2021 Sustainability and Climate Action Plan (S/CAP) Update Report

April 19, 2021

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Objectives for Tonight

• Review the 2021 Sustainability and Climate Action Plan (S/CAP) Update Report
  – 2019 GHG Inventory
  – Business as Usual Forecast
  – Preliminary results of the Impact Analysis

• Discuss policy tools for further refinement that could be included in the revised S/CAP

• Provide direction on next steps for S/CAP Engagement
Sustainability and Climate Action Plan Goal: 80 x 30

- **ENERGY**
  - Christine Tam

- **MOBILITY**
  - Sylvia Star-Lack
  - Rebecca Atkinson

- **ELECTRIC VEHICLES**
  - Shiva Swaminathan
  - Hiromi Kelty
  - Mike Nafziger

- **WATER**
  - Karla Dailey
  - Karin North

- **CLIMATE ADAPTATION & SEA LEVEL RISE**
  - Julie Weiss
  - Christine Luong

- **NATURAL ENVIRONMENT**
  - Walter Passmore
  - Pam Boyle Rodriguez
  - Karin North

- **ZERO WASTE**
  - Paula Borges
  - Maybo AuYeung
  - Wendy Hediger

(cityofpaloalto.org/ClimateAction)
Proposed Engagement Focus Areas

1. Technical Analysis
2. Policy Development
3. Near-Term Programs
Palo Alto GHG Emissions Down ~38.2%

Palo Alto Citywide Greenhouse Gas Emissions by Sector

1990 vs 2019 emissions breakdown:
- On-Road Transportation
- Natural Gas Use
- Wastewater
- Brown Power Supply (Electricity)
- Additional Transportation Sources
- Natural Gas Fugitive Emissions
- Solid Waste

Source: cityofpaloalto.org/ClimateAction

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Palo Alto GHG Emissions Down ~38.2%

Palo Alto Citywide Greenhouse Gas Emissions by Sector

GHG Emissions (MT of CO2e)

80 x 30 Target (156K MT CO2e)

1990

2019

- On-Road Transportation
- Additional Transportation Sources
- Natural Gas Use
- Natural Gas Fugitive Emissions
- Wastewater
- Solid Waste
- Brown Power Supply (Electricity)
GHG Emission Sources in Palo Alto

Source: 2019 Palo Alto Municipal Operations & Community GHG Emissions

- Natural Gas Use, 31.8%
- Residential, 15.0%
- Commercial, 13.9%
- Industrial, 3%
- Additional Sources, 4.5%
- On-Road Transportation, 60.8%
- Solid Waste, 1.4%
- Wastewater, 0.4%
- Natural Gas Fugitive Emissions, 1.0%
- Transportation and Mobile Sources, 65.3%

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Adjusted “BAU” GHG Forecast and 80 x 30 Target

217,745 MT CO$_2$e

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Analysis Results: Effect of Policies vs. BAU

8% additional reductions needed
Outcomes Needed by 2030

- Commute travel is reduced 10% via telecommuting
- Vehicle Miles Traveled (VMT) are reduced 8% to 11%
- 85% of all Palo Alto new vehicle purchases are EVs (up from 30%) for a vehicle fleet that is 44% EVs (50% in single-family households, 33% in multi-family)
- 40% of commuter trips into Palo Alto and 30% of visitor trips are made in EVs, 35% total (Currently 3%)
- Virtually all single-family gas appliances and virtually all commercial rooftop HVAC units are electrified
- Significant additional multi-family and commercial building electrification and other emissions reductions to be determined
Costs of Emissions Reduction Actions

- Other commercial and multi-family actions are expensive – at least those analyzed so far.
- Other single-family appliances like cooktops and clothes dryers are more expensive, but unlock other savings.
- Lowest cost building electrification is single-family space and water heating and commercial rooftop HVAC.
- Alternative commute and electric vehicle programs are a net savings.

- Most costly ($600-$1800/MT)
- More costly ($200-$600/MT)
- Less costly (<$160/MT)
- Break even
- Net savings ($0 to-$400/MT)
Spectrum of Tools for Achieving Climate Goals

- **Low Intervention**
  - Early Adopters
  - Voluntary Programs
  - Education and Outreach
  - Pilot Projects

- **Some Intervention**
  - Council Policies, Plans, and Reach Ordinances
  - Council Ordinances, Bans, and Mandates
  - Financial Incentives

- **Higher Intervention**
  - City-wide Voter-Approved Mandates or Financing
  - Utility-scale Infrastructure Shift

Voluntary Market driven solutions ➝ Government driven solutions
Potential Short-term Actions

• Expand residential emissions reductions programs to promote building and transportation electrification, enhance programs with technical assistance, direct installation, incentives, and/or on-bill financing.

• Targeted outreach to multifamily residential (MFR), renters and lower income residents, including assistance with charger installation for MFR buildings

• Establish business electrification programs, including EV charger installation and rooftop HVAC units

• Micro-mobility (E-Bike and E-Scooter) and on-demand transit service pilot programs

• Expand scope of transportation management association

• Reach Code Expansion (Non-Residential, Renovations)
Potential Mid-Term Actions

- Explore mandates to require end-of-life replacement of various gas appliances with all-electric versions, including mixed-fuel rooftop packaged HVAC systems and single-family residential space and water heaters.
- Explore residential bill discount for registered EVs.
- Explore plan to build 30 miles of Bicycle Boulevard /Traffic Calming facilities over next 20 years.
- Explore ballot measures to implement other actions that could support the City’s sustainability goals, such as carbon pricing, funding for emissions reducing activities, additional mandates, or withdrawal of gas from parts of the City.
Carbon Neutrality

California’s Goal:
80% BELOW 1990 LEVEL
BY 2050

Palo Alto’s Goal:
80% BELOW 1990 LEVEL
BY 2030

2045 Reach Carbon Neutrality
Proposed Engagement Focus Areas

1. Technical Analysis
2. Policy Development
3. Near-Term Programs
Council Involvement Options

1. Continue to bring items directly to the City Council

2. Create an Ad Hoc Committee to assist staff as work is underway

3. Provide status reports on S/CAP work to the Finance Committee
Community Engagement Options

1. Utilize City’s Board, Commission and Committee (BCC) Structure
2. Stakeholders-Specific Roundtable Discussions
3. Community-Driven Working Groups
4. Community Meetings
5. Online Survey
6. Community Summit Series
Engagement Options Considerations

- Scope and Goals
- Engagement Approach
- Resources
  - Budget and Staffing
- Formality of Group
  - Potential Brown Act Requirements
- Timeline

Subject to Council direction staff may need to come back for confirmation of actions needed.
Proposed Adjusted Timeline

• June-August 2021: Stakeholder-Specific Roundtables
• Early Fall 2021: Commission meetings on the S/CAP focus areas, potential select community meetings
• Early Winter 2021: Online survey and Summit Series
• December 2021: Final Draft S/CAP presented to Council
• Spring 2022: California Environmental Quality Act (CEQA) evaluation completed
• Spring 2022: S/CAP with CEQA Review and Sea Level Rise Adaptation Plan presented to Council for adoption
Council Action Requested:

1. Discuss and provide feedback to staff on policy tools that could be implemented in S/CAP analysis that would be included in the S/CAP engagement strategy for further refinement and eventual adoption of a revised S/CAP, and

2. Provide direction on stakeholder engagement for the S/CAP Update, and direct staff to develop and implement an S/CAP engagement strategy for S/CAP engagement tracks that includes outreach to City Board, Commissions and Committees, key stakeholders, and the community at large
Thank You!

Brad Eggleston, Director of Public Works
Jonathan Abendschein, Assistant Director Utilities
Resource Management
Christine Luong, Sustainability Manager