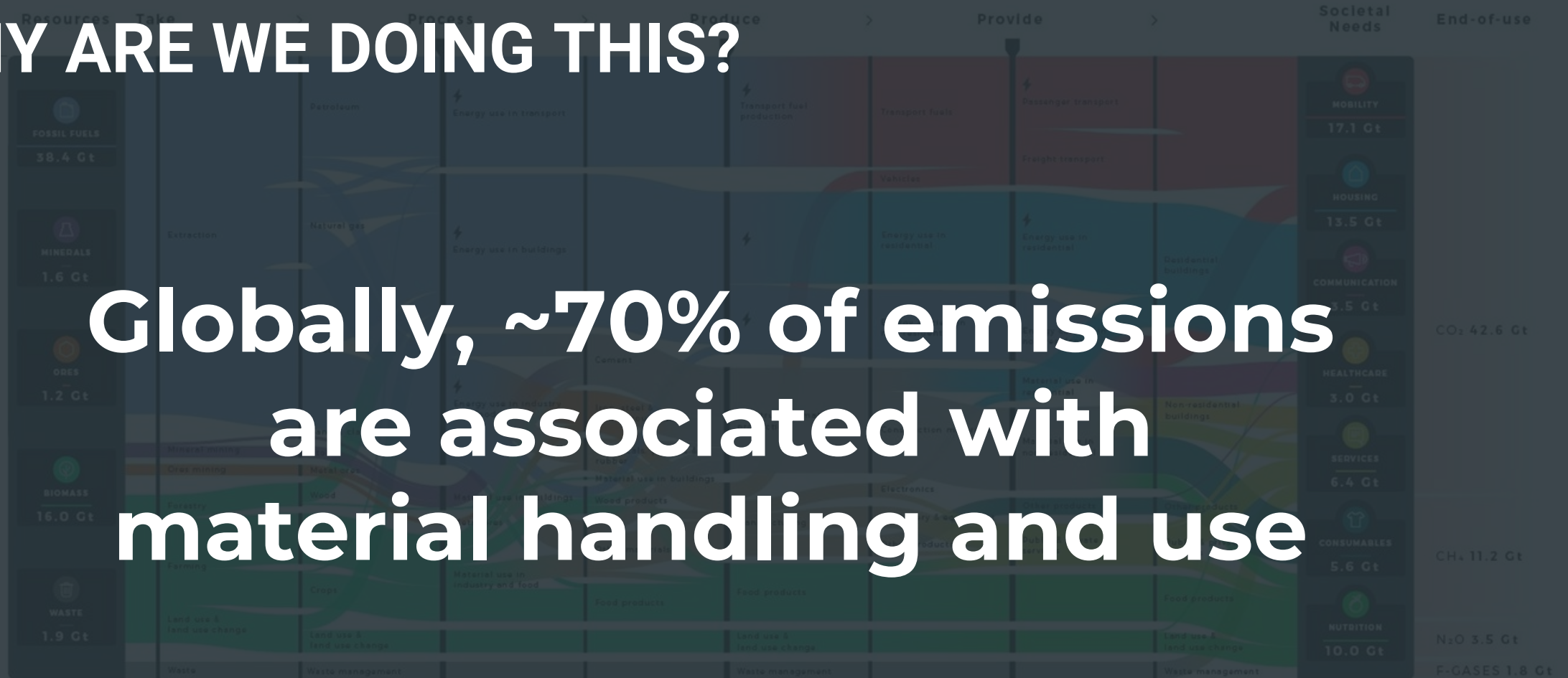
This way, nothing becomes waste and the intrinsic value of products and materials are retained.

## **REGENERATE NATURE**

The third principle of the circular economy is to regenerate nature. By moving from a take-make-waste linear economy to a circular economy, we support natural processes and leave more room for nature to thrive

# WHY ARE WE DOING THIS?

Total emissions embodied in each resource group  
59.1 Gt



**Globally, ~70% of emissions are associated with material handling and use**

⚡ Energy carriers such as oil, gas, coal and fuelwood travel through the economy

📍 Key points in the value-chain (from Process to Provide) where emissions embodied in energy carriers and materials shift and eventually switch

Circular solutions can deliver global needs with **30% less materials** and keep us within 2 degrees of warming.

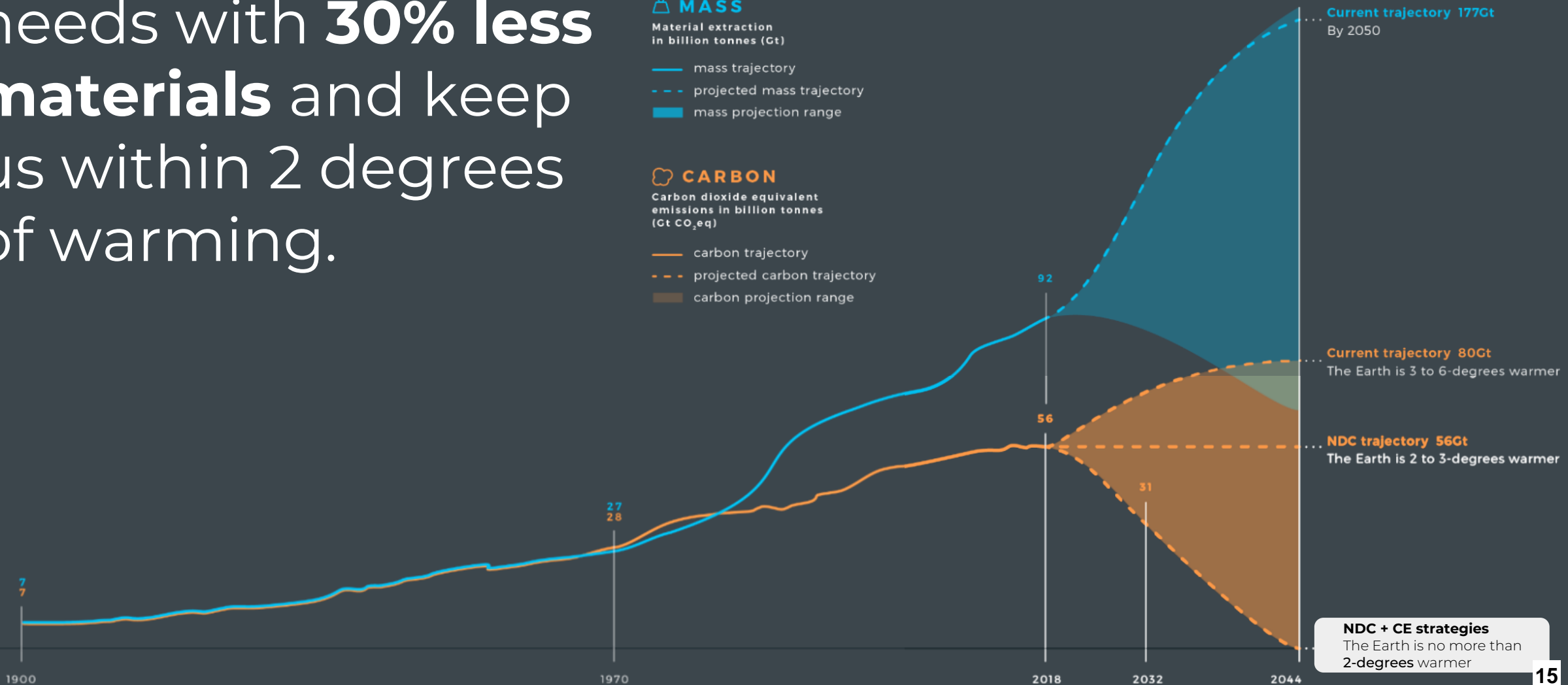
## CARBON TRAJECTORIES 1900-2050

**MASS**  
Material extraction  
in billion tonnes (Gt)

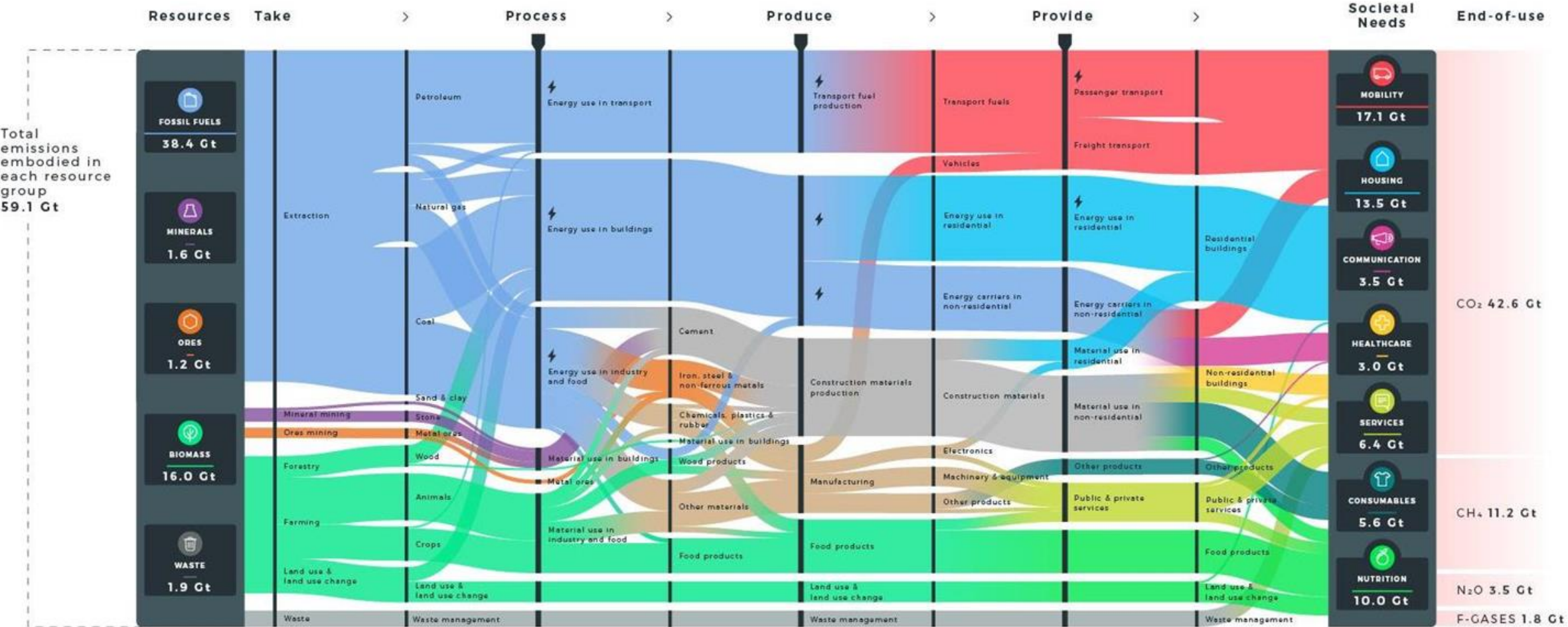
- mass trajectory
- - - projected mass trajectory
- mass projection range

**CARBON**  
Carbon dioxide equivalent  
emissions in billion tonnes  
(Gt CO<sub>2</sub>eq)

- carbon trajectory
- - - projected carbon trajectory
- carbon projection range



# CIRCULAR CITY OF BOULDER | URBAN METABOLISM: MATERIAL FLOW ANALYSIS



⚡ Energy carriers such as oil, gas, coal and fuelwood travel through the economy

🔑 Key points in the value-chain (from **Process** to **Provide**) where emissions embodied in energy carriers and materials shift and eventually switch

The size of **embodied emissions** from the goods we consume is larger than all local sources of emissions combined.

That means even a small change in **circularity** can have an **enormous effect on overall impact.**

# BENEFITS OF A **CIRCULAR** CITY

- Reduces carbon emissions
- Restores local ecosystems
- Creates a more prosperous & resilient economy
- Builds community & social connections
- Fosters innovation
- Builds capacity and creates green jobs
- Drives collaboration



# THE RICHMOND **CIRCULAR** CITY STRATEGY IS ALIGNED WITH CITY PLANS

The action-based approach of this Strategy is aligned with the goals as specified in the plans, strategies, programs and policies below, but is not redundant.

Circular economy is about the flow of resources, materials, nutrients, products and energy. The actions in the Strategy augment the City work through an expanded focus on these flows.

- 3 5-Year Tourism Plan
- 2 Agricultural Viability Strategy
- 1 Barn Owls Nest Box Program
- 1 Bat Friendly Community Recognition
- 6 Biweekly Garbage Cart Program
- 6 Blue Box/Blue Cart Programs
- 3 Business Resilience Program
- 4 City Centre Transportation Vision 2007
- 4 5 Community Energy & Emissions Plan 2050
- 1 2 3 4 5 6 Cultural Harmony Plan
- 2 3 Farming First Strategy
- 1 Ecological Network Management Strategy
- 1 Enhanced Pesticide Management Program
- 6 Green Cart Program
- 3 5 6 House Moving and Salvage Program
- 3 5 Industrial Land Intensification Initiative
- 1 5 Integrated Rainwater Resources Strategy
- 1 2 Invasive Species Action Plan
- 6 Litter Collection Program
- 6 Large Item Pick Up Program
- 3 5 Resilient Economy Strategy
- Official Community Plan 1 2 3 4 5 6
- Park and Open Spaces Strategy 1 2 5
- Partners for Beautification 1 5
- Poverty Reduction Plan 2 3 4 5
- Public Spaces Recycling Program, Event Recycling, Facilities Recycling 6
- Procurement Policy 3
- Reclaimed Asphalt Pavement Pilot Project 5 6
- Richmond Business Development Program 3
- Richmond Food System Action Team 2
- Richmond Food System Assessment 2006 2
- Richmond Foodland Report 2013 1 2
- Richmond Garden Club 2
- Richmond Local Food Map 2
- Richmond Nectar Trail 1 2
- Richmond Pesticide Management 1
- Riparian Areas Regulation Response Strategy 1 5
- Single-Use Plastic and Other Items Bylaw No. 10000 3 6
- Tree Management Strategy 1 2 5
- Wellness Strategy 1 2 4 5

# THE CITY'S VISION FOR A **CIRCULAR** ECONOMY

The City of Richmond's vision for circular economy is to maximize the value of resources, by design, through responsible consumption, minimizing waste and reimagining how resources flow in a sustainable, equitable, low-carbon economy.

**Upside-down approach to complexity**



# CITY'S **CIRCULAR** PRINCIPLES

The City has started using circular economy criteria in various ways, guided by the following 5 principles:

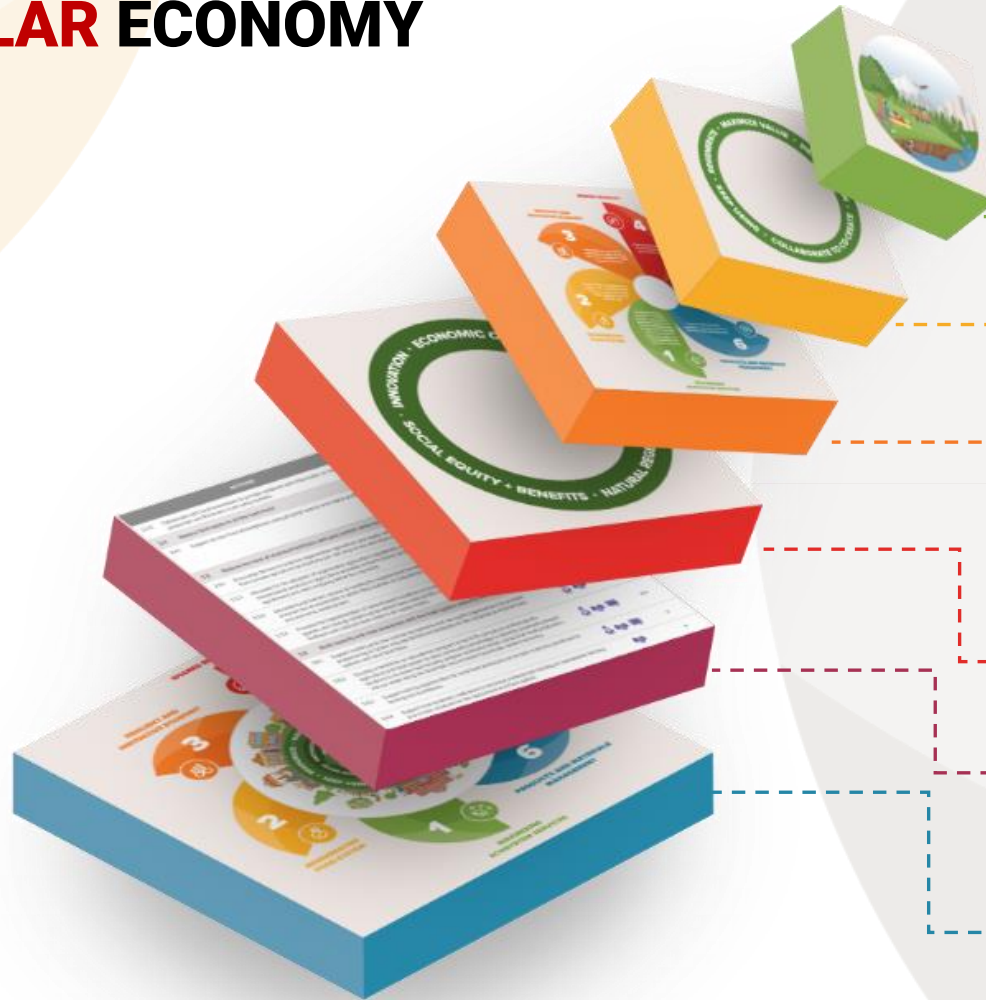
- Design clean
- Keep using
- Collaborate to co-create
- Regenerate
- Maximize value



# RICHMOND **CIRCULAR** CITY STRATEGY



# THE STRATEGY OUTLINES A FRAMEWORK THAT WILL GUIDE RICHMOND'S TRANSITION TO A **CIRCULAR** ECONOMY



## VISION

The City of Richmond's vision for circular economy is to maximize the value of resources, by design, through responsible consumption, minimizing waste and reimagining how resources flow in a sustainable, equitable, low-carbon economy.

## PRINCIPLES

Design clean, Keep using, Collaborate to co-create, Regenerate, Maximize value.

## DIRECTIONS

Maximizing ecosystem services; Regenerative food systems; Resilient and innovative economy; Shared mobility; Adaptive built environment; Products and materials management.

## GOALS

30 directional goals, outcome focused.

## ACTIONS

84 actions that will set Richmond on a path to achieve 100% circularity.

## RESULTS

The Strategy makes room for other organizations to co-create, test and implement circular practices as partners with the City or within their respective context, fostering the transition towards a regenerative and circular city.

# OUR APPROACH

- Collaboration
- Learning by doing
- Innovation
- People-centred






**Procurement Policy  
with circular principles  
and criteria**

The City became the first municipality in Canada to integrate circular economy criteria into its Procurement Policy #3104.

Canada's first vendor-focused Circular Economy Engagement Workshop hosted and facilitated by the City of Richmond, with different City's vendor, suppliers and industry stakeholders.



## Vendor-focused Circular Economy Engagement Workshop



Canada's first vendor-focused  
Circular Economy Engagement  
Workshop hosted and facilitated by  
the City of Richmond, with over 70  
participants.



## Food Waste Reduction

The City partnered with FoodMesh to mobilize local food manufacturing, processing and retail businesses to adopt circular economy practices. An online exchange platform enabled the diversion of surplus or off-spec food products away from waste streams to secondary markets or local charities, with a **414,555 kg of diverted food** waste and **\$2,207,971 savings** to food brands and charities.

The City Joined the national Love Food Hate Waste Campaign to promote food waste reduction through a partnership with the province.





## 40% Reclaimed Asphalt Pavement Pilot Project and Toolkit

Richmond became the first Canadian city to apply 40% recycled asphalt pavement (RAP) on a municipal road; initially an 800-meter segment of a high traffic volume road.

By early 2023 Richmond had used 40% RAP on 7,000 meters of multi-use pathways as well as on the arterial road. In this circular pilot project, more than 3,000 metric tons of reclaimed asphalt pavement have been diverted from landfill and used as raw material in the new asphalt pavement.

Given the success of the program, the City created an online toolkit to help other local governments introduce RAP to further their sustainability goals while maintaining quality.

## The Circular Economy as a strategic direction in the CEEP 2050



The City's Community Energy and Emission Plan 2050, adopted in 2022, properly integrates a circular economy strategy to mitigate carbon emissions. The Strategy Direction 8 - Transition to a Circular Economy introduces specific actions to reduce non-inventoried embedded carbon in materials from goods and services that Richmond residents and businesses consume. While the plan does not quantify consumption and material-based GHG emissions in Richmond, it does have specific policy and program actions identified to mitigate this type of emissions by transitioning from a linear to a circular economy.

# RICHMOND CLIMATE ACTION PROGRAMS


## MITIGATION


Actions limit the magnitude of rate of global warming and its related effects. In short, reduce greenhouse gas emissions.

BC Energy Step Code: Carbon Neutral New Buildings 

Lulu Island Energy Company: Carbon Neutral Energy Systems 

Retrofit Existing Buildings\* 

Active Mobility for All\* 


Zero Waste/Organics Recycling 

Transition to Zero Emission Vehicles 


## MITIGATION & ADAPTATION

Official Community Plan: Complete Communities 

Public Lands Forest Management Strategy 

Richmond Circular City Strategy\* 

Ecological Network Management Strategy 

Integrated Rainwater Resource Management Strategy 

Farming First Strategy 


Water Conservation Program 

## ADAPTATION

Actions reduce the negative impact of a changing climate, while taking advantage of potential new opportunities.

Dike Master Plans 

Flood Protection Management Strategy 

Invasive Species Action Plan 

Cooling Centres 

Floodplain Designation & Protection Bylaw No. 8204 

Emergency Programs 

\*Community Energy & Emissions Plan 2050

# TOP 10 Strategies to implement circularity in project activities




## CIRCULAR LEARNING HUB



# CIRCULAR LEARNING HUB

Building internal capacity and collaboration by workshops, webinars, engagement activities, interdepartmental working groups, learning material, videos, and other multimedia resources.

An illustration of a man in a black jacket and blue pants walking on a winding road that leads towards a city skyline. The background features a blue sky with clouds, birds, and a body of water. A signpost on the left holds a blue sign with white text. To the right, a green callout box contains text, and a row of colorful dots is positioned above it.

## Demolition Waste and Recyclable Materials Bylaw No. 9516

The bylaw requires that 70% demolition waste be recycled or reused. With over 1,000 permits issued since the introduction of the bylaw, it is estimated that over 27,000 tonnes of demolition waste has been diverted from disposal.

## House Moving and Salvage Program

In an effort to minimize the demolition of livable houses as well as expand on the City's Demolition Waste Recycling initiative, the City of Richmond encourages homeowners to post their houses on the City's House Moving and Salvage List for the purpose of offering to move or salvage their house, prior to applying for a demolition permit.





## External Collaboration and pilot projects

### Collaborating

- Circular Cities and Regions Initiative (CCRI)
- Deconstruction Specialist working group hosted by District and City of North Vancouver
- Green Economy Canada's Sustainable IT Procurement pilot
- Dutch Canadian Circular Alliance
- Mission for MaRS Public Procurement Coalition
- Buyers for Climate Action
- Carbon Price Working Group
- Publishing of the Guide "Mastering Circularity"

### Projects

- Textiles – Circular Business Case - Pilot
- Measuring Embodied Carbon in Infrastructure - Pilot
- Measuring Embodied Carbon in Civic Buildings - Pilot
- Richmond Material Flow Analysis Study and Carbon Scan
- Embodied carbon reduction Study approaches
- Update of the Demolition Bylaw target to the ICI and MFU



# CIRCULAR RESULTS

## THE SOUTH DIKE UPGRADE PROJECT

Circular criteria involved a focus on reusing excavated materials, recycling raw materials and low-carbon transportation.

Criteria was selected in consultation with the project team and **based on the nature of the project.**

The expected impacts included a greater emphasis on keeping materials onsite and reusing them.

Key learnings from the project include the importance of clear communication and understanding of circular economy principles during the design process.

A wrap-up meeting with the contractor and engineer also provided valuable insights for improving the efficiency and effectiveness of future projects in achieving circular economy goals.



# CIRCULAR RESULTS

## SYNTHETIC SPORTS SURFACING REPLACEMENT IN HUGH BOYD PARK

The contract required the removal and recycling of the existing synthetic turf surface and the installation of new synthetic turf playing field surfacing that meets the most current FIFA Quality Pro synthetic turf product standards.

Award criteria focused on sustainability initiatives, energy management, waste reduction, emission reduction, recycling efforts, and preference for recycling and utilizing removed turf surface materials.

Additionally, the proponents were required to provide ongoing maintenance and repairs within 48 hours notice, and a warranty of a minimum of 8 years for both labor and materials.

Reusing crumb rubber at Hugh Boyd sports field provided **cost savings of \$330,000** compared to new infill and kept **363,000 kg of rubber away from landfills**.



# CIRCULAR RESULTS

## ARCHITECTS AND CONSTRUCTION MANAGERS SPARKS CIRCULAR IDEAS FOR COLLABORATION

*Q: What ideas does your firm have and how should the City change its specifications to reflect a practical and value-added transition to a circular economy?"*

The proponents were given time for internal discussions before providing their feedback and answers. This approach allowed the City to gauge the level of awareness, understanding, and market readiness for circular economy principles among the proponents.

The various responses showcased the proponents' ideas and suggestions for collaborating with the City to promote a circular economy.

A consultant shared valuable resources, such as research, tools, and insights on design for disassembly. As a result of this presentation, the architectural firm was connected with the staff to explore further collaboration and integration of circular economy principles into the City's projects.



# CIRCULAR RESULTS

## FURNITURE CIRCULAR MANAGEMENT: IMPLEMENTING CIRCULAR BUSINESS MODELS FOR SUSTAINABLE AND COST-EFFECTIVE OPERATIONS

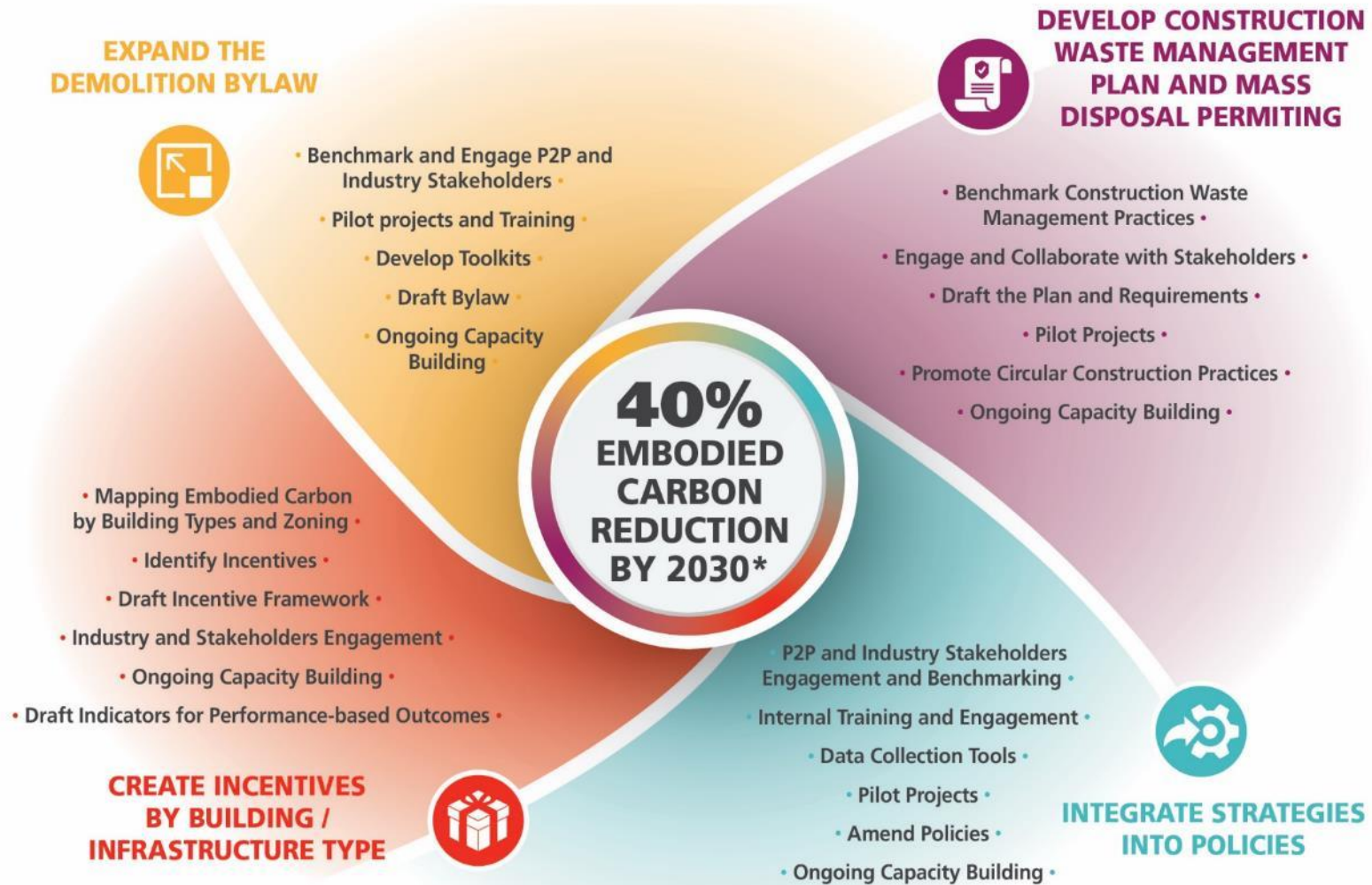
The City implemented a circular business models to improve operations performance and reduce in the procurement and management of furniture.

The team utilized existing furniture in the inventory for most reconfigurations. While new materials were occasionally required due to project specifications or insufficient stock, the team also refurbished furniture items, such as chairs, filing cabinets, and panels.

The refurbished items proved to be significantly more cost-effective and required less lead time. For example, the average cost of a **new upholstered** chair was **\$602.20 with a 3-4 week** lead time, while a **refurbished chair cost \$230.00** with only a **1-week lead time**.



# REDUCING EMBODIED CARBON IN THE BUILT ENVIRONMENT



*\*The World Green Building Council has established a target of reducing embodied carbon emissions by 40% by 2030. This target aligns with the objectives of various local governments in Canada, as well as with Richmond's Circular City Strategy and the Community Energy and Emissions Plan for 2050. Following the completion of the Material Flow Analysis Study, conducted by the City of Richmond, Circle Economy, and Sonnevera, this goal will be reviewed and potentially updated.*

# THANK YOU!

## Marcos Alejandro Badra

Programe Manager, Circular Economy  
City of Richmond, BC  
Cell 778 986 7209 | mbadra@richmond.ca  
[www.richmond.ca/circulareconomy](http://www.richmond.ca/circulareconomy)





# CONTRA COSTA COUNTY

1025 ESCOBAR STREET  
MARTINEZ, CA 94553

## Staff Report

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**File #:** 25-772

**Agenda Date:** 3/10/2025

**Agenda #:** 4.

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### **SUSTAINABILITY COMMITTEE**

**Meeting Date:** March 10, 2025

**Subject:** APPROVE Record of Action from February 10, 2025, meeting of the Sustainability Committee

**Submitted For:** SUSTAINABILITY COMMITTEE

**Department:** DEPARTMENT OF CONSERVATION & DEVELOPMENT

**Presenter:** Jody London || DCD | Sustainability Coordinator

**Contact:** Jody London (925) 655-2815

### **Referral History:**

This is a standing item of the Committee.

### **Referral Update:**

PLEASE SEE ATTACHMENT.

### **Recommendation(s)/Next Step(s):**

APPROVE Record of Action from February 10, 2025, meeting of the Sustainability Committee.

### **Fiscal Impact (if any):**

None.



# CONTRA COSTA COUNTY

## Committee Meeting Minutes - Draft

### Sustainability Committee

Supervisor Ken Carlson, Chair  
Supervisor John Gioia, Vice Chair

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Monday, February 10, 2025

1:00 PM

|| SPECIAL MEETING ||

11780 San Pablo Ave., Ste. D,  
El Cerrito, CA 94530 |

2255 Contra Costa Blvd., Ste. 202  
Pleasant Hill, CA 94523

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#### ZOOM LINK

<https://cccouny-us.zoom.us/j/86061197524>

| Dial: 888-278-0254 |  
ACCESS CODE: 841892

The public may attend this meeting in person at either above locations and/or remotely via call-in or ZOOM.

*AGENDA ITEMS may be taken out of order based on the business of the day and preference of the Committee.*

1. INTRODUCTIONS Call to order and roll call.

***Chair Carlson called the meeting to order at 1:01pm.***

**Staff Present:** Jody London, Sustainability Coordinator, Dept. of Conservation and Development;  
Demian Hardman-Saldana, Principal Planner, Dept. of Conservation and Development;  
Emily Groth, Planner, Dept. of Conservation and Development;  
Adam Scarbrough, Planner, Dept. of Conservation and Development;  
Raquel De La Torre, Secretary, Dept. of Conservation and Development;  
Vivian Lee, Glover Office Administrator, Office of the Board of Supervisors;  
Arianna Aguilera, DER Specialist Fellow, Dept. of Public Works;  
Wade Finlinson, Integrated Pest Management Coordinator, Dept. of Public Health;  
Danielle Pellegrini, Executive Secretary, Dept. of Conservation and Development;  
Sonia Bustamante, Chief of Staff to Supervisor Gioia;  
Lia Bristol, Deputy Chief of Staff to Supervisor Carlson

**Attendees:** Solomon Bellette  
Jamie Duran

---

Sarah Foster  
 Kim Jones  
 Devin Jackson  
 Gunkeshari Shrestha  
 Reilly Kent  
 Denice Dennis  
 Cheryl Sudduth  
 Kim Jones  
 Nadine Peyrucain  
 Kathleen Wimer  
 Andrea Bailey  
 Betty Lobos

**Present:** District I Supervisor John Gioia and District IV Supervisor Ken Carlson

- 2. PUBLIC COMMENT on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to two (2) minutes).

*There was no Public Comment.*

- 3. INTERVIEW applicants for the four (4) expiring At-Large Seats on the Contra Costa County Sustainability Commission.

**Attachments:** [Attachment A - Member Roster](#)  
[Attachment B -Applicants Sorted by Interest Group](#)  
[Attachment C - Summary of Applications](#)  
[Attachment D - Applications Received](#)

*The Committee interviewed the following individuals for the At-Large, Community Group seat: Luz Gomez, Solomon Belette, and Reilly Kent. One additional applicant, Xiping Yang, did not attend the interview.*

*The Committee interviewed the following individuals for the At-Large, Education or Research Institution seat: Devin Jackson and Kim Jones.*

*The Committee interviewed the following individuals for the At-Large, Commercial Business seat: Jamie Duran and Gunkeshari Shrestha. One additional applicant, Chirag Kathrani, did not attend the interview.*

*The Committee interviewed the following individual for the At-Large, Environmental Justice seat: Sarah Foster.*

*There was no public comment.*

- 4. RECEIVE presentation on 2024 Climate Action and Adaptation Plan.

**Attachments:**            [2024 CAAP Strategies and Actions Table](#)  
[2025\\_02\\_10 Contra Costa County CAAP Overview - Sustainability Committee](#)

*Jody London, Sustainability Coordinator for Contra Costa County, gave a presentation on the 2024 Climate Action and Adaptation Plan (CAAP). The presentation included a background and overview of the CAAP development as well as an overview of the work that County staff are engaged in, both community-facing and for County operations, within each of the CAAP focus areas.*

*These focus areas include:*

- *Clean and Efficient Built Environment*
- *No Waste Contra Costa*
- *Clean Transportation Network*
- *Resilient Communities and Natural Infrastructure*
- *Climate Equity*
- *Leadership*

*Committee Discussion:*

*The Committee inquired about the challenges experienced at the Federal level around funding and whether California will continue to be supportive of climate action goals by continuing to provide funding for this work. London replied that the State provides funding for which local governments compete, except when there is a block (aka formula) grant. Another way the State could distribute funds to local governments is to simply make funding available for each jurisdiction in the State with a list of allowable activities. This would reduce the administrative burden local governments face when pursuing State funds. London added that the State has been facing a budget deficit and has recently been redirecting funds from various climate programs.*

*The Committee asked whether County departments are working together to apply for grant funding. London replied, stating that the Sustainability Team works across departments on funding opportunities. The PITCH meeting is a standing meeting which includes The Contra Costa County Department of Conservation and Development (DCD), flood control and transportation engineers from the Public Works Department, and the Department of Public Health. Recently the DCD team has been working with the Contra Costa Office of Emergency Services (OES) to plan around resilience centers in the County.*

*Public Comment:*

*A member of the public provided written public comments to the Committee about the CAAP goals and funding sources citing that the County cannot rely on the Federal Government for funding and should be relying on alternative funding sources. Another member of the public shared his appreciation to Jody London for sharing updates about the CAAP and mentioned that the full document is very long and presentations like the one given by London will be integral in communicating these issues to the public.*

5. DISCUSS Priority Topics for Sustainability Committee Meetings in 2025.

**Attachments:**            [2025\\_02\\_10 Sust. Cmte. Calendar - working document](#)

*This agenda item was reordered and addressed as Item 6.*

***Committee Discussion:***

*The Committee discussed topics to cover for 2025 and landed on a few topics of interest which include: exploring how the County can support residents around the Bay Area Air District's (BAAD) upcoming rule changes for water and space heating; the Contra Costa Sheriff's Office Fleet - whether the State fleet rule applies; and a general presentation on transitioning existing buildings to all-electric. London shared that for the next meeting in March staff will be bringing a draft of the County's Clean Energy Roadmap and that the all-electric buildings topic could be discussed there.*

***Public Comment:***

*A member of the public, Denice Dennis, suggested the County should provide periodic updates on the CAAP implementation progress.*

6. DISCUSS and RECOMMEND to the Board of Supervisors candidates for at-large seats on the Contra Costa County Sustainability Commission.

*This agenda item was reordered and addressed as Item 5.*

***Committee Discussion:***

*The Committee highlighted the interest, historically, in the community to serve on the Sustainability Commission and that this year is no different. The Committee nominated the two incumbents, Luz Gomez and Sarah Foster, to the Community Group seat to the Environmental Justice seat respectively. For the Education seat the Committee nominated Devin Jackson and for the Commercial Business seat, the Committee nominated Jamie Duran.*

*Supervisor Gioia shared that he plans to reach out to Kim Jones to discuss the Supervisor-appointed seat in District 1 and encouraged other applicants that were not nominated for the Sustainability Commission to explore appointment by Supervisors who have openings right now.*

*There was no public comment.*

*The motion to nominate the candidates discussed above was moved by Carlson, second by Gioia, unanimously approved.*

7. **ADJOURN** until the next Sustainability Committee Meeting to be held on, Monday, March 10, 2025 at 1:00pm.

*Meeting adjourned at 2:27pm*

GENERAL INFORMATION

HOW TO PROVIDE PUBLIC COMMENT

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

DRAFT

**From:** [Jody London](#)  
**To:** [Raquel De La Torre](#)  
**Subject:** FW: Public Comment 2.10.25 Sustainability Committee  
**Date:** Wednesday, March 5, 2025 4:12:01 PM

---

This is the email that needs to be attached to the Feb. 10 minutes.

Jody

---

**From:** Denice A Dennis <deniceadennismph@gmail.com>  
**Sent:** Monday, February 10, 2025 12:11 PM  
**To:** John Gioia <John.Gioia@bos.cccounty.us>; Ken Carlson <Ken.Carlson@bos.cccounty.us>  
**Cc:** Jody London <Jody.London@dcd.cccounty.us>  
**Subject:** Public Comment 2.10.25 Sustainability Committee

Dear Supervisor Carlson and Supervisor Gioia,

Please accept this written comment for today's Agenda item on the 2024 Climate and Adaptation Plan Presentation.

(I have been having technical difficulties and am not sure if I will be able to comment at the meeting.)

The approved CAAP includes the goal of reduction of community wide Greenhouse gas emissions by 40 percent from 1990 levels by 2030. The Fiscal Impact of the the Legislative Details report text states that some of the Plan's activities will require state or federal grant funding and additional staffing.

We absolutely cannot depend on the federal government for either funding or action at this point. Please dedicate the county resources needed to prioritize and implement the Plan's actions which are necessary to reach the greenhouse gas emissions reduction goals by 2030.

We are in an emergency and we have only 5 years now to do this urgent work.

Respectfully,  
Denice A Dennis, MPH  
350 Contra Costa



# CONTRA COSTA COUNTY

1025 ESCOBAR STREET  
MARTINEZ, CA 94553

## Staff Report

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**File #:** 25-773

**Agenda Date:** 3/10/2025

**Agenda #:** 5.

---

### **SUSTAINABILITY COMMITTEE**

**Meeting Date:** March 10, 2025

**Subject:** Report on the County's Draft Clean Energy Roadmap for Existing Buildings

**Submitted For:** SUSTAINABILITY COMMITTEE

**Department:** DEPARTMENT OF CONSERVATION & DEVELOPMENT

**Presenter:** Demian Hardman-Saldana || DCD | Principal Planner

**Contact:** Demian Hardman-Saldana (925) 655-2816

### **Referral History:**

On May 15, 2023, the Sustainability Committee received a report that provided direction to staff on the development of a roadmap to convert existing buildings to be all-electric.

### **Referral Update:**

On November 5, 2024, the County Board of Supervisors adopted the Contra Costa County 2045 General Plan and Contra Costa County Climate Action and Adaptation Plan (CAAP) 2024 Update. Consistent with the State's greenhouse gas (GHG) emission reduction goals, the County's updated 2024 CAAP includes GHG reduction goals to 40% below 1990 levels by 2030 and achieve net carbon neutrality by 2045.

CAAP Strategy BE-2 (Retrofit existing buildings and facilities in the unincorporated county, and County infrastructure, to reduce energy use and convert to low-carbon or carbon-free fuels) includes an implementation action to create a detailed County roadmap to convert existing homes and businesses to use low-carbon or carbon-free appliances. It also states that the roadmap should include steps to support converting buildings to rely on low-carbon or carbon-free energy using an equitable framework that minimizes the risk of displacement or significant disruptions to existing tenants.

Attached is the Draft Clean Energy Roadmap for Existing Buildings. Staff will provide a summary report on the draft roadmap and discuss a proposed timeline for the roadmap to be considered for possible adoption by the Board of Supervisors.

### **Recommendation(s)/Next Step(s):**

RECEIVE Report on the County's Draft Clean Energy Roadmap for Existing Buildings and PROVIDE DIRECTION, as needed

### **Fiscal Impact (if any):**

Measure X funding is allocated to cover the staff time associated with the development of the roadmap. However, the outreach and engagement action item specified in the roadmap currently does not have funding allocated to implement its recommended action. Other funding sources will need to be considered to implement this action.



# Report on Draft Clean Energy Roadmap for Existing Buildings

*BOS Sustainability Committee  
March 10, 2025*

---

Demian Hardman-Saldana  
Department of Conservation and Development  
Contra Costa County  
(925) 655-2816 - [Demian.Hardman@dcd.cccounty.us](mailto:Demian.Hardman@dcd.cccounty.us)



# Achieving State Greenhouse Gas Reduction Targets Will Require Going All-Electric

- In 2019 residential structures accounted for 19% of Contra Costa County's total GHG emissions
- Meeting California's statewide GHG emission reduction targets will require a fuel source transition in residential buildings from natural gas to all-electric

## Proportion of GHG Emissions, 2019

Sector	2019
Transportation	47%
Energy - Residential	19%
Energy - Nonresidential	9%
Solid waste	22%
Agriculture	4%
Off-road equipment	5%
Water and wastewater	Less than 1%
BART	Less than 1%
Land use and sequestration	-7%
Total Annual MTCO <sub>2</sub> e	100%
Note: Total may not equal the sum of individual rows due to rounding.	

Source: Updated 2024 CAAP

# Roadmap Progress To Date

- Transitioning Existing Buildings to All-Electric Cohort (Fall 2021 – Summer 2022)



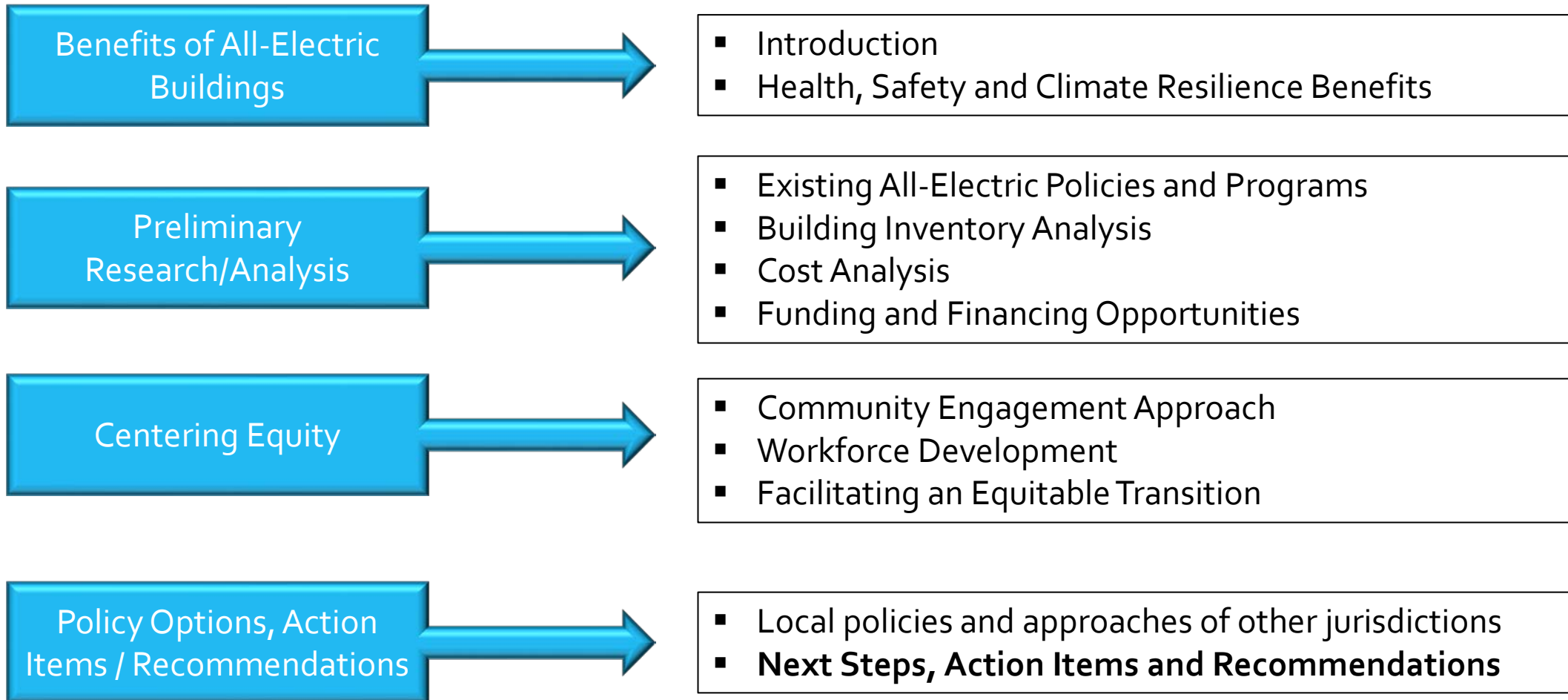
- Research and Initial Roadmap Development (Fall 2022)
- Presented Roadmap Outline to Sustainability Commission (December 2022 & April 2023)
- Presented Updated Roadmap Outline to Sustainability Committee (May 2023)
- Updated 2024 Climate Action and Adaptation Plan (CAAP) includes **CAAP Strategy BE-2** that includes implementation action to **create a detailed County roadmap to convert existing homes and businesses to use low-carbon or carbon-free appliances.**

# Clean and Efficient Built Environment (BE): CAAP Strategy BE-2

**BE-2: Retrofit existing buildings and facilities in the unincorporated county, and County infrastructure, to reduce energy use and convert to low-carbon or carbon-free fuels.**

- **Create a detailed County roadmap** to convert existing homes and businesses to use low-carbon or carbon-free appliances. The roadmap should include steps to support converting buildings to rely on low-carbon or carbon-free energy using an equitable framework that minimizes the risk of displacement or significant disruptions to existing tenants. (COS-A14.7)

# Clean Energy Roadmap for Existing Buildings (focuses on residential Buildings)



# Next Steps, Action Items and Recommendations

## Regional and State Collaboration

Work with the County's Legislation Committee and Board of Supervisors to develop a policy framework that allows staff to establish new and/or expand existing relationships with regulatory agencies to support the goal of transitioning existing buildings to all-electric. It would enable staff to formally participate in public hearings, provide comments during the regulatory decision-making process, and petition for rulemaking from regulatory agencies like the California Energy Commission (CEC). It also includes collaborating with the investor-owned utilities (IOUs), such as PG&E, and Community Choice Aggregators (CCAs), such as MCE that service our region to gain a better understanding of the existing gas distribution system as well as explore the process and feasibility of decommissioning gas lines at a neighborhood/community scale.

***Implementation Timeline: 3-6 Months for Adoption of Policy Framework***

# Next Steps, Action Items and Recommendations...continued

## Additional Analysis

Conduct additional analysis to expand on the work presented in this roadmap. This includes an expanded building inventory that will provide more data on the condition of the existing building stock and more research on the costs of transitioning existing buildings to all-electric in the County.

***Implementation Timeline: 6-12 Months to complete a building inventory and cost analysis.*** Study to be completed to determine the residential building types that would be most cost-effective to retrofit in the County. \$100K already approved for allocation by County under its Energy Efficiency and Conservation Block Grant for consultant to complete study.

# Next Steps, Action Items and Recommendations...continued

## Outreach and Engagement

A specific outreach and engagement strategy is needed to communicate and collaborate with the residents of Contra Costa County that ensures that historically marginalized and unrepresented communities have a voice in planning for a clean energy transition. The roadmap outlines a specific framework for staff to follow to ensure that efforts around transitioning existing buildings to all-electric extend to all unincorporated communities throughout the County. This includes working with community-based organizations to engage and collaborating with our communities to further develop the various strategies that will provide better health outcomes and a more resilient future.

***Implementation Timeline:*** *No funding is allocated to implement this recommendation. Staff will look to leverage other existing programs, funding opportunities to determine how to implement this action.*

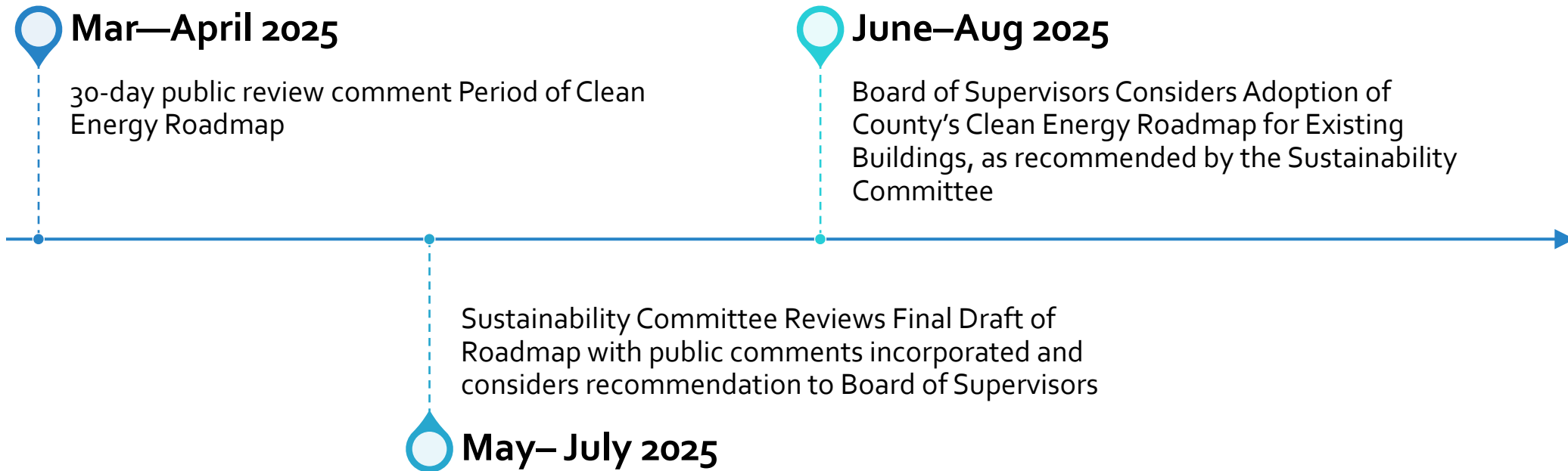
# Next Steps, Action Items and Recommendations...continued

## Other Actions

There are other actions included in the roadmap that will strengthen the County's ability to succeed in this transition. These actions include seeking approval from the Board of Supervisors (BOS) to continuously pursue funding for this effort as well as further analysis of the policy options and issues related to facilitating an equitable transition for converting existing buildings to all-electric. It also includes implementing pilot projects, where appropriate.

*Implementation Timeline: Ongoing*

# Timeline For Adoption of County's Clean Energy Roadmap for Existing Buildings



# QUESTIONS?

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**Demian Hardman-Saldana, Contra Costa County**  
demian.hardman@dcd.cccounty.us  
925.655.2816

County of Contra Costa, California

# Clean Energy Roadmap for Existing Buildings



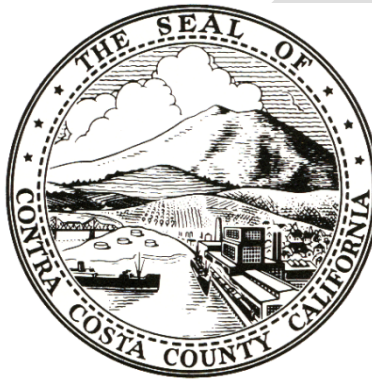
**Prepared By:**

County of Contra Costa

Department of Conservation and Development

30 Muir Rd, Martinez, CA 94553

[www.contracosta.ca.gov/dcd](http://www.contracosta.ca.gov/dcd)



DRAFT

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# GLOSSARY

**ABAG:** Association of Bay Area Governments

**AC:** Air Conditioning

**AEA:** Association for Energy Affordability

**BAAD:** Bay Area Air District

**BayREN:** Bay Area Regional Energy Network

**BOS:** Board of Supervisors

**CARB:** California Air Resources Board

**CAP:** 2015 Climate Action Plan

**CAAP:** Updated 2024 Climate Action and Adaptation Plan

**CAISO:** California Independent System Operator

**CCA:** Community Choice Aggregator

**CCHS:** Contra Costa Health Services

**CEC:** California Energy Commission

**CO<sub>2</sub>:** Carbon Dioxide

**CPUC:** California Public Utilities Commission

**DER:** Distributed Energy Resources

**EPA:** Environmental Protection Agency

**EV:** Electric Vehicle

**GHG:** Greenhouse Gas

**HPWH:** Heat Pump Water Heater

**HVAC:** Heating, Ventilation, and Air Conditioning

**IOU:** Investor-Owned Utility

**LEED:** Leadership in Energy and Environmental Design

**MCE:** Community choice energy provider for most of Contra Costa County.

**NO<sub>x</sub>:** Nitrogen Oxide

**NO<sub>2</sub>:** Nitrogen Dioxide

**PSPS:** Public Safety Power Shutoff

# Executive Summary

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Energy usage from existing buildings is one of the largest contributors of greenhouse gas (GHG) emissions, responsible for approximately 30 percent of all the annual GHG emissions in unincorporated Contra Costa County. Transitioning existing buildings to use clean energy to reduce GHG emissions is a complex issue that requires a thoughtful, strategic approach that will not overburden our population. The most common approach to reducing GHG emissions in buildings is to transition buildings away from using gas as the building's fuel source.

The Clean Energy Roadmap for Existing Buildings is an action item specified in Strategy BE-2 of the County's Climate Action and Adaptation Plan 2024 Update (CAAP) adopted on November 5, 2024, by the County Board of Supervisors. The roadmap provides an initial assessment of the existing landscape in California for transitioning buildings to all-electric and highlights existing all-electric policies and plans at the local, regional, and State levels. The roadmap also highlights the many benefits that come with all-electric homes such as enhanced health and safety in homes as well as improved community resilience to the impacts of climate change. A strategic community engagement strategy is also outlined that centers on equity to inform our impacted communities in the County on the benefits of buildings operating on clean energy.

Below is a summary of the research and analysis conducted as well as a summary of the recommendations and next steps included in the County's Clean Energy Roadmap.

## **INITIAL RESEARCH RESULTS**

The research and analysis conducted by County staff for this roadmap is preliminary and serves as a framework for more comprehensive analyses in the future on the existing building stock characteristics, the costs associated with transitioning buildings to be all-electric, the current challenges and barriers to evaluate, and the policies that have been deployed successfully in other jurisdictions. Each research topic summarized below provides insight into the factors that influence the transition of existing buildings to all-electric and supports efforts to have buildings use clean energy that reduces or eliminates carbon dioxide emissions, therefore reducing GHG emissions and improving health.

Building Inventory – An initial building inventory was conducted for all the residential buildings in unincorporated Contra Costa County. It identified key characteristics such as building typology, vintage, and total square footage. The initial assessment found that 93 percent of all the residential buildings in the County are single-family homes and that 56 percent of those homes were constructed prior to 1978.

Cost Analysis – A brief overview of the issues around the cost of transitioning a building to all-electric is provided. This includes the factors that influence the cost of transitioning buildings to all-electric, such as new equipment, operational costs, and other unique factors. A comprehensive study specific to the County's region will need to be conducted to better understand how all these variables impact the cost of transitioning a home to be all-electric.

Facilitating an Equitable Transition –The roadmap highlights a number of issues to resolve to be equitable for County residents. This includes insufficient electrical panel capacity or outdated panel compatibility, outdated wiring in the home, prohibitive costs of adding solar panels and battery storage, and the landlord/tenant dilemma for making tenant improvements.

Policy Options and Other Strategies – A brief overview of the policy options and other approaches other jurisdictions have implemented is provided. This includes actions that trigger, through permitting, and require an upgrade to all-electric (e.g., major renovations) as well as a discussion on how these options through permitting are no longer feasible due to a recent court ruling. Also included is a strategy on decommissioning the gas distribution system through collaboration with investor-owned utilities (IOUs) and community choice aggregators (CCAs).

## **RECOMMENDATIONS AND NEXT STEPS**

This Roadmap includes specific recommendations and next steps based on the research and information collected for this report. Below is a summary of the recommendations and next steps. All recommended actions are intended to support staff in the ongoing effort to transition existing buildings to all-electric so that the County can reach the emission reduction goals outlined in its CAAP.

Regional and State Collaboration: Work with the County's Legislation Committee and Board of Supervisors to develop a policy framework that allows staff to establish new and/or expand existing relationships with regulatory agencies to support the goal of transitioning existing buildings to all-electric. It would enable staff to formally participate in public hearings, provide comments during the regulatory decision-making process, and petition for rulemaking from regulatory agencies like the California Energy Commission (CEC). It also includes collaborating with the IOUs, such as PG&E, and CCAs, such as MCE that service our region to gain a better understanding of the existing gas distribution system as well as explore the process and feasibility of decommissioning gas lines at a neighborhood/community scale.

Additional Analysis: Conduct additional analysis to expand on the work presented in this roadmap. This includes an expanded building inventory that will provide more data on the

condition of the existing building stock and more research on the costs of transitioning existing buildings to all-electric in the County.

### Outreach and Engagement

A specific outreach and engagement strategy is needed to communicate and collaborate with the residents of Contra Costa County that ensures that historically marginalized and unrepresented communities have a voice in planning for a clean energy transition. The roadmap outlines a specific framework for staff to follow to ensure that efforts around transitioning existing buildings to all-electric extend to all unincorporated communities throughout the County. This includes working with community-based organizations to engage and collaborate with our communities to further develop the various strategies that will provide better health outcomes and a more resilient future.

### Other Actions

There are other actions included in the roadmap that will strengthen the County's ability to succeed in this transition. These actions include seeking approval from the Board of Supervisors (BOS) to continuously pursue funding for this effort as well as further analysis of the policy options and issues related to facilitating an equitable transition for converting existing buildings to all-electric. It also includes implementing pilot projects, where appropriate.

# 1.0 Introduction

---

Climate change is one of the greatest challenges the world faces today.<sup>1</sup> The continued use of fossil fuels as an energy source has caused a build-up of greenhouse gases (GHG) such as carbon dioxide, nitrous oxide, and methane in the atmosphere. These gases and others are altering the chemical composition of the atmosphere and leading to a rise in the overall global temperature.

In 2015, Contra Costa County adopted its first Climate Action Plan (CAP) for the unincorporated areas of the County. The 2015 CAP states that the County is expected to experience more extreme heat events, reduced air quality, changes in sea level, less predictable water supply, and an increase in storm severity and frequency of flood events.

Since the adoption of its first CAP, the County has actively been working to mitigate its GHG emissions to reduce the severity of these expected impacts as well as help meet State and County climate goals. The County has made progress in meeting the goals of the 2015 CAP. Some major activities include providing marketing and outreach support for Bay Area Regional Energy Network (BayREN) programs to promote energy efficiency and all-electric retrofits, ongoing implementation of the County's low-income Weatherization Program, and piloting programs like the County's Asthma Initiative that links health impacts with energy efficiency. The County also has three LEED Gold certified County Administration Buildings, one of which also has a Total Resource Use and Efficiency (TRUE) building certification. In 2018, the County received grant funding through the California Strategic Growth Council to conduct a renewable resource potential study to identify more opportunities for renewable energy in the County and in 2020 adopted a solar overlay zone which allows ground-mounted solar in certain areas outside of the urban limit line. In addition, the County has installed solar and is upgrading to energy efficient lighting in County facilities on an ongoing basis.

On September 22, 2020, the Contra Costa County Board of Supervisors (BOS) passed Resolution 2020/256 which endorsed a declaration of a climate emergency in Contra Costa County, formally addressing the need for immediate action to combat climate change. The Climate Emergency Resolution included a range of initiatives, including that the County prioritize the implementation of its CAP and that the County should develop policies to require all new construction to be fully electric through the adoption of reach building codes. The Climate Emergency Resolution also acknowledges the process of updating its General Plan, Climate Action Plan (now the Climate Action and Adaptation Plan, or CAAP, and zoning codes, which provide an opportunity to follow State guidance for reducing greenhouse gas emissions for the unincorporated areas of Contra Costa County.

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<sup>1</sup> [www.nrdc.org/stories/what-are-effects-climate-change#weather](http://www.nrdc.org/stories/what-are-effects-climate-change#weather)

On November 5, 2024, the County Board of Supervisors (BOS) adopted the Contra Costa County 2045 General Plan and Contra Costa County Climate Action and Adaptation Plan (CAAP) 2024 Update. Consistent with the State’s GHG emission reduction goals, the County’s updated 2024 CAAP includes GHG reduction goals to 40 percent below 1990 levels by 2030 and achieve net carbon neutrality by 2045.<sup>2</sup>

The purpose of this roadmap is to facilitate the implementation of CAAP Strategy BE-2, which includes an implementation action to create a detailed County roadmap to convert existing homes and businesses to use low-carbon or carbon-free appliances. It also states that the roadmap should include steps to support converting buildings to rely on low-carbon or carbon-free energy using an equitable framework that minimizes the risk of displacement or significant disruptions to existing tenants.

Although the goal of the roadmap is to convert existing homes and businesses to use low-carbon or carbon-free appliances, such as having buildings be all-electric, the initial focus will be on residential buildings because they comprise a majority of the existing structures in the unincorporated areas of the County. This roadmap includes an overview of the benefits and challenges, an examination of what buildings have low-carbon or carbon-free appliances at the local and state level and a preliminary analysis of the costs associated with converting existing buildings to be all-electric. It also includes ways to center equity in all aspects of a transition to all-electric buildings and explore policy options and next steps to meet the County’s CAAP goals for existing buildings.

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<sup>2</sup> [www.contracosta.ca.gov/8683/Update-of-the-Climate-Action-Plan](http://www.contracosta.ca.gov/8683/Update-of-the-Climate-Action-Plan)

## 2.0 Benefits of All-Electric Buildings

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Existing buildings are responsible for approximately 30 percent of all the annual GHG emissions for unincorporated Contra Costa County, 19 percent of which come from residential buildings and 11 percent from non-residential buildings. Transitioning away from the use of fossil fuel infrastructure, such as gas in residential, commercial, and industrial buildings, has many health, safety, and climate resiliency benefits.

### 2.1 Health

The County has approximately 300,000 residents living in census tracts that rank in the 95<sup>th</sup> percentile or higher statewide for asthma-related emergency department visits; these census tracts are located primarily along the County's northern waterfront.<sup>3</sup> This is higher than any other county in California.

On average, Californians spend approximately 90 percent of their time indoors where the air quality can be more polluted than outdoors. Gas appliances emit harmful amounts of carbon dioxide (CO<sub>2</sub>) and nitrogen dioxide (NO<sub>2</sub>), which become trapped in the home, causing lasting health ramifications to occupants. For example, gas stoves in homes produce NO<sub>2</sub> concentrations that are 50-400 percent higher than homes with electric stoves.<sup>4</sup> These spikes often cause indoor air quality to far exceed the standards for outdoor air pollution. Children living in homes with gas stoves are 42 percent more likely to suffer asthma symptoms than those living in homes with electric stoves.<sup>5</sup> Particularly for those with moderate to severe asthma, eliminating the use of gas stoves and other appliances that use gas in the home are known to improve health outcomes.

### 2.2 Safety

California has one of the oldest gas distribution infrastructures in the United States. As the system continues to age, it becomes more vulnerable to gas leaks or complete failure. The U.S. Environmental Protection Agency (EPA) found that unplanned gas leaks, also known as fugitive gas leaks, occur in all parts of the gas distribution infrastructure.<sup>6</sup> The majority of the gas lost through leakage is methane, which is 25

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<sup>3</sup> [www.greenandhealthyhomes.org/publication/contra-costa-asthma-initiative/](http://www.greenandhealthyhomes.org/publication/contra-costa-asthma-initiative/)

<sup>4</sup> [www.rmi.org/press-release/health-air-quality-impacts-of-cooking-with-gas/](http://www.rmi.org/press-release/health-air-quality-impacts-of-cooking-with-gas/)

<sup>5</sup> [www.rmi.org/indoor-air-pollution-the-link-between-climate-and-health/](http://www.rmi.org/indoor-air-pollution-the-link-between-climate-and-health/)

<sup>6</sup> [www.epa.gov/natural-gas-star-program/primary-sources-methane-emissions](http://www.epa.gov/natural-gas-star-program/primary-sources-methane-emissions)

times more potent in its impact to the atmosphere than carbon dioxide.<sup>7</sup> Another safety risk associated with the gas infrastructure is accidental explosions caused during maintenance or excavation near gas pipelines.

Contra Costa County is also located in an area at high risk for earthquakes, near numerous earthquake faults including the San Andreas Fault, and all or portions of the Hayward, Calaveras, Concord, Antioch, Mt. Diablo, and other lesser faults. A study released in 2015 by the Working Group of California Earthquake Probabilities predicts that for the San Francisco region, the 30-year likelihood of at least one earthquake or more measuring/ 6.7 or larger magnitude is 72 percent. Scientists, therefore, believe that an earthquake of a magnitude 6.7 or larger is now slightly more than twice as likely to occur as to not occur in, approximately, the next 30 years. The California Seismic Safety Commission reported that 20-50 percent of post-earthquake fires can be directly attributed to leaks in the gas infrastructure.<sup>8</sup> The elimination of gas infrastructure in buildings would reduce the hazards associated with gas leaks during seismic events.

Fire is also a risk. Highly combustible dry grass, weeds, and brush are common in the hilly and open space areas in the County for 6 to 8 months of each year. Many of these combustible areas are adjacent to developed locations and are shown in the latest Fire Hazard Severity Zone Maps published in April 2024 by the California Department of Forestry and Fire Protection.<sup>9</sup> These areas are more prone to wildland fires, which threaten nearby buildings, particularly those with wood roofs, or sidings. This condition can be found throughout Contra Costa County, especially in developed and developing areas of the County. Earthquake gas fires due to gas line ruptures can ignite grasslands and stress resources to combat fires. The elimination of gas infrastructure in buildings would also reduce fire hazards of buildings located near highly combustible dry land areas.

## 2.3 Climate Resilience

As temperatures in Contra Costa County increase in the coming decades, so will our demand for energy. Air conditioning systems will run more frequently and for longer periods of time. Transitioning buildings to be all-electric will lead to an overall increase in electricity consumption. Increasing the level of community resilience to the various impacts associated with climate change is imperative and working to identify solutions that address multiple problems and present multiple benefits is a clear way to

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<sup>7</sup> [www.epa.gov/ghgemissions/overview-greenhouse-gases#methane](https://www.epa.gov/ghgemissions/overview-greenhouse-gases#methane)

<sup>8</sup> [www.ssc.ca.gov/wp-content/uploads/sites/9/2020/08/cssc\\_2002-03\\_natural\\_gas\\_safety.pdf](https://www.ssc.ca.gov/wp-content/uploads/sites/9/2020/08/cssc_2002-03_natural_gas_safety.pdf)

<sup>9</sup> [www.osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps](https://www.osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps)

accomplish this. Converting all appliances to electricity enhances resiliency to climate change through improved health and comfort in homes. Adding distributed energy resources (DERs), such as battery storage and solar panels also helps mitigate the impacts from an increased electricity load on the grid and furthers resiliency by adding protection against loss of power and public safety power shutoff (PSPS) events during high wildfire risk events. This is especially important for those in the community that are medically dependent on power. A common misconception with gas is that it serves as a redundant system during power loss events, however many gas appliances still require electricity to power fans and function.<sup>10</sup> Back-up generators that operate on diesel are a convenient option during loss of power; however, they cause more air pollution and create additional fire risk, further exacerbating climate change.

Eliminating the use of gas in existing buildings is a key strategy to reinforce community resiliency against climate change. Including battery storage and solar panels only serves to add to a household's overall resiliency. Unfortunately, many members in the community, especially those who live in areas disproportionately burdened by pollution, don't have adequate funding or resources to make these investments. Most also lack the authority to initiate the transition to all-electric due to different motivations for tenants and landlords to invest in these upgrades.<sup>11</sup> For the purposes of this roadmap and consistent with the County's General Plan, these burdened communities will be referred to as "impacted communities." To improve resiliency in the unincorporated County, especially our impacted communities, focus must be given to addressing these barriers so that these communities can experience the benefits that come with all-electric buildings.

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<sup>10</sup> [www.peninsulacleanenergy.com/myths-and-facts-about-gas-appliances-during-a-power-outage/](http://www.peninsulacleanenergy.com/myths-and-facts-about-gas-appliances-during-a-power-outage/)

<sup>11</sup> The "split incentive" or "tenant-landlord dilemma" refers to the situation where building owners do not directly benefit from increased comfort, better indoor air quality, and utility bill savings that can result from investments in energy efficiency upgrades. Tenants, who would benefit, usually lack the authority and the financing to make these investments.

## 3.0 Existing All-Electric Policies and Programs

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There are numerous policies and programs in place at the state, regional, and local levels that are either planned or are currently being implemented that support local agencies in adopting policies or initiatives to help convert existing buildings to all-electric. Below is an overview of the government actions being taken throughout the State and in Contra Costa County.

### 3.1 Statewide Policies and Plans

Transitioning existing buildings to all-electric is a strategy being deployed by California. These efforts, some of which are provided below, work collectively to position the State and the jurisdictions within it to convert our sources of electricity and the building stock to be less carbon intensive.

**Building Energy Efficiency Standards (Title 24) (1978):** California's building code for all new construction. The energy code is updated every three years and sets the requirements around energy efficiency and electrification. The most recent code became effective in January 2023 with updates that include requiring new homes installed with gas infrastructure to be electric-ready as well as standardizing electric heat pumps for water and space heating.<sup>12</sup>

**Assembly Bill 32 (2006):** The California Global Warming Solutions Act of 2006 formed the basis for subsequent policy, both through executive orders and legislation. Assembly Bill (AB) 32 required California to reduce its GHG emissions to 1990 levels by 2020. This is a reduction of 15 percent below emissions expected under a "business as usual" scenario with reductions coming from virtually all sectors of the economy through policies, planning, direct regulations, market approaches, incentives, and voluntary efforts. AB 32 was a success as target reductions across the state were achieved in 2016.<sup>13</sup>

**Senate Bill 350 (2015):** The Clean Energy and Pollution Reduction Act, which is implemented by the California Energy Commission (CEC), establishes more stringent clean energy and GHG reduction targets, including reducing GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.<sup>14</sup>

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<sup>12</sup> [www.dgs.ca.gov/BSC/About/History-of-the-California-Building-Code--Title-24-Part-2](http://www.dgs.ca.gov/BSC/About/History-of-the-California-Building-Code--Title-24-Part-2)

<sup>13</sup> [www.ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006](http://www.ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006)

<sup>14</sup> [www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350](http://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350)

**Senate Bill 32 (2016):** The California Global Warming Solutions Act of 2016 builds on AB 32 by requiring the California Air Resources Board (CARB) to reduce GHG emissions to 40 percent below the 1990 levels by 2030.<sup>15</sup>

**Executive Order B-55-18 (2018):** Governor Brown issued Executive Order B-55-18, which established an additional statewide goal of achieving carbon neutrality (no net GHG emissions) by 2045. Under this goal, any GHGs that are emitted by California must be fully offset by other activities by 2045. Though this goal does not yet have the force of law, it does indicate the direction in which the State is moving and may be a reference point for future legislative action.<sup>16</sup>

**Assembly Bill 3232 (2018):** The Low Carbon Buildings bill directs the CEC to prepare a Building Decarbonization Assessment in conjunction with the California Public Utilities Commission (CPUC), CARB, and the California Independent System Operator (CAISO). This report, which was published in August 2021, assesses the potential for California to reduce GHG emissions from buildings by 40 percent below 1990 levels by 2030.<sup>17</sup>

**Senate Bill 100 (2018):** The 100 Percent Clean Energy Act requires renewable energy and zero-carbon resources to supply 100 percent of electric retail sales to end-use customers by 2045. To help accomplish this, the bill updated the State's Renewables Portfolio Standard to ensure that at least 60 percent of California's electricity is renewable by 2030. The bill also established a requirement for the CEC, CPUC, and CARB to use programs under existing laws to achieve 100 percent clean electricity and issue a joint policy report which includes an initial assessment of additional energy resources and resource building rates needed to achieve 100 percent clean electricity. The first report was issued in 2021, and subsequent reports will be released every four years.<sup>18</sup>

**Senate Bill 1477 (2018):** The Clean Homes to Californians bill requires the CPUC to allocate \$50 million per year from cap-and-trade revenue until 2023 to support the Building Initiative for Low-Emissions Development (BUILD) and the Technology and Equipment for Clean Heating (TECH) pilot programs.<sup>19</sup>

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<sup>15</sup> [www.clear.ucdavis.edu/explainers/how-california-working-reduce-greenhouse-gas-emissions](http://www.clear.ucdavis.edu/explainers/how-california-working-reduce-greenhouse-gas-emissions)

<sup>16</sup> [www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf](http://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf)

<sup>17</sup> [www.leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB3232](http://www.leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB3232)

<sup>18</sup> [www.energy.ca.gov/sb100](http://www.energy.ca.gov/sb100)

<sup>19</sup> [www.nrdc.org/bio/merrian-borgeson/governor-signs-sb-1477-delivers-clean-homes-californians](http://www.nrdc.org/bio/merrian-borgeson/governor-signs-sb-1477-delivers-clean-homes-californians)

## 3.2 Regional Programs, Plans, and Studies

The San Francisco Bay Area has always been proactive in addressing climate change. The Bay Area Air District (BAAD), the regional authority for setting rules and planning around air quality in the Bay Area, routinely sets regulations to improve air quality and reduce GHG emissions. Below are some of the agency's recent actions focused on reducing GHG emissions.

**Clean Air Plan (2017):** BAAD developed the Clean Air Plan as a regional strategy to protect public health and address climate change. The plan defines a vision for transitioning the region to a post-carbon economy so that the region can meet identified GHG reduction targets for 2030 and 2050. Specific to all-electric buildings, the plan addresses ways to accelerate low carbon buildings, eliminate methane leaks, increase building energy efficiency, and convert space and water heating in buildings to all-electric.<sup>20</sup>

**BAAD Rules 9-4 and 9-6 Amendments (March 2023):** BAAD adopted amendments to appliance rules 9-4 and 9-6 which govern nitrogen oxide (NOx) emissions from fan type residential central furnaces and gas-fired boilers and water heaters. The 9-4 rule changes aim to lower the NOx emission limits in central furnaces in the short term and expand applicability of the rule to include non-residential settings. The rule bans the purchase of NOx emitting water heaters (i.e. gas water heaters) in the BAAD territory for residential buildings or standard commercial and industrial spaces starting in 2027. The ruling also bans the purchase of NOx emitting furnaces (i.e. gas burning furnaces) starting in 2029 with a ban on the purchase of NOx emitting larger commercial water heaters beginning 2031.<sup>21</sup>

## 3.3 California Jurisdictions with Adopted All-Electric Building Plans

While state and regional policies help support transitioning existing buildings to be all-electric, local government policy actions also have a key role in shaping future State and regional policy. This includes the adoption of local codes that either encourage or require buildings to become all-electric as well as other actions, such as the adoption of a local plan or initiative to reduce GHG emissions from existing buildings. Provided

<sup>20</sup> [www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf](http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf)

<sup>21</sup> [www.baaqmd.gov/rules-and-compliance/rule-development/building-appliances](http://www.baaqmd.gov/rules-and-compliance/rule-development/building-appliances)

below are some of the jurisdictions in California that have already adopted these types of plans or policies that support this effort.

**Alameda:** The City of Alameda adopted an Equitable Building Decarbonization Plan in January 2023. The plan presents a phased approach to shifting existing buildings from gas to all-electric in alignment with the City's climate, equity, and housing efforts.<sup>22</sup>

**Berkeley:** The City of Berkeley adopted an Existing Building Electrification Strategy in November 2021. This plan lays out research and recommendations to transition gas appliances in existing buildings to all-electric alternatives to benefit all residents, especially members of historically marginalized communities.<sup>23</sup>

**Half Moon Bay:** In February 2022, the City of Half Moon Bay adopted an ordinance requiring all gas lines to be capped or decommissioned in existing buildings by 2045.<sup>24</sup>

**Piedmont:** In October 2021, the Piedmont City Council adopted a Reach Code Ordinance that requires electrical panel replacement to include sufficient capacity to allow for the transition to all-electric appliances.<sup>25</sup>

**San Jose:** The City of San Jose launched the Electrify San Jose: Framework for Existing Building Electrification in May 2022. The plan includes strategies to encourage and expand awareness of and access to existing incentive programs for homes and businesses to become all-electric.<sup>26</sup>

**San Mateo:** In November 2022, the City of San Mateo adopted a Reach Code Ordinance that includes a variety of requirements related to increased electric panel capacity to prepare for future electrification, the installation of electric-readiness outlets in kitchen and laundry renovations, the installation of heat pump air conditioning and water heaters, and the prohibition of new gas infrastructure for outdoor equipment.<sup>27</sup>

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<sup>22</sup> [www.alamedaca.gov/files/assets/public/city-manager/documents/building-electrification/building-decarb-plan\\_jan-2023\\_final.pdf](http://www.alamedaca.gov/files/assets/public/city-manager/documents/building-electrification/building-decarb-plan_jan-2023_final.pdf)

<sup>23</sup> [www.berkeleyca.gov/your-government/our-work/adopted-plans/berkeley-existing-buildings-electrification-strategy](http://www.berkeleyca.gov/your-government/our-work/adopted-plans/berkeley-existing-buildings-electrification-strategy)

<sup>24</sup> [www.half-moon-bay.ca.us/761/Building-Electrification](http://www.half-moon-bay.ca.us/761/Building-Electrification)

<sup>25</sup> [www.piedmont.ca.gov/services\\_\\_departments/planning\\_\\_building/about\\_building\\_/reach\\_code\\_information](http://www.piedmont.ca.gov/services__departments/planning__building/about_building_/reach_code_information)

<sup>26</sup> [www.sanjoseca.gov/home/showpublisheddocument/90625/63801700033510000](http://www.sanjoseca.gov/home/showpublisheddocument/90625/63801700033510000)

<sup>27</sup> [www.cityofsanmateo.org/3363/Reach-Codes](http://www.cityofsanmateo.org/3363/Reach-Codes)

**Santa Monica:** The City of Santa Monica released a high-level Existing Building Electrification Roadmap in February 2023. The plan includes a building stock inventory, an analysis of the associated costs, and it outlines policy options to convert existing buildings to all-electric with a focus on equity.<sup>28</sup>

### 3.4 Contra Costa County Programs and Plans

The actions taken by the County to reduce GHG emissions started in 2005 with the Contra Costa County Climate Protection Report, which presented the County's first GHG emissions inventory. In 2015, the County adopted its first CAP, laying the groundwork for future and ongoing efforts to reduce GHG emissions in the unincorporated County. The County's current CAAP includes additional strategies to retrofit existing buildings and facilities to reduce energy use for conversion to low-carbon or carbon-neutral fuels. Below are County specific policies, programs, and plans that support this effort.

**Building Ordinance Reach Codes:** In January 2022, the County BOS approved an All-Electric Buildings Ordinance (Ordinance No. 2022-02), also known as a reach code, because it requires more stringent standards than that of the state, requiring all new construction of residential, office, retail, and hotels to be all-electric. On February 27, 2024, the County BOS suspended its the All-Electric Buildings Ordinance because of a decision on January 2, 2024, by the U.S. Court of Appeals 9<sup>th</sup> Circuit that invalidated the City of Berkeley ordinance that prohibited gas infrastructure in new buildings. The court held that the federal Energy Policy and Conservation Act ("EPCA"), a federal statute that regulates the energy efficiency of several consumer products including water heaters, furnaces, stoves, and heating, ventilation, and air conditioning (HVAC) systems, precludes cities and counties from adopting ordinances that prohibit the installation of gas plumbing in buildings.<sup>29</sup> To ensure the County could meet its CAAP goals, on October 1, 2024, the County BOS adopted Ordinance 2024-17 which amends the County's energy code to require higher energy efficiency for new residential and commercial construction.

**Contra Costa County Asthma Initiative (2019 – 2023):** The Asthma Initiative was developed through a technical assistance grant provided by Green and Health Homes Initiative (GHHI), in coordination with Contra Costa Health Services (CCHS), the County Weatherization Program, The Association for Energy Affordability (AEA), BayREN, and MCE (the County's community choice energy provider) to develop a business plan to implement a comprehensive home-based asthma program. After

<sup>28</sup> [www.santamonica.gov/press/2023/02/27/city-of-santa-monica-releases-existing-building-electrification-roadmap](http://www.santamonica.gov/press/2023/02/27/city-of-santa-monica-releases-existing-building-electrification-roadmap)

<sup>29</sup> <https://www.contracosta.ca.gov/8536/All--Electric-Buildings>

completion of the business plan in late 2019, CCHS was awarded grant funding from the Sierra Health Foundation (on behalf of the State's Health Division) and BAAD to implement and administer the Contra Costa Asthma Initiative. Program services include an assessment of the home to identify the primary asthma triggers and establish a remediation scope, including asthma trigger remediation, and energy efficiency and weatherization services to lower utility bill costs and improve comfort in the home. Program grant funding for this project ended in 2023, however the County is exploring how to implement a similar program on a long-term basis through the County's Health Plan or other funding sources.<sup>30</sup>

**Contra Costa County Weatherization Program:** The County weatherization program is a federal and state funded program designed to assist low and/or fixed income homeowners and renters in making their homes more energy efficient. The program provides a home evaluation and overview of potential energy efficiency measures needed as well as gas appliance testing at no cost to determine whether the test appliances are operating properly and safely. Core energy efficiency measures offered by the program include building envelope improvements and monitoring equipment such as programmable thermostats and carbon monoxide detectors. Gas appliances in the home that fail inspection are either repaired or replaced, potentially with an electric replacement.<sup>31</sup>

**PeakFLEX Demand Response Program:** In 2022, the Board approved participation in MCE's PeakFLEX Demand Response program for County facilities. The program incentivizes building-level electric load shifting and shedding during critical times of peak energy demand in California. The County successfully implemented a Demand Response strategy the Summer of 2022, when the California Independent System Operation called 9 consecutive "Flex Alert" days. By participating in the program, the County reduced electric usage across 20 office facilities by adjusting each building's operating hours, which in turn provided critical relief to California's burdened electric grid. The County received a program incentive of \$15,000 on top of an estimated \$3,000 utility bill cost reduction. The County will continue to participate in the program and increase the number of Demand Response tactics employed.

**Strategic Energy Management Program:** In 2022, the BOS approved participation in MCE's Strategic Energy Management program. The program incentivizes any measured or modeled energy savings resulting from County actions taken to reduce energy use in County buildings. The County Public Works Department is working with program implementers and County consultants, to draft a comprehensive Strategic Energy Management (SEM) program to govern, manage, report, and

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<sup>30</sup> [www.greenandhealthyhomes.org/publication/contra-costa-asthma-initiative/](http://www.greenandhealthyhomes.org/publication/contra-costa-asthma-initiative/)

<sup>31</sup> [www.contracosta.ca.gov/4336/Weatherization](http://www.contracosta.ca.gov/4336/Weatherization)

evaluate energy use from County operations. County SEM program strategies will reflect all Board-approved energy-related plans and initiatives through proactive management and continuous improvement.

**Strategic Energy Management Plan:** In January 2025, the BOS adopted the 2025-2035 Strategic Energy Management Plan for the County. This plan serves to direct and organize the County's energy investments to be aligned with the newly adopted Envision 2040 General Plan, CAAP, and other County plans, track performance related to energy investment at County facilities and promote stakeholder engagement both internally and externally.

**Local Energy Efficiency Pilot/Rebate or Grant Programs:** The County routinely obtains outside funding from other agencies or grants to implement various small scale energy efficiency programs throughout the County. Below is a list of the current programs being offered/administered by the County:

- [Pinole Energy Enhancement Rebate Program](#)
- [Bay Point / Pittsburg Energy Enhancement Pilot Program](#)

## 4.0 Building Inventory Analysis

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A comprehensive building inventory analysis is needed to enable the County to identify the specific building types that are less complex and costly to transition to all-electric and better understand the barriers to a cost-effective transition for all-electric buildings in the County.

The initial building inventory analysis conducted in this report focuses on residential buildings, which comprise a majority of building use types in unincorporated Contra Costa County. The analysis includes the number of residential structures, residential building vintages, and building square footage of these buildings. Maps were also created to highlight the existing makeup of home building types in the County's most impacted communities, referred to by the State as "disadvantaged communities" (DACs), as defined by Senate Bill (SB) 535. The specific impacted community maps can be found in Appendix A. Below is a summary analysis of the existing residential building landscape in unincorporated County.

For unincorporated Contra Costa County, there are approximately 51,715 residential structures, with over 90 percent identified as single-family homes. The remaining residences, which include smaller multifamily housing like duplexes, triplexes, and quadplexes alongside the typical 5+ unit multi-family buildings, account for less than 10

percent of the remaining housing stock. A detailed summary of this is provided in Table 4-1 below.

**Table 4-1 Residential Building Types**

Building Typologies	Total Buildings	Percentage of Buildings
Single-family Homes	47,970	93%
Small Multi-family (Duplex, Triplex, and Quadplex)	916	2%
5+ Multi-family, up to 3 floors	2,829	5%
Total Residential	51,715	100%

Figures 4-1, 4-2, and 4-3 below divide the age of homes built in unincorporated Contra Costa County into the following four categories: (1) pre-1978, (2) 1978-1991, (3) 1992-2010, and (4) 2011-present. These building age ranges were selected because they are often used in evaluating cost-effectiveness for existing energy efficiency programs operating throughout the State.

Figure 4-1

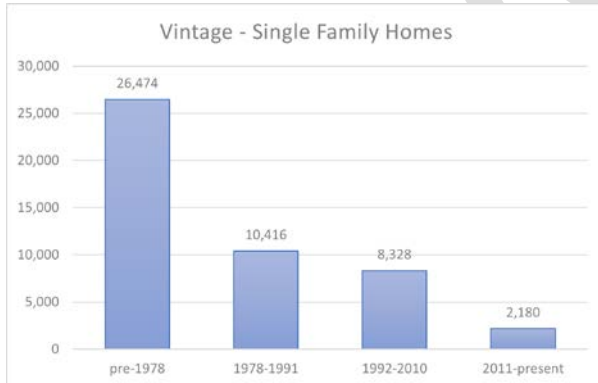


Figure 4-2

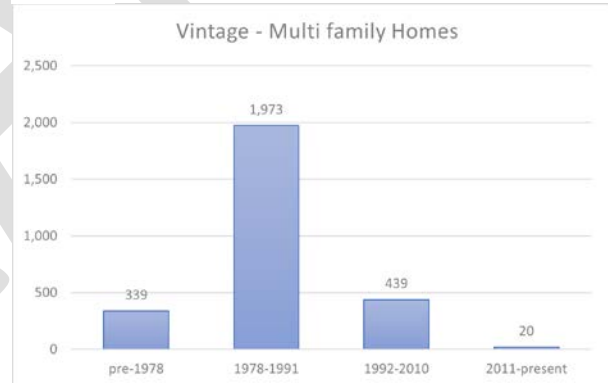
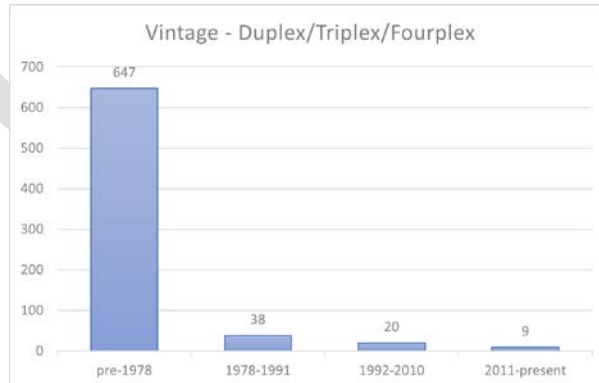


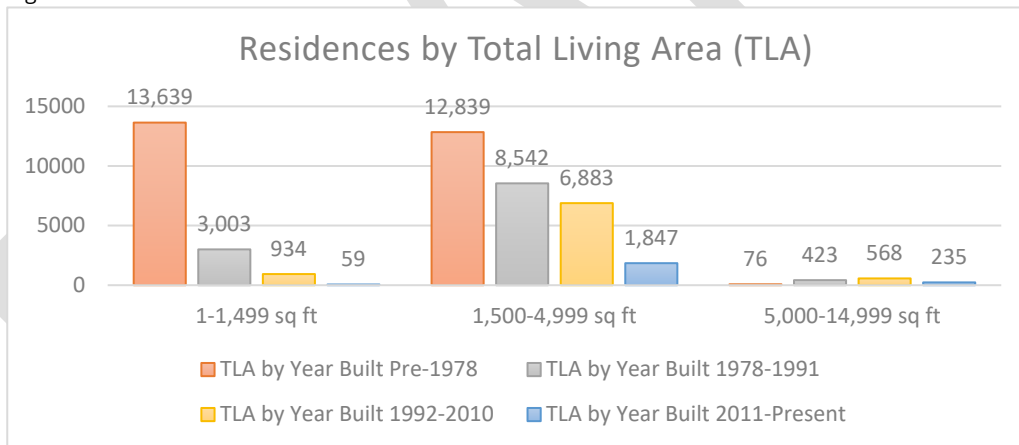
Figure 4-3



The year homes were built varies depending on housing type. For single-family homes, 56 percent were constructed prior to 1978, 22 percent between 1978-1991, 18 percent between 1992-2010, and only 5 percent in 2011 or later. Like single-family homes, the majority of duplexes, triplex, and quadplexes in the unincorporated County were constructed before 1978, accounting for 91 percent of all structures in this housing category. Of the multi-family housing in the unincorporated County, only 12 percent was built before 1978, with most of the multifamily housing, 71 percent, being built between 1978-1991. Multi-family homes built between 1992-2010 account for roughly 6 percent and homes built after 2010 account for less than 1 percent.

Another criterion used in this preliminary building inventory is the home's square footage, or total living area (TLA). Figure 4-4 below shows the breakdown of single-family homes by the TLA as well as when the homes were built and how many were constructed. For homes that were built prior to 1978, 52 percent are 1,500 sq ft or less and 48 percent are between 1,500 sq ft and 4,999 sq ft. Homes built post-1978 generally fall in the 1,500 – 4,999 sq ft category with homes of this size built between 1978-1991 at 71 percent, homes built between 1992-2010 representing 82 percent, and homes built after 2011 representing 86 percent.

Figure 4-4



The year, size, and type of homes built are all important factors in determining an approach to what types of homes should be targeted first for conversion to all-electric. These factors help with understanding what the building requirements are based on the age of the home, the expected electrical panel size and needs for upgrading if the home were to be made all-electric, as well as other barriers for certain building ages that may make it difficult for specific home configurations to make an all-electric transition. Additional analysis is needed to determine what building configurations are best suited for a cost-effective all-electric retrofit. A more detailed building inventory will also need to be

conducted for other building types (i.e., commercial, and industrial buildings). This is especially important for specific impacted communities, such as North Richmond, Bay Point, Pacheco, Rodeo, and Vine Hill.

## 5.0 Cost Analysis

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A key component in determining the feasibility of transitioning existing buildings to all-electric is cost. There are various factors that impact cost, such as the cost of the new equipment, operational costs, and other unique factors.

Since the mid-1900s, domestic appliances have been commonplace in homes. These appliances include water heaters, gas furnaces, clothes washers, clothes dryers, and cooking stoves. Historically, both gas and electricity have been used as a fuel source for home appliances with some appliances, such as a gas furnace, requiring both to operate. However, in recent years, as climate change awareness has increased and energy efficiency and cost savings have become more important to residents, more options for all-electric appliances have become available. To adequately prepare for this transition, an in-depth cost analysis specific to the County's geographic region is needed. This will work to inform the County on what resources may be needed or could be provided to better support a cost-effective all-electric transition that retrofits existing buildings and facilities to reduce energy use for conversion to low-carbon or carbon-neutral fuels. Specific information is needed on the cost differences between new gas and new electric appliances, the motivation of homeowners to stay with gas appliances or embrace all-electric appliances, and how incentive programs impact the cost of this transition.

Capital cost and operating costs of appliances also impact the overall cost of transitioning existing buildings to all-electric. Operating costs are influenced by utility rates, the efficiency of the appliance(s), heating and cooling loads, and resident behavior. Conducting a comparative analysis on the utility rates for gas versus electricity (including time-of-use rate programs) and the efficiency of the appliances would allow a better understanding of the benefits of all-electric buildings. Insufficient building insulation and inefficient appliances can also make it more costly to operate due to the space not retaining the desired temperature as well as resulting in more frequent heating and cooling appliance use.

Capital cost considerations that are specific to transitioning a building to be all-electric are the home's wiring configuration, the capacity of the electrical panel and the addition of solar panels and battery storage. Though not all homes will require an upgraded electrical panel and wiring, most will likely need to be replaced because most single-family homes in the unincorporated areas of the County were constructed prior to 1978, when the building

code was first adopted. The cost of needing a panel upgrade is expected to be a substantial barrier for transitioning buildings to be all-electric. Solar panels and battery storage present a different challenge because these additions are not required for a home to transition to all-electric. However, when paired with all-electric appliances, solar panels and battery storage result in higher energy cost savings. Like electrical panel and wiring upgrades, there are few incentives for solar and most of the available incentives are financing programs, which are less accessible to residents of impacted communities.

To better understand how all these variables impact the cost of transitioning a home to be all-electric, a comprehensive study will need to be conducted. A cost study will also be needed for other types of buildings, such as commercial and industrial.

## 6.0 Funding and Financing Opportunities

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Funding and financing opportunities will need to be leveraged to assist property owners with the cost of upgrading gas equipment to all-electric equipment. Understanding what funding opportunities are available to property owners, the incomes to which they are applicable, and the type of buildings that qualify are important considerations to determine where gaps in resources exist and where additional funding or resources need to be prioritized.

Below is an overview of the current rebate opportunities, tax credits, and financing mechanisms available for property owners located in unincorporated Contra Costa County that support or assist with converting buildings to be all-electric. Using these existing resources will be very important to determine where resources should be prioritized to meet the County's all-electric building(s) goals. The County may also determine if it wishes to develop its own financing program to assist its residents.

### 6.1 Rebate Opportunities

There are numerous rebate programs available that will reduce the cost of transitioning existing buildings to all-electric. These programs come from both the State and regional level and apply to a variety of appliance upgrades and energy efficient retrofits. This section includes an overview of the programs that are currently available.

#### **Bay Area Regional Energy Network (BayREN)**

BayREN is a network of local governments consisting of the nine Bay Area counties that work in collaboration to promote energy and water efficiency with the goal of reducing

greenhouse gas emissions. BayREN is funded by utility ratepayer funds through the CPUC and led by the Association of Bay Area Governments (ABAG).

[BayREN's programs](#)<sup>32</sup> provide the Bay Area with rebates, funding, technical assistance, education and more. BayREN manages 10 programs spanning four sectors: residential, cross-cutting, commercial and public sector.

## TECH

[The TECH Clean California](#)<sup>33</sup> initiative works to accelerate the adoption of clean space and water heating technology across California homes in order to help California meet its goal of being carbon-neutral by 2045. TECH operates statewide and offers incentives for Heat Pump heating, ventilation, and air conditioning (HVAC) systems and can be layered with other incentive programs such as BayREN.

## Self-Generation Incentive Program (SGIP)

[The SGIP program](#)<sup>34</sup> provides incentives for customer-side battery storage installation serving residential, small businesses, non-profit organizations, government agencies and educational institutions. The program is regulated by the CPUC and administered by the investor-owned utilities (IOUs) in California as well as the Center for Sustainable Energy (CSE), a non-profit organization. Since its creation in 2001, the program has evolved to include provisions that target low-income customers and disadvantaged communities as well as communities with an elevated risk of PSPS events due to wildfires. In April 2022, the program was expanded further to include incentives for heat pump water heater (HPWH) installations with half of the \$40 million allocated to be reserved for low-income utility customers.<sup>35</sup>

## MCE

MCE became California's first community choice aggregator (CCA) in 2010, procuring and providing electricity produced by renewable sources for the County of Marin and its jurisdictions. Since then, MCE has expanded to Napa County, parts of Sonoma County, and most of Contra Costa County, including 14 of the County's 19 jurisdictions as well as the unincorporated County<sup>36</sup>. In total, MCE provides service to over 540,000 customers with Contra Costa County accounting for the largest portion. In addition to serving as a clean energy provider, MCE offers a suite of customer programs to incentivize local

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<sup>32</sup> [www.bayren.org/how-we-work/our-programs](http://www.bayren.org/how-we-work/our-programs)

<sup>33</sup> [www.techcleanca.com/](http://www.techcleanca.com/)

<sup>34</sup> [www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/self-generation-incentive-program](http://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/self-generation-incentive-program)

<sup>35</sup> [www.selfgenca.com/](http://www.selfgenca.com/)

<sup>36</sup> The City of Hercules has been approved for membership in MCE. The enrollment of Hercules is expected to occur in spring 2025, after completion of regulatory approvals by the California Public Utilities Commission.

renewable energy development, grow the energy economy, and support energy equity across its communities. The incentives offered through MCE include energy efficiency and electrification retrofits for residential and commercial properties, electric vehicles and charging, as well as workforce development programs. Below is a list of the current programs offered by MCE

### Residential Programs

[Home Energy Savings Program](#)<sup>37</sup>: Free home energy assessment by a trained energy advisor for low-income households. The advisor recommends energy efficiency upgrades including attic insulation, duct sealing, pipe installation, and smart thermostats.

[Multifamily Energy Savings Program](#)<sup>38</sup>: Free comprehensive assessment and consultation for multifamily properties that have 5 or more units and offer affordable housing and/or is a deed-restricted property.<sup>39</sup> The assessment will identify opportunities for energy efficiency and electrification including HVAC, heat pumps, insulation, and window replacement.

[Emergency Water Heater Incentive](#)<sup>40</sup>: Provides contractors with \$1,500 to help cover the cost of installing and maintaining a temporary loaner water heater as part of the customer's permanent HPWH installation.

### Commercial and Industrial

[Commercial Energy Efficiency Program](#)<sup>41</sup>: Businesses that take service from MCE can receive free energy assessments and project specifications, rebates for a range of energy efficiency upgrades, start-to-finish project management and technical assistance, post-project quality assurance and financing assistance.

[Strategic Energy Management \(SEM\)](#)<sup>42</sup>: Provides businesses, municipalities, and multifamily properties (5 units or more) that are located within the MCE service area with an Energy Coach who will conduct a walk-through and assessment to learn current energy usage and help the customer reduce energy use through insights gained from custom-built energy models. The program goals are to help clients save from 3-15

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<sup>37</sup> [www.mcecleanenergy.org/home-savings/](http://www.mcecleanenergy.org/home-savings/)

<sup>38</sup> [www.mcecleanenergy.org/multifamily-savings/](http://www.mcecleanenergy.org/multifamily-savings/)

<sup>39</sup> **Deed Restricted Property**: A written agreement that accompanies the home's deed restricting the use or activities that may take place on the property. Oftentimes these restrictions are used to safeguard affordable housing by limiting any future sales of the home to income-eligible borrowers.

<sup>40</sup> [www.mcecleanenergy.org/heat-pump-water-heater-incentive/](http://www.mcecleanenergy.org/heat-pump-water-heater-incentive/)

<sup>41</sup> [www.mcecleanenergy.org/business-savings/](http://www.mcecleanenergy.org/business-savings/)

<sup>42</sup> [www.mcecleanenergy.org/energy-management/](http://www.mcecleanenergy.org/energy-management/)

percent on energy use, provide incentives of \$0.03/kWh and \$0.25/therm saved, and provide additional incentives for achieving program milestones.

[\*FLEXmarket\*](#)<sup>43</sup>: Pays aggregators for the actual grid value of energy savings achieved and commercial and residential projects. Aggregators can receive a 20 percent upfront cash payment of the forecasted value on energy efficiency projects to limit risk and preserve cashflow. This program does not provide direct incentives for all-electric appliances.

### Electric Vehicle and Charging

[\*MCE EV Rebate Program\*](#)<sup>44</sup>: Offers a \$3,500 instant rebate for new and leased EVs and \$2,000 for pre-owned EVs. In addition, this program will provide application support for additional rebates through the Clean Vehicle Rebate Project (CVRP) offered through the state. This program is limited to applicants that are enrolled in an existing low-income assistance program (see MCE website for list of programs) or for applicants that meet the income requirements established by MCE.

[\*MCE EV Charging and Multifamily Properties\*](#)<sup>45</sup>: Provides incentives for multifamily property owners for EV charger installation. This program also provides education materials and technical assistance and can be stacked with rebates from other programs.

[\*MCE Sync\*](#)<sup>46</sup>: An EV smart charging app that helps users automate EV charging to use the least expensive and cleanest energy available. In addition to EV charging automation and scheduling, this program provides up to \$10 cash back per month for charging during “low-carbon events”.

### Workforce

[\*Workforce Opportunities for Contractors and Pathways for Job Seekers\*](#)<sup>47</sup>: MCE provides free electrification workshops and partners with local workforce development programs to match pre-qualified job seekers with contractors that work on electrification projects and need staff. Job seekers are provided free, comprehensive job training as well as paid, on-the-job experience with a vetted contractor. This allows job seekers to gain green job experience at no cost so that they have an edge on future employment opportunities.

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<sup>43</sup> [www.mcecleanenergy.org/flexmarket/](http://www.mcecleanenergy.org/flexmarket/)

<sup>44</sup> [www.mcecleanenergy.org/ev-rebate/](http://www.mcecleanenergy.org/ev-rebate/)

<sup>45</sup> [www.mcecleanenergy.org/ev-charging/](http://www.mcecleanenergy.org/ev-charging/)

<sup>46</sup> [www.mcecleanenergy.org/mce-sync/](http://www.mcecleanenergy.org/mce-sync/)

<sup>47</sup> [www.mcecleanenergy.org/contractors/#gwp](http://www.mcecleanenergy.org/contractors/#gwp)

[Green Workforce Pathways \(GWP\) Program](#)<sup>48</sup>: This program connects job seekers with career opportunities in the electrification industry. MCE works with local organizations to help develop training programs, offer specialized energy efficiency courses, and provide career readiness materials.

## **Pacific Gas and Electric (PG&E)**

PG&E is the investor-owned utility that provides gas and electricity to the San Francisco Bay Area as well as a large portion of northern and central California.

[Energy Savings Assistance \(ESA\) Program](#)<sup>49</sup>: Free energy efficiency upgrades and appliance replacement for low-income homeowners and renters living in a home that is at least 5 years old.

[Generator and Battery Rebate Program](#)<sup>50</sup>: In response to the increasing frequency of PSPS events, PG&E has started offering a \$300 rebate for the purchase of a qualifying product (battery or generator) to prepare for power outages.

[Portable Battery Program](#)<sup>51</sup>: In response to the increasing frequency of PSPS events, PG&E provides backup batteries for customers who rely on medical devices.

[California Golden State Rebate Program](#)<sup>52</sup>: The ratepayer-funded California Golden State Rebate program is authorized by the CPUC and supported by the major IOUs in California, including PG&E. The program offers rebates (via coupons) for HPWH and room air conditioner installations.

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<sup>48</sup> <https://mcecleanenergy.org/building-the-workforce-for-our-clean-energy-future/>

<sup>49</sup> [www.pge.com/en/save-energy-and-money/energy-saving-programs.html](http://www.pge.com/en/save-energy-and-money/energy-saving-programs.html)

<sup>50</sup> [www.pge.com/en/outages-and-safety/outage-preparedness-and-support/general-outage-resources/generator-and-battery-rebate-program.html](http://www.pge.com/en/outages-and-safety/outage-preparedness-and-support/general-outage-resources/generator-and-battery-rebate-program.html)

<sup>51</sup> [www.pge.com/en/account/billing-and-assistance/financial-assistance/portable-battery-program.html](http://www.pge.com/en/account/billing-and-assistance/financial-assistance/portable-battery-program.html)

<sup>52</sup> [www.goldenstaterebates.clearexult.com/](http://www.goldenstaterebates.clearexult.com/)

## 6.2 Inflation Reduction Act Rebates and Tax Credits<sup>53</sup>

The United States Government passed the Inflation Reduction Act in 2022 to curb inflation and as one of the strategies, the legislation promotes clean energy through rebates for energy efficiency retrofits as well as solar and EV charger installation. The following tax credits can be utilized by both single-family homeowners and multi-family property owners.

Measure	Rebate	Tax Credit
HP HVAC	up to \$8,000	30% of cost up to \$2,000
HPWH	up to \$1,750	30% of cost up to \$2,000
HP Clothes Dryer	up to \$840	N/A
Electric Stove	up to \$840	N/A
Building Weatherization	up to \$1,600	30% of cost up to \$1,200
Electrical Panel Upgrade	up to \$4,000	30% of cost up to \$600
Electrical Wiring	up to \$2,500	N/A
Home Energy Audit	N/A	30% of cost up to \$150
Battery Storage (2022-2023)	N/A	30% of total cost
Solar Energy Systems (2022-2023)	N/A	30% of total cost

## 6.3 Financing Options

For many property owners, particularly those located in Impacted Communities, it will be a substantial financial burden to make any energy efficiency or all-electric building retrofits. A transition to all-electric in all existing buildings will need to leverage existing financing options as well as come up with other, more creative financing options. Beyond the traditional lending options (i.e., home equity loan or personal loan), below are other financing options available for property owners and businesses to transition their gas appliances to all-electric.

<sup>53</sup> [www.rewiringamerica.org/app/ira-calculator](http://www.rewiringamerica.org/app/ira-calculator)

Tariff On-Bill Financing (TOBF)<sup>54</sup>: TOBF, or Inclusive financing, allows utilities to finance clean energy upgrades for low- and middle-income households without dealing with credit or income level issues. TOBF is similar to traditional on-bill financing except it does not require the loan recipient to be approved by the utility or a third-party financier for the loan. This enables utilities to provide capital for electrification upgrades and then recoup their cost through a tariff added to the customer's utility bill. The tariff charge is tied to the service address as well as the upgrade made.

On-Bill Financing (Traditional)<sup>55</sup>: On-bill financing of retrofits enables non-residential customers to obtain loans from their utility provider to fund the upfront costs of electrification and weatherization projects. The customer pays the loan back using cost savings that result from the project. Once the loan is repaid, subsequent savings go directly to the customer. PG&E offers on-bill financing with loans ranging between \$5,000 and \$4,000,000 through its interest free loan program. PG&E also offers loans smaller than \$5,000 through the GoGreen Business Financing Program.<sup>56</sup>

GoGreen Home Energy Financing (GoGreen Home)<sup>57</sup>: The GoGreen Home program, formerly known as the Residential Energy Efficiency Loan (REEL) program, is a statewide loan program that provides incentives for homeowners to make home energy efficiency improvements by offering a credit enhancement to mitigate the risk of default. These credit enhancements essentially improve the credit risk of a borrower which in turn improves the terms for repaying the debt. This allows participating lenders to offer lower rates, higher loan amounts, longer payback periods, and a broader base of borrowers. The program is available to single-family homes, condos, townhomes, manufactured homes and duplexes, triplexes, and fourplexes. In early 2022, the Go Green Home program partnered with the TECH initiative to expand the equipment and associated costs that are eligible for credit enhancements through GoGreen Homes based on fuel source. This partnership results in a streamlined pathway to home electrification for California residents.

GoGreen Multifamily Energy Financing (GoGreen Multifamily)<sup>58</sup>: The GoGreen Multifamily program provides financing options to eligible multifamily property owners for energy efficiency upgrades. Financing types include leasing, equipment financing agreements, and energy service agreements for existing properties. Eligibility is contingent on the property having five or more units with at least 50 percent of the units categorized as income restricted, the property must have a minimum of five years

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<sup>54</sup> [www.aceee.org/toolkit/2017/02/bill-energy-efficiency](http://www.aceee.org/toolkit/2017/02/bill-energy-efficiency)

<sup>55</sup> [www.pge.com/pge\\_global/common/pdfs/save-energy-money/financing/energy-efficiency-financing/handbook\\_obf.pdf](http://www.pge.com/pge_global/common/pdfs/save-energy-money/financing/energy-efficiency-financing/handbook_obf.pdf)

<sup>56</sup> [www.gogreenfinancing.com/smallbusiness](http://www.gogreenfinancing.com/smallbusiness)

<sup>57</sup> [www.gogreenfinancing.com/residential](http://www.gogreenfinancing.com/residential)

<sup>58</sup> [www.gogreenfinancing.com/multifamily](http://www.gogreenfinancing.com/multifamily)

remaining on the affordability covenant when qualified, and the property must receive a gas or electricity bill from PG&E, or another participating utility.

Property Assessed Clean Energy (PACE)<sup>59</sup>: PACE programs are financing mechanisms designed for residential and commercial properties to fund energy efficiency, electrification, and renewable energy improvements. This includes, but is not limited to, replacement and/or installation of HVAC system, solar panels, EV charging, battery storage, as well as projects that improve seismic and wildfire resiliency. PACE is unique from other financing mechanisms in that a PACE loan is tied to the property rather than the individual. This means that when a home is purchased with an active PACE loan tied to it, the new property owner is responsible for the loan payments. Contra Costa County has approved four PACE financing providers to work with property owners in unincorporated areas of the County.

Refundable Transfer Tax: A refundable transfer tax for converting to all-electric is a financing mechanism that levies a refundable tax on the sale of a home for which the home buyer can then be reimbursed upon the completion of a partial or full transition to all-electric. Should the buyer decide not to make any upgrades that bring it closer to or fully transition the home to all-electric, the home buyer will forfeit the tax refund.

Restructuring Permit Fees: The County collects permit fees for new construction, additions, alterations, remodels, for any conversion or replacement of an electrical or gas system, and more. An option would be to reduce the permit fees associated with retrofits that improve energy efficiency and/or result in the replacement of a gas appliance with an electric equivalent.

## 6.4 Existing Funding Models to Explore

Richmond Community Foundation (RCF) Model<sup>60</sup>: In partnership with the City of Richmond, the Richmond Community Foundation has developed a solution for addressing blighted properties and barriers to home ownership through social impact bonds from private capital to fund the rehabilitation of abandoned properties. These properties are then advertised and sold to first time home buyers. Though this model doesn't directly address all-electric building retrofits, it does provide a potential framework for other jurisdictions to adopt and modify so that the homes that are rehabilitated are outfitted to be all-electric. Identifying the potential impact of a program of this nature will require an analysis to determine the frequency of property types this program reaches in unincorporated Contra Costa County. This includes

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<sup>59</sup> [www.energy.gov/scep/slsc/property-assessed-clean-energy-programs](http://www.energy.gov/scep/slsc/property-assessed-clean-energy-programs)

<sup>60</sup> [www.rcfconnects.org/community-initiatives/restoring-neighborhoods/richmond-housing-renovation-program/](http://www.rcfconnects.org/community-initiatives/restoring-neighborhoods/richmond-housing-renovation-program/)

properties that are abandoned or extremely dilapidated, properties that have unaddressed code violations or significant tax delinquencies, and properties that have defaulted on the mortgage. Exploring the feasibility of implementing this financing model or others that are similar will be important in supporting the County's all-electric building(s) goals.

## 7.0 Centering Equity

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Impacted communities exist throughout the County, however, the majority of the impacted communities are concentrated along the Northern Waterfront and in East and West County. In many cases, these communities consist of minority groups that have been historically marginalized including Black, Latino/a/x, Asian, and Indigenous and Communities of Color (BIPOC). Additionally, and oftentimes concurrently, the residents living in these communities have limited income, live with a disability, are non-English speaking, elderly, or part of the LGBTQ community.

The effort needed to make our existing buildings be all-electric in unincorporated Contra Costa County we will need to consider equity in the process. Transitioning buildings to all-electric in these communities presents an invaluable opportunity to improve on the inequities around housing that persist in the County today. To address equity in this roadmap we will use the Greenlining Institute's definition of equity, which states that equity is "increasing access to power, redistributing and providing additional resources, and eliminating barriers to opportunity, in order to empower low-income communities of color to thrive and reach full potential". This means that those living in impacted communities should have an equal opportunity to experience the benefits of transitioning to all-electric such as health, comfort, improved resilience, and economic benefits.

Communities in the County have varying needs and backgrounds and it will be important to develop strategies and policies that are targeted for these varying needs. Exploring policies that prevent resident displacement, particularly when home improvements are made. This approach will consider the concept of Targeted Universalism in the strategy and policy planning around this transition. Targeted Universalism, as outlined in the Haas Institute *Primer on Targeted Universalism*<sup>61</sup>, seeks to establish a general policy goal while also identifying strategies to specifically address impacted communities. This serves to ensure that both impacted communities and the greater population stand to benefit from the established policy.

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<sup>61</sup> [www.belonging.berkeley.edu/targeted-universalism](http://www.belonging.berkeley.edu/targeted-universalism)

The Greenlining Institute's Equitable Building Electrification Framework<sup>62</sup> outlined below, serves as a framework to be used to engage the community on the County's all-electric buildings approach. The Greenlining framework consists of five steps that are outlined to serve as a guide for jurisdictions, such as the County, to ensure that community engagement is equitable and supports the overall goal.

### The Greenlining Framework

**1. Step 1: Assess the Communities' Needs.**

This should include understanding the barriers preventing community members from transitioning their homes to all-electric as well as the residents' knowledge around building electrification.

**2. Step 2: Establish Community-Led Decision-Making.**

Input and engagement from the community serves to strengthen the overall program design quality by ensuring local buy-in and investment, and deliver tangible local benefits rooted in the lived experiences of everyday people. Partner with community-based organizations to develop a decision-making process that ensures that decisions are based on community needs and priorities.

**3. Step 3: Develop Metrics and a Plan for Tracking.**

Metrics should include both clean energy benefits like greenhouse gas reductions and community benefits such as local hires and residents' ability to pay their energy bills without sacrificing other essential expenses.

**4. Step 4: Ensure Funding and Program Leveraging.**

Current low-income energy programs often fail to deliver maximum benefits to all qualifying households due to short and unpredictable funding cycles, poor program design that inadequately reaches qualifying customers, or lack of coordination and integration with complementary programs.

**5. Step 5: Improve Outcomes.**

Using the tracking and metrics plan described above, ensure that there is a continuous feedback loop to improve current and future programs' reach and impact in Environmental and Social Justice Communities. Consider adjustments to ensure the program reaches the people it seeks to reach and delivers the intended benefits.

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<sup>62</sup> [www.greenlining.org/publications/equitable-building-electrification-a-framework-for-powering-resilient-communities/](http://www.greenlining.org/publications/equitable-building-electrification-a-framework-for-powering-resilient-communities/)

## 7.1 Community Engagement Approach

Using the Greenlining Framework as a guide, the County should develop a strategy for working with communities that build trust with all stakeholders who may be involved in an all-electric transition. Community engagement efforts should be transparent and place emphasis on co-creation throughout the process.

### Preparing for Community Engagement

Understanding Community Level Data: Prior to working with the community, staff will need to develop an understanding of the composition and geographic distribution of all communities. This will include data on socio-economic demographics as well as burdens faced by communities such as air quality, climate resilience, and energy costs.

Determine Key Issues: Through activities such as literature review and policy analysis, a building inventory assessment, meeting with technical experts and community members, and consultation of the specific community profiles developed in the County's Envision 2040 General Plan, the County can build its understanding of the most pressing issues communities face as they work to make the existing building stock all-electric.

Establish Relationships with Community-Based Organizations (CBOs): The role of CBOs in engaging the community cannot be understated. CBOs will provide an invaluable perspective about the communities with which they work. CBOs can help convey the financial and economic needs, the social and human assets, and the values of the community, providing an understanding of the power dynamics within the community.

Consider Establishing a Steering Committee: A steering committee composed of members who understand the function and capabilities of the community engagement process can help ensure the process continuously leads to positive outcomes.

Work With Community Stakeholders Prior to Engagement Process: It is important that the all-electric building strategy is developed in collaboration with the community in order to address strategy development. This requires working with stakeholders to establish a mutual understanding and metrics for assessing goals and potential strategies and establishing recommendations. Community engagement should prioritize working with community leaders to define as many relevant community partners and stakeholders as possible to ensure that all community groups, especially impacted groups, have a voice in planning the strategy.

## Proposed Community Engagement Process

Engage the Community through CBOs: The initial stages of community engagement will focus on educating the public on the County plans around all-electric buildings for existing buildings. This would include an overview of the benefits of having buildings be all-electric. CBOs would serve as a bridge between local government and community groups and members who are best positioned to provide input, feedback, or assist with the initial outreach efforts in coordination with the County. CBOs can set up meetings with community leaders and other groups, especially those representing impacted communities, to build trust. Because the County will be requesting feedback from community members, providing compensation for their time through use of stipends is critical to the success of the effort. County staff should work to identify funding mechanisms to cover this cost, either through grant or County funding.

These meetings can also serve as a place for feedback on the County's goal to reduce greenhouse gas emissions from existing buildings as well as provide direction on how to reach the broader community at-large. County staff should also explore partnerships with all other County departments in developing the outreach strategy, such as the Office of Racial Equity and Social Justice, the County Health Department, the Employment and Human Services Department and Department of Conservation and Development.

As the CBOs work with the County on initial outreach to communities, the County will connect with other stakeholders. These should include, and are not limited to, unions such as the Electrical Workers Union (IBEW Local 302) and the Plumbers and Steamfitters Union (Local 159), environmental organizations like 350 Contra Costa, the East Contra Costa Community Alliance and Rising Sun, community colleges, faith organizations, and other similar groups.

Acknowledge and Understand Community Feedback: As communities become informed about the benefits of all-electric buildings and trust is established between the communities and the County, feedback would be gathered from the community on the opinions and concerns related to this transition. In addition to receiving community feedback, the County will look to explore other options for this type of transition, including the exploration of alternative pathways for making buildings all-electric.

To help bolster widespread community comprehension and increase community participation, the County will look at ways to host educational workshops and use focus groups to help inform communities on electrification technology, available incentives, and the health and safety benefits of having buildings be all-electric.

County and Community Co-Create Draft Strategy: A co-created draft strategy should be developed for strategically engaging with specific community groups on the barriers

and other considerations that need to be contemplated in working to transition buildings in their community to be all-electric.

## 7.2 Workforce Development

Transitioning our buildings to be all-electric in the County is an opportunity to increase the number of high-quality jobs that pay a living wage. Making buildings all-electric will require one or more specialized tasks such as building weatherization, replacement of appliances, electrical panel and wiring upgrades, energy efficiency upgrades, or battery backup and solar photovoltaic (PV) power. This transition can lead to the creation of more high-quality job opportunities which will in turn necessitate a trained workforce. It will also require a focus on maintaining the existing contractor pool by continuing to provide resources and training through programs like BayREN.

To address the eventual need for more trained contractors, coordination will be needed with the Workforce Development Board of Contra Costa County (WDBCCC) and the Contra Costa County Department of Conservation and Development's Economic Development team on outreach to local trade schools, leveraging existing relationships with community colleges that provide information on pathways to becoming trained to work on transitioning buildings to be all-electric. Coordinating this effort should also be integrated into the Economic Development team's work around the County's Just Transition to an economy that is less reliant on fossil fuels.

## 8.0 Facilitating an Equitable Transition

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Moving to all-electric buildings includes a number of issues that must be resolved if the transition is going to be equitable for all County residents. Those issues are described below.

**Electrical Panel Capacity and Wiring:** Electrical panel capacity can be a significant barrier to cost-effective all-electric buildings. Existing residences in unincorporated areas vary widely by vintage and oftentimes lack sufficient capacity to accommodate newer all-electric appliances. Homes of average size built in the 1980s are typically equipped with 200-amp service, the minimum service level currently required for new home construction. Whereas homes built prior to the 1980s may be outfitted with any number of panel sizes, such as 100-amp or 60-amp service, depending on the year the home was built or if the home has had any significant upgrades. As shown in this report, the housing stock in the unincorporated county, which consists of 93 percent single-family homes and consists

primarily of homes that were built prior to 1978. This indicates that over half of the existing single-family homes could require panel upgrades.

Wiring is also a factor that presents a challenge for transitioning buildings to be all-electric. When designing electrical systems for homes, 240-V outlets are often only located where they'll be needed; historically limited to clothes dryers and in some cases for electric stoves. This has resulted in the majority of homes being insufficiently equipped to successfully transition homes to be all-electric. For this transition, many homes will need to have rewiring work completed to accommodate the newer appliances that require 240-V outlets. This will increase the cost burden. As the County explores pathways for a cost-effective all-electric building(s) transition, high priority must be given to mitigate the challenges around electrical panel and wiring upgrades.

The cost of an electric panel upgrade and associated rewiring may be the most significant barrier to making homes all-electric in the County. Determining how best to upgrade an electric panel that minimizes the impact on the overall electric grid capacity needs to be considered in evaluating the best approach to transitioning buildings to be all-electric.

**On-site Solar Photovoltaic (PV) and Battery Storage:** Barriers for installing solar PV and battery storage impact low income and impacted communities more than the broader community. The largest barrier is cost, as solar PV requires high upfront cost if paying out of pocket or a relatively high credit score to access financing options. Furthermore, there is a lack of incentives available for low-income and impacted communities for on-site solar PV and battery storage. Another common barrier is that low-income and impacted communities often face issues around site suitability, which also impacts cost. Roofs oftentimes require repair or replacement before solar PV can be installed and the electrical wiring and panel of a home may need to be upgraded, as described above. In the case of renter-occupied properties, renters lack the decision-making authority to initiate investments in solar PV and battery storage.

To overcome these barriers the County will need to explore creative solutions. One approach and promising example of a creative solution is the EnergyScore risk indicator<sup>63</sup> developed by Stanford University, the Massachusetts Institute of Technology (MIT), and a community solar company, Solstice, designed to provide an alternative metric to predict a customer's future payment behavior more accurately than the FICO credit score, which is the current standard. Rather than focusing on a customer's overall credit history, EnergyScore utilizes the customer's utility bill payment history to gauge future payment history, thereby ensuring that potential customers with lower FICO scores are not automatically disqualified from financing. In addition to removing the barriers to those without exemplary credit scores, this model also could enable utility companies to

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<sup>63</sup> [www.globalenergyinstitute.org/international-energy-security-risk-index](http://www.globalenergyinstitute.org/international-energy-security-risk-index)

consolidate the utility bill with community solar repayment so that the customer would only receive one bill and would be less likely to default on the financing payments for solar PV.

Another option is facilitating community-scale solar projects with battery storage, rather than projects on individual rooftops. Community solar projects are defined by the U.S. Department of Energy as:

...any solar project or purchasing program, within a geographic area, in which the benefits flow to multiple customers such as individuals, businesses, nonprofits, and other groups. In most cases, customers benefit from energy generated by solar panels at an off-site array.

Community solar customers typically subscribe to—or in some cases own—a portion of the energy generated by a solar array and receive an electric bill credit for electricity generated by their share of the community solar system. Community solar can be a great option for people who are unable to install solar panels on their roofs because they are renters, can't afford solar, or because their roofs or electrical systems aren't suited to solar.<sup>64</sup>

Community solar projects, paired with battery storage for backup, may be a more efficient and cost-effective option for providing solar energy in unincorporated areas of the County.

**Displacement and Tenant/Landlord Constraints:** As the County creates a strategy to transition existing buildings to all-electric, it is important to ensure that retrofits don't displace renters or homeowners. Any strategy or policy addressing all-electric conversion of existing buildings should develop strategies to support housing preservation and tenant protections. Property owners of single family and multifamily buildings encounter numerous obstacles when transitioning buildings to be all-electric. These obstacles are highlighted in the American Council for an Energy-Efficient Economy's (ACEEE), Energy Equity for Renters Toolkit<sup>65</sup>, and include,

- Lack of awareness or knowledge
- Lack of resources
- Deferred Maintenance
- Split Incentives

Addressing these barriers is paramount in the overall effort to transition our existing building stock to all-electric. Staff should explore strategies for addressing the

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<sup>64</sup> <https://www.energy.gov/eere/solar/community-solar-basics>

<sup>65</sup> [www.aceee.org/toolkit/2022/11/energy-equity-renters-toolkit](http://www.aceee.org/toolkit/2022/11/energy-equity-renters-toolkit)

tenant/landlord dilemma that are being deployed in other jurisdictions to determine their feasibility as a strategy in Contra Costa County.

**Ensuring Energy Reliability:** With the increase of electric appliances in homes and businesses, it is anticipated that communities in Contra Costa County will become more dependent on the electrical grid. The California electrical grid, operated by the California Independent System Operator (CALISO), delivers over 239 million megawatt hours (MWh) per year to approximately 30 million consumers.<sup>66</sup> The grid operates under a delicate balance. Because electricity is difficult to store, the grid must maintain a balance that ensures that electricity consumption matches electricity production as closely as possible. Increasing the number of all-electric homes will strain the grid while utility companies and energy providers work to build capacity. For this reason, communities throughout the County and beyond will need to take steps to make homes more energy efficient to help to reduce power disruptions.

As Contra Costa County pushes forward to transition its existing building stock to all-electric to meet its CAAP target goal of carbon neutrality by 2045, the County must take actions to better insulate itself from the potential of an unreliable grid. These actions will need to focus on multiple areas including minimizing demand on the grid from our building stock to the greatest extent feasible, enhancing the energy resilience of the building stock, developing policies and programs that support grid stability and increase renewable generation, as well as partnering with regulatory agencies, utility companies, and other government agencies at the local, regional, and state level.

Minimizing demand on the grid from our building stock is necessary for maintaining grid stability and energy reliability to residents in the County. As more buildings transition to all-electric, energy efficiency, building envelope improvements, and load management will become increasingly important strategies. Homes transitioning to all-electric should be outfitted with high-efficiency appliances and building envelope improvements such as wall and attic insulation, multi-pane windows, and air sealing to minimize energy loss. Residents will also need to shift energy use habits to avoid drawing from the electrical grid during peak demand periods which generally run from 4:00 p.m. to 9:00 p.m. and shift the use of operating high energy use appliances such as clothes dryers and electric vehicle charging during off-peak times.

Local utility companies and others play an important role in shifting consumer behavior by offering demand response programs like the Power Saver Rewards Program offered by PG&E, which provides consumers with credit to their bills for minimizing energy

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<sup>66</sup> [www.caiso.com/Documents/CaliforniaISO-GeneralCompanyBrochure.pdf](http://www.caiso.com/Documents/CaliforniaISO-GeneralCompanyBrochure.pdf)

consumption during peak demand periods or the SmartAC device that remotely shifts air conditioning use to off-peak times to reduce strain on the grid.<sup>67</sup>

Building resilience through distributed energy resources (DER) is another strategy for maintaining overall grid stability and improving energy reliability for residents. DER consists of small, modular, energy generation and storage technologies that provide electric capacity such as solar panels, battery storage, and electric vehicles.<sup>68</sup> Installing solar panels on homes reduces the demand on the grid during peak times and when paired with battery storage provides the added benefit of allowing homes to maintain power, even during power loss events due to extreme heat or weather. DER can also help to build out the infrastructure for Virtual Power Plants (VPP) which consists of a collection of small-scale energy resources that, when aggregated together and coordinated with grid operations, can provide added grid reliability.<sup>69</sup>

Developing programs to support energy efficiency and DER will be necessary to realize the full benefit of these strategies. Contra Costa County offers several programs that help support grid reliability and energy resilience. The State funded weatherization program offers free energy efficiency improvements to low-income renters and property owners. The County also partners with BayREN to promote energy efficiency through rebates and no-cost technical assistance for single-family and multifamily properties. MCE, the County's community choice energy provider, offers similar incentive programs for properties in its service area which includes much of Contra Costa County along with parts of Marin, Napa, and Solano Counties. These programs will help residents in the County to improve efficiency in their homes, however, this alone will not ensure grid reliability as the building stock increasingly becomes more electric. The state will need to continue to support local governments by establishing policies and programs that promote continued energy efficiency and DER retrofits in our building stock. In 2022, California established the Community Energy Resilience Investment (CERI) program to fund projects that bolster grid reliability. One of the CERI program goals will be to reduce the frequency and duration of power outages as well as strengthen communities' ability to function during these outages.<sup>70</sup> The program is currently being developed by the CEC and anticipates releasing its first Grant Funding Opportunity (GFO) in early 2024.

As Contra Costa County and other jurisdictions across the State continue to promote transitioning to all-electric in their communities, ensuring that the grid has the capacity to handle the added demand is paramount. At the local level, this will require local

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<sup>67</sup> [www.pge.com/en\\_US/residential/save-energy-money/savings-solutions-and-rebates/demand-response/demand-response.page](http://www.pge.com/en_US/residential/save-energy-money/savings-solutions-and-rebates/demand-response/demand-response.page)

<sup>68</sup> [www.nrel.gov/docs/fy02osti/31570.pdf](http://www.nrel.gov/docs/fy02osti/31570.pdf)

<sup>69</sup> [www.rmi.org/clean-energy-101-virtual-power-plants/](http://www.rmi.org/clean-energy-101-virtual-power-plants/)

<sup>70</sup> [www.energy.ca.gov/programs-and-topics/programs/community-energy-resilience-investment-ceri-program](http://www.energy.ca.gov/programs-and-topics/programs/community-energy-resilience-investment-ceri-program)

governments to develop and implement policies and programs that further support energy efficiency and DER upgrades in our communities. However, ensuring a reliable grid goes beyond local governments. The state must act as a leader in this effort by continuing to establish higher emission reduction targets while also developing policies and programs that help to mitigate the challenges involved, notably maintaining grid reliability.

## 9.0 Policy Options and Other Strategies

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There are many local policies and approaches that other jurisdictions have implemented to make or encourage buildings to transition to all-electric. Most policy actions taken include the adoption of a local ordinance to establish mandates for all-electric retrofits based on a specific action being taken by a property owner. This includes:

- Time of Major Renovation – Requires homeowners to replace gas appliances with the electric equivalent when performing major home renovations.
- Time of Burnout – Requires homeowners to replace end-of-life gas appliances with the electric equivalent.
- Point of Sale – Requires home sellers and/or buyers to retrofit the home to be all-electric at the time of sale.

Ordinances with these types of actions have been implemented in other jurisdictions within the San Francisco Bay Area. The most widely utilized policy adopted is an ordinance that requires gas appliances/equipment to be replaced with all-electric equipment at the time of major renovation, which has been successfully adopted in numerous counties and cities in the region. This includes the City and County of San Francisco, the County of Marin, the City of Alameda, and the City of Palo Alto.

While these policy actions have been successful with other jurisdictions, it is not recommended that they are considered due to a decision from the U.S. Court of Appeals 9<sup>th</sup> Circuit in January 2024, that precludes cities and counties from adopting ordinances that prohibit the installation of gas plumbing in buildings. Some jurisdictions have responded with implementing more stringent energy efficient building code requirements instead of mandating that gas appliances be replaced with all-electric appliances. However, similar to what the County has done, this approach is more widely used only for new construction projects.

Neighborhood-wide gas infrastructure decommissioning is a strategy being looked at by local governments with their local utility. The process involves identifying sections of the gas distribution system that are more cost-effective to remove from use. These buildings would be converted to all-electric. The primary advantage of this approach is that it is the

most efficient method for transitioning homes to all-electric and in certain circumstances can be very cost-effective for the utility to implement. Rather than continuing to maintain the gas pipeline system, the utility can instead invest those funds in other ways to make the grid more reliable.

Coordination with the County's local utility, PG&E, and CCA, MCE, will be necessary to leverage all available resources to develop an approach within the County to implement neighborhood-wide gas infrastructure decommissioning. Incentivizing Incremental improvements to reduce reliance on gas, such as changing out specific appliances when they wear out, is also likely to be a more realistic option for removing gas infrastructure from existing buildings. Additional research and coordination will be needed to determine the best feasible approaches for the County.

## 10.0 Next Steps

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Transitioning the existing building stock to be all-electric is a complex issue. Most of the approaches used only address a portion of the issue. To meet our CAAP goals, the County will need to implement additional initiatives that both align and compliment state and regional efforts. To help support this work, below are recommended actions for staff to either explore or implement to support the use of low-carbon or carbon-free appliances for existing buildings.

### 10.1 Action Items and Recommendations

#### Regional and State Collaboration

- Work with the County's Legislation Committee and Board of Supervisors to develop a policy framework to more routinely engage with State regulatory agencies, such as the CEC, CPUC, and CARB, to provide input on activities and actions that help support all-electric building initiatives, or other low-carbon or carbon-free appliances for existing buildings.
- Work with energy providers, such as PG&E, MCE, or other regulatory agencies, such as the CEC and CPUC, to obtain information on the gas infrastructure throughout the County to determine cost-effective opportunities where gas infrastructure could be decommissioned. Analyze which community areas may have the best opportunity for cost-effective gas infrastructure decommissioning and explore a

County-wide strategy for decommissioning gas infrastructure in certain parts of the County, if feasible.

- Continue to track opportunities that assist property owners and renters in paying for retrofits associated with transitioning buildings to all-electric. These opportunities could include incentive programs that offer rebates or no-cost retrofits as well as financing options that are accessible to those of all income levels. In addition, County staff should track statewide and regional plans that address building decarbonization so that future planning efforts are aligned with these plans.

### Additional Analysis

- Expand on the preliminary building inventory. This should include a more comprehensive inventory that accurately reflects the distribution of homes by type and vintage so that these can be mapped on a more specific community scale. County staff should also work to gain a better understanding of the appliances that currently exist in homes by analyzing the permits issued for appliance replacement. For appliances that do not require a permit for replacement, such as stoves or washers and dryers, staff should seek other ways to identify whether these are gas fueled in homes or have already been swapped for the all-electric equivalent. These actions will help enable County staff to better prioritize and more accurately target specific areas based on home configuration and financial need. Explore the feasibility of this work being completed in-house or determine if a consultant is needed to assist with this work.
- Expand on the preliminary cost analysis. This roadmap presents a high-level overview of the costs associated with transitioning existing buildings to all-electric. Further research is needed on the direct and indirect costs for this all-electric transition which includes an analysis and cost breakdown of the various options for each appliance type and the operational costs around operating all-electric appliances. From this analysis, County staff could provide a policy or County specific program for consideration to encourage more buildings to operate solely using electricity.

## Outreach and Engagement

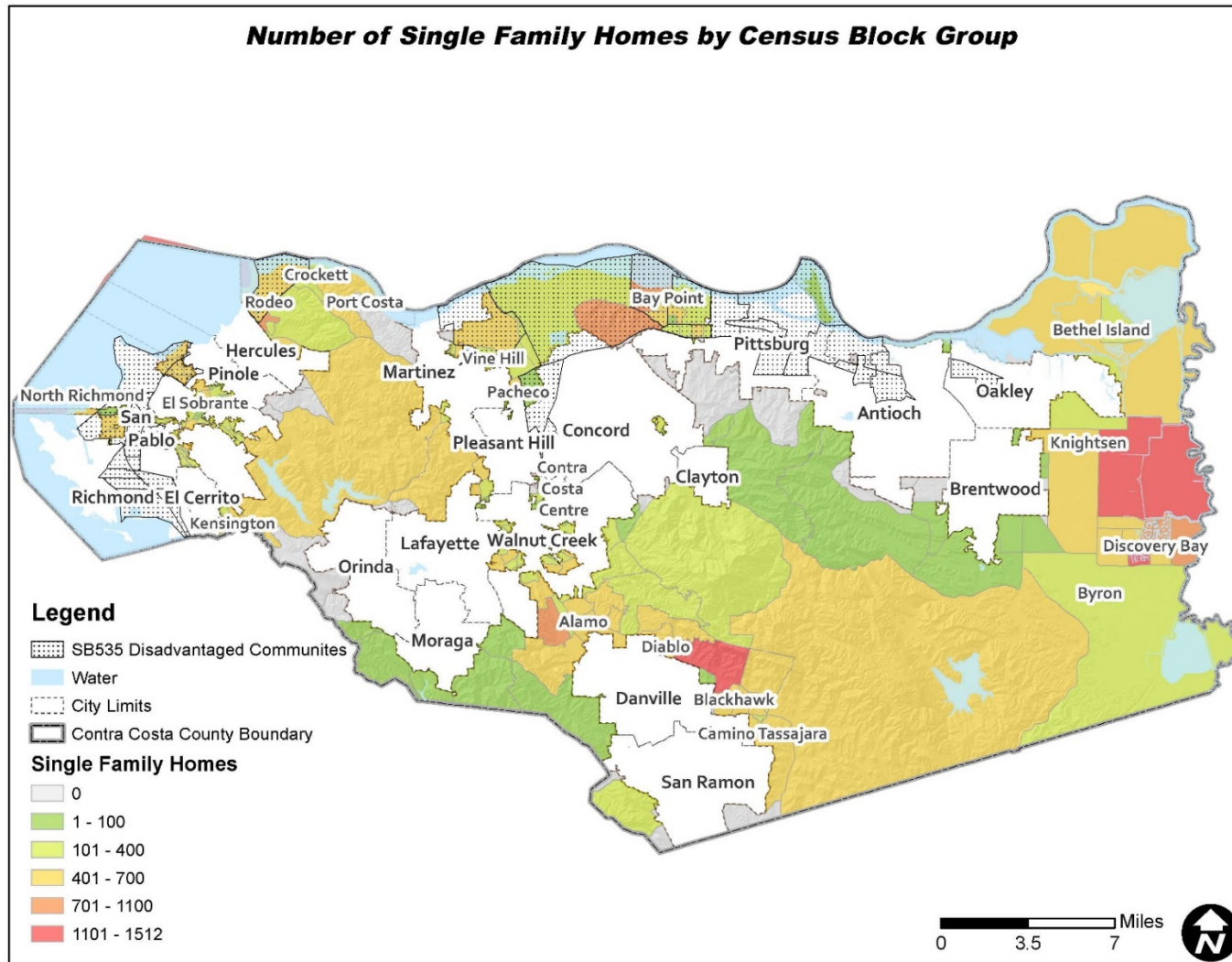
- Develop a thoughtful community outreach and engagement strategy that centers equity in the process. Outreach and engagement should educate residents about the benefits of all-electric buildings. Leverage regional programs like BayREN for outreach and education, as appropriate. The preliminary work done in this roadmap should serve as a framework for engaging with impacted communities throughout the County.
- Work with the County's Economic Development team on outreach to local trade schools, leveraging existing relationships with community colleges that provides information on pathways to becoming trained to work on transitioning buildings to be all-electric.

## Other Actions

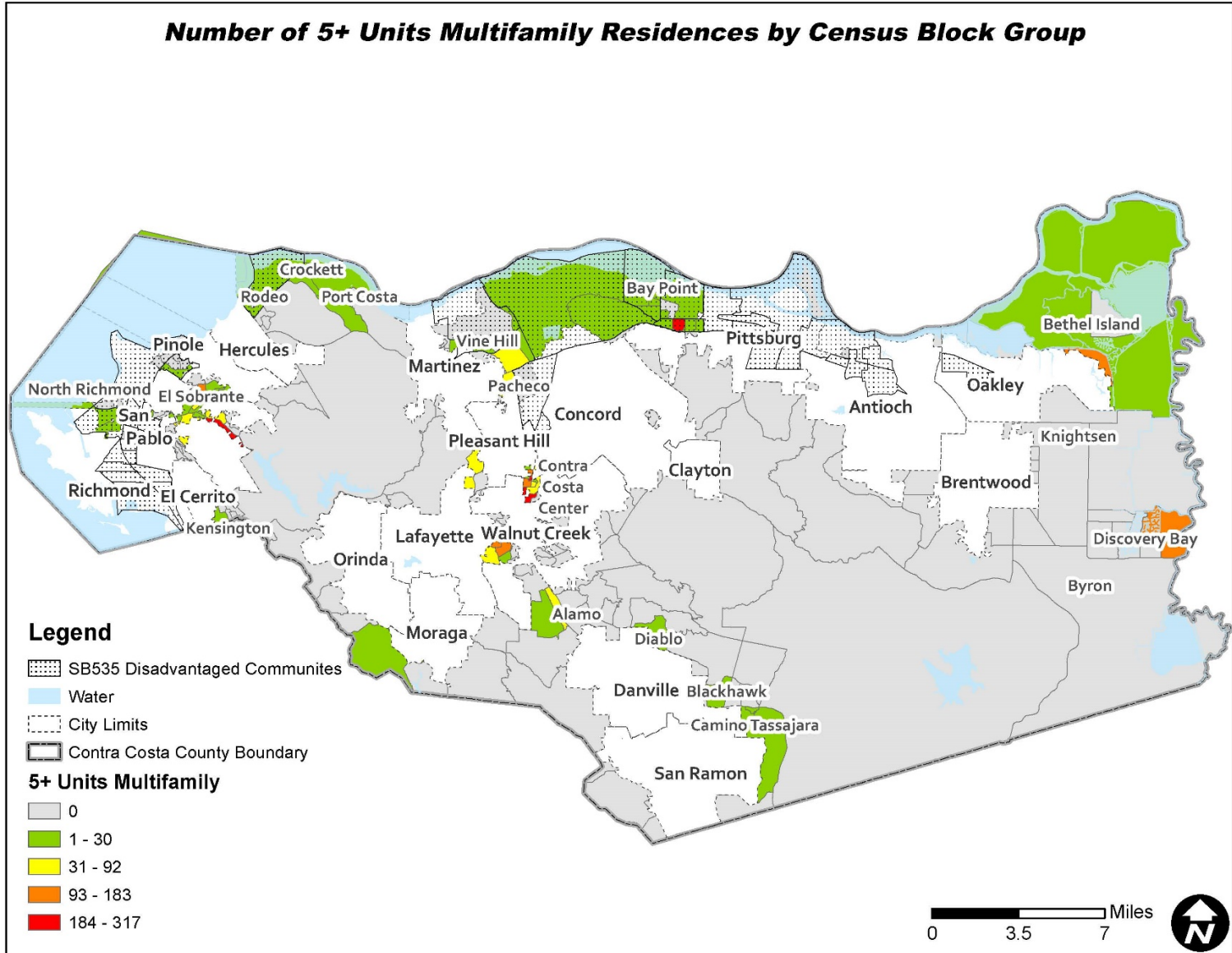
- Further explore the policy options outlined in this document to support making buildings become all-electric. This should include, time of sale, time of replacement due to burnout OR due to renovation, building performance standards, and neighborhood-wide gas pruning (gas decommissioning).
- To support the transition of making buildings become all-electric, work to develop a strategy to address the tenant/landlord rental property constraints that commonly prevent property owners from making building improvements.
- Seek solutions that make installing solar panels and battery storage accessible to all homeowners and property owners to improve the overall resiliency of households in unincorporated County, including community solar with battery storage. Work with the County's Legislation Committee and Board of Supervisors to advocate through the CPUC for additional funding support to utility companies and collaborate with PG&E to facilitate more timely and efficient solar panel upgrades and backup battery installations.
- Allow staff to seek and obtain funding that supports the implementation of this roadmap.
- Identify opportunities for pilot projects that will test the variety of strategies for converting existing homes and other buildings to be all-electric.

# APPENDIX A: Unincorporated Contra Costa County Housing Stock Maps

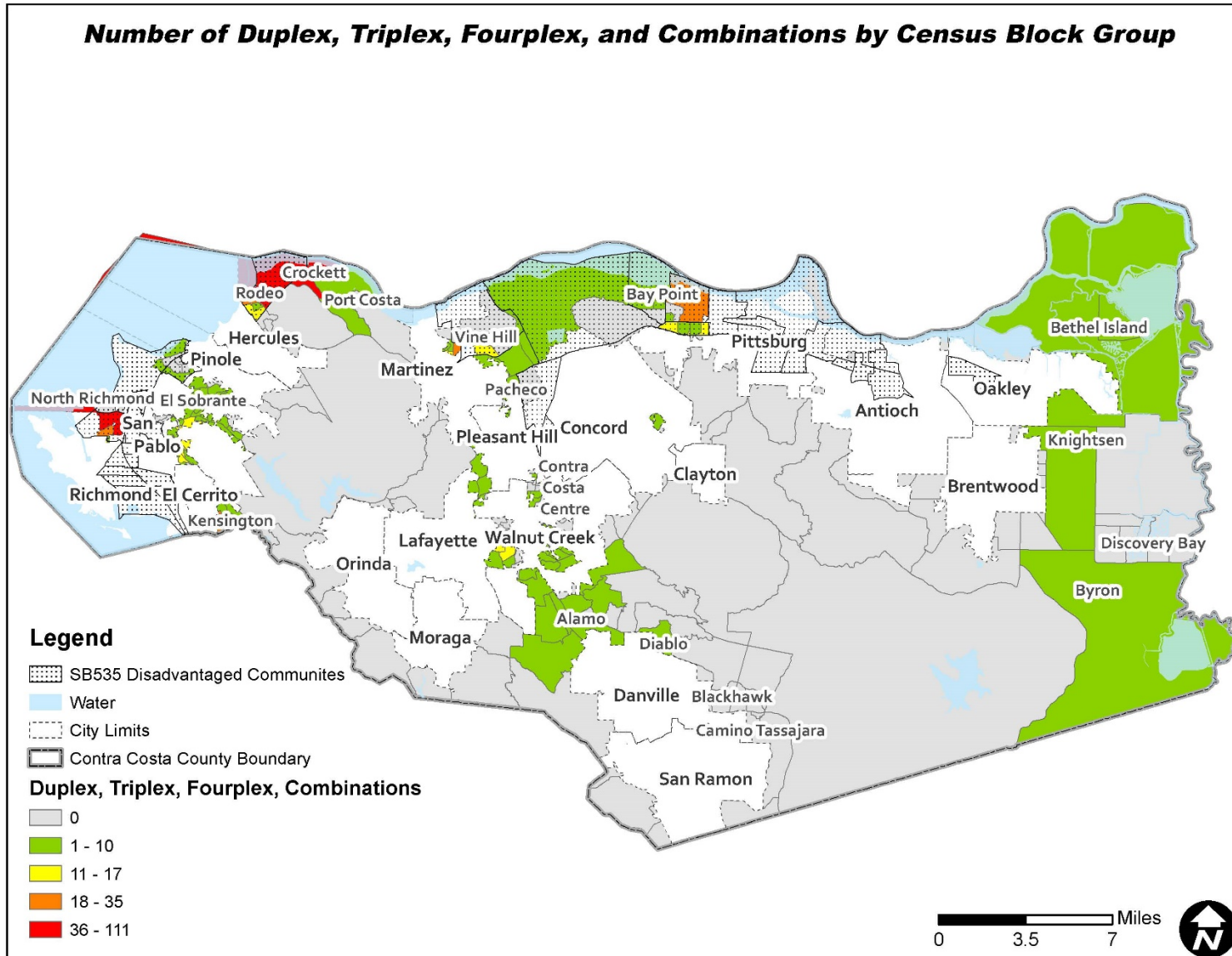
## Single-family Residential



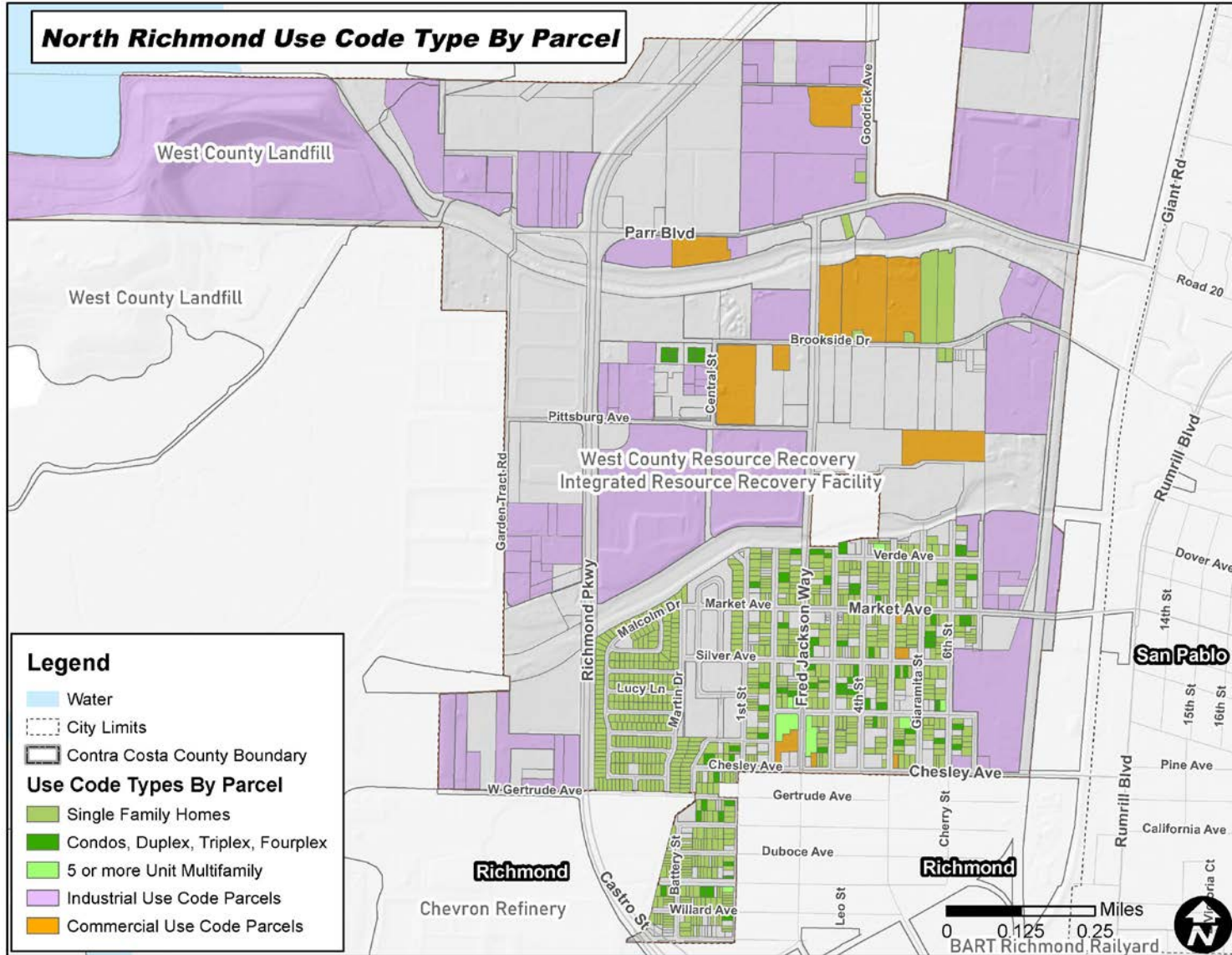
# Multifamily Residential



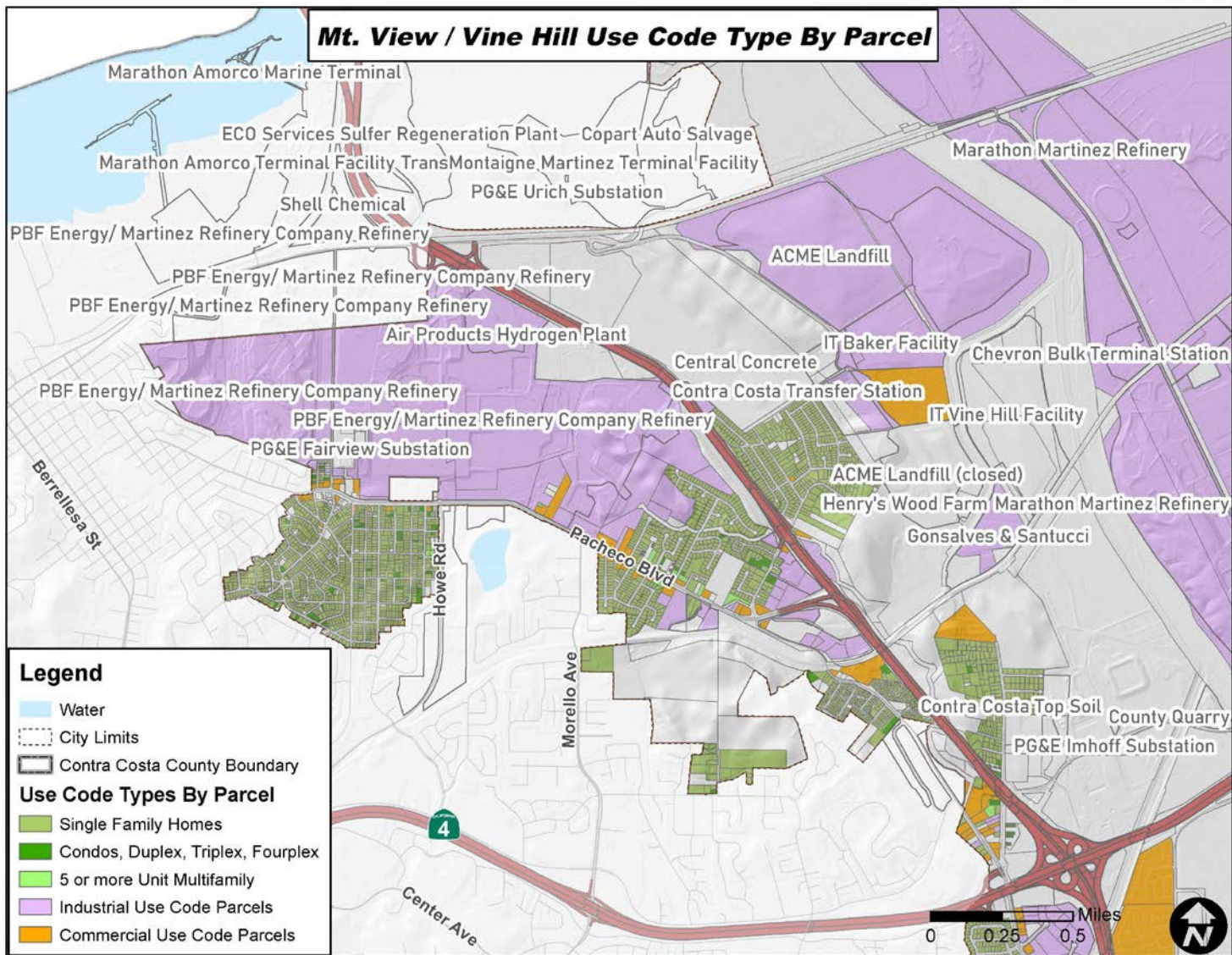
# Duplex, Triplex, Fourplex, and Combination Residential



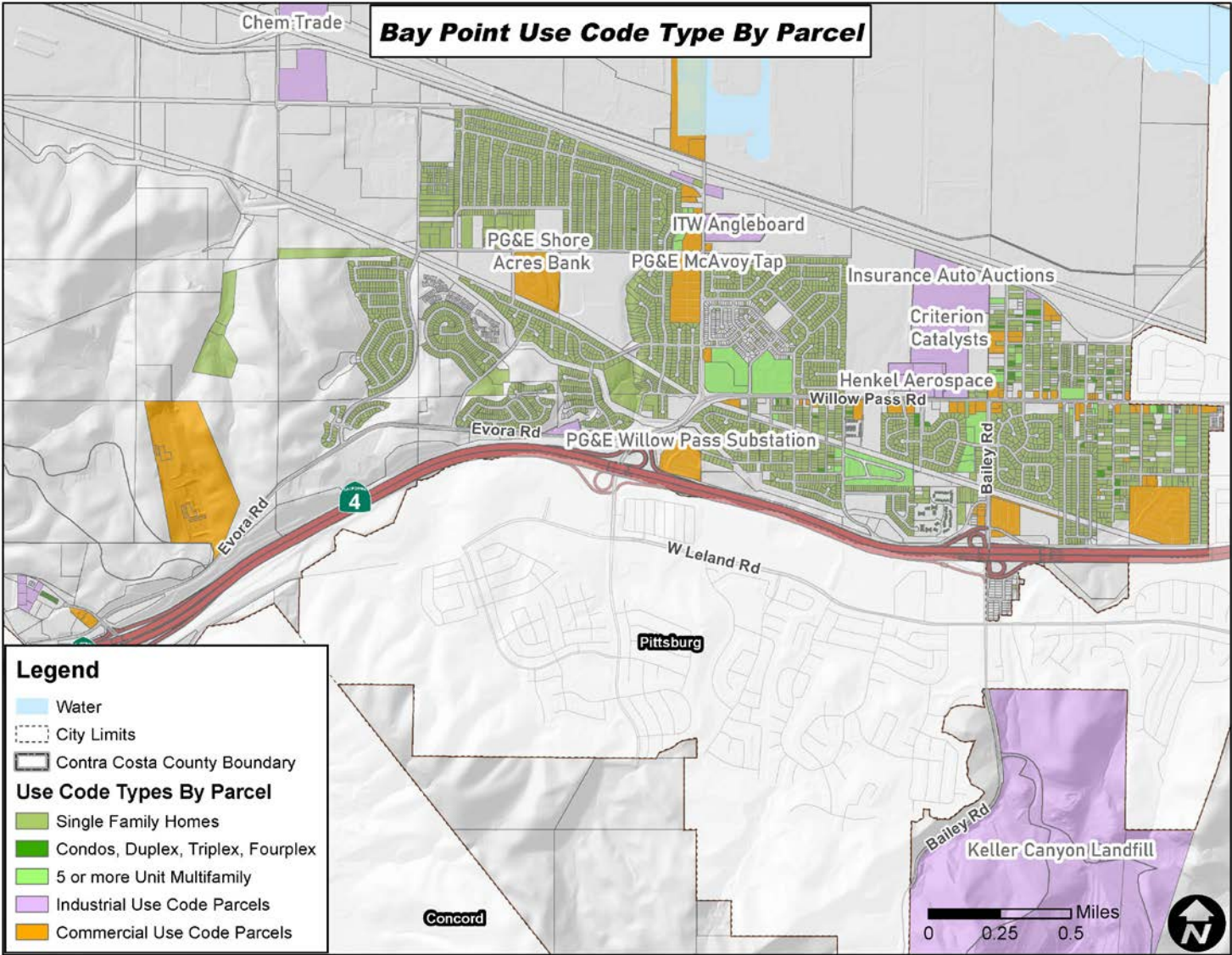
# North Richmond, CA - Residential Zoning



# Vine Hill, CA - Residential Zoning



# Bay Point, CA - Residential Zoning





# CONTRA COSTA COUNTY

1025 ESCOBAR STREET  
MARTINEZ, CA 94553

## Staff Report

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**File #:** 25-774

**Agenda Date:** 3/10/2025

**Agenda #:** 6.

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### **SUSTAINABILITY COMMITTEE**

**Meeting Date:** March 10, 2025

**Subject:** Annual Climate Action Plan Progress Report

**Submitted For:** SUSTAINABILITY COMMITTEE

**Department:** DEPARTMENT OF CONSERVATION & DEVELOPMENT

**Presenter:** Jody London || DCD | Sustainability Coordinator

**Contact:** Jody London (925) 655-2815

### **Referral History:**

The Sustainability Commission submits an annual Climate Action Plan Progress Report (Progress Report) to the Board of Supervisors. The report is submitted in March, concurrent with the submittal of annual reports for other planning documents submitted by the Department of Conservation and Development. This allows the report to include data for the entire calendar year.

The Climate Action and Adaptation Plan (CAAP) 2024 Update was adopted by the Board of Supervisors on November 5, 2024, and will be the basis for the 2025 CAAP Progress Report.

### **Referral Update:**

The 2023-2024 Interim Climate Action Work Plan that is the basis for this report is included in Attachment A. The Climate Action Plan Progress Report for 2024 is provided in Attachment B. The 2024 Progress Report is reporting on progress towards the 2023-2024 Interim Climate Action Work Plan.

Going forward, Progress Reports will focus on the Climate Action and Adaptation Plan 2024 Update. The Progress Report was approved by the Sustainability Commission at its February 24, 2025, meeting and will be on the agenda for the March 25, 2025, Board of Supervisors meeting.

### **Recommendation(s)/Next Step(s):**

RECEIVE update on 2024 Climate Action Plan Progress Report

### **Fiscal Impact (if any):**

None.

**Contra Costa County  
Interim Climate Action Work Plan 2023-2024**

	<b>Goal</b>	<b>Tools</b>	<b>Potential Measure(s) of Effectiveness</b>	<b>Lead County Department(s)</b>	<b>Notes</b>	
<i>Note: The Climate Action Plan (CAP) pertains to County operations, County facilities, and the unincorporated communities in the County. Cities develop their own Climate Action Plans, at their discretion. Impacted communities are the communities that have been and will continue to be hit first and worst by the impacts of the changing climate, and are the least able to adapt, resist, or recover from those impacts.</i>						
<b>1</b>	<b>Clean and Efficient Built Environment</b>	<i>Homes, workplaces, and businesses in Contra Costa County run on clean energy.</i>				
1.1	Increase the number of carbon neutral buildings in Contra Costa County	· All-electric buildings	· Adopt All-Electric Building Roadmap · # of permits issued for all-electric new construction in unincorporated County · # of all-electric retrofit projects in County facilities	DCD Public Works (for County facilities)		
		· Energy efficiency and weatherization programs	· Participation in energy efficiency and weatherization programs by residential and commercial buildings, with attention to participation in impacted communities · # of contractors that learn about and promote energy efficiency and electrification retrofits through the Bay Area Regional Energy Network (BayREN), Self-Generation Incentive Program (SGIP), and TECH Clean California Initiative · Continue implementing Asthma Initiative · Energy efficient lighting and other appliances and mechanical systems installed annually in County facilities	DCD Health Services Public Works (for County facilities) CAO		
1.2	Replace fossil fuel electricity with renewable electricity	· Increase participation in MCE Deep Green program by County facilities	· # and percent of County accounts enrolled in MCE Deep Green	Public Works		
		· Install more renewable electricity	· # of permits issued for solar installations in unincorporated County · Megawatts of rooftop and parking lot solar installed in unincorporated County, including County facilities and impacted communities · Gas load converted to electricity at County facilities	DCD Public Works (for County facilities)		
1.3	Increase electrical grid resiliency	· Energy storage	· Update Solar Overlay Zone Ordinance to include battery energy storage systems · # of permits issued for battery energy storage projects in unincorporated County · # of County buildings with energy storage systems, and capacity/energy storage duration of each system · Amount of kilowatts available at County facilities when grid is down	DCD Public Works (for County facilities)		
		· Energy use reduction in County facilities	· # of County facilities actively participating in demand response load shedding · Energy use avoided in County facilities annually	Public Works		

**Contra Costa County  
Interim Climate Action Work Plan 2023-2024**

	Goal	Tools	Potential Measure(s) of Effectiveness	Lead County Department(s)	Notes	
<p><i>Note: The Climate Action Plan (CAP) pertains to County operations, County facilities, and the unincorporated communities in the County. Cities develop their own Climate Action Plans, at their discretion. Impacted communities are the communities that have been and will continue to be hit first and worst by the impacts of the changing climate, and are the least able to adapt, resist, or recover from those impacts.</i></p>						
1.4	Low-carbon building materials and strategies	· Consider recommendations from low-carbon concrete study	· Low-carbon concrete study	DCD Public Works		
		· Continue use of zero-waste construction practices in County construction projects	· # of projects with Total Resource Use and Efficiency (TRUE) certification · Amount of material diverted from the landfill in TRUE certified projects	Public Works		
		· Develop tool to track embodied carbon in material choice for new construction and major renovations	· Tool to track embodied carbon in construction materials	Public Works		
2	<b>Resilient Communities and Natural Infrastructure</b>	<i>Contra Costa County will increase resilience to climate hazards and foster community health.</i>				
2.1	Sequester carbon in natural lands in Contra Costa County	· Carbon sequestration on public and private lands	· Implement recommendations from carbon sequestration feasibility study	DCD		
		· Install green infrastructure	· Progress report on implementation of County's Green Infrastructure Plan for County projects · # of projects completed and in progress in unincorporated County that include green infrastructure	Public Works CAO		
		· Explore opportunities to incorporate pervious paving in County projects · Encourage applicants to incorporate pervious paving in private projects	· Miles or square feet pervious paving installed in County projects · Develop information to educate applicants about pervious paving	Public Works DCD		
2.2	Address impacts of heat islands	· Increase number of cool roofs	· # of permits for cool roofs, both private and County facilities	DCD Public Works		
		· Increase tree canopy in unincorporated County	· Secure funding to develop a countywide Tree Plan	DCD		

**Contra Costa County  
Interim Climate Action Work Plan 2023-2024**

	Goal	Tools	Potential Measure(s) of Effectiveness	Lead County Department(s)	Notes	
<p><i>Note: The Climate Action Plan (CAP) pertains to County operations, County facilities, and the unincorporated communities in the County. Cities develop their own Climate Action Plans, at their discretion. Impacted communities are the communities that have been and will continue to be hit first and worst by the impacts of the changing climate, and are the least able to adapt, resist, or recover from those impacts.</i></p>						
<b>3</b>	<b>No-Waste Contra Costa</b>	<i>Contra Costa County generates no more solid waste than 2.2 pounds per person per day (PPD).</i>				
3.1	Recover organic waste and edible food (SB 1383/Short-Lived Climate Pollutants Program)	· Outreach and education to residential and commercial customers in County franchise areas	· Proof of documentation provided to applicable residential and commercial customers · Public Health Nutrition Program food waste educational efforts	DCD Health Services		
		· Implement weekly organics collection services for all residential and commercial customers served in County franchise areas	· Updated franchise agreements or other appropriate action approved by the Board directing service implementation	DCD		
		· Explore opportunities to reduce the use of single-use plastics.	· Ongoing reports	DCD Health Services - Environmental Health Division		
		· Implement Edible Food Recovery Inspection Program · Educate Tier 1 & 2 businesses per adopted ordinance	· Number of Tier 1 businesses inspected (2023+) · Number of Tier 2 businesses inspected (2024)	Health Services - Environmental Health Division		
3.2	Update the County's existing Environmentally Preferable Purchasing (EPP) Policy	· Educate County staff on EPP and monitor implementation	· Compliance with EPP	Public Works		
<b>4</b>	<b>Reduce Water Use and Increase Drought Resilience</b>	<i>Contra Costa County uses less water and communities are prepared for drought.</i>				
4.1	Reduce water use in unincorporated County and in County facilities	· Promote water conservation	· Reduction in overall water use as reported by water companies · Reduction in water use at County facilities	DCD Public Works (for County facilities)		
4.2	Manage groundwater resources sustainably	· Groundwater Sustainability Plan	· Groundwater Sustainability Plan is approved by California Dept. of Water Resources	DCD		

**Contra Costa County  
Interim Climate Action Work Plan 2023-2024**

	Goal	Tools	Potential Measure(s) of Effectiveness	Lead County Department(s)	Notes	
<p><i>Note: The Climate Action Plan (CAP) pertains to County operations, County facilities, and the unincorporated communities in the County. Cities develop their own Climate Action Plans, at their discretion. Impacted communities are the communities that have been and will continue to be hit first and worst by the impacts of the changing climate, and are the least able to adapt, resist, or recover from those impacts.</i></p>						
5	<b>Clean Transportation Network</b>	<p><i>Contra Costa County's transportation network provides safe and accessible options for walking, biking, and transit. If residents and workers are driving, they are in electric vehicles.</i></p>				
5.1	Reduce vehicle miles traveled in Contra Costa County by increasing number of people who bike, walk, and take public transit	<ul style="list-style-type: none"> <li>· Bicycle network in the unincorporated portions of the County that connects to the county-wide network</li> </ul>	<ul style="list-style-type: none"> <li>· Percentage complete and under construction of unincorporated bike network</li> </ul>	Public Works DCD	May require partnership with other agencies and jurisdictions	
		<ul style="list-style-type: none"> <li>· Provide pedestrian network gap closures</li> </ul>	<ul style="list-style-type: none"> <li>· Linear feet of pedestrian facilities constructed</li> <li>· # of gaps closed</li> </ul>	Public Works		
		<ul style="list-style-type: none"> <li>· Projects that add pedestrian and bicycle facilities shall be tracked over time to document the County's implementation of the County Road Improvement and Preservation Program (CRIPP), Complete Streets, Vision Zero, Active Transportation, and equity-focused plans, programs, and policies</li> </ul>	<ul style="list-style-type: none"> <li>· Develop and begin using tool to measure progress</li> <li>· Updated project list</li> <li>· Grant awards (# and \$\$ amount)</li> <li>· Projects completed</li> </ul>	Public Works DCD	Expectation that Federal and State grants under Biden Administration will favor projects that promote bike/ped/urban greening	
		<ul style="list-style-type: none"> <li>· Increase equity in and continue promoting Safe Routes to School, Injury Prevention, and Building Healthy Communities programs</li> </ul>	<ul style="list-style-type: none"> <li>· Educational efforts</li> <li>· Communities reached</li> </ul>	Health Services - Public Health		
		<ul style="list-style-type: none"> <li>· Identify strategies and funding to implement recommendations in 2019 Employee Commute Survey of County employees</li> </ul>	<ul style="list-style-type: none"> <li>· # and percentage of County employees working remotely</li> <li>· # of County employees using pretax commute benefit</li> </ul>	CAO HR		
5.2	Increase percentage of electric vehicles (EVs) in Contra Costa County fleet	<ul style="list-style-type: none"> <li>· Increase number of EVs in Contra Costa County</li> </ul>	<ul style="list-style-type: none"> <li>· # of EVs registered to drivers in Contra Costa County</li> <li>· # of EVs purchased annually for County fleet</li> <li>· Percentage of County fleet that is all-electric</li> </ul>	Public Works CAO DCD		
		<ul style="list-style-type: none"> <li>· Install EV chargers at County facilities</li> </ul>	<ul style="list-style-type: none"> <li>· # of EV chargers (active ports) installed at County facilities for County fleet, workplace, and/or public use</li> <li>· # of parking stalls with EV charging available</li> </ul>	Public Works CAO DCD		
		<ul style="list-style-type: none"> <li>· Provide leadership and coordination on transportation electrification strategies outlined in the Contra Costa County EV Readiness Blueprint</li> </ul>	<ul style="list-style-type: none"> <li>· Amount of funding secured for electric vehicle supply equipment infrastructure</li> <li>· # of city jurisdictions and public agencies formally participating in coordination activities</li> </ul>	Public Works		

**Contra Costa County  
Interim Climate Action Work Plan 2023-2024**

	<b>Goal</b>	<b>Tools</b>	<b>Potential Measure(s) of Effectiveness</b>	<b>Lead County Department(s)</b>	<b>Notes</b>	
<i>Note: The Climate Action Plan (CAP) pertains to County operations, County facilities, and the unincorporated communities in the County. Cities develop their own Climate Action Plans, at their discretion. Impacted communities are the communities that have been and will continue to be hit first and worst by the impacts of the changing climate, and are the least able to adapt, resist, or recover from those impacts.</i>						
<b>6</b>	<b>Climate Equity</b>	<i>The CAP will mitigate environmental factors leading to health disparities, promote safe and livable communities, and promote investments that improve neighborhood accessibility.</i>				
6.1	All residents live in clean, healthy homes and neighborhoods, have access to parks, open space, and fresh food, and can easily move through the County	<ul style="list-style-type: none"> <li>· Adopt environmental justice policies in General Plan update</li> <li>· Ensure Climate Action Plan is equitably implemented in impacted communities</li> </ul>	<ul style="list-style-type: none"> <li>· General Plan environmental justice policies</li> <li>· Analyze funds spent by the County on energy efficiency and other services and physical improvements in impacted communities compared to non-impacted communities</li> </ul>	CAO DCD Health Services Public Works		
6.2	Plan for transition to a local economy that is less reliant on fossil fuels	<ul style="list-style-type: none"> <li>· Implement Community Funding Project grant from U.S. Dept. of Housing and Urban Development to support development of the Just Transition Economic Revitalization Plan Roadmap</li> <li>· Collaborate with stakeholders to develop an inclusive process</li> </ul>	<ul style="list-style-type: none"> <li>· Ongoing reports</li> </ul>	Board of Supervisors (via Sustainability Cmte) DCD		
<b>7</b>	<b>Leadership</b>	<i>Contra Costa County is a model for how local government can take action on climate issues.</i>				
7.1	Contra Costa County is a leader among local governments on how it addresses climate issues	<ul style="list-style-type: none"> <li>· Continue work of Interdepartmental Climate Action Task Force</li> </ul>	<ul style="list-style-type: none"> <li>· Twice yearly reports to Board of Supervisors</li> </ul>	DCD Public Works		
		<ul style="list-style-type: none"> <li>· Participation by County departments in County's Green Government Group (G3) Program</li> </ul>	<ul style="list-style-type: none"> <li>· # of G3 Champions and # of County departments represented by G3 Champions</li> <li>· Activities completed by G3 Champions (meetings held, surveys completed, etc.)</li> </ul>	DCD		
7.2	Implement Climate Emergency Resolution	<ul style="list-style-type: none"> <li>· Implement climate emergency resolution</li> </ul>	<ul style="list-style-type: none"> <li>· Assess progress on action items in the Climate Emergency Resolution</li> </ul>	Board of Supervisors (via Sustainability Cmte) DCD		
7.3	Build Community and County Employee Support for Climate Action Plan	<ul style="list-style-type: none"> <li>· Newsletters</li> <li>· Meetings</li> <li>· Collaboration with cities and community-based organizations</li> </ul>	<ul style="list-style-type: none"> <li>· Regular column in Contra Costa FOCUS (employee newsletter)</li> <li>· Sustainability newsletter</li> <li>· # of meetings, other collaboration</li> </ul>	DCD		

**Contra Costa County  
Interim Climate Action Work Plan 2023-2024**

	Goal	Tools	Potential Measure(s) of Effectiveness	Lead County Department(s)	Notes	
<p><i>Note: The Climate Action Plan (CAP) pertains to County operations, County facilities, and the unincorporated communities in the County. Cities develop their own Climate Action Plans, at their discretion. Impacted communities are the communities that have been and will continue to be hit first and worst by the impacts of the changing climate, and are the least able to adapt, resist, or recover from those impacts.</i></p>						
7.4	County investments support climate equity	<ul style="list-style-type: none"> <li>· Amend the County investment policy to divest from fossil fuels, consider the use of Environmental, Social, and Governance criteria, and prohibit investment in all securities issued by fossil fuel companies</li> </ul>	<ul style="list-style-type: none"> <li>· Updated County Investment Policy</li> </ul>	Treasurer's Office		
		<ul style="list-style-type: none"> <li>· Evaluate the issuance of labeled bonds or other projects to be funded by municipal securities for "Green," "Sustainable," or "Social"</li> </ul>	<ul style="list-style-type: none"> <li>· Adopted guidance on best practices</li> </ul>	CAO		
		<ul style="list-style-type: none"> <li>· Evaluate the use of third-party certifiers for labeled bonds to promote the integrity of the bond sale and avoid appearances of "greenwashing"</li> </ul>	<ul style="list-style-type: none"> <li>· Adopted guidance on best practices</li> </ul>	CAO		
		<ul style="list-style-type: none"> <li>· Evaluate the implementation of retail order periods to encourage local retail investors to purchase County bonds, including "labeled bonds" such as Green Bonds</li> </ul>	<ul style="list-style-type: none"> <li>· Adopted guidance on best practices</li> </ul>	CAO		

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## Contra Costa County Interim Climate Action Work Plan 2024 Progress Report



**March 10, 2025**

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Cover photo by Bobby Groth.

# Executive Summary








This report provides a progress update on the 2023-2024 Contra Costa County Interim Climate Action Work Plan (Interim Work Plan). The Interim Work Plan outlines the actions the County took to address our changing climate while the County’s Climate Action and Adaptation Plan (CAAP) was updated alongside the County’s General Plan. There are seven goals outlined in the Interim Work Plan, which aim to increase the effectiveness of climate change mitigation and adaptation efforts.<sup>1</sup>











This Executive Summary provides a high-level overview of the County’s progress. More detail and additional context is provided in the main report. In general, the County met or made significant progress toward most of the 2023-2024 goals. The icons below indicate the County’s status on the goals included in the Interim Work Plan.










	Goal	Tools	Achievements	Status
1	Clean and Efficient Built Environment	<i>Homes, workplaces, and businesses in Contra Costa County run on clean energy.</i>		
		· All-electric buildings	<ul style="list-style-type: none"> <li>- The Board adopted an ordinance requiring increased energy efficiency standards for new construction after the suspension of the all-electric ordinance.</li> <li>- Staff continue work on the Clean Energy Roadmap to support transitioning existing buildings to clean energy.</li> </ul>	
1.1	Increase the number of carbon neutral buildings in Contra Costa County	· Energy efficiency and weatherization programs	<ul style="list-style-type: none"> <li>- 422 BayREN Home+ projects were completed (25 in the unincorporated areas of the county).</li> <li>- 2 multifamily properties completed projects through the BayREN BAMBE program, with 12 properties in-progress.</li> <li>- 21 businesses completed projects through the BayREN Business program.</li> <li>- Contra Costa County had 1,356 approved Home Energy Scores (83 in the unincorporated areas of the county).</li> <li>- 183 households were served through the County Weatherization Program (26 in the unincorporated areas of the county).</li> <li>- 20 households participated in the Pinole Energy Enhancement Rebate Program.</li> <li>- The County was awarded 3 grants to provide additional energy efficiency and all-electric services.</li> <li>- 3 high efficiency condensing boilers were installed at County facilities.</li> </ul>	






<sup>1</sup> The County’s Climate Action and Adaptation Plan (CAAP) 2024 Update was adopted by the Board of Supervisors on November 5, 2024. Going forward, progress reports will focus on the CAAP 2024 Update.

	Goal	Tools	Achievements	Status
1.2	Replace fossil fuel electricity with renewable electricity	· Increase participation in MCE Deep Green program by County facilities	· 88.8% total (residential and non-residential) accounts are enrolled in MCE. 6.2% of these accounts are enrolled in Deep Green. · 98.8% of County accounts are enrolled in Deep Green.	
		· Install more renewable electricity	· 1,170 residential solar permits and 15 commercial solar permits for rooftop and ground mount solar installations were issued. · The County has 7,332 kilowatts of solar installed at County facilities. No new solar was installed at County facilities in 2024.	
1.3	Increase electrical grid resiliency	· Energy storage	· The Solar Overlay Zone Ordinance will be updated through the Envision Zoning Code Update Project. · 145 permits were issued for residential battery energy storage system projects, with an additional 941 battery energy storage system installations included in residential solar permits. · One new battery energy storage system at a County facility is in the design phase.	
		· Energy use reduction in County facilities	· 19 County facilities are participating in demand response load shedding.	
1.4	Low-carbon building materials and strategies	· Consider recommendations from low-carbon concrete study	· Staff continue to monitor State embodied carbon requirements and strategies.	
		· Continue use of zero-waste construction practices in County construction projects	· The County has one Total Resource Use and Efficiency (TRUE) Gold-certified project: the Administration Building and Jail Demolition and Redevelopment Project. The project also achieved LEED Platinum certification and was honored with the California Green Building Award for Honor in Zero Waste & Circular Solutions. · The project diverted 95.07% of material from the landfill. · The project's use of low-carbon concrete resulted in a 58.50% reduction in kgCO2e emissions compared to the CALGreen industry baseline.	
		· Develop tool to track embodied carbon in material choice for new construction and major renovations	· The tool has not yet been developed.	

	Goal	Tools	Achievements	Status
2	<b>Resilient Communities and Natural Infrastructure</b>	<i>Contra Costa County will increase resilience to climate hazards and foster community health.</i>		
2.1	Sequester carbon in natural lands in Contra Costa County	· Carbon sequestration on public and private lands	· Staff have begun implementing recommendations included in <i>Healthy Lands, Healthy People: A Carbon Sequestration Feasibility Study</i> . · The County was awarded a \$750,000 grant to develop an Urban Forest Management Plan.	
		· Install green infrastructure	· The County continued to make progress on implementation of the County's Green Stormwater Infrastructure Plan. Green stormwater infrastructure is treating a total of 7.127 acres with another 10.980 acres to be treated by planned projects.	
		· Explore opportunities to incorporate pervious paving in County projects · Encourage applicants to incorporate pervious paving in private projects	· The County incorporated green infrastructure into the Administration Building and Jail Demolition Redevelopment Project, including both a rain garden and pervious pavement.	
2.2	Address impacts of heat islands	· Increase number of cool roofs	· 558 permits were issued for residential cool roofs, and 5 permits were issued for commercial cool roofs. · 4 cool roof projects were completed at County facilities.	
		· Increase tree canopy in unincorporated County	· The County was awarded a \$750,000 grant to develop an Urban Forest Management Plan.	
3	<b>No-Waste Contra Costa</b>	<i>Contra Costa County generates no more solid waste than 2.2 pounds per person per day (PPD).</i>		
3.1	Recover organic waste and edible food (SB 1383/Short-Lived Climate Pollutants Program)	· Outreach and education to residential and commercial customers in County franchise areas	· Haulers provided information to their customers about Senate Bill (SB) 1383 via mail, contamination tags, and website.	
		· Implement weekly organics collection services for all residential and commercial customers served in County franchise areas	· All four of the County's solid waste franchise agreements have services compliant with SB 1383.	
		· Explore opportunities to reduce the use of single-use plastics.	· Staff continue to monitor State requirements to reduce single-use plastics.	
		· Implement Edible Food Recovery Inspection Program · Educate Tier 1 & 2 businesses per adopted ordinance	· 10 Tier 1 generators were inspected since 2023, and 1 Tier 2 generator was inspected in 2024.	
3.2	Update the County's existing Environmentally Preferable Purchasing (EPP) Policy	· Educate County staff on EPP and monitor implementation	· 65% of paper products purchased by the County contained at least 30% recycled content. · The G3 Champions provided ideas and feedback on strategies for promoting and training staff on the updated EPPP.	

	Goal	Tools	Achievements	Status
4	<b>Reduce Water Use and Increase Drought Resilience</b>	<i>Contra Costa County uses less water and communities are prepared for drought.</i>		
4.1	Reduce water use in unincorporated County and in County facilities	· Promote water conservation	· The County retrofitted all restrooms with motion sensing faucets and toilets at 2 County facilities. · The County receives reports from water districts detailing overall water use.	
4.2	Manage groundwater resources sustainably	· Groundwater Sustainability Plan	· The County continues to implement the East Contra Costa Subbasin Groundwater Sustainability Plan.	
5	<b>Clean Transportation Network</b>	<i>Contra Costa County's transportation network provides safe and accessible options for walking, biking, and transit. If residents and workers are driving, they are in electric vehicles.</i>		
5.1	Reduce vehicle miles traveled in Contra Costa County by increasing number of people who bike, walk, and take public transit	· Bicycle network in the unincorporated portions of the County that connects to the county-wide network	· 9,500 feet of bikeways were constructed. · The existing unincorporated bicycle network spans 120 miles, which is approximately 37% of the planned network. Grant awards received in 2024 will support progress in this area in the coming years.	
		· Provide pedestrian network gap closures	· 1 pedestrian network gap was closed. · 125 feet of pedestrian pathways were constructed.	
		· Projects that add pedestrian and bicycle facilities shall be tracked over time to document the County's implementation of the County Road Improvement and Preservation Program (CRIPP), Complete Streets, Vision Zero, Active Transportation, and equity-focused plans, programs, and policies	· The County received over \$2 million across 5 regional, State, and Federal grants to support transportation infrastructure improvement projects. · 5 transportation infrastructure improvement projects were completed, and 24 funded projects were in the design or construction phase.	
		· Increase equity in and continue promoting Safe Routes to School, Injury Prevention, and Building Healthy Communities programs	· County won 1 grant of over \$200,000 to promote active transportation and advance bicycle and pedestrian roadway safety. · The Building Healthy Communities Program continues to provide bicycle and pedestrian education and encouragement programming.	
		· Identify strategies and funding to implement recommendations in 2019 Employee Commute Survey of County employees	· The County continues to implement the Remote Work Policy for County employees. Based on a survey conducted in August 2024, 7,750 individual trips are avoided per week because of employees working remotely. · 12 employees used the pre-tax commuter benefit. · The County participates in Bike to Work Day.	

	Goal	Tools	Achievements	Status
5.2	Increase percentage of electric vehicles (EVs) in Contra Costa County fleet	- Increase number of EVs in Contra Costa County	- All-electric vehicles (EVs) make up about 6% of the County's fleet. - The County ordered 48 EVs.	
		- Install EV chargers at County facilities	- 115 active charging ports were installed at County facilities. - 1,477 public and 905 shared private EV chargers are available across Contra Costa County. - Zero-emission vehicles made up 32.7% of light-duty vehicle sales.	
		- Provide leadership and coordination on transportation electrification strategies outlined in the Contra Costa County EV Readiness Blueprint	- Over \$24 million has been secured for EV supply equipment infrastructure at County facilities. - The County's Energy Manager convenes a monthly meeting for public agencies to collaborate on EV readiness.	
6	<b>Climate Equity</b>	<i>The CAP will mitigate environmental factors leading to health disparities, promote safe and livable communities, and promote investments that improve neighborhood accessibility.</i>		
6.1	All residents live in clean, healthy homes and neighborhoods, have access to parks, open space, and fresh food, and can easily move through the County	- Adopt environmental justice policies in General Plan update - Ensure Climate Action Plan is equitably implemented in impacted communities	- The 2045 General Plan and Climate Action and Adaptation Plan 2024 Update were adopted by the Board on November 5, 2024.	
6.2	Plan for transition to a local economy that is less reliant on fossil fuels	- Implement Community Funding Project grant from U.S. Dept. of Housing and Urban Development to support development of the Just Transition Economic Revitalization Plan Roadmap - Collaborate with stakeholders to develop an inclusive process	- The County completed the required environmental review for the County's Just Transition Economic Revitalization Plan, funded by a \$750,000 Community Project Funding grant from the U.S. Department of Housing and Urban Development. - The County is supporting the Green Empowerment Zone and continues to implement the strategic plan for the Northern Waterfront Economic Development Initiative.	

	Goal	Tools	Achievements	Status
7	Leadership	<i>Contra Costa County is a model for how local government can take action on climate issues.</i>		
7.1	Contra Costa County is a leader among local governments on how it addresses climate issues	<ul style="list-style-type: none"> <li>- Continue work of Interdepartmental Climate Action Task Force</li> <li>- Participation by County departments in County's Green Government Group (G3) Program</li> </ul>	<ul style="list-style-type: none"> <li>- The Task Force met on February 26 and August 14 and provided reports to the Board on March 18 and October 8.</li> <li>- Approximately 85 G3 Champions across 17 County departments participate in the program.</li> <li>- The G3 Champions developed the Low-Waste Office Events Checklist to help County departments save money and resources when planning events.</li> <li>- The Contra Costa County Library launched its departmental Climate Action Plan in August.</li> </ul>	  
7.2	Implement Climate Emergency Resolution	<ul style="list-style-type: none"> <li>- Implement climate emergency resolution</li> </ul>	<ul style="list-style-type: none"> <li>- Implementation of the Climate Emergency Resolution is ongoing. Focus in 2024 was on the Interdepartmental Climate Action Task Force, G3 Champions, Just Transition, and new ordinance requiring increased energy efficiency standards for new construction.</li> </ul>	
7.3	Build Community and County Employee Support for Climate Action Plan	<ul style="list-style-type: none"> <li>- Newsletters</li> <li>- Meetings</li> <li>- Collaboration with cities and community-based organizations</li> </ul>	<ul style="list-style-type: none"> <li>- Sustainability staff publish a quarterly Sustainability Newsletter and regular column in the Contra Costa FOCUS employee newsletter.</li> <li>- Sustainability staff have attended and hosted events for community members and local government staff.</li> <li>- The Office of Communications and Media created numerous videos highlighting the County's climate action work.</li> <li>- The County led multiple initiatives to increase community access to and familiarity with induction cooking technology.</li> </ul>	
7.4	County investments support climate equity	<ul style="list-style-type: none"> <li>- Amend the County investment policy to divest from fossil fuels, consider the use of Environmental, Social, and Governance criteria, and prohibit investment in all securities issued by fossil fuel companies</li> <li>- Evaluate the issuance of labeled bonds or other projects to be funded by municipal securities for "Green," "Sustainable," or "Social"</li> <li>- Evaluate the use of third-party certifiers for labeled bonds to promote the integrity of the bond sale and avoid appearances of "greenwashing"</li> <li>- Evaluate the implementation of retail order periods to encourage local retail investors to purchase County bonds, including "labeled bonds" such as Green Bonds</li> </ul>	<ul style="list-style-type: none"> <li>- These measures were completed in 2023 with the Board's adoption of the County's updated Investment Policy and Debt Management Policy.</li> </ul>	

# Contra Costa County Interim Climate Action Work Plan 2024 Progress Report

## Introduction

This report provides a progress update on the 2023-2024 Contra Costa County Interim Climate Action Work Plan (Interim Work Plan). The Interim Work Plan outlines the actions the County took in 2023 and 2024 to address our changing climate while the County's Climate Action and Adaptation Plan (CAAP) was updated alongside the County's General Plan through the Envision Contra Costa process. The CAAP 2024 Update and 2045 General Plan were adopted by the Board of Supervisors on November 5, 2024.

There are seven goals outlined in the Interim Work Plan, which aim to increase the effectiveness of climate change mitigation and adaptation efforts. Additionally, the Interim Work Plan allows the County to monitor progress towards its climate goals. Under each goal, there are sub-goals and corresponding actions that will help the County achieve the main goal. Various departments and agencies are responsible for implementing these goals and reporting on measures of effectiveness. The achievements and progress made towards the Interim Work Plan goals in 2024, as well as additional achievements that support the County's climate goals, are detailed below. Going forward, progress reports will focus on the CAAP 2024 Update.

## Clean and Efficient Built Environment

*Homes, workplaces, and businesses in Contra Costa County run on clean energy.*

### Increase the number of carbon neutral buildings in Contra Costa County

#### All-Electric Buildings

On February 27, 2024, the Board of Supervisors (Board) suspended its enforcement of the requirement that most new buildings in Contra Costa County be constructed using all-electric technology (Ordinance No. 2022-02). While Section 74-4.010 will remain in the County's building code, it will not be enforced at this time. The Board took this action because in January 2024, the U.S. Court of Appeals for the Ninth Circuit invalidated a similar City of Berkeley ordinance that prohibited natural gas infrastructure in new buildings.

At the same time, the Board affirmed its commitment to the goals that prompted it to adopt the all-electric requirement: improving public health and fighting climate change, and the Board directed staff to look for other methods of meeting the County's CAAP goals while also complying with the Ninth Circuit's decision. On June 4, 2024, the Board directed staff to develop an ordinance amending the County building code to increase the energy efficiency standards for certain types of newly constructed buildings to meet the County's CAAP goals.

The Board adopted Ordinance No. 2024-17 on October 1, 2024, which amends the 2022 California Energy Code to require increased energy efficiency standards for newly constructed residential buildings, hotels, offices, and retail buildings. The ordinance will go into effect once it is accepted by the California Energy Commission, which is expected to occur in early 2025.

Prior to February 27, 2024, seven single-family or duplex residential projects, two multifamily residential projects, 15 ADU projects, and no commercial projects that were issued permits in the unincorporated county were all-electric. *Figure 1* shows the number of projects that received permits in alignment with the all-electric ordinance between June 1, 2022, when the ordinance went into effect, and February 27, 2024.

**Figure 1: Permits Issued in Unincorporated County in Alignment with All-Electric Ordinance**

Permit Category	Number of Permits Issued June 1, 2022, Through February 27, 2024.
Single-Family or Duplex	158
Multifamily	10
ADU	146
Commercial	4

Staff continued developing the Contra Costa County Clean Energy Roadmap that examines the opportunities, challenges, and strategies for transitioning existing buildings to use low-carbon or carbon-free appliances, as well as supporting the conversion of buildings to rely on low-carbon or carbon-free energy. The Clean Energy Roadmap will help implement actions in the updated CAAP. A draft of the Clean Energy Roadmap is expected to be completed in 2025.

One new County facility was constructed to be all-electric: the new administration building at 1026 Escobar Street in Martinez. Additionally, nine rooftop gas-fired package units that provided heating and cooling were replaced with all-electric heat pumps at two County facilities.

### Energy Efficiency and Weatherization Programs

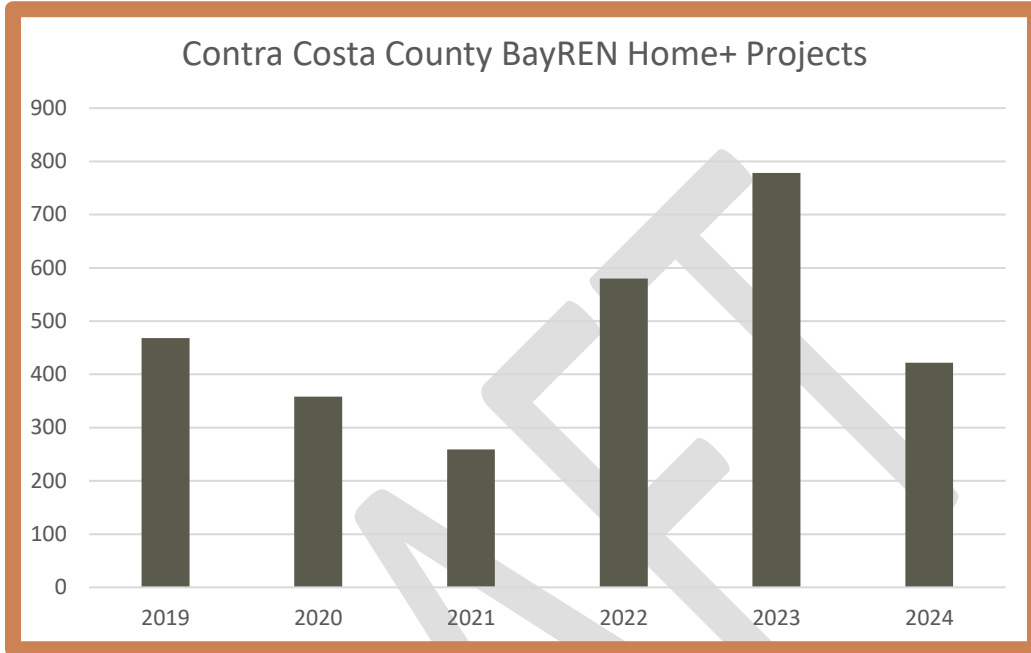
#### BayREN

The Bay Area Regional Energy Network (BayREN) provides energy efficiency programs, services, and resources to the nine Bay Area counties. Through October 18, 2024, there were 422 single-family homes in Contra Costa County that participated in the BayREN Home+ program, which provided rebates to single-family homeowners for energy efficiency improvements. \$341,352.25 in rebates were dispersed across Contra Costa County. 25 of the Home+ projects were located in unincorporated areas of the county, receiving \$19,210.30 of the rebates dispersed across the county.

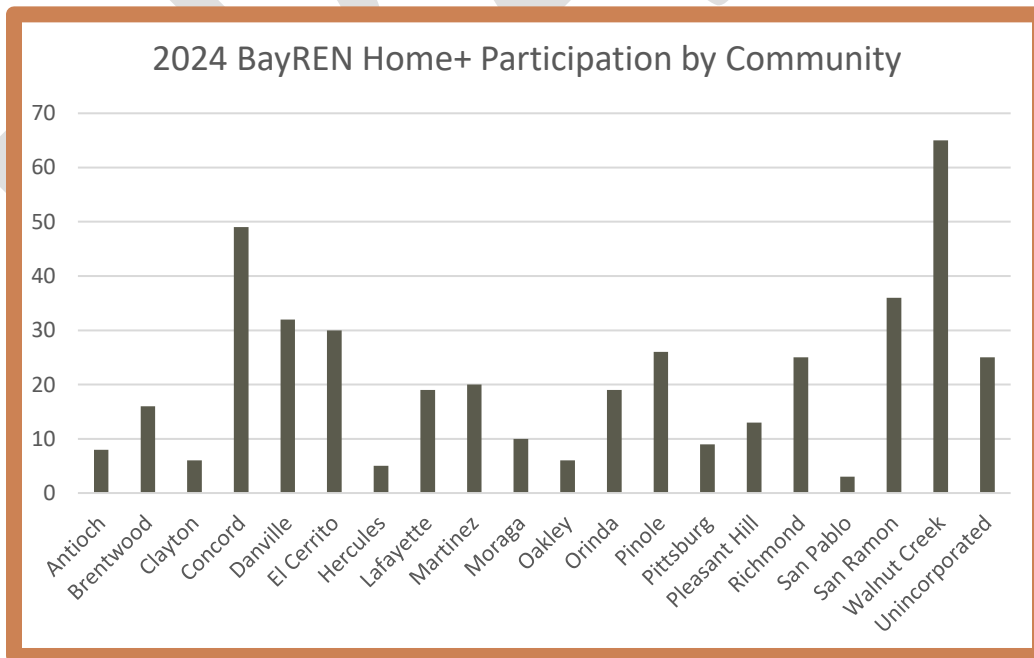
The number of Home+ projects decreased from 2023 levels (*Figure 2*). In 2022, BayREN began redesigning its Single-Family Program to better serve moderate-income and hard-to-reach residents. To prepare for the launch of the [BayREN Efficiency and Sustainable Energy \(EASE\) Home program](#) in 2025, BayREN’s Home+ program rebates were sunset throughout 2024. The [first wave of phase-outs](#) began on April 15, 2024; it included rebates for heat pump water heaters and heat pump heating, ventilation, and air conditioning (HVAC) systems. On October 18, 2024, the [Home+ program was officially retired](#) and concluded all Home+ incentives and Energy Advisor services. Given the sunset of measures throughout

2024 and the uncertainty around when the Home+ incentive budget would be exhausted, Home+ program participation in 2024 was lower than in 2023. See *Figure 3* for participation levels in the BayREN Home+ program across the county.

**Figure 2: Contra Costa County BayREN Home+ Projects**



**Figure 3: BayREN Home+ Participation Across Contra Costa Communities**



There were two properties in Contra Costa County in 2024 that completed projects through the [BayREN Bay Area Multifamily Building Enhancements \(BAMBE\)](#) program, which seeks to promote energy savings

and enhance resident well-being in multifamily buildings. These projects represented 52 units and received \$93,000 in incentives. 11 additional projects, representing 577 units, are in the technical assistance stage, and one project, representing 141 units, is moving forward with an established scope of work.

The [BayREN Business](#) program supports local, small, hard-to-reach businesses through energy efficiency projects. 21 projects were completed across the county in 2024, saving 85,966 kWh of energy with \$164,738.83 of incentives disbursed across all the projects.

BayREN also offers the [Home Energy Score](#), which provides residents with insights into their home's efficiency potential prior to undertaking home upgrade projects. In 2024, Contra Costa County had 1,356 approved Home Energy Scores, with 83 of these assessments taking place in the unincorporated areas of the county. \$338,450 in incentives for Home Energy Scores were paid out across Contra Costa County, with \$20,750 in incentives paid out to households in the unincorporated areas of the county.

The Contra Costa County Library has Energy Efficiency Toolkits, provided by BayREN and the Department of Conservation and Development, available for checkout, so residents can test the electricity use of their home appliances and the temperatures of their rooms, refrigerators, and freezers. As of August 15, 2024, 37 toolkits have been checked out 645 times and put on hold 293 times since the Library began offering them at all its branches in 2019.

#### ***Additional Energy Efficiency Programs and Initiatives***

The [County Weatherization Program](#) is a Federal and State-funded program whose purpose is to assist low and/or fixed income people in making their homes more energy-efficient and is available regardless of whether you own or rent and live in a house, apartment, or mobile home. In 2024, 183 households were served through the County Weatherization Program with a total of \$837,346.65 spent on home repairs. 26 households were served in the unincorporated areas of the county.

The County partnered with the City of Pinole to administer the [Pinole Energy Enhancement Rebate \(PEER\) Program](#) on the City's behalf. The PEER Program launched on January 1, 2024. 20 households participated in the PEER Program in 2024, with \$105,900 in incentives issued.

The Contra Costa Green Business Program (CCGBP) began serving as a bilingual (Spanish-speaking) outreach partner for the MCE Small Business Energy Advantage Program (SBEA) in fall 2024. SBEA provides small businesses located in impacted communities with access to bill reducing energy efficiency upgrades that also offer health, comfort, and safety benefits. In 2024, CCGBP staff engaged with 29 businesses, and 11 businesses enrolled in SBEA.

The County was awarded three grants to provide additional energy efficiency and all-electric services:

- \$19 million from the U.S. Environmental Protection Agency's Community Change Grant Program for the North Richmond Community Resilience Initiative, which includes all-electric home retrofits, a resilience hub at the Urban Tilth farm, improvements to Wildcat Creek Trail, establishing a community garden, rehabilitating low-income housing, establishing an e-bike lending library, installing green infrastructure throughout the community, and creek and watershed stewardship and education.

- \$356,510 from the U.S. Department of Energy’s Energy Efficiency and Conservation Block Grant Program to retrofit home-based childcare facilities in impacted communities to improve energy efficiency and create a building inventory to inform the County’s Clean Energy Roadmap.
- \$150,000 from the Keller Canyon Mitigation Fund to implement the [Bay Point/Pittsburg Energy Enhancement Pilot Program](#), which offers incentives for qualified energy efficient and all-electric home improvement projects.

The Contra Costa Asthma Initiative was a comprehensive home-based asthma pilot program that provided asthma education and home energy efficiency retrofits to asthma patients referred through Contra Costa Health Services. The Asthma Initiative was funded by grants from the Sierra Health Foundation and Bay Area Air Quality Management District. Both grant terms ended in 2023. The Contra Costa Health Plan continues to offer environmental asthma home remediation and education services to its members. However, this service is no longer tied to energy efficiency improvements or performed in coordination with partners outside of the Contra Costa Health Plan.

Three high efficiency condensing boilers were installed at County facilities in 2024.

## 1.2 Replace fossil fuel electricity with renewable electricity

### MCE Deep Green Participation

As of January 1, 2025, 88.8% of total (residential and non-residential) accounts in the unincorporated areas of the county are enrolled in MCE, equating to 62,627 accounts. 6.2% of these accounts, equating to 3,881 accounts, are enrolled in MCE’s Deep Green electricity service, which provides electricity from 100% renewable energy. As a result of MCE’s generation services, an estimated 12,015.69 metric tons of CO<sub>2</sub> equivalent were reduced in the unincorporated areas of the county through 2023 since 2018 when Contra Costa County joined MCE, a 7.5% savings of CO<sub>2</sub> equivalent compared with PG&E.<sup>2</sup> See *Figure 4* and *Figure 5* for a summary of overall MCE participation and MCE Deep Green participation across Contra Costa communities.<sup>3</sup>

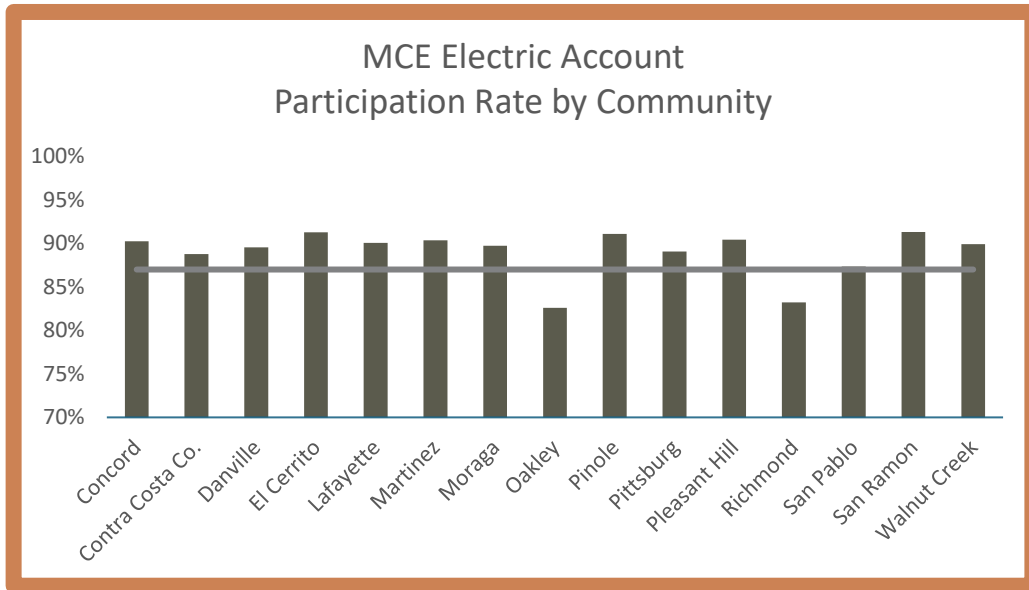
Approximately 98.8% of County-owned accounts are enrolled in MCE’s Deep Green electricity service, covering 595 individual accounts.

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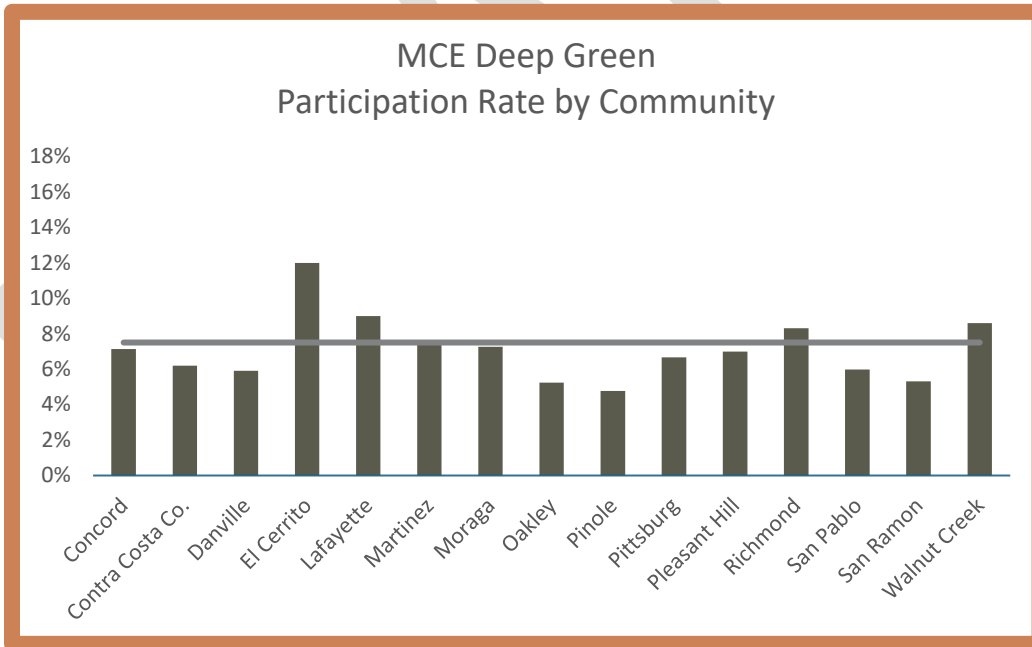
<sup>2</sup> The emissions reduction estimate was calculated based on usage data from 2023 and the 2023 emission factor.

<sup>3</sup> Only cities and towns that participate in MCE are listed.

**Figure 4: MCE Participation Across Contra Costa Communities**



**Figure 5: MCE Deep Green Participation Across Contra Costa Communities**



The gray lines in Figure 3 and Figure 4 represent the MCE average.

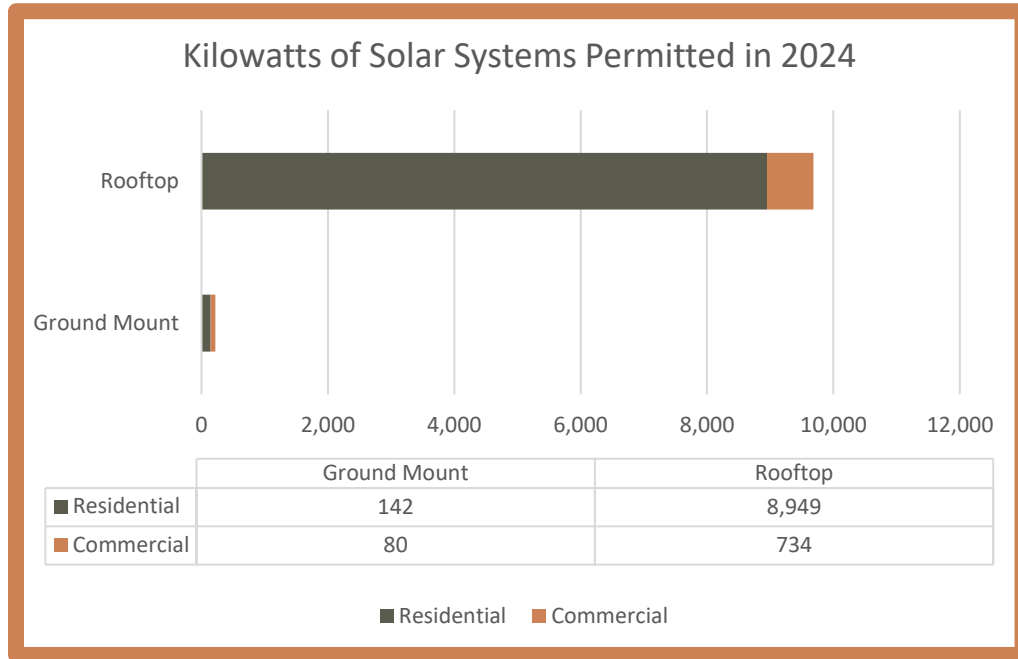
**Solar Installations**

There were 1,170 total permits issued for residential solar projects in the unincorporated areas of the county, including 1,158 rooftop and 12 ground mount projects, totaling approximately 9,091 kilowatts.<sup>4</sup>

<sup>4</sup> Please note that due to corrections in the data for kilowatts associated with permitted solar systems, the reported kilowatts of solar systems permitted in 2024 is lower than in past progress reports.

A total of 15 permits were issued for commercial solar installations, including six rooftop and nine ground mount projects, totaling approximately 814 kilowatts. *Figure 6* describes the kilowatts associated with rooftop and ground mount solar systems that were issued permits in 2024.

**Figure 6: Kilowatts of Solar Systems Permitted in 2024**



The County partnered with the Bay Area SunShares program for the 2024 season, which ran from September 1 through November 15, 2024. This program resulted in the completion of two solar projects, two battery storage projects, and eight projects with both solar and battery storage in Contra Costa County.

**Renewable Electricity in County Facilities**

The County has 7,332 kilowatts of rooftop and parking lot solar installed at County facilities. There were no new solar projects completed at County facilities in 2024. Some gas load to electricity conversions occurred in leased facilities, though the County Energy Program is not yet set up to track and manage energy use in leased facilities.

**1.3 Increase electrical grid resiliency**

**Energy Storage**

The Solar Overlay Zone Ordinance has been identified for inclusion in the first round of comprehensive zoning code changes as part of the Envision Zoning Code Update Project. The inclusion of battery energy storage systems will be examined during the update to the Solar Overlay Zone Ordinance.

145 permits were issued for residential battery energy storage system projects in the unincorporated areas of the county. An additional 941 battery energy storage system installations were included in residential solar permits, bringing the total number of permits issued for residential battery energy storage systems to 1,086.

The County has battery storage systems at three facilities, totaling 1,500 kW of capacity. One new battery energy storage system was in the design phase.

### Energy Use Reduction in County Facilities

There were 19 County facilities actively participating in demand response load shedding in 2024. The amount of energy consumption avoided and incentives received by the County for participating in demand response programs was not yet available at the time of this report's publication.

## 1.4 Low-carbon building materials and strategies

Staff continue to monitor state action on low-carbon concrete. On August 2, 2023, the California Building Standards Commission updated the California Green Buildings Standards Code (CALGreen) Title 24 to include embodied carbon requirements. These requirements became effective statewide on July 1, 2024. Nonresidential commercial building projects over 100,000 square feet and school building projects under the Division of the State Architect over 50,000 square feet are required to comply with one of three embodied carbon reduction pathways. The scope of projects required to comply with these embodied carbon requirements will expand in the coming years to achieve the State's comprehensive building sector goal of achieving 40% net reductions in building materials greenhouse gas emissions by no later than December 31, 2035.

The County has one Total Resource Use and Efficiency (TRUE) Gold-certified project: the [Administration Building and Jail Demolition and Redevelopment Project](#) (ADR) at 1026 Escobar Street in Martinez, which was completed in summer 2024.<sup>5</sup> This is the first government building to achieve TRUE for Construction certification. The project also achieved LEED (Leadership in Energy and Environmental Design) Platinum certification, the highest level awarded by the U.S. Green Building Council, and was honored with the California Green Building Award for Honor in Zero Waste & Circular Solutions. The project achieved a 95.07% waste diversion rate and prevented 10,346 tons of material from being sent to the landfill through a variety of techniques and processes to reuse, repurpose, and reduce materials used. Among the sustainable construction techniques used in the project was the use of low-carbon concrete, which resulted in a 58.50% reduction in kgCO<sub>2</sub>e emissions compared to the CALGreen industry baseline.



The County has not yet developed a tool to track embodied carbon in construction materials for new construction and major renovations.

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<sup>5</sup> Administration Building and Public Plaza [TRUE Case Study](#) and Sustainability Video Tour ([English](#) and [Spanish](#))

# Resilient Communities and Natural Infrastructure

*Contra Costa County will increase resilience to climate hazards and foster community health.*

## 2.1 Sequester carbon in natural lands in Contra Costa County

### Carbon Sequestration Feasibility Study

The Board of Supervisors accepted [Healthy Lands, Healthy People: A Carbon Sequestration Feasibility Study](#) in 2023. The study found that the practices with the most potential to sequester greenhouse gases include applying compost to all land types; nutrient management to improve soil health; urban forestry through the maintenance of existing healthy trees and planting of new trees; alley cropping; and conserving, maintaining, and restoring forested areas next to streams, lakes, ponds, and wetlands. Staff have begun implementing the recommendations included in the report, including securing funding to develop an Urban Forest Management Plan.

The County was notified in December 2024 that it will receive a \$750,000 grant from the Governor’s Office of Land Use and Climate Innovation through the Integrated Climate Adaptation and Resiliency Program’s Extreme Heat and Community Resilience Program for the development of the Urban Forest Management Plan. The County is currently negotiating the budget and workplan for this grant.

### Green Infrastructure

The County continued to make progress on implementation of the [County’s Green Infrastructure Plan](#). Green infrastructure refers to constructing and retrofitting storm drainage systems to mimic natural processes by enabling stormwater to infiltrate the soil rather than to runoff into storm drains and pipes. This is a multi-department and multi-year plan that is still being expanded. See *Figure 7* for completed and planned County green infrastructure projects in 2024. Green infrastructure is treating a total of 7.127 acres<sup>6</sup> from projects completed between January 2021 and December 2024, with another 10.980 acres to be treated by planned projects.

The County incorporated green infrastructure into the Administration Building and Jail Demolition Redevelopment (ADR) Project at 1026 Escobar Street in Martinez, including both a rain garden and pervious pavement, on a total of 0.317 acres. Future County pervious paving opportunities are being explored, and pervious paving is listed as an option for developers’ stormwater treatment requirements.

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<sup>6</sup> Please note that due to an adjustment in how acres treated is calculated, the reported number of acres treated by green infrastructure projects is different than in past progress reports. Acres treated in this progress report represent reported or estimated potential impervious surface treated (in acres) for green infrastructure projects. Five projects completed prior to January 2021 represent 2.48 acres treated that were calculated based upon total drainage management areas treated by the green infrastructure facilities, not simply impervious surfaces, and are not included in the total number of acres being treated by green infrastructure in this progress report.

**Figure 7: Completed and Planned Green Stormwater Infrastructure Projects in Unincorporated Contra Costa County and at New County Facilities in 2024**

Project Name	Project Location	Acres Treated	Project Type	Installation Date
<b>Administration Building &amp; Jail Demolition Redevelopment (ADR) Project</b>	650 Pine and 651 Pine St., Martinez (Now 1026 Escobar Street)	0.145	Rain Garden	April 2024
<b>Pine Street Plaza (ADR Project)</b>	650 Pine and 651 Pine St., Martinez (Now 1026 Escobar Street)	0.172	Pervious Pavement	April 2024
<b>Danville Boulevard Roundabout</b>	At intersection of Danville Boulevard and Orchard Court, Alamo	0.23	Rain Garden	April 2024
<b>Brookside Drive Frontage Improvements (Urban Tilth Richmond Farm)</b>	Brookside Drive, just east of Fred Jackson Way	0.08	Rain Garden	April 2025
<b>Marsh Creek Road Bridge Replacement</b>	Bridges No. 28C0143 and 28C0145, Clayton	6.35	Vegetated Swale	July 2025
<b>Byron Highway Bridge Replacement</b>	Over California Aqueduct, 3.75 miles southeast of Byron	4.55	Vegetated Swale	December 2027

## 2.2 Address impacts of heat islands

There were 558 residential and five commercial permits issued for cool roofs. Four cool roof projects were completed at County facilities.

## No-Waste Contra Costa

*Contra Costa County generates no more solid waste than 2.2 pounds per person per day (PPD).*

### 3.1 Recover organic waste and edible food (Senate Bill (SB) 1383/Short-Lived Climate Pollutants Program)

#### Outreach and Education

All haulers mailed information about SB 1383 to their customers. Mailers included service guides, quarterly newsletters, or postcards. Haulers notified customers of contamination found in their carts by providing tags that identified mis-sorted items. Information about SB 1383 can also be found on all the haulers’ and the County’s websites.

#### Weekly Organics Collection Services

All four of the County’s solid waste collection [franchise agreements](#) have services compliant with SB 1383. The Board approved the final franchise agreement for SB 1383-compliant service on March 26, 2024. Areas covered by the franchise agreements now have weekly organics collection service with food waste, food scraps, and food-soiled paper accepted in the organics bins.

### Single-use Plastics Reduction

The Plastic Pollution Prevention and Packaging Producer Responsibility Act (SB 54) was signed into law by the governor in 2022. Staff continue to monitor progress on its implementation. SB 54 establishes an extended producer responsibility program to reduce waste associated with single-use packaging and single-use plastic food serviceware in California and requires that these single-use items be recyclable or compostable by 2032. In 2024, the State published a list of covered materials categories and continued developing SB 54 regulations.

### Edible Food Recovery

SB 1383 requires certain food generators to donate excess edible food that would otherwise be disposed to food recovery organizations. County Environmental Health performs inspections on Tier 1 and Tier 2 Commercial Edible Food Generators regarding compliance with SB 1383 and provides information on food recovery requirements. In the unincorporated areas of the county, there are a total of five Tier 1 generators, which include wholesale food vendors, food service providers, food distributors, and grocery stores, and four Tier 2 generators, which include hotels, restaurant facilities, health facilities, large venues and events, local education agencies, and State agency cafeterias. Since 2023, there were a total of 10 inspections of Tier 1 generators. One inspection of Tier 2 generators occurred in 2024.

## 3.2 Update the County's existing Environmentally Preferable Purchasing (EPP) Policy

The [Environmentally Preferable Purchasing Policy](#) (EPPP) was updated and approved by the Board of Supervisors on September 12, 2023. It includes purchasing requirements to minimize environmental impacts, reduce greenhouse gas emissions, and advance the goals of the CAAP. Public Works Purchasing Division staff are tracking the purchase of paper products made from recycled content in compliance with SB 1383 and the EPPP. 65% of paper products purchased in 2024 contained at least 30% recycled content; 3% contained below 30% recycled content; and 32% contained no recycled content.

On June 12, 2024, Public Works Department Purchasing Division staff provided an overview of the updated EPPP to the G3 Champions. The G3 Champions provided ideas and feedback on strategies for promoting and training staff on the updated EPPP in their departments.

## Reduce Water Use and Increase Drought Resilience

*Contra Costa County uses less water, and communities are prepared for drought.*

### 4.1 Reduce water use in unincorporated County and in County facilities

The County implements water saving practices such as drought tolerant plantings and automatic irrigation system shutoffs in the event of rain, leaks, or breaks. In 2024, the County retrofitted all restrooms with motion sensing faucets and toilets at two County facilities.

The majority of residents and businesses in the county receive their water from two water districts: Contra Costa Water District (CCWD), which serves north central and eastern portions of the county, and East Bay Municipal Utility District (EBMUD), which serves the western and south central portions of the county.

See *Figure 8* and *Figure 9* for total water usage in the unincorporated areas of the county covered by CCWD and EBMUD’s service areas. EBMUD water usage data for 2024 was not yet available at the time of this report’s publication. In 2024, water use for both non-residential and residential CCWD customers increased. Residential water use for EBMUD customers continued to decrease in 2023, though non-residential water use increased compared to previous years.

**Figure 8: Contra Costa Water District CCF Per Year Water Usage <sup>7 8</sup>**

Contra Costa Water District CCF Per Year Water Usage					
Unincorporated Area	2020	2021	2022	2023	2024
Non-Residential	337,170	322,729	312,771	303,870	323,330
Residential	752,961	726,026	678,909	665,032	683,479
All Accounts	1,090,131	1,048,755	991,680	968,902	1,006,809

**Figure 9: East Bay Municipal Utility District CCF Per Year Water Usage**

East Bay Municipal Utility District CCF Per Year Water Usage				
Unincorporated Area	2020	2021	2022	2023
Non-Residential	3,779,268	3,837,469	3,980,418	4,093,836
Residential	6,012,011	5,546,508	5,090,536	4,806,887
All Accounts	9,791,279	9,383,977	9,070,954	8,900,723

## 4.2 Manage groundwater resources sustainably

The [East Contra Costa Subbasin Groundwater Sustainability Plan](#) (GSP) was approved by the California Department of Water Resources (DWR) in 2023. The GSP was created to comply with the Sustainable Groundwater Management Act (SGMA). The GSP goals are consistent and complementary with the County’s CAAP and focus on groundwater management strategies that protect and maintain safe and reliable groundwater sources in the face of climate change.

<sup>7</sup> Each CCF (one hundred cubic feet) is equivalent to 748 gallons.

<sup>8</sup> CCWD data includes CCWD’s retail service area. Wholesale service area customers are not included.

# Clean Transportation Network

*Contra Costa County's transportation network provides safe and accessible options for walking, biking, and transit. If residents and workers are driving, they are in electric vehicles.*

## 5.1 Reduce vehicle miles traveled in Contra Costa County by increasing number of people who bike, walk, and take public transit

### Bicycle and Pedestrian Network

The Public Works Department (Public Works) continues to implement the [Capital Road Improvement & Preservation Program \(CRIPP\)](#), [Complete Streets Policy](#), [Vision Zero Final Report](#), [Active Transportation Plan](#), and equity-focused plans, programs, and policies. In 2024, Public Works was awarded numerous regional, State, and Federal grants to support the implementation of these initiatives, including:

- \$900,000 from the Safe Routes to BART Program for the North Bailey Road Active Transportation Corridor Project;
- \$200,000 across three Transportation Development Act (TDA) grants for projects focused on crosswalk enhancements and pedestrian improvements; and
- \$1,000,000 from Congressionally Directed Spending provisions for the San Pablo Avenue Complete Street/Bay Trail Gap Closure Project.

The existing unincorporated bicycle network spans an estimated 120 miles, which is approximately 37% of the total estimated 327 miles of planned bicycle network in the unincorporated areas of the county. In 2024, approximately 9,500 feet of bikeways and 125 feet of pedestrian pathways were constructed. One pedestrian network gap was closed. Completed transportation infrastructure improvement projects in 2024 and their associated plans and policies included:

- The 2024 Countywide Surface Treatment Project,
- Bixler Road and Regatta Drive Intersection Improvements (Complete Streets, Active Transportation),
- Danville Boulevard/Orchard Court Complete Streets Improvements (Complete Streets, Vision Zero, Active Transportation),
- Livorna Road Shoulder Widening, and
- Walnut Boulevard Shoulder Widening (Vision Zero, Equity-Focused).

Transportation infrastructure improvement projects that have been funded and were in the design or construction phase in 2024, as well as their associated plans and policies, are listed in *Figure 10*.

**Figure 10: Planned Transportation Infrastructure Improvement Projects**

Planned Projects	Complete Streets	Vision Zero	Active Transportation	Equity-Focused	Grant Funding <sup>9</sup>
Appian Way at Fran Way Crosswalk Enhancements	X		X	X	HSIP, TDA
Appian Way Utility Undergrounding Project				X	
Bridge Preventative Maintenance Project					
Briones Area Guardrail Upgrades					HSIP
Byron Highway Bridge Replacement over California Aqueduct (Bridge No. 28C0121)					
Byron Highway Safety Improvements	X				HSIP
Camino Tassajara/Tassajara Road Realignment Project		X			
Countywide Guardrail Upgrades - Phase 2					HSIP
Deer Valley Road Traffic Safety Improvements			X		HSIP
Del Monte Drive Bridge Painting and Poly Overlay (Bridge No. 28C0207)					
Franklin Canyon Road Safety Improvements		X			HSIP
Freeman Road and Briones Valley Road Bridge Maintenance Project					
Market Avenue at UPRR Crossing Improvements Project		X		X	
Morgan Territory Road Bridges 5.0 & 5.2 Replacement			X		
Norris Canyon Road Slide Repair and Safety Improvements					
North Bailey Road Active Transportation Corridor	X		X	X	ATP
Pacifica Avenue Safe Routes to School	X		X	X	ATP
San Miguel Drive Pedestrian Path	X		X	X	TDA
San Pablo Avenue Complete Street/Bay Trail Gap Closure	X		X		ATP
Second Avenue Bridge Replacement (Bridge No. 28C0383)	X		X	X	
Tara Hills Curb Ramps on Shawn Drive	X		X		TDA
Treat Boulevard Corridor Improvements				X	
Vasco Road Safety - Phase 2	X		X		
Vasco Road Safety Improvements				X	HSIP

### Building Healthy Communities

In 2024, the Contra Costa Health Building Healthy Communities Program (BHC) was awarded a one-year \$205,000 grant through the California Office of Traffic Safety’s Pedestrian and Bicycle Safety Program to advance Vision Zero, build community capacity to promote bicycle and pedestrian safety, and disseminate bicycle and pedestrian safety campaigns. This grant added to three other multi-year grants

<sup>9</sup> HSIP = Highway Safety Improvement Program; ATP = Active Transportation Program

already being administered by BHC, with funding for bicycle and pedestrian education totaling over \$1.1 million.

BHC continues to provide bicycle and pedestrian education, encouragement, and engagement programming, with a focus on equity-priority communities. BHC partnered with County Public Works Department engineers and local school stakeholders to conduct four street safety assessments with a focus on school zones and identifying how existing infrastructure can support educational efforts to encourage walking and rolling to school.



*Community Walk Audit at Nystrom Elementary School in Richmond.*

Through funding from the Metropolitan Transportation Commission's One Bay Area Grant Cycle 3, BHC began developing Safe Routes to School curricula for elementary through high school students. The Safe Routes to School curricula will be piloted in public schools across the county in the 2025/26 school year. These curricula will encourage increased active transportation for students and families, advancing educational efforts for active transportation and encouraging the reduction of vehicle miles traveled in Contra Costa County.

BHC's Transportation Development Act (TDA) Article 3 funding stream remains pivotal to the continuous delivery of its countywide bike and pedestrian education, outreach activities, and promotion strategies. The past year saw a robust increase in community partnerships that accentuated the program's reach. Some highlights from the TDA Article 3 FY 2024 activities include:

- The City of Richmond and District 1 Supervisor's Office's Thrive Thursday health and wellness event that saw over 100 community residents receive free bike and pedestrian safety resources, including helmet distribution and fittings;
- Coordination with the Contra Costa Health Nutrition and Physical Activity Promotion Program to observe and celebrate the National Walk and Roll to School Day celebration in West County; and
- League of Cycling Instructor-led bike rodeos reaching up to 170 school-aged kids in East and West Contra Costa County.

In its sunset year, BHC's Safe Routes to School multi-year grant from the California Department of Transportation, which is administered by the Public Works Department and funds West Contra Costa High School programming at seven sites, continued to see increased student and staff engagement. Notably, four walk-and-bike student-led clubs have been established at four of the seven high schools, with staff leading efforts that surveyed over 180 high school students on their travel habits as BHC looks to continue promoting active transportation encouragement and awareness in impacted school communities.

### **County Employee Commutes**

The County's Remote Work Policy remains in effect and is being implemented by departments. Based on a survey conducted by the County Administrator's Office in August 2024 of all County departments

related to employee participation in the County’s remote work policy, it is estimated that the total number of weekly commutes avoided because of employees working remotely is 3,875, which is approximately 7,750 individual trips<sup>10</sup> saved per week. There were 12 employees as of the end of 2024 using the pre-tax commuter benefit. The County participates in Bike to Work Day and does an extensive outreach campaign with rewards in various categories.

## 5.2 Increase percentage of electric vehicles in Contra Costa County fleet

### County Fleet

All-electric vehicles (EVs) make up about 6% of the County’s fleet of approximately 1,276 vehicles. In 2024, the County ordered 48 EVs. 29 non-electric vehicles were purchased, which included a small number of trailers and heavy equipment vehicles. 115 active charging ports were installed at County facilities in 2024, bringing the total number of active charging ports to 142 with an additional 89 ports in permitting or under construction.

The County acquired over \$24,000,000 in funding to continue to install EV supply equipment infrastructure at additional County facilities to facilitate the transition of the fleet to all-electric and increase the availability of EV charging for the community. This funding includes:

- \$2,500,000 from the County’s Sustainability Fund, which is supported by the Measure X sales tax;
- \$15,000,000 awarded from the Federal Highway Administration’s Charging and Fueling Infrastructure (CFI) Grant Program;
- \$3,000,000 in match funding secured from a third party for the CFI grant; and
- \$3,644,000 awarded from the California Energy Commission’s grant solicitation for Charging Infrastructure for Government Fleets.

The County’s Energy Manager convenes a monthly meeting for interested public agencies in the county to collaborate on EV readiness and pursue goals identified in the [Contra Costa County EV Readiness Blueprint](#). 62 local governments and public agencies are participating in coordination activities.

### In the Community

Across the entirety of Contra Costa County, there are 1,477 total public EV chargers, including 1,060 Level 2 and 417 DC Fast chargers, as of August 26, 2024. Additionally, there are 905 shared private EV chargers at locations such as workplaces and multifamily residences.<sup>11</sup> In Contra Costa County, zero-emission vehicles made up 32.7% of total light-duty vehicle sales in 2024 with 14,732 light-duty zero-emission vehicles sold.<sup>12</sup>

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<sup>10</sup> For the purposes of this progress report, an individual trip is considered a single trip either to or from an employee’s work site.

<sup>11</sup> [Electric Vehicle Chargers in California, California Energy Commission](#)

<sup>12</sup> [New ZEV Sales in California, California Energy Commission](#)

## Climate Equity

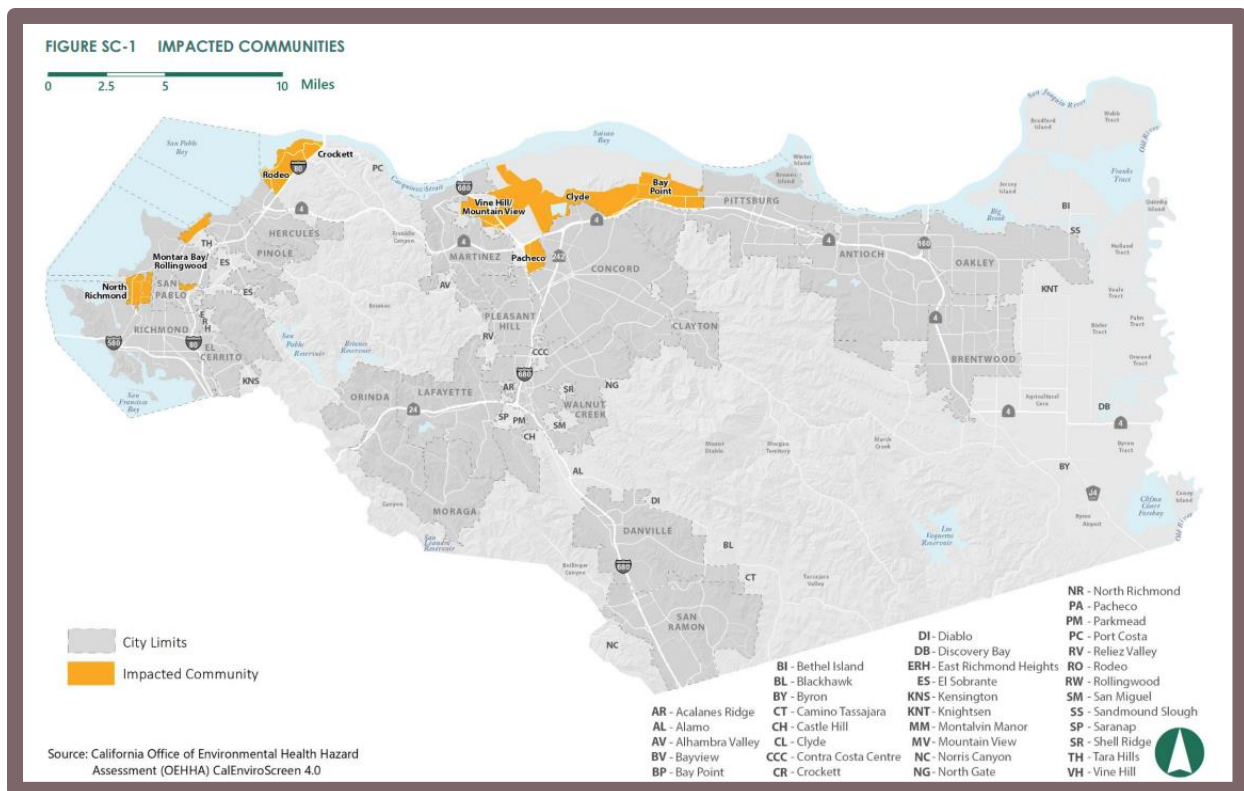
*The CAP will mitigate environmental factors leading to health disparities, promote safe and livable communities, and promote investments that improve neighborhood accessibility.*

### **6.1 All residents live in clean, healthy homes and neighborhoods, have access to parks, open space, and fresh food, and can easily move through the County**

The Board of Supervisors adopted the Contra Costa County [2045 General Plan](#) and [Climate Action and Adaptation Plan \(CAAP\) 2024 Update](#) on November 5, 2024. Four themes are interwoven throughout both plans: environmental justice, community health, economic development, and sustainability. Many of the General Plan's environmental justice policies can be found in the Stronger Communities Element. These policies work to counteract a history of discrimination, neglect, and disempowerment and improve the quality of life and health outcomes in low-income communities and communities of color.

As the County moves towards implementation of the updated General Plan and CAAP, the County is working to develop a comprehensive process to analyze funds spent by County departments on energy efficiency and other services and physical improvements in impacted communities compared to non-impacted communities. In fiscal year 2024, approximately \$1.68 million was spent on road improvement projects and approximately \$1.2 million was spent on electric vehicle charging infrastructure in impacted communities. *Figure 11* shows a map of the County's impacted communities as identified in the 2045 General Plan.

**Figure 11: Impacted Communities in Unincorporated Contra Costa County<sup>13</sup>**



## 6.2 Plan for transition to a local economy that is less reliant on fossil fuels

The County completed the required environmental review for the U.S. Department of Housing and Urban Development in October 2024 and submitted a voucher for and received \$29,038 in reimbursement for staffing costs for the \$750,000 Community Project Funding grant to fund the development of a Just Transition Economic Revitalization Plan (JTERP). The JTERP is a plan for transitioning away from an economy that is dependent on fossil fuels to a zero-emission, clean, and green economy and for improving the health, safety, infrastructure, and job opportunities of residents in communities most impacted by the environmental burdens of the climate crisis. The County is committed to providing meaningful opportunities for sustained input from the community, with a special focus on highly impacted environmental justice communities, and workers, especially impacted workers.

<sup>13</sup> This map is from the Contra Costa County 2045 General Plan – Stronger Communities Element (page 3-4). In the 2045 General Plan, Impacted Communities are defined as “An area, typically low-income, that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation. This is the term Contra Costa County uses in place of ‘disadvantaged communities,’ as named in Senate Bill (SB) 1000. SB 1000 defines disadvantaged communities per Health and Safety Code Section 39711, specifying CalEnviroScreen as the primary screening method for identifying these communities. In this General Plan, Census tracts with a cumulative CalEnviroScreen score of 72 or higher are identified as Impacted Communities.”

The Sustainability Commission held a meeting on October 28, 2024, to receive an update on the County's work on the JTERP. County staff presented the following funding allocations: \$200,000 for community engagement, \$200,000 for economic analyses, and \$150,000 for detailed studies. This brings the County's total anticipated expenditure on consulting assistance to \$550,000. The County's next step involves issuing a request for proposals to assist in developing the JTERP. Community engagement will include a JTERP Advisory Table, which is anticipated to include Sustainability Committee member(s), labor/impacted workers, environmental and frontline environmental justice community representatives, local government, business/industry, workforce development and training entities, the education sector, and academic partners.

The County is supporting the Green Empowerment Zone (GEZ), which was created by Assembly Bill 844 (Grayson, 2021). The purpose of the GEZ is to build upon the comparative advantage provided by the regional concentration of highly skilled energy industry workers by prioritizing access to tax incentives, grants, loan programs, workforce training programs, and private sector investment in the renewable energy sector. The Governing Board of the GEZ consists of local and state government, large employers, small business and economic development, universities, private sector, and workforce development and met five times in 2024. The County entered into an agreement with UC Berkeley Labor Center in August 2024 to support the GEZ with foundational research, technical assistance, and policy recommendations for a high-road clean energy manufacturing strategy for the GEZ.

The County also continues to implement the strategic plan for the Northern Waterfront Economic Development Initiative, having received a \$500,000 grant from the Metropolitan Transportation Commission for the Priority Production Areas Technical Assistance project and having applied for a \$1.2 million grant from the U.S. Environmental Protection Agency for the Contra Costa County Brownfields Coalition.

## Leadership

*Contra Costa County is a model for how local government can take action on climate issues.*

### 7.1 Contra Costa County is a leader among local governments on how it addresses climate issues

#### Interdepartmental Climate Action Task Force

The County's Interdepartmental Climate Action Task Force met on February 26 and August 14, 2024. The Task Force discussed the draft update of the County's CAAP; implementation of the Sustainability Fund to install EV chargers and energy efficient outdoor lighting at County facilities; the G3 Champions, including sustainability activities in the Department of Agriculture and a Low-Waste Office Events Checklist; and an initiative to build better relationships between County staff and community-based organizations with the goal of better serving community needs and collaborating in advance of grant opportunities. The Task Force also heard from Diablo Water District on its progress in meeting the net zero carbon by 2027 goal set by its Board; the Co-Directors of the Contra Costa County Office of Racial Equity and Social Justice; and the Contra Costa County Fire Protection District on wildfire preparedness.

The Task Force provided reports to the Board of Supervisors on March 18 and October 8, 2024. The March report covered the G3 Champions Activity Guide and guest speakers at recent G3 Champions meetings, implementation of the Sustainability Fund, and collaboration and innovation across County Departments to support the County’s climate action goals. The October report covered an update on implementation of the Sustainability Fund, the County’s Environmentally Preferable Purchasing Policy, the G3 Champions Low-Waste Office Events Checklist, reducing key sources of emissions from County operations through the County’s remote work policy, and a cross-department collaboration to install a portable EV charger at the Department of Child Support Services office.

### Green Government Group (G3) Champions

The G3 Champions form a network of County employees across departments who are focused on making Contra Costa County a cleaner, healthier place to live and work. Approximately 85 G3 Champions represent 17 County departments. At meetings, G3 Champions learned about best practices for reducing waste and assessing the sustainable qualities of products from staff at two local refill shops; the Contra Costa Green Business Program; the [Cleaner Contra Costa Challenge](#); the County’s draft Strategic Energy Management Program; and communication strategies to help connect with colleagues and community members about climate change. The G3 Champions also provided input on implementation of the County’s updated Environmentally Preferable Purchasing Policy and met with the Co-Directors of the County’s Office of Racial Equity and Social Justice. To help County departments save money and resources when planning events, the G3 Champions created a [Low-Waste Office Events Checklist](#).



*G3 Champions tour the TRUE Gold- and LEED Platinum-certified new administration building at 1026 Escobar St. in Martinez.*

In August, the Contra Costa County Library launched its departmental Climate Action Plan (CAP) specific to its operations. G3 Champions from the Library’s branches played an integral role in the development of the Library’s CAP by providing ideas and feedback on the goals, actions, metrics, and implementation information within the CAP.

## 7.2 Implement Climate Emergency Resolution

The County continued to implement the action items identified in the [2020 Climate Emergency Resolution](#). Accomplishments in 2024 include the Interdepartmental Climate Action Task Force’s reports to the Board of Supervisors; the ongoing work of the G3 Champions; continued progress towards developing a Just Transition Economic Revitalization Plan through a Community Project Funding grant from the U.S. Department of Housing and Urban Development; and the Board’s adoption of a new ordinance amending the 2022 California Energy Code to require increased energy efficiency standards for newly constructed residential buildings, hotels, offices, and retail buildings.

## 7.3 Build community and County employee support for Climate Action Plan



*Antioch Dunes Evening Primrose  
(a federal endangered species)*

As part of its ongoing responsibilities, the Sustainability Team provides administrative support to the Sustainability Committee of the Board of Supervisors and the Sustainability Commission, a 17-member citizen advisory body. The Sustainability Team also facilitates two series of quarterly meetings for local government staff across the county. The [Sustainability Exchange](#) is a networking and professional development gathering. Topics of focus this year included climate communications, solid waste and the County's Illegal Dumping Initiative, and regional climate action planning, as well as a trip to the Antioch Dunes National Wildlife Refuge for a site tour and invasive species removal work day. Check out a video about the Sustainability Exchange in [English](#) and

[Spanish](#). The Energy Efficiency Collaborative is an opportunity for resource sharing and peer learning related to energy programs, covering topics such as Bay Area Regional Energy Network, MCE, and PG&E programming; policies to support all-electric and energy efficient buildings; and reach codes.

Sustainability staff published a quarterly [Sustainability in Contra Costa County](#) newsletter and regular Sustainability Corner column in the [Contra Costa FOCUS](#) employee newsletter. The Sustainability Team continued to maintain the [Sustainability Resources webpage](#), providing an overview of local, State, and Federal incentive programs for residents and business owners, and updated the [Green Building Materials webpage](#) with information on designing and constructing buildings that conserve energy, water, and material resources. The Office of Communications and Media created a variety of videos highlighting the County's climate action work, including a [video series about themes in the 2045 General Plan](#) and CAAP 2024 Update; Bike to Work Day (in [English](#) and [Spanish](#)); and a collaborative project between the Department of Child Support Services (DCSS) and Public Works to implement a [portable EV charger at the DCSS office](#).



*Department of Child Support Services staff with a new portable EV charger.*

Department of Conservation and Development staff continued to meet with community groups and support the Supervisors' open houses that occurred during the 2045 General Plan and CAAP 2024 Update public comment period in early 2024. County staff promoted BayREN programs and County sustainability efforts at community events, including senior clubs, Rotary Clubs, building industry professional events, the City of Pinole's Earth Walk, and the Contra Costa Block Party. Other events at which staff spoke include a Climate Careers Chat hosted by the Sustainable Leaders in Action and Contra Costa County Library; Ignited's Sustainability Week, a workshop for local teachers; a webinar promoting the Bay Area SunShares program in partnership with the City of Martinez; and the San Francisco Bay Conservation and Development Commission's first Bay Adapt Summit to discuss sea level rise planning. County staff presented on the County's climate action work at a variety of conferences including the

Federal Government Energy Exchange Conference, California Climate and Energy Collaborative, and Urban Sustainability Directors Network annual meeting.



*Live induction cooking demonstration at the Brentwood Community Center in October.*

The County led multiple initiatives to increase community access to and familiarity with induction cooking technology. During summer and fall 2024, the [BayREN CookSmart Pilot Program](#) provided free portable induction cooktops and induction-compatible cookware to 97 households. Program participants had the opportunity to attend in-person or virtual cooking demonstrations that served as hands-on opportunities to become more familiar with induction. More than half the participants who joined the CookSmart Program had little to no familiarity with induction cooking, and by the end of the three-month program period, over 75% of participants shared they would recommend induction cooking to a friend or family member. On October

1, 2024, County staff partnered with BayREN and the Building Decarbonization Coalition to host a live induction cooking demonstration in Spanish. Watch the highlight video with [English](#) or [Spanish](#) subtitles.

## 7.4 County investments support climate equity

These measures were completed in 2023 with the Board of Supervisors' adoption of the County's updated Investment Policy and Debt Management Policy.

## Additional Achievements

The California Ocean Protection Council (OPC) awarded the County \$1,499,285 for the development of the [Contra Costa Resilient Shoreline Plan](#) (Plan) as part of the Senate Bill 1 Sea Level Rise Adaptation Planning Grant Program (SB 1 Grant Program) at [OPC's June 4, 2024, meeting](#). The grant will fund an extensive participatory community engagement and visioning process, a strategic update to the County's existing vulnerability assessments, and the development of the Plan, which will include adaptation pathways, implementation actions, partnership needs, financing strategies, metrics, and priority projects. Work funded by the SB 1 Grant Program will begin early 2025. Staff are working to ensure the Plan is consistent with sea level rise planning requirements established in Senate Bill 272 and the San Francisco Bay Conservation and Development Commission's newly adopted Regional Shoreline Adaptation Plan Guidelines.

On July 23, 2024, the Board of Supervisors established a new standing committee, the [Contra Costa Resilient Shoreline Committee](#), which was previously an ad hoc committee established on May 16, 2023, to address sea level rise adaptation and resilience along the more than 90 miles of County shoreline.

## Conclusion

The County met or made significant progress towards most of the goals included in the 2023-2024 Interim Climate Action Work Plan. As the County moves towards implementation of the Climate Action and Adaptation Plan 2024 Update, the County remains committed to reducing greenhouse gas emissions, improving climate resilience and adaptation, promoting equity on climate issues, and establishing itself as a leader on climate change mitigation and adaptation efforts.

DRAFT



# CONTRA COSTA COUNTY

1025 ESCOBAR STREET  
MARTINEZ, CA 94553

## Staff Report

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**File #:** 25-775

**Agenda Date:** 3/10/2025

**Agenda #:** 7.

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### **SUSTAINABILITY COMMITTEE**

**Meeting Date:** March 10, 2025

**Subject:** RECEIVE Report from the Sustainability Commission Chair, or Designee

**Submitted For:** John Kopchik || DCD | Director

**Department:** DEPARTMENT OF CONSERVATION & DEVELOPMENT

**Presenter:** Shoshana Wechsler || SUSTAINABILITY COMMISSION | Chair

**Contact:** Jody London (925) 655-2815

### **Referral History:**

This is a standing item of the Committee.

### **Referral Update:**

The Sustainability Commission Chair provides an update at each meeting of the Sustainability Committee on the work of the Commission.

### **Recommendation(s)/Next Step(s):**

RECEIVE report from the Sustainability Commission Chair, or Designee.

### **Fiscal Impact (if any):**

None.



# CONTRA COSTA COUNTY

1025 ESCOBAR STREET  
MARTINEZ, CA 94553

## Staff Report

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**File #:** 25-776

**Agenda Date:** 3/10/2025

**Agenda #:** 8.

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### **SUSTAINABILITY COMMITTEE**

**Meeting Date:** March 10, 2025

**Subject:** RECEIVE Report on staff activities that support sustainability goals

**Submitted For:** John Kopchik || DCD | Director

**Department:** DEPARTMENT OF CONSERVATION & DEVELOPMENT

**Presenter:** Jody London || DCD | Sustainability Coordinator

**Contact:** Jody London (925) 655-2815

### **Referral History:**

This is a standing item of the Committee.

### **Referral Update:**

PLEASE SEE ATTACHMENT.

### **Recommendation(s)/Next Step(s):**

RECEIVE report on staff activities that support sustainability goals.

### **Fiscal Impact (if any):**

None.

**SUSTAINABILTY STAFF REPORT FOR  
SUSTAINABILITY COMMITTEE  
March 10, 2025**

Activities since the Sustainability Committee’s meeting on December 12, 2024, are listed below. Activities are keyed to goals in the 2024 Climate Action and Adaptation Plan.

ACTIVITY	2024 CAAP GOAL
<b>Department of Conservation and Development</b>	
Staff is in the process of entering into contract with the Ocean Protection Council’s (OPC) for the Senate Bill 1 Sea Level Rise Adaptation Planning Grant, which was awarded in June 2024. The grant of almost \$1.5 million will support the development of the Contra Costa Resilient Shoreline Plan. Staff has been working with OPC to complete requirements to execute the grant and expect to receive the funds in March 2025.	Goal 5 – Resilient Communities and Natural Infrastructure
Staff has received the County’s \$356,510 Energy Efficiency & Conservation Block Grant formula allocation from the U.S. Department of Energy (DOE). The grant will fund the following activities over a two-year period: (1) Providing energy efficiency and weatherization upgrades at no cost for buildings within the unincorporated area that operate as licensed childcare facilities. County staff will partner with community-based organization CocoKids to help identify eligible daycare facilities and provide educational materials and technical support to retrofit recipients during all phases of the project. (2) Hiring a technical consultant to conduct an inventory of the existing building stock in the unincorporated areas of the county and develop cost analysis on transitioning to low- or zero-carbon energy appliances. This inventory will provide critical insights to guide the development of a Clean Energy Roadmap for the unincorporated areas of the County. The technical consultant to conduct the building inventory and cost analysis has been selected and will begin work in February 2025. Staff expects to release a Request for Qualifications in March 2025 to select an entity to implement the energy efficiency upgrades for licensed childcare facilities.	Goal 1 – Clean and Efficient Built Environment
The County has been preliminarily awarded a \$750,000 grant from the Governor’s Office of Land Use and Climate Innovation (LCI) that will fund development of an Urban Forest Management Plan. The grant was submitted through the Integrated Climate Adaptation and Resilience Program, <a href="#">Extreme Heat and Community Resilience Program</a> . Staff are in negotiations with LCI to develop the budget and workplan, and are working with partners on the project to do so (The Watershed Project, Sustainable Contra Costa, Civicorps, Workforce Development Board of Contra Costa County).	Goal 5 – Resilient Communities and Natural Infrastructure
On January 29, 2025, the Sustainability Team convened a brainstorm session on community solar. Participants included solar developers, MCE, and staff from several County departments. The objectives for the meeting were to identify options for bringing community solar (with battery storage, ideally) to residents of Impacted Communities in Contra Costa County and establish models that could be used elsewhere.	Goal 1 – Clean and Efficient Built Environment

ACTIVITY	2024 CAAP GOAL
<p>On February 25, 2025, the Sustainability Team hosted the inaugural meeting of the Contra Costa All-Electric Working Group. The goals for this working group include exploring the challenges and opportunities related to transitioning the County's building stock to operate on clean energy, promoting collaboration among stakeholders on funding opportunities to advance this work, and gathering input on the County's draft Clean Energy Roadmap.</p>	<p>Goal 1 – Clean and Efficient Built Environment Goal 7 - Leadership</p>
<p>On January 6, 2025, the County received a grant award from the U.S. Environmental Protection Agency for a \$19 million Community Change Grant for the North Richmond Community Resilience Initiative. The County is working to develop agreements with the partners to the project: Urban Tilth, The Watershed Project, Richmond Land, and the Community Housing Development Corporation. The project includes a resilience hub at the Urban Tilth farm, all-electric home retrofits, improvements to Wildcat Creek Trail, establishing a community garden, rehabilitating low-income housing, establishing an e-bike lending library, installing green infrastructure throughout the community, and creek and watershed stewardship and education.</p>	<p>Goal 1 – Clean and Efficient Built Environment Goal 5 – Resilient Communities and Natural Infrastructure Goal 6 – Climate Equity</p>
<p>Sustainability staff released a video showcasing educational highlights and attendee takeaways from the October 1<sup>st</sup> Spanish language induction cooking demonstration event. The highlight video can be viewed with <a href="#">English</a> or <a href="#">Spanish subtitles</a> on Contra Costa TV's YouTube channel.</p>	<p>Goal 1 – Clean and Efficient Built Environment</p>
<p>Staff collaborated with the Ambrose Recreation and Park District to submit an application to the PG&amp;E Resilience Hubs Grant Program on January 31, 2025. The \$25,000 grant award would allow Contra Costa County and the Ambrose Recreation and Park District to partner on a gap assessment of the Ambrose Community Center in Bay Point. The gap analysis would help identify the climate-smart retrofits and expanded services necessary for the Ambrose Community Center to serve the community as a resilience hub. Should the grant be awarded, staff intend to leverage BayREN's new Energy Roadmapping service to support the retrofit portion of the gap assessment.</p>	
<p>The County launched the <a href="#">Bay Point/Pittsburg Energy Enhancement Pilot Program</a> on January 15, funded through a grant from the Keller Canyon Mitigation Fund. The first phase of the Pilot Program offers rebates to cover up to 50% of the project cost (maximum of \$8,000) for the installation of qualified electric heat pump heating, ventilation, and air conditioning (HVAC) systems in eligible single-family homes.</p>	<p>Goal 1 – Clean and Efficient Built Environment Goal 6 – Climate Equity</p>
<p>The County hosted its second Drought and Water Shortage Task Force meeting on February 6. The Task Force is made up of County staff, groundwater sustainability agencies, water providers, and state agencies. At the second meeting, the Task Force reviewed a draft Risk Assessment to be incorporated into a countywide Drought Resilience Plan, in accordance with SB 552.</p>	<p>Goal 4 – Reduce Water Use and Increase Drought Resilience</p>
<p>Climate Emergency Resolution:</p> <ul style="list-style-type: none"> <li>• <i>Just Transition</i>. The Governing Board of the Green Empowerment Zone (GEZ) consists of local and state government, large employers, small business and economic development, universities, private sector, and workforce development, and met five times in 2024. The County entered into an agreement with UC Berkeley Labor Center in August 2024 to support the GEZ</li> </ul>	<p>Goal 1 – Clean and Efficient Built Environment Goal 7 - Leadership</p>

ACTIVITY	2024 CAAP GOAL
<p>with foundational research, technical assistance, and policy recommendations for a high-road clean energy manufacturing strategy for the GEZ.</p> <p>The County continues to implement the strategic plan for the Northern Waterfront Economic Development Initiative, having received a \$500,000 grant from the Metropolitan Transportation Commission (MTC) for the Priority Production Areas Technical Assistance project, and having applied for a \$1.2 million grant from the U.S. Environmental Protection Agency (EPA) for the Contra Costa County Brownfields Coalition.</p> <p>Economic Development and Sustainability staff attended a Sustainable Technology and Partnerships Workshop at the Lawrence Livermore National Laboratory (LLNL) on January 28. The workshop allowed community groups and local government staff to meet LLNL scientists and staff, learn more about ongoing research, and identify potential areas for collaboration.</p> <ul style="list-style-type: none"> <li>• <i>Interdepartmental Climate Action Task Force.</i> Department Heads received an update on February 11 on the 2024 CAAP and the Sustainability Fund, with an emphasis on work to help County employees become more comfortable with electric vehicles as part of their jobs. The G3 Champions met on February 12 and brainstormed ideas for how they can help achieve the CAAP goals in their departments.</li> <li>• <i>All-Electric Building Ordinance.</i> The new ordinance that amends the County building code to increase energy efficiency standards for newly constructed residential buildings, offices, hotels, and retail buildings to meet the County's Climate Action Plan goals will go into effect after it is approved by the California Energy Commission.</li> </ul>	
<p>The <a href="#">winter 2025</a> issue of the quarterly Sustainability in Contra Costa County newsletter was published on December 20, 2024. The newsletter included articles on the Board of Supervisors' adoption of the updated Climate Action and Adaptation Plan, open seats on the Sustainability Commission, tips to host a sustainable holiday gathering, recent grants awarded to the County to work towards CAAP goals, the new administration building's sustainability achievements, and more.</p>	Goal 7 - Leadership
<p>Sustainability staff continue to monitor state and federal grant opportunities and prepare to apply for projects that will support key climate goals around all-electric buildings, active transportation, sea level rise, climate resilience, and Just Transition.</p>	All
<b>Department of Public Works</b>	
<p>On January 30, 2025, Public Works submitted a grant application for the San Pablo Dam Road Complete Street project for consideration of federal funding through the Better Utilizing investments to Leverage Development (BUILD) program, previously known as Rebuilding American Infrastructure with Sustainability &amp; Equity (RAISE). The project proposes a road diet, new</p>	Goal 5 – Clean Transportation Network

ACTIVITY	2024 CAAP GOAL
<p>crosswalks, and other active transportation infrastructure and enhancements along San Pablo Dam Road from Appian Way to Tri Lane in El Sobrante.</p> <p>Note, Public Works also submitted the same project to the MTC Active Transportation Technical Assistance program on December 18, 2024, to fund preliminary design.</p>	
<p>On January 30, 2025, Public Works submitted three grant applications for consideration of Transportation Development Act funding. The three projects included: (1) Arlington Crosswalk Improvements; (2) Contra Costa Centre Pedestrian Improvements; and (3) Driftwood Drive Crosswalk Improvements. All three projects will install rectangular rapid flashing beacons at existing crosswalks and may include other pedestrian enhancements such as curb extensions or new sidewalk.</p>	<p>Goal 5 – Clean Transportation Network</p>
<b>Department of Agriculture</b>	
<p>The Department of Agriculture, co-led by the Department’s G3 Champion, organized the Board of Supervisors’ annual Martin Luther King, Jr., Celebration on January 21 and incorporated numerous sustainability initiatives into the event. Sustainability initiatives included floral decorations sourced from local Contra Costa County farmers, three-stream (compost, recycle, and landfill) waste bins available during lunch, customized signage for the waste bins featuring images of items attendees used at the event, and collaborating with White Pony Express to collect and distribute for donation 40 pounds of leftover food.</p>	<p>Goal 7 - Leadership</p>
<b>Contra Costa Health</b>	
<p>The Building Healthy Communities Program under the Contra Costa Health Community Wellness &amp; Prevention Program accomplished the following:</p> <ul style="list-style-type: none"> <li>• Secured a \$208,475 grant from the California Office of Traffic Safety to support the Pedestrian &amp; Bicycle Safety Program through Federal Fiscal Year 2024-2025. Grant funds will support various activities focused on bicycle and pedestrian safety, including: support for local jurisdictions to include public health principals in road safety plans and address the community conditions that create unsafe environments for non-motorized road users; promote the CCH traffic safety campaign, “Slow Roads Save Lives;” Community bicycle and walk “audits” of streets with high rates of pedestrian or bicyclist fatalities and serious injury crashes; bicycle training courses that teach youth skills to help them stay safe on the road; and community events that promote bicyclist and pedestrian visibility and the importance of sharing the road, slowing down, and staying alert to bicyclists and pedestrians while driving.</li> <li>• In partnership with Rich City Rides, facilitated the creation of and sustained three student-lead active transportation clubs at El Cerrito High School, John F. Kennedy High School, and Pinole Valley High School. The program, West County Walk &amp; Bike Leaders for Clean Air, is funded by Caltrans. Staff support coordination with school and district staff, host weekly club meetings, provide outreach to students on safe active transportation, and lead club events such as bike rides and hikes.</li> </ul>	<p>Goal 5 – Clean Transportation Network Goal 6- Climate Equity</p>

ACTIVITY	2024 CAAP GOAL
<ul style="list-style-type: none"> <li>Applied for and were selected for the UC Berkeley SafeTREC Complete Streets Safety Assessment Program to study Willow Pass Road and Port Chicago Highway in Bay Point. This free technical assistance program will include a field assessment of bicycle and pedestrian safety issues along these corridors and a comprehensive report with treatment recommendation. Staff applied in partnership with the County Department of Conservation &amp; Development and Public Works Department. The field assessment will take place in late March 2025.</li> <li>Hosted five active transportation outreach booths at various community and school events across the county. At these booths, staff share safe active transportation encouragement information and small incentives such as bike lights and reflective gear.</li> <li>Supported a bike rodeo, facilitated by Bike East Bay, conducted at Meadow Homes Elementary School in Concord. Over 60 elementary school students participate in the rodeo and learned about safe bicycling.</li> </ul>	
<b>Library</b>	
<p>The library has hosted 9 Master Gardener programs since September 1, 2024. The programs were in-person and virtual. The program topics included Seed Saving, Drought Tolerant Planting, Fall Planting, and Edible Gardens. The library partnered with West County Wastewater on an in-person informational program at the El Sobrante Library on January 16, 2025. The library partnered with Earth Arts Lab on a September program titled Rainwater Harvesting at the Kensington Library. Our energy Efficiency Toolkits circulated 88 times since September 1, 2024.</p>	<p>Goal 2 - Resilient Communities and Natural Infrastructure Goal 7 - Leadership</p>
<b>Ongoing</b>	
<p>Staff participated in professional learning opportunities regarding environmental justice, carbon sequestration, climate resilience, communication and facilitation strategies, race and equity, and related.</p>	<p>All</p>
<p>Staff participated in regional activities.</p>	<p>All</p>

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**Attachments**

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