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’s Emissions

- Transportation: 70%
- Building Energy: 27%
- Other: 3%

100% CLEAN ENERGY
Electrification Pathway

Decarbonize Electric Grid → Energy Efficiency → Electrify Buildings
Accomplishment & Plans

2019
Limit natural gas infrastructure in new residential projects on city-owned land

2020
Require all new development citywide to be all electric

2021
“Electrifying Existing Residential Buildings in Alameda” report

2022
Existing Building Electrification Roadmap + Policies

2030
All electric buildings
Electrification Workshop Series

Electrification 101
March 16
6:30-7:30 PM
West End Library (hybrid)

April 6
6:30-7:30 PM
Main Library (hybrid)

Roadmap Brainstorm

Residential and Commercial Renters
March 28
6:30-8:00 PM
Zoom (virtual)

Residential and Commercial Owners and Property Management
March 30
TIME CHANGE:
10:00-11:30 PM
Zoom (virtual)

Single Family Home Owners
April 4
6:30-8:00 PM
Zoom (virtual)

Draft Roadmap + Ordinance

April 27
6:30-8:00 PM
Zoom (virtual)

May 4
6:30-8:00 PM
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 Raise 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

- **Immediate**: 2022-2023
- **Near Term**: 2024 – 2025
- **Long Term**: 2026 – 2030
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

- New Construction Reach Code
- 2. Energy Assessment
- 3. Upgrade at Equip't Replacem't
- 4. Upgrade at Major Renovation
- 5. Performance Standards
- End of Flow
- Unabated Emissions

Unabated GHG emissions

Zero Emissions Building Goal
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
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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
If you are applying for a permit and the permit includes installing, replacing, or relocating the following appliances:

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<td>Central A/C</td>
<td>Add space heating capability with central A/C upgrade</td>
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<tr>
<td>Water heater</td>
<td>Electric water heater (if feasible)</td>
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<tr>
<td>Cooktop/range</td>
<td>Electric cooktop/range</td>
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<tr>
<td>Clothes dryer</td>
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<tr>
<td>Electric panel upgrade</td>
<td>New panel to include capacity for future whole home electrification</td>
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Timeline & Next Steps:

March-April:
Electrification 101 +
Roadmap Brainstorm
Workshops

May – June:
Draft Roadmap to
Public Utility Board &
Planning Board

July:
Draft
Ordinance
Public
Meetings

June:
Roadmap at City
Council

September:
Ordinance at
Planning
Board

November:
Ordinance at
City Council
Thank you!

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