

Draft Electrification Roadmap + Ordinance Review

City of Alameda

April 27 & May 4, 2022

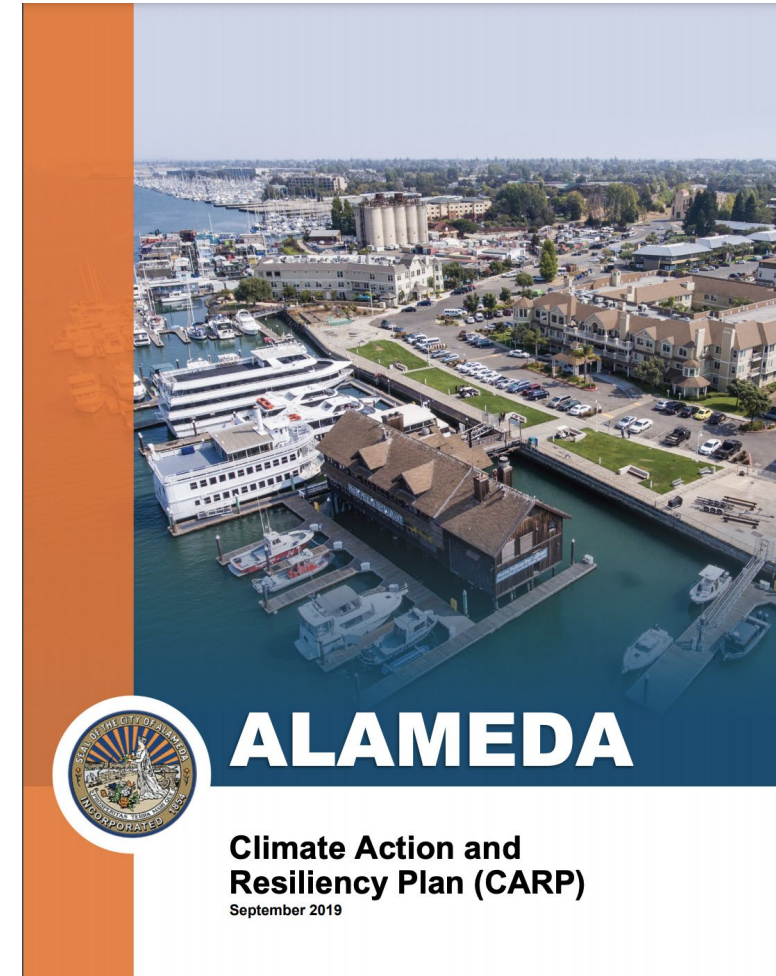
Objectives

- Introduce equitable energy efficiency and electrification roadmap **elements** and implementation **phases to achieve net zero emission buildings by 2030.**
- Community provide feedback and questions regarding roadmap draft
- Introduce new electrification ordinance concept
- Community provide feedback and questions on ordinance concept



Alameda Climate Action and Resiliency Plan (CARP)

- Reduce emissions by 50% below 2005 levels by 2030
- Address disproportionate impacts on vulnerable, socioeconomically disadvantaged populations
- Climate adaptation
 - flooding, sea level and groundwater rise, drought, extreme heat, hazardous air quality, and earthquakes/ liquefaction.
- 2019 Climate Emergency Declaration
 - **Achieve net zero emissions as soon as possible no later than 2030.**

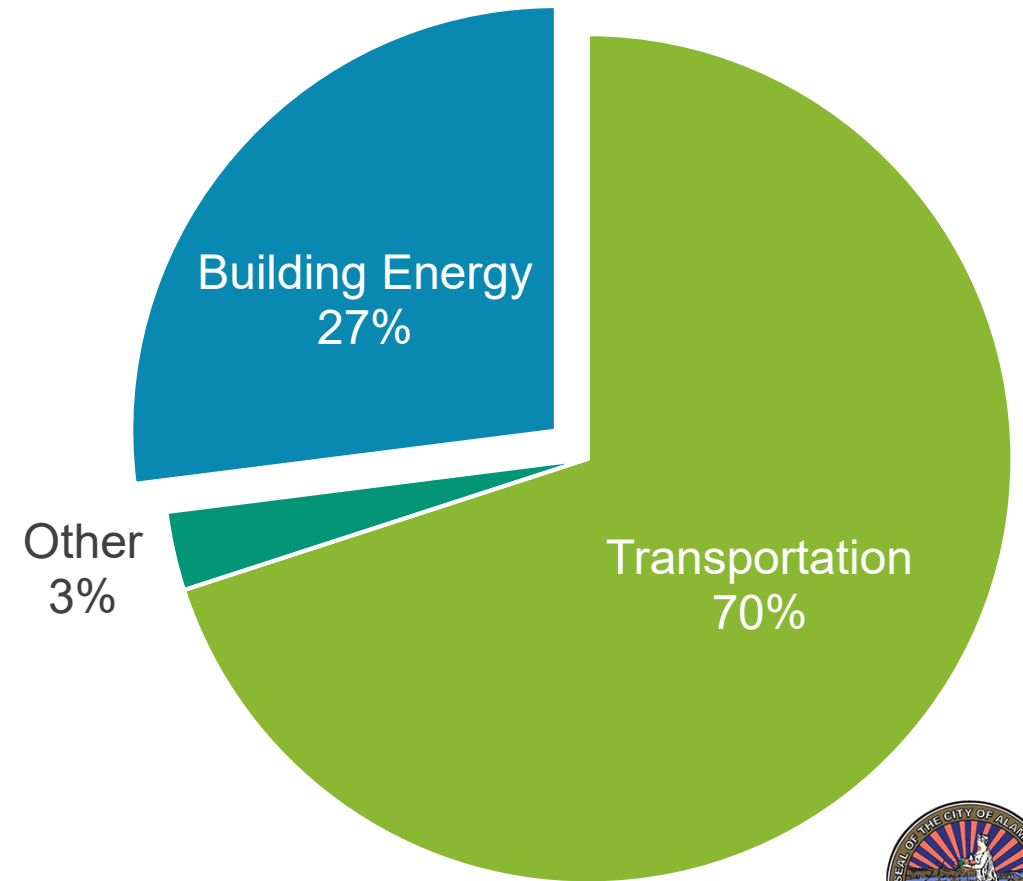
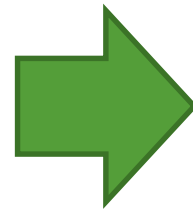


ALAMEDA

**Climate Action and
Resiliency Plan (CARP)**
September 2019



Alameda's Emissions



Electrification Pathway

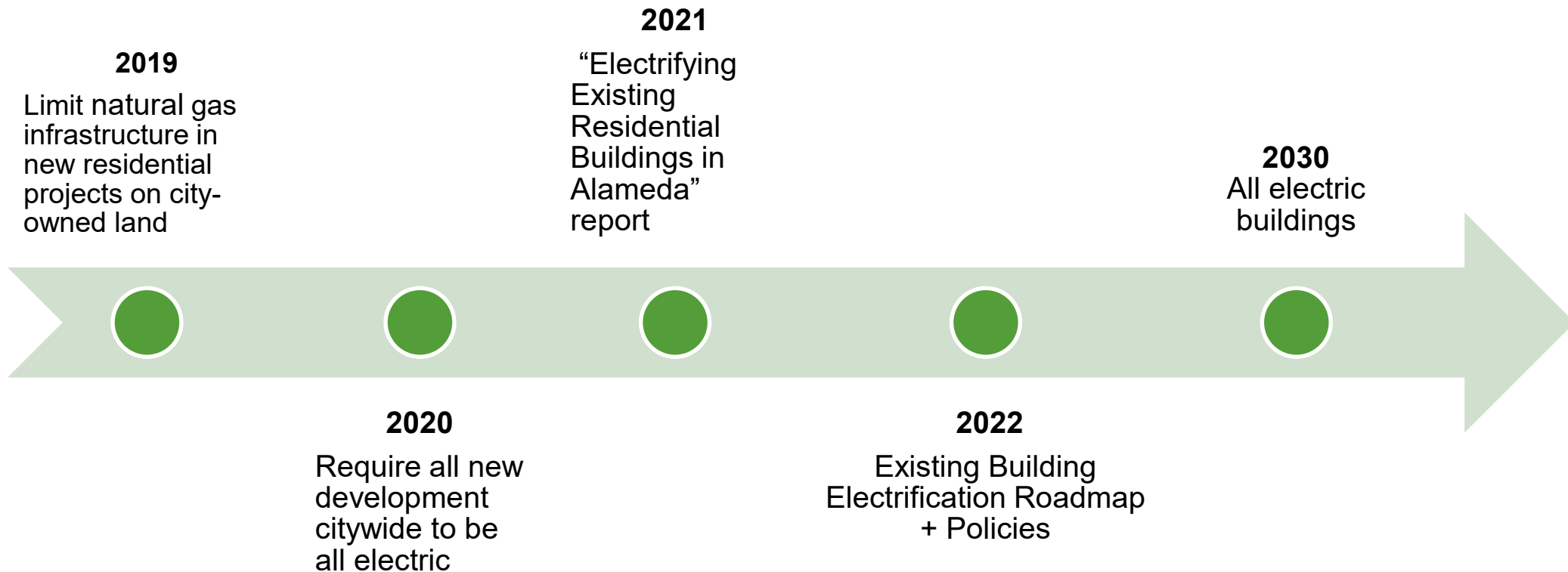
Decarbonize
Electric Grid

Energy
Efficiency

Electrify
Buildings



Accomplishment & Plans





Electrification Workshop Series



Electrification

101

March 16

6:30-7:30PM

West End Library
(Hybrid)



April 6

6:30-7:30PM

Main Library
(Hybrid)



Roadmap Brainstorm

Residential and
Commercial Renters

March 28

6:30-8:00PM
Zoom (virtual)



Residential and
Commercial Owners and
Property Management

March 30

TIME CHANGE:
1:00-2:30PM
Zoom (virtual)



Single Family Home
Owners

April 4

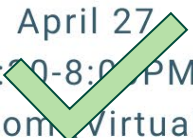
6:30-8:00PM
Zoom (virtual)



Draft Roadmap + Ordinance

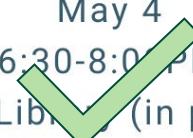
April 27

6:00-8:00PM
Zoom (virtual)



May 4

6:30-8:00PM
Main Library (in person)



What we heard during the workshops

- Support for
 - Roadmap Principles
 - Keeping dollars local with AMP
 - Demonstrate leadership in climate action
 - More education and outreach in the community
 - Community wide campaigns
 - Low cost and interim options
- Some concerns about:
 - Cost
 - Reliance on electric grid only
 - Housing cost and displacement (CIP program)
 - Trigger other unforeseen projects during process
 - Availability of supplies and labor



Equitable Energy Efficiency and Electrification Roadmap

What: A policy roadmap centered in equity that lays process for shifting natural gas use in existing buildings towards all electric buildings by 2030.

Why: To ensure that the electrification process is equitable and beneficial to the community, especially frontline communities.

How: Workshop series to co-create solutions and integrate community knowledge and feedback into the roadmap.

Next Steps: We will bring draft roadmap to Boards and Commission, followed by City Council



Important to Note

- What this roadmap is not:
 - A plan set in stone: each individual policy or program proposal will have a public process and subject to City Council and/or PUB approval
 - A mandate to replace all gas appliances by 2030
- What this roadmap is:
 - A big picture roadmap to align actions with community and key stakeholders to reduce energy and use and GHG emissions in buildings
 - Develops a common understand for how we will operationalize this goal
 - Strategically positions city to take advantage of forthcoming state/federal funds and other opportunities
 - A workplan for staff going forward



Roadmap Principles

- Everyone, especially low to moderate income households, should be able to affordably switch to modern electric equipment (do good, not harm)
- Electrification policy should also support housing and anti-displacement policy
- The electrification process should be as simple and seamless and possible
- Our timelines should be fast but be realistic about challenges and other priorities



Energy Efficiency and Weatherization



Wall, Attic, and Rase Floor Insulation



Air Sealing and Weather-Stripping



Window Replacement



Upgrade to LED bulbs



Duct Sealing, New Ducts, and Duct Insulation



Water Heater Blanket



Hot Water Pipe Insulation



Electrification Technology



Heat pump water heaters



Heat pump heating/cooling



Electric dryer



Induction Stove



Holistic Approach to Safe, Green, Healthy Buildings

Solar and/or batteries

Great opportunity to plan for electrification and increase resiliency

Seismic retrofit

Protect your investments and reduce damage to your home or business during an earthquake

Electric vehicle and charging

Reduce pollution from transportation & lifetime cost of driving

Mold, asbestos, and lead paint removal

Promote health and safety in the home



Benefits of Electrifying

Health

Safety

Climate

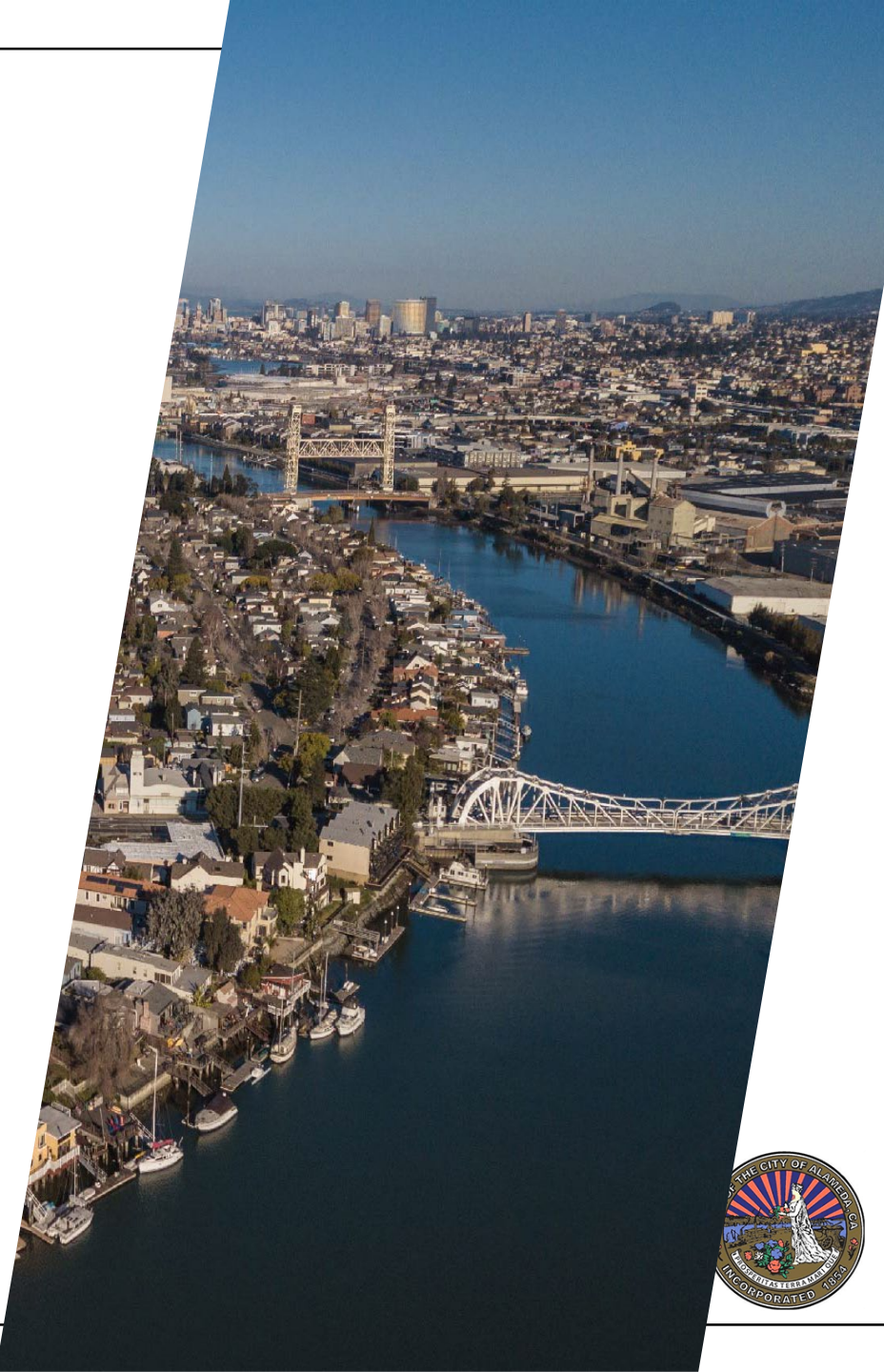
Four Elements of Electrification Roadmap

Alameda
Municipal
Power

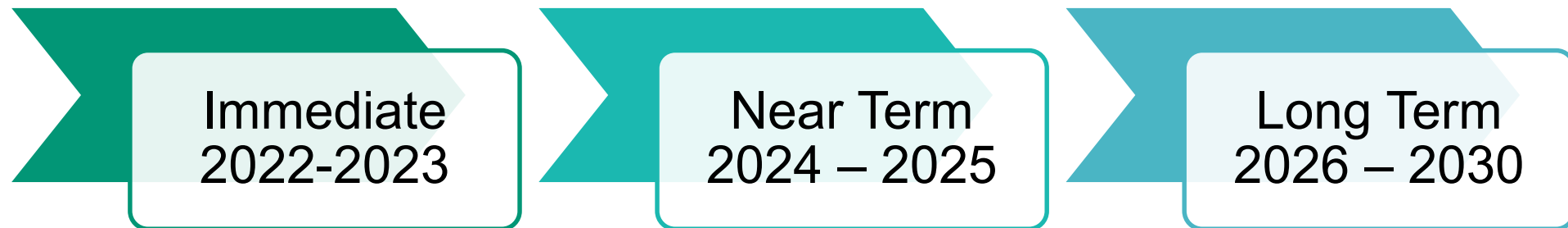
Policy &
Program

Financing

Education &
Outreach



Implementation Phases



Education & Outreach Phases

Immediate (2022-2023)

- Develop electrification educational material
- Public engagement on draft roadmap
- Public meetings about new policy proposals
- Conduct stakeholder meetings

Near Term (2024-2025)

- Continue targeted community education with focus on low and moderate income households
- Public meetings about new policy proposals
- Continue stakeholder meetings

Long Term (2026-2030)

- Continue broad community education
- Public meetings about new policy proposal
- Continue stakeholder meetings



Policy Levers

Time of
Major
Renovation

Code
Compliance

Time of Sale

Replacement
at Burnout

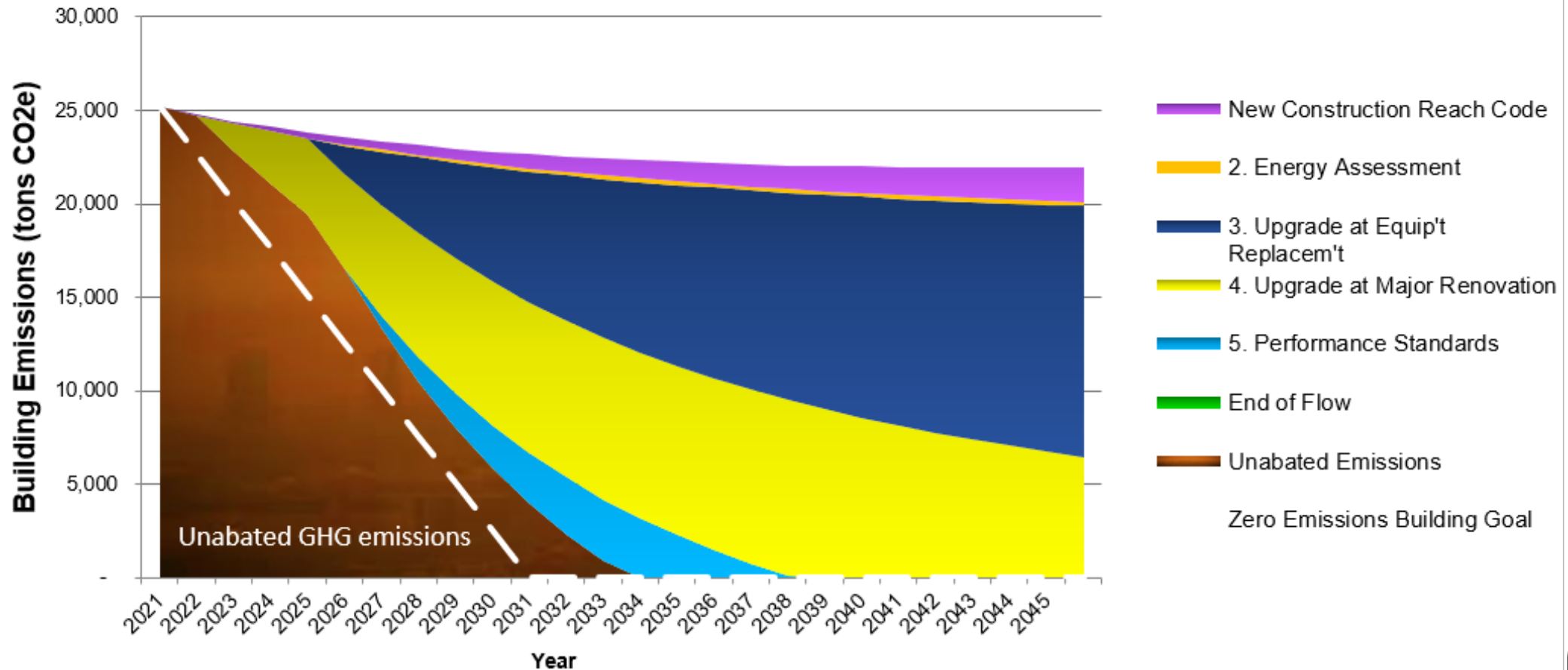
Building
Performance
Standards

Gas-Line
Pruning



BayREN Policy Calculator

Forecast of Cumulative GHG Emission Impacts from Selected Policy Options



Policy and Program Phases

Immediate (2022-2023)

- Support voluntary adoption of electrification
- Develop ordinance requirements for already cost effective electrification measures
- Re-adopt ordinance for new electric buildings for 2023 building code cycle

Near Term (2024-2025)

- Evaluate energy audit at time of sale
- Consider building code compliance
- Consider benchmarking requirements as a precursor to BPS
- Conduct Alameda Housing Authority pilot program
- Develop direct install program with local contractor

Long Term(2026-2030)

- Consider Building Performance Standards and gas-line pruning
- Implement space heating upgrade requirement without existing A/C upgrade



Financing

Rebates and
Incentives

Split Utility User
Tax

On-Bill
Financing

Tariff On-Bill
Financing

Refundable
Electrification
Transfer Tax

Decarbonization
Electricity Rate



Financing Phases

Immediate (2022-2023)

- Explore revenue measures to support LMI households
- Evaluate state and federal grant opportunities

Near Term (2024-2025)

- Consider refundable transfer tax for building retrofits.
- Consider split utility user's tax
- Evaluate grant opportunities

Long Term(2026-2030)

- Identify additional revenue measures
- Evaluate grant opportunities



Alameda Municipal Power

Rate design

Rebates

Technical Assistance

Reimagine
Alameda
Green

Education
and
Outreach



AMP Phases

Immediate (2022-2023)

- Continue targeted education and outreach
- Continue market rate rebates and introduce new rebates for electrification
- Incorporate additional equity focus into current rebate programs
- Coordinate with other agencies to streamline rebate and programs
- Develop energy advisor services and technical assistance program for electrification
- Develop alternative sustainability focused program for Alameda Green

Near Term (2024-2025)

- Evaluate program designs and results to determine future needs

Long Term(2026-2030)

- Evaluate program designs and results to determine future needs



	Immediate (2022 - 2023)	Near Term (2024 - 2025)	Long Term (2026 - 2030)
Education & Outreach	<ul style="list-style-type: none"> •Develop electrification educational material •Public engagement on draft roadmap •Public meetings about new policy proposals •Conduct stakeholder meetings 	<ul style="list-style-type: none"> •Continue targeted community education with focus on LMI households •Public meetings •Stakeholder meetings 	<ul style="list-style-type: none"> •Continue broad community education •Public meetings •Stakeholder meetings
Policies & Programs	<ul style="list-style-type: none"> •Support voluntary adoption of electrification •Develop ordinance requirements for already cost effective electrification measures •Re-adopt ordinance for new electric buildings for 2023 building code cycle 	<ul style="list-style-type: none"> •Evaluate energy audit at time of sale •Consider building code compliance •Conduct Alameda Housing Authority pilot program •Develop direct install program with local contractor 	<ul style="list-style-type: none"> •Consider Building Performance Standards and gas-line pruning •Implement space heating upgrade requirement without existing A/C upgrade
Financing	<ul style="list-style-type: none"> •Explore revenue measures to support LMI households •Evaluate state and federal grant opportunities 	<ul style="list-style-type: none"> •Consider refundable transfer tax for building retrofits. •Consider split utility user's tax •Evaluate grant opportunities 	<ul style="list-style-type: none"> •Identify additional revenue measures •Evaluate grant opportunities
AMP	<ul style="list-style-type: none"> •Continue targeted education and outreach •Continue market rate rebates and introduce new rebates for electrification •Incorporate additional equity focus into current rebate programs •Coordinate with other agencies to streamline rebate and programs •Develop energy advisor services and technical assistance program for electrification •Develop alternative sustainability focused program for Alameda Green 	<ul style="list-style-type: none"> •Evaluate program designs and results to determine future needs 	<ul style="list-style-type: none"> •Evaluate program designs and results to determine future needs

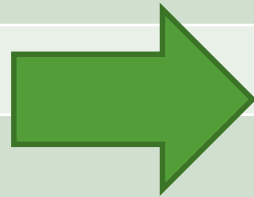
Existing Building Electrification Ordinance - Concept

- Avoid missed opportunities
 - New gas appliances have 10-25 year lifetime. Each opportunity locks in or prevents their lifetime worth of GHG emissions.
- Focus on cost-effective, low hanging fruit
- Already have contractor on board and a project in process; convenient time to do the work it takes to electrify

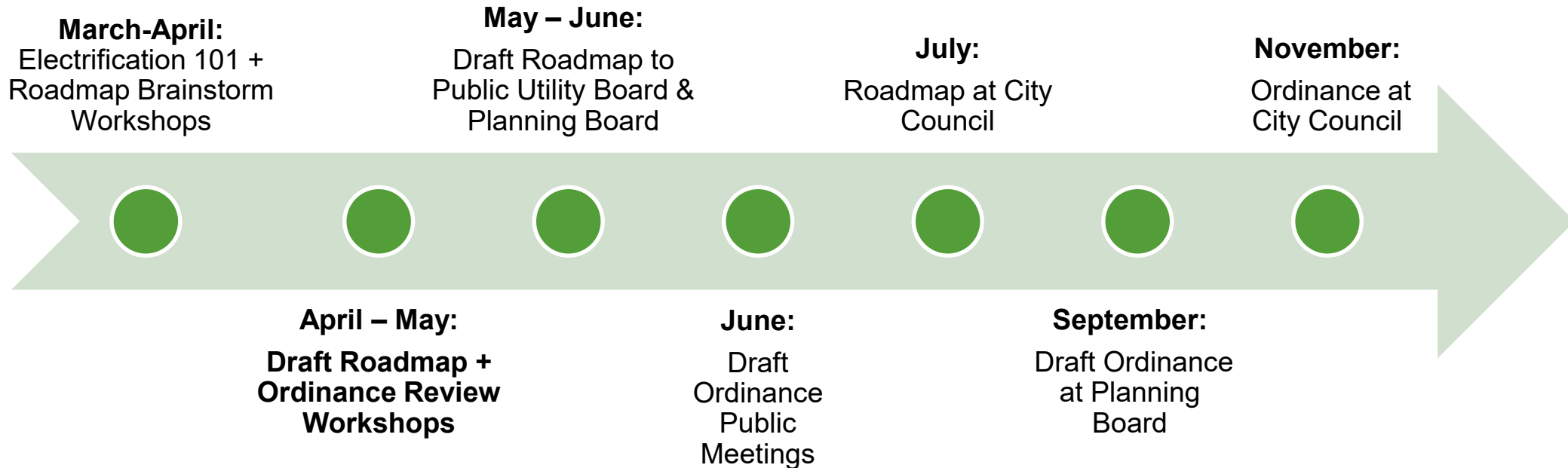


Existing Building Electrification Ordinance - Concept

If you are applying for a permit and the permit includes installing, replacing, or relocating the following appliances:	Then we will ask for the appliance included in the scope of permit to be all electric:
<ul style="list-style-type: none">• Central A/C	<ul style="list-style-type: none">• Add space heating capability with central A/C upgrade
<ul style="list-style-type: none">• Water heater	<ul style="list-style-type: none">• Electric water heater (if feasible)
<ul style="list-style-type: none">• Cooktop/range	<ul style="list-style-type: none">• Electric cooktop/range
<ul style="list-style-type: none">• Clothes dryer	<ul style="list-style-type: none">• Electric dryer
<ul style="list-style-type: none">• Electric panel upgrade	<ul style="list-style-type: none">• New panel to include capacity for future whole home electrification



Timeline & Next Steps:



Thank you!

- Visit www.alamedaca.gov/BuildingElectrification
- Take our survey!

