Environmental Quality Commission

REGULAR MEETING MINUTES
Date: 7/21/2021
Time: 6:00 p.m.
Regular Meeting Location: Zoom.us/join – ID# 915 4675 0502

A. Call To Order

Chair Price called the meeting to order at 6:02 p.m.

B. Roll Call

Present:	Elkins, Evans, Gaillard, Kabat, London (exited at 7:30 p.m.), Price (Chair), Payne (arrived at 7:11 p.m.)
Absent:	None
Staff:	Rebecca Lucky- Sustainability Manager

C. Public Comment

- Steve Schmidt spoke in support of the Commission's efforts on the climate action plan.

D. Regular Business

D1. Approve May 19 2021 minutes (Attachment)

Chair Price introduced item.

ACTION: Motion and second (Gaillard/ Elkins) to approve the May 19, 2021 minutes, correcting the word "coloration" with negotiation in public comment, passed 6-0 (Payne absent).

Chair Price reordered the agenda.

D3. Review and discuss 2030 climate action plan progress report (Staff Report #21-004-EQC)

Sustainability Manager introduced MuniPC sustainability consultant to provide a presentation to the commission (Attachment).

- Peter Edmonds suggested using gross greenhouse gas (GHG) consumption per employee and/or per capita to measure progress.
- Erin Cooke spoke in support of the Commission and staff efforts on the climate action plan.

ACTION: Motion and second (Gaillard/ Kabat) to refer to the commission climate action plan subcommittee to return with brief proposal, passed 6-0 (London absent).

The Commission took a recess at 7:42 p.m.

The Commission reconvened at to 7:58 p.m.

D2. Select chair and vice chair

ACTION: Motion and second (Kabat/ Price) to select Commissioner Payne as Chair, passed 6-1 (London absent).

ACTION: Motion and second (Gaillard/ Kabat) to select Commissioner Evans as the Vice Chair, passed 6-1 (London absent).

D4. Review and discuss cost effectiveness and policy options report to electrify existing buildings (climate action plan No.1 strategy) (Staff Report #21-005-EQC)

Sustainability Manager introduced TRC and DNV consultants to provide a presentation to the commission (Attachment).

- James Tuelya spoke in support of incorporating the SB 1477 TECH program.
- Diane Bailey, representing Menlo Spark, spoke in support of the City's efforts and provided recommendations that include mandates, permit efficiency, and outreach and education.

ACTION: Motion and second (Price/ Payne) to defer to August meeting, refer to building decarbonization subcommittee for further review, and appoint Commissioner Evans to the building decarbonization subcommittee, passed 6-0 (London absent).

E. Reports and Announcements

E1. Reports and Announcements from staff and commissioners

None.

F. Adjournment

Chair Price adjourned the meeting at 9:50 p.m.

Rebecca Lucky, Sustainability Manager

These minutes were approved on August 18, 2021 by the Commission.

D3-PRESENTATION

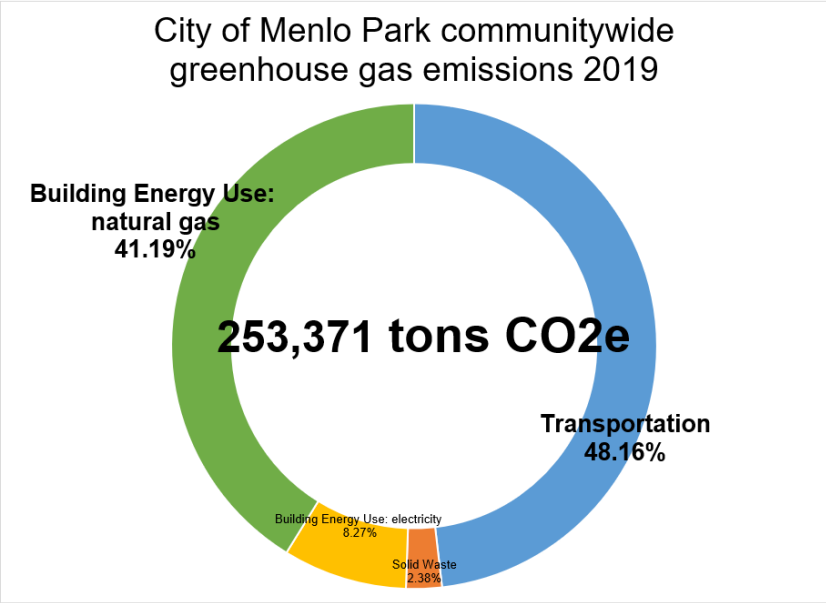
MENLO PARK 2030 CLIMATE ACTION PLAN PROGRESS

Candise Almendral, MuniPC Sustainability

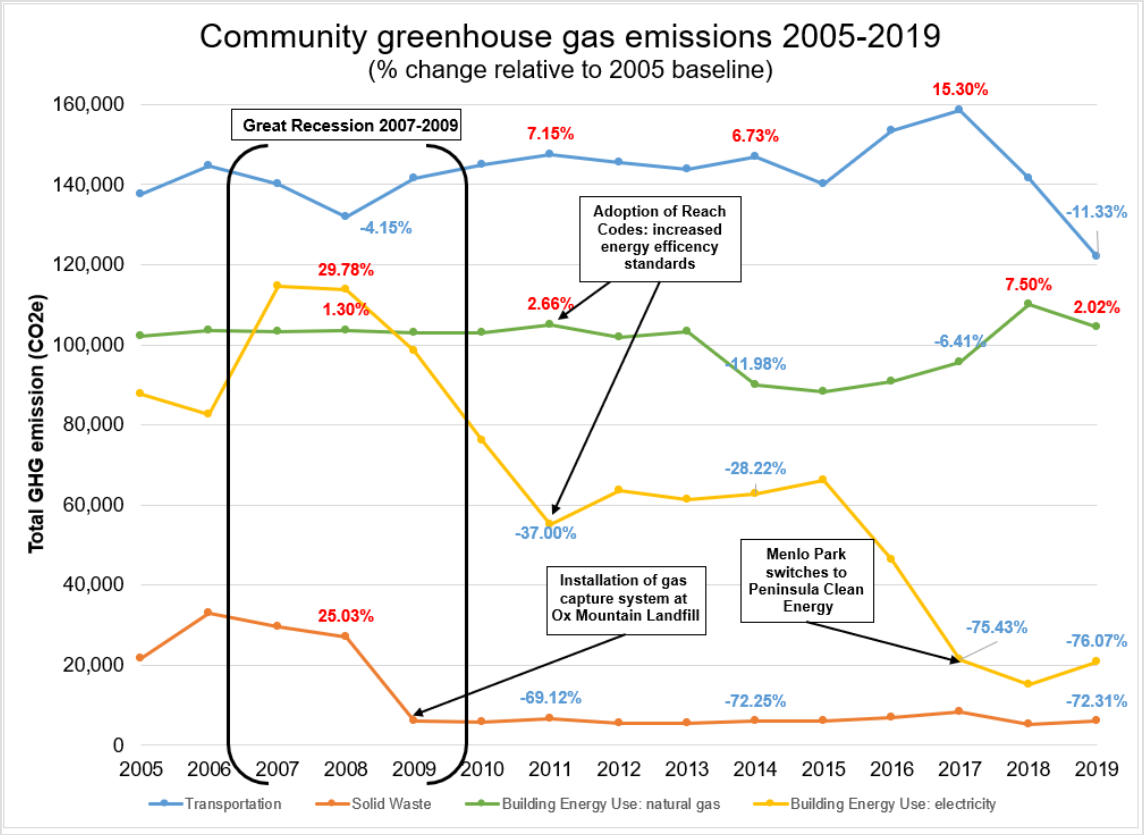
CLIMATE ACTION GOAL AND COMMUNITY GREENHOUSE GAS EMISSIONS

- July 2020: City Council adopted the goal to become carbon neutral by 2030

- Most recent 2019 data shows communitywide emissions have decreased to 253,371 tons (27.5% relative to 2005 levels)



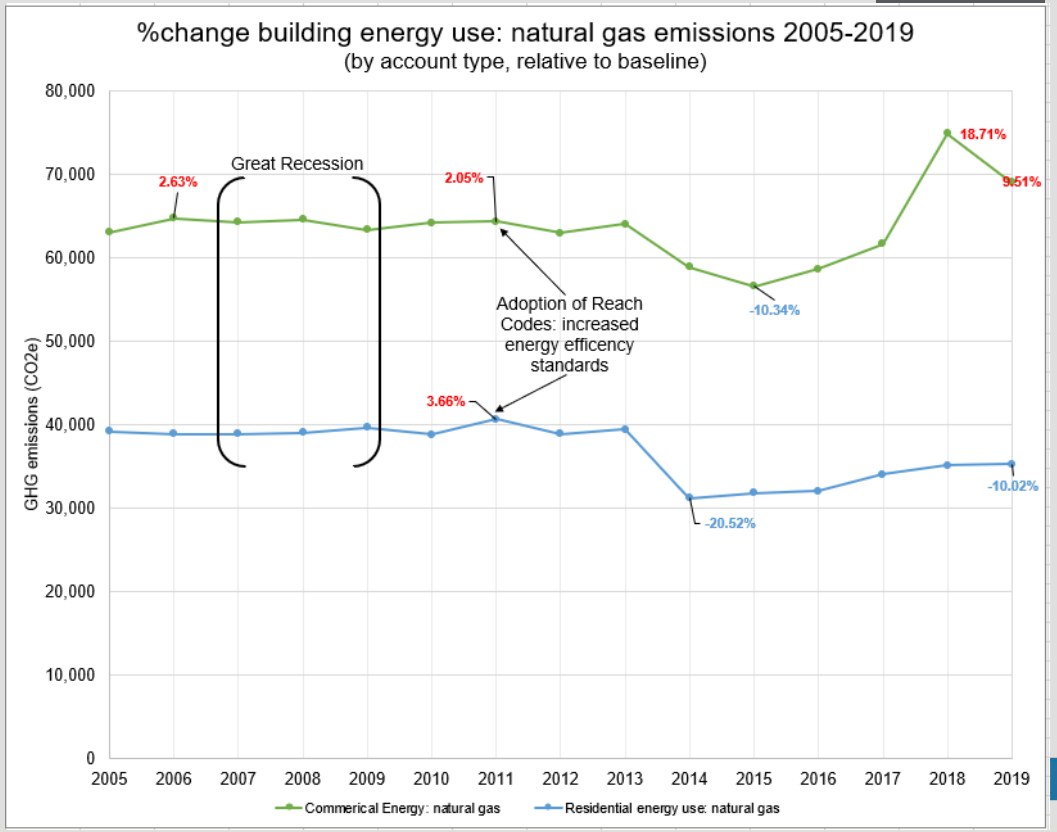
EMISSIONS TRENDS BY CATEGORY



CLIMATE ACTION PLAN 2020-21 STRATEGY NO. 1

Explore policy/program options to convert 95% of existing buildings to all-electric by 2030

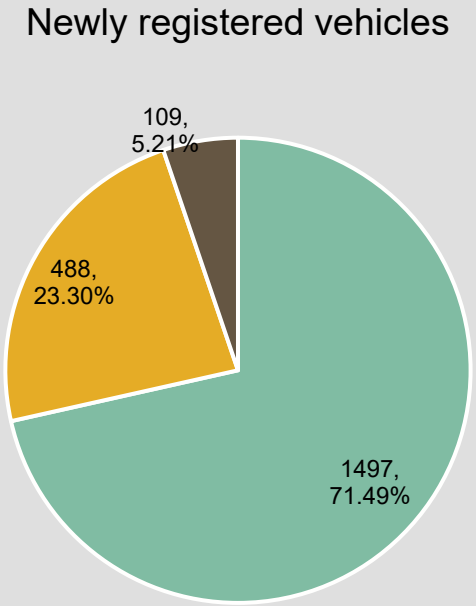
- On track to achieve project milestones

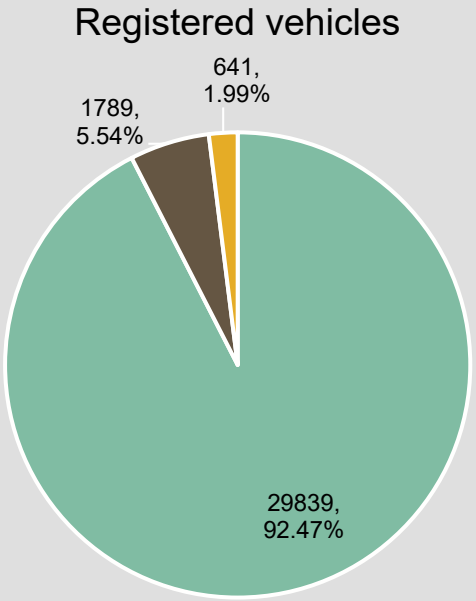


CLIMATE ACTION PLAN 2020-21 STRATEGY NO. 2

Set citywide goals for increasing electric vehicles to 100% of new vehicles by 2025 and decreasing gasoline sales 10% a year

- Implementation differed to the Beyond Gas Initiative under Joint Venture Silicon Valley





CLIMATE ACTION PLAN 2020-21 STRATEGY NO. 3

Expand access to electric vehicle (EV) charging for multifamily and commercial properties

- Staff is and will continue to monitor local and regional incentive programs (Peninsula Clean Energy EV Ready)
  - PCE reports five multifamily properties have applications under review
    - Properties vary in size (4-41 units). Note, two properties have yet to confirm total units
    - Scope of projects (e.g., charging type, total number of charging spaces, etc.) is also currently unknown

CLIMATE ACTION PLAN 2020-21 STRATEGY NO. 4

Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission

- Recently adopted Transportation Master Plan includes 14 strategies that are completed, underway, or planned.

- Transportation Management Association (TMA) feasibility study to achieve identified objectives nearing completion
  - Objective 1: Endorse and support regional/sub regional transportation demand management (TDM) efforts
  - Objective 2: Ensure TDM is available for all businesses
  - Objective 3: City to serve as an example of an employer with a robust and collaborative TDM program

- SB2 Housing grant activities considered part of the housing element update
  - Accelerate/encourage housing production in already urban/built-up areas to reduce dependance on vehicles for everyday activities and VMT

CLIMATE ACTION PLAN 2020-21 STRATEGY NO. 5

Eliminate the use of fossil fuels from municipal operations

- Proposals for Menlo Park Community Campus microgrid currently under review
- Municipal fleet has transitioned to renewable diesel and reserved five full battery electric Ford F-150 trucks
- HVAC replacements for the Arrillaga Family Rec Center and Gym are planned to be all-electric
- Assessment of available electrical capacity City Hall completed, installation of additional spaces currently in design phase
- Currently piloting use of four full battery electric leaf blowers

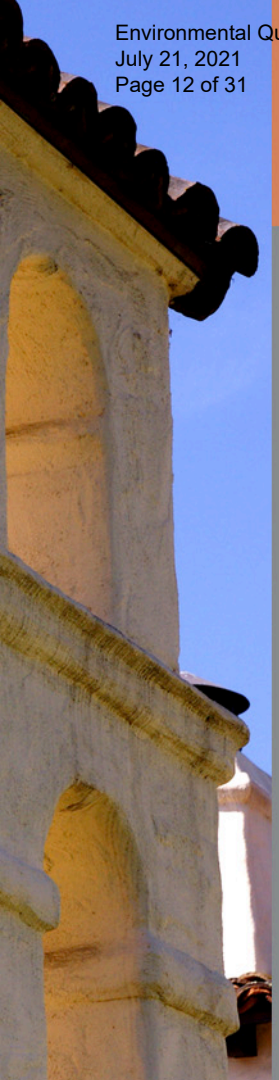
CLIMATE ACTION PLAN 2020-21 STRATEGY NO. 6

Develop a climate adaptation plan to protect the community from sea level rise and flooding

- Strategy to Advance Flood protection, Ecosystem, and Recreation along San Francisco Bay Project (SAFER Bay) grant application has been selected for further review
  - Regional project (San Francisquito Creek Joint Powers Authority) project to protect people, property, and infrastructure from Bay tides and anticipated sea level rise

- Menlo Park has partnered with OneShoreline for the construction and maintenance of the Bayfront Canal and Atherton Channel Flood project
  - High tides have kept flows in the Bayfront Canal from draining to the Bay. Even minor rainfall events have resulted in the flooding with nearby properties experiencing flooding 40 times over the past 70 years – most recently in 2017

- Local Hazard Mitigation Plan update is currently underway
  - LHMP reduces risk to life and property from a hazard events including those compounded/cause by climate change (e.g., high tides resulting increased flooding events along the Bayfront Canal)



NEXT STEPS

- Obtaining and compiling the metric data presented opportunities and challenges that will be discussed at the next EQC meeting.

- Present to City Council tentatively scheduled for August 31.
  - Would include the commission's recommendations for 2021 and beyond

THANK YOU

Existing Building Electrification Policy Options – Draft Analysis and Discussion

Prepared by Farhad Farahmand (TRC), Mayra Vega (TRC), and Blake Herrschaft (DNV-GL), in partnership with City Staff and Peninsula Clean Energy

Menlo Park Environmental Quality Commission – July 21, 2021

Introduction

- City Council scope of work for Climate Action Plan goal No.1 included analyzing the cost effectiveness to electrify existing buildings in Menlo Park and provide potential policy pathways

- Working draft is being released for the Environmental Quality Commission and staff to review and discuss before presented to the City Council on August 31

- The commission can continue discussion at its August meeting to finalize advice to the City Council

Market Readiness

End Use	Technology Available?	Contractor Familiarity?	More Challenging Building Types
Space Heating	Yes, since 1950s	All	Labs, hospitals, VAV reheat systems in commercial office (typically >50 ft2 or more)
Water Heating	Yes, since 2010	Some	Labs, hospitals, hotels, large multi-family
Cooking	Yes, since 1950s, more so since 2010	All for residential, Some for commercial	Restaurants with limited site electrical capacity
Clothes Drying	Yes, since 1940s	All for most buildings, some for laundromats, etc.	Laundromats, hotels, hospitals
Pools	Yes, since 1990s	Some	Large commercial pools

BayREN contractor list available here
Clean Energy Connection list available here

Berkeley, Half Moon Bay, Palo Alto, San Francisco, and New York City are all working towards existing building electrification mandates

Local Jurisdiction Roles in Incentives and Financing

Lead Roles

- Developing incentive programs for constituents
  - Can fund via local taxes and fees (e.g., Utility User's Tax)
  - Can partner with other agencies (e.g., Bay Area Air Quality Management District).
- Municipal financing – electrifying public buildings through green bonds or local taxes

Advocacy Roles

- On-bill financing (utility customer loan) or *tariffed* on-bill financing (utility investment tied to utility meter)
- Sharing of resources enabling electrification
  - Partner incentives (Utilities, BayREN, PCE)
  - Electrification-as-a-service partnerships
  - Tax credits, deductions and rebates
  - Loan programs (i.e., California Hub for Energy Efficiency Financing)

Statewide Utility Cost Effectiveness - Methodology

- Lifecycle periods of 15 years (nonresidential) and 30 years (residential)
- Benefit metrics
  - On-bill – Peninsula Clean Energy utility rate schedules, energy inflation, discount rates
  - Time Dependent Valuation - 'societal value or cost' such as carbon emissions
- Cost effectiveness measured in Benefit/Cost ratio and Net Present Value
- Three vintages: 80's, 90's, and 2000's

Sector	Prototypes
Residential	Single-family (2,700 ft2), Low-rise multifamily (6,960 ft2)
Nonresidential	Office (53,000 ft2), Retail (25,000 ft2), Warehouse (18,000 ft2), Quick Restaurant (2,500 ft2), Full Restaurant (5,000 ft2)

Cost Effectiveness – Residential Results

- Heat pumps are TDV cost effective using 2022 TDV
- Heat pumps are on-bill cost effective when paired with on-site solar PV

Measure	Vintage	Gross Measure Cost	PCE/ BayREN Incentive	Net Measure Cost	Year 1 Utility Cost Savings	No Incentive		With Incentive	
						On-Bill B/C Ratio	On-Bill NPV	On-Bill B/C Ratio	On-Bill NPV
SEER 21 Heat Pump at HVAC Replacement	Pre-1978	$3,749	$1,000	$2,749	-$30	0.19	-$3,290	0.26	-$2,168
	1978-1991				-$66	0	-$4,637	0	-$3,514
	1992-2010				-$67	0	-$4,820	0	-$3,697
NEEA Tier 3 HPWH at Replacement	Pre-1978	$2,775	$2,000	$775	$5	0.21	-$2,434	0.78	-$188
	1978-1991				-$6	0.13	-$2,702	0.46	-$456
	1992-2010				-$9	0.10	-$2,788	0.36	-$542

Cost Effectiveness – Nonresidential Results*

Prototype	All-Electric (Code Minimum)	All-Electric + Efficiency	All-Electric + Solar PV
Retail	Not cost effective yet	On-Bill and TDV	On-Bill and TDV
Office	Not cost effective yet	Not cost effective yet	Not cost effective (maybe TDV with efficiency measures)
Quick-Service Restaurant	Not cost effective (maybe TDV excluding cooking)	TDV (excluding cooking)	Not cost effective yet (includes battery)
Full-Service Restaurant	Not cost effective yet	Not cost effective (maybe TDV excluding cooking)	Not cost effective yet (includes battery)
Warehouse	Not cost effective yet	Not cost effective yet	On-bill

*Updated findings as of 7/20

Electrification For All

- Menlo Park contains 1,500 housing units with occupants that are below 30 percent of the area median income (AMI).
  - Mostly renters
  - 7-11% of income is spent on energy
- Equitable policy characteristics
  - Ensure access to incentives
  - Ensure bill reductions
  - Avoid increasing debt
  - Avoids "renovictions" that evict tenants when making building upgrades, or rent increases
- Partnering with local community-based organizations is critical to honest discussion and long-term commitment

Rental Housing Performance Standards (RHPS), coupled with rental housing policies, could:
- reduce the energy cost burden on tenants,
- eliminate the split incentive, and
- support cities in meeting climate goals.

26 cities in CA have rental housing inspection policies

At least **6 cities outside CA** have RHPS with energy efficiency requirements.

Sources: LEAD Tool, StopWaste, Urban Sustainability Director's Network

Policy Options Overview

#1: Public Engagment and Eductation

- Concierge assistance for residents toward financing, permit education
- Piloting projects in LMI communities
- Outreach and forums for residents and businesses

#2: Generate Funds for Financing

- Fees for building projects that generate GHGs
- Increase Utility User's Tax
- Partner with local lenders to provide streamlined financing options

#3 Time Certain Building Performance Standards

- Set a deadline for electrification (e.g., 2030)
- Require reporting and/or inspections
- **Pros:** Easy to understand, reduces missed opportunities, impacts all buildings
- **Cons:** Increased staff responsibilities, emergency replacement challenges, relies on incentive availability

Policy Options Overview

#4: Permitting

- A: Heat pumps when installing air-conditioning
- B: Electric-ready at panel upgrade or solar PV install
- C: Heat pumps installed at voluntary HVAC/DHW replacements
- D: Heat pumps installed in Additions to single family homes
- E: Heat pump pool heating for new pools
- F: Electric appliances in Alterations including HVAC/DHW
- **Pros:** Easy path to enforcement, opportunity to integrate incentives
- **Cons:** Can add significant cost w/o incentives, may decrease permit application even further, limited effectiveness

Policy Options Overview

#5: Time of Sale

- *Encourage* electrification at time of real estate sale or transfer through reduced taxes or rebates
- *Require* upgrades at time of sale, similar to Davis or San Francisco
- **Pros:** Can electrify whole buildlings at a time, upgrades can be negotiated between the buyer and seller
- **Cons:** Can add significant cost w/o incentives, limited number of buildings impacted

Policy Option Evaluation: Methodology

Each policy option was scored against a set of five criteria and given a point for each definition it met for a score of 0 – 3 for each criteria. The criterial definitions are as follows:

Ease of Implementation/Process	Convenience	Equitable	Cost Effectiveness	Effectiveness
❿There is a low level of engagement necessary during the adoption process ❿Does not require long term-staff resources ❿Does not require coordination with other agencies.	❿Does not increase scope beyond the original plan ❿Does not increase project timeline or cause a physical impact to the property ❿Skilled workforce for the required upgrade is available.	❿Tenant protections exist ❿There are income-qualified exemptions, incentives, and financing available ❿There is community engagement on policy design and workforce development and training.	❿Demonstrates on-bill savings ❿Does not increase upfront costs ❿Incentive programs are available or forth-coming.	❿Is an enforceable mandate, ❿Transforms the market ❿Is scalable

Policy Option Evaluation: Key Take-aways

Highest ranking options

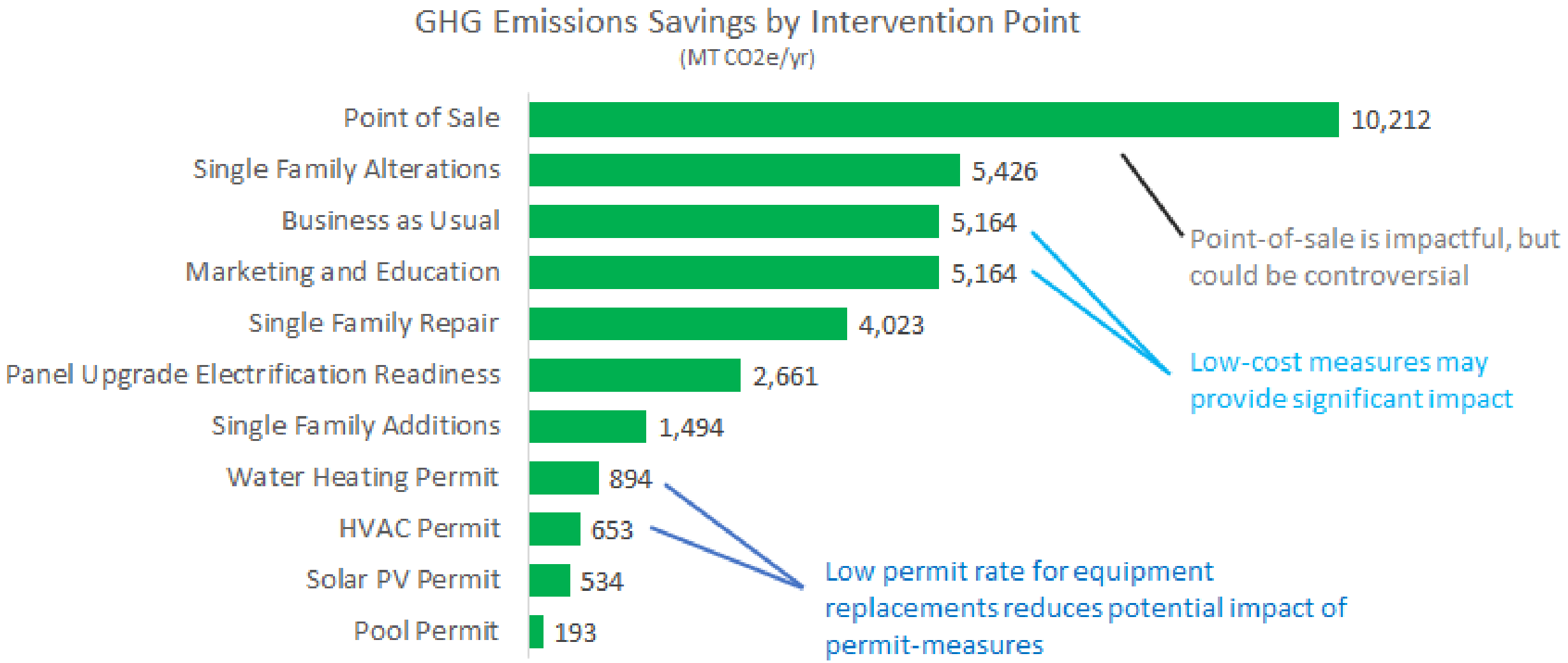
- Option 2 Generate Funds
  - Most convenient policy because it doesn't directly impact project work
  - Incentives available
  - Can be designed to generate and redistribute funds equitably
  - May be implemented by city staff relatively easily, or in partnership with utility
- Option 4A Heat Pump at A/C installation
  - Minimally intrusive
  - Does not add cost to a project where air-conditioning equipment is already being replaced

Lowest ranking options

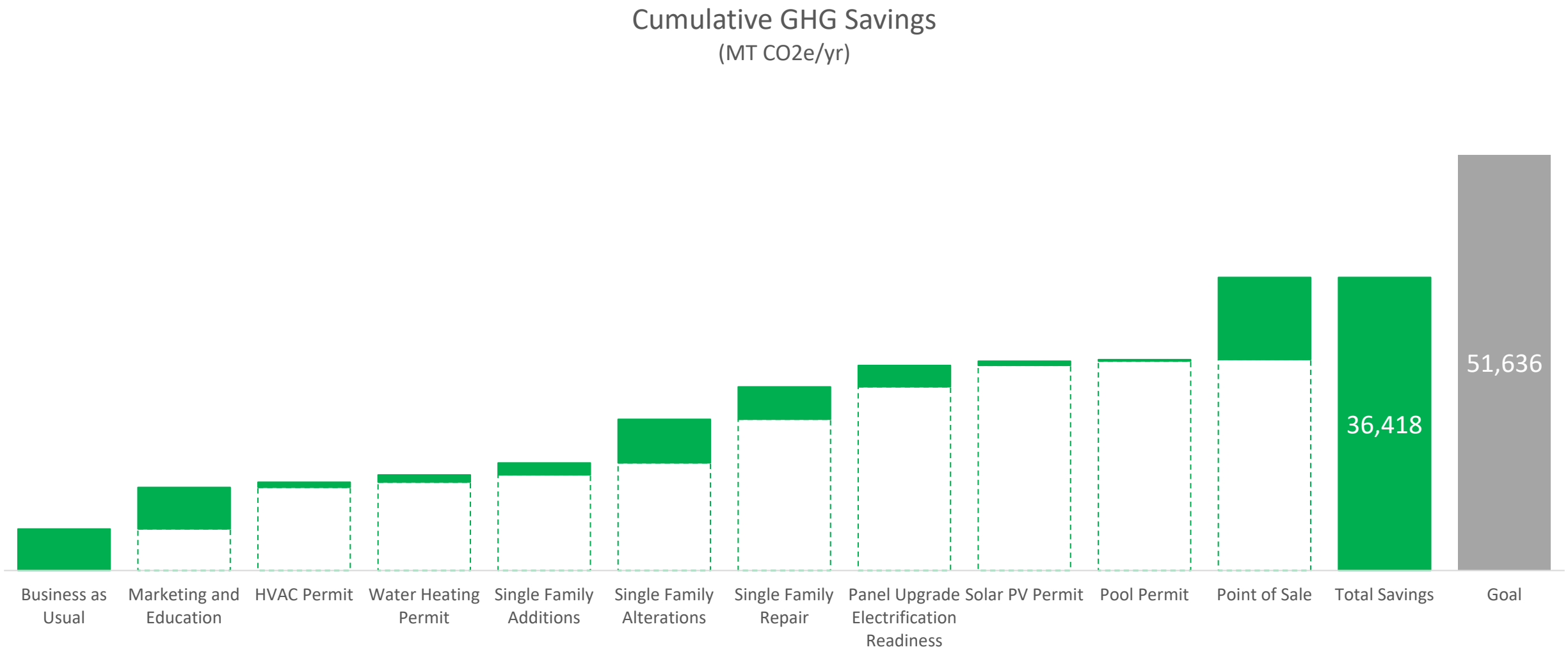
- Option 4C Heat Pump Installed Upon Voluntary Replacement
  - Susceptible to permit dodging
- Option 4D Heat Pump Installed During Additions to SF Buildings
  - Susceptible to permit dodging
- Option 3 Time Certain Building Performance Standards
  - Requires a disclosure program to become enforceable

- All of these options require
  - High level of engagement, and either new staff resources or coordination with outside agencies
  - They can all increase a project's scope of work, budget, and timeline
  - Incentives for panel upgrades, heat pump water heaters and heat pump space heaters are available but may not cover full upfront cost

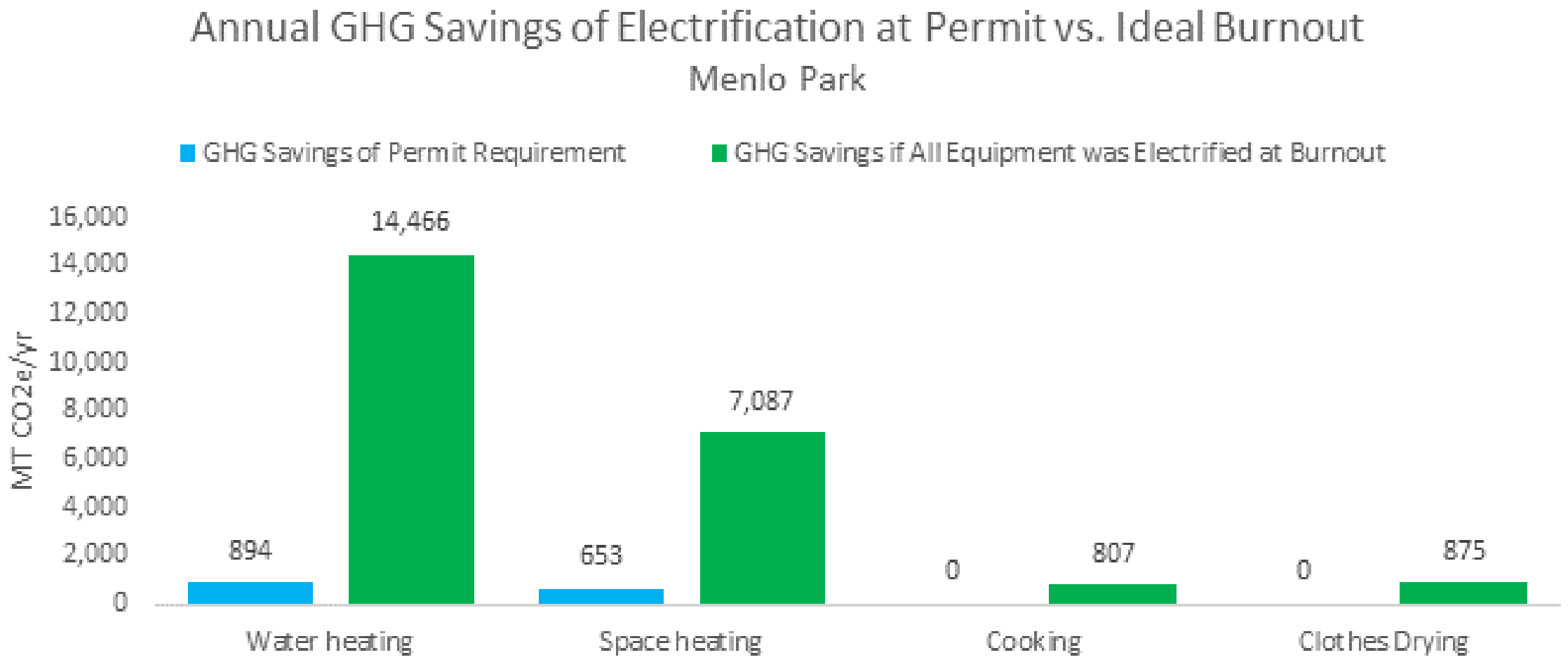
Emissions Impacts (2022 – 2030)



Emissions Impacts



Emissions Impacts – Limitations of Eqpt Permits



Next Steps

- **August 18 EQC Meeting-** finalize feedback/advice for the City Council to consider on the cost effectiveness analysis and potential policy pathways
- **August 25-** Finalize cost effectiveness analysis and policy pathways report
- **August 31 City Council Meeting-** study session to present cost effectiveness analysis
- **September 15 EQC Meeting-** finalize feedback/advice to the City Council on policy pathways if desired or needed
- **September/October City Council Meeting**- study session to dive deeper on policy pathways that includes staff and commission recommendations
- **October City Council Meeting**- City Council directs staff on next steps for CAP No. 1: electrify existing buildings

Discussion

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