



RICAPS

Regionally Integrated Climate Action Planning Suite

Multi-city Working Group
May 25, 2021

RICAPS technical assistance is available through the San Mateo County Energy Watch program, which is funded by California utility customers, administered by Pacific Gas and Electric Company (PG&E) under the auspices of the California Public Utilities Commission and with matching funds provided by C/CAG and additional funding provided by Peninsula Clean Energy.

Agenda

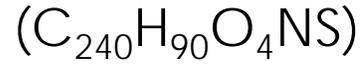
- Fugitive methane emissions
- Heat pump water heater permitting
- Neighborhood electrification pilots
- Fostering collaboration with schools
- Final announcements

Please
introduce
yourself and
share something
you're working
on in chat!

Re-Thinking Natural Gas Emissions

Including Fugitive Methane Emissions in our Calculations

Coal



Carbon Dioxide

SOx

NOx

Particulates

Natural Gas



Carbon Dioxide

Methane

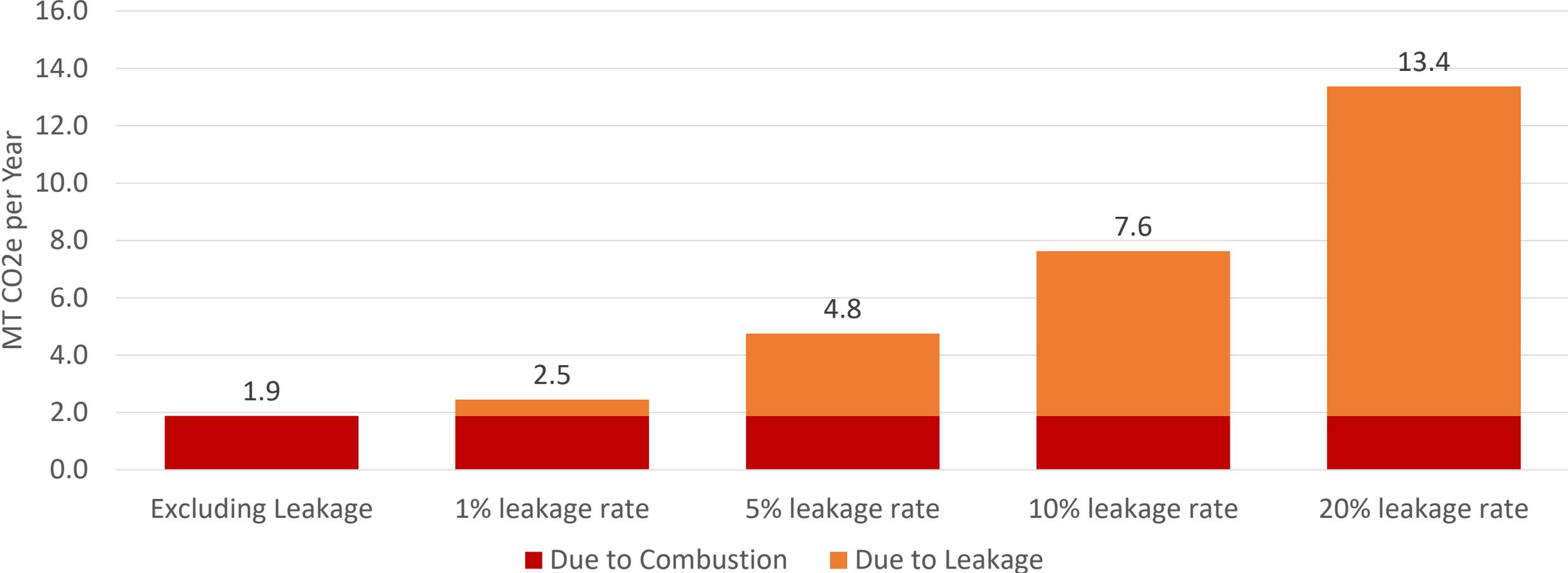
Electricity Powered by Solar, Wind, Hydro



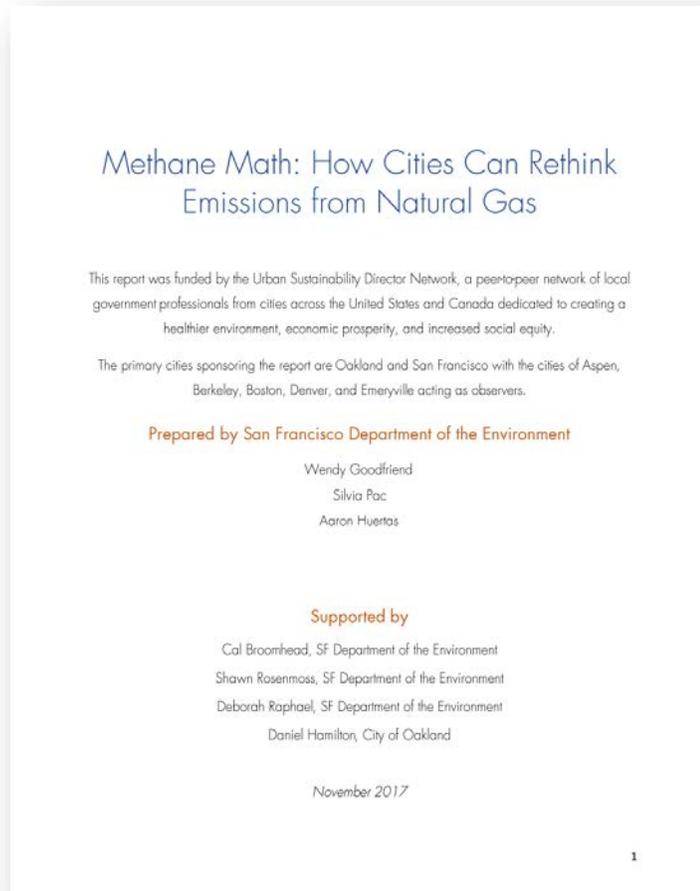
Fresh air

Gas May Be Worse Than Coal

Impact of Including Methane Leakage on GHG Calculations - Single Family Homes



2017 - A Call to Action



Ten Priority Action Steps for City Climate Leadership on Methane

1. **Change carbon accounting practices.** Switch to a shorter time frame for methane emissions (GWP₂₀), use updated leak rate estimates, and advocate for these changes to become the new standard of practice, including in emissions trading systems.
2. **Communicate the importance of leaks.** Highlight the impact of natural gas leaks and include leak reduction goals in climate action plans.
3. **Disclose leaks.** Require utilities provide public data that details leaks, including number, location, pipeline, component type, volume leaked, estimated greenhouse gas emissions, and past or planned repairs.
4. **Collect more local data on natural gas leak rates.** Partner with local or state governments, non-profits, private sector, local universities, utilities, or other entities to conduct bottom-up emissions that quantify city-level leaks.
5. **Reduce leaks in local distribution.** Require utilities to detect and repair leaks during municipal street or sidewalk construction projects and encourage the prioritization of "super-emitter" sites that account for a large portion of leaks in cities.
6. **Incentivize leak repair.** Create a carbon emission abatement metric for fixing leaks to incentivize utilities to prioritize non-emergency leak repairs.
7. **Prioritize decarbonization.** Eliminate code barriers to electrification and require electric-only new construction while phasing in retrofits of other types of buildings, including single family, small multifamily, and municipal operations.
8. **Support fuel switching.** Fund homeowners at the end of a natural gas distribution line to switch to electricity rather than repairing or replacing natural gas pipelines.^x
9. **Switch to renewable natural gas.** Where electrification is not feasible, switch to renewable natural gas sources such as biomethane from landfills and dairy producers.
10. **Create an investment plan.** Develop a long-term energy investment plan that considers together aging natural gas infrastructure replacement costs, emission-reduction goals, and climate change adaptation.

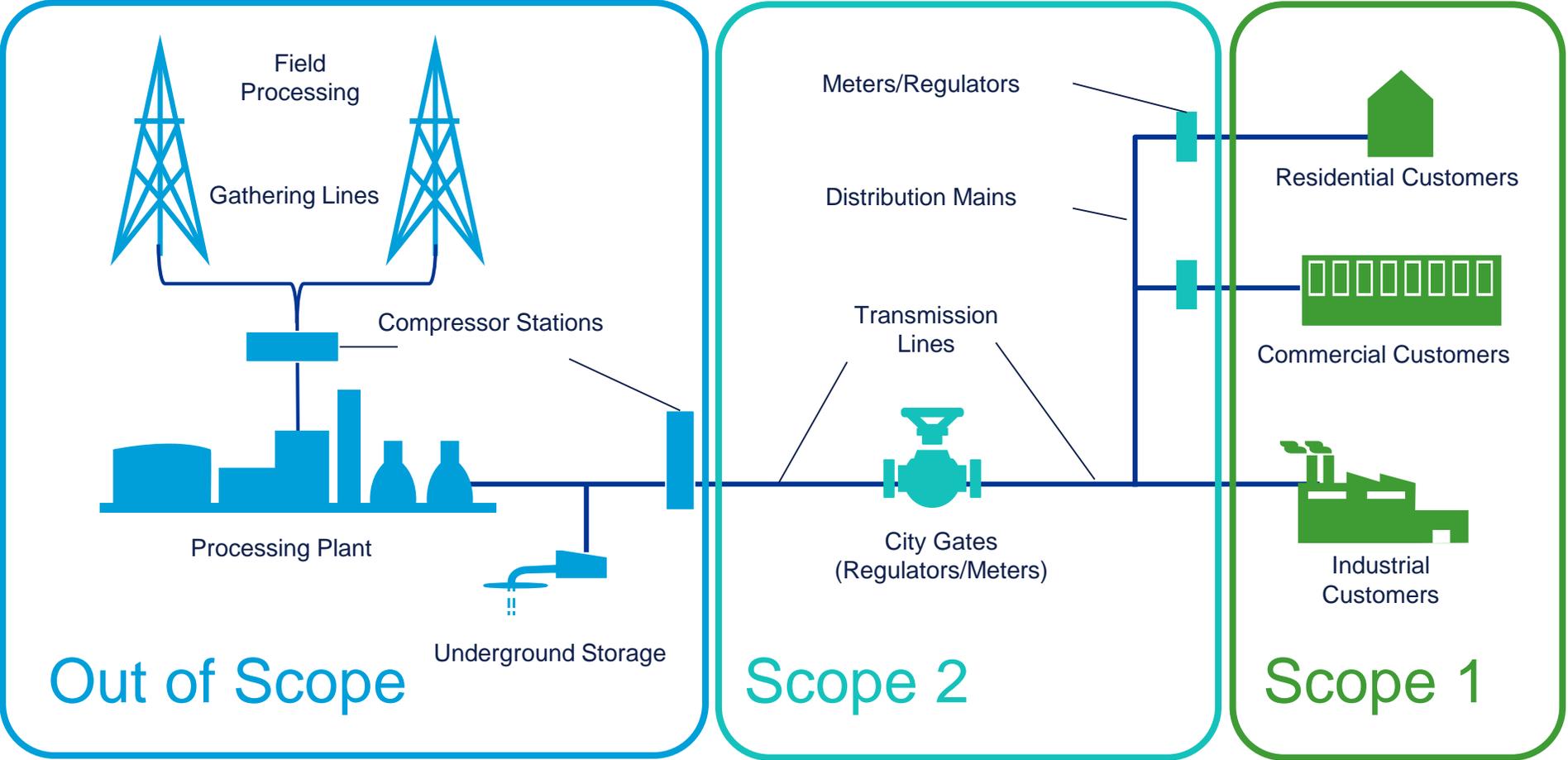
Reach Codes

Reach Codes

Reach Codes

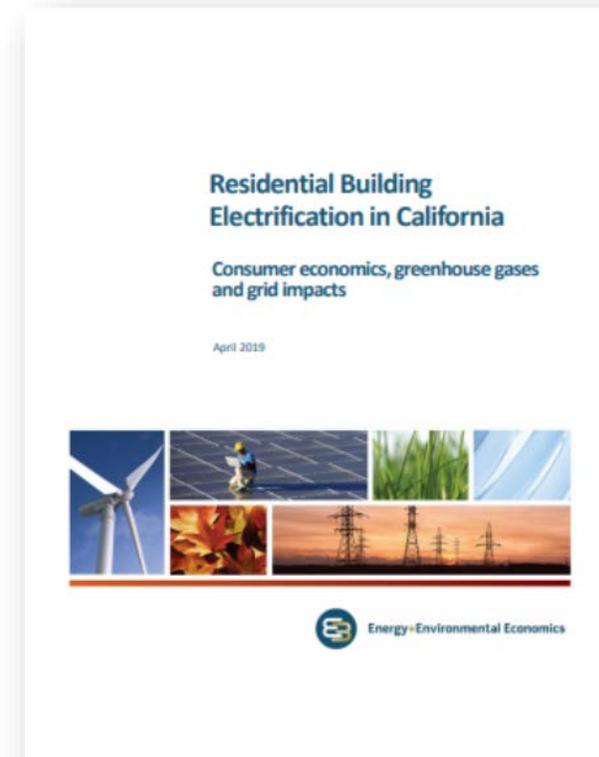
CEC Work

Where Fugitive Methane Emissions Occurs

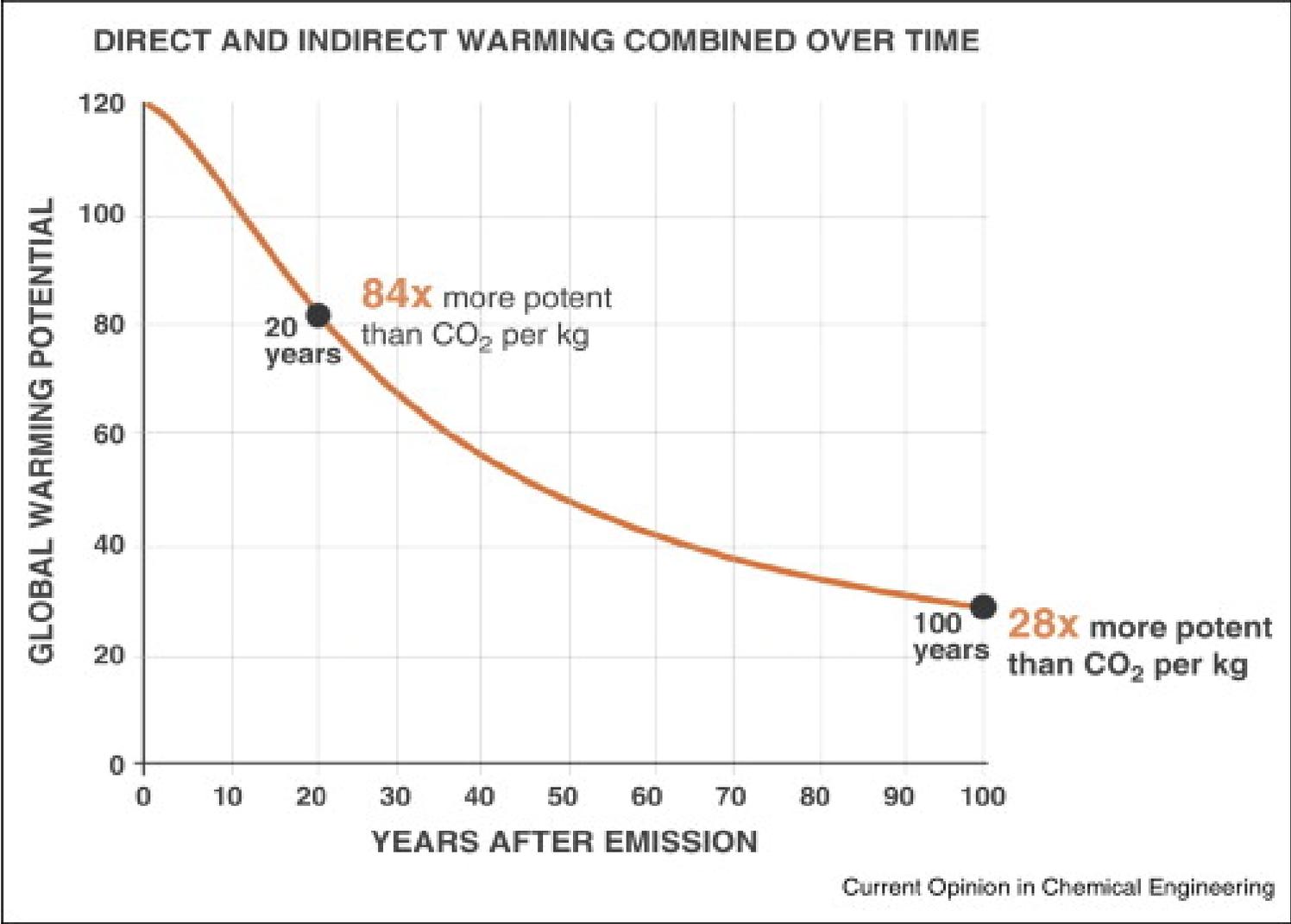


Establishing a Leakage Rate

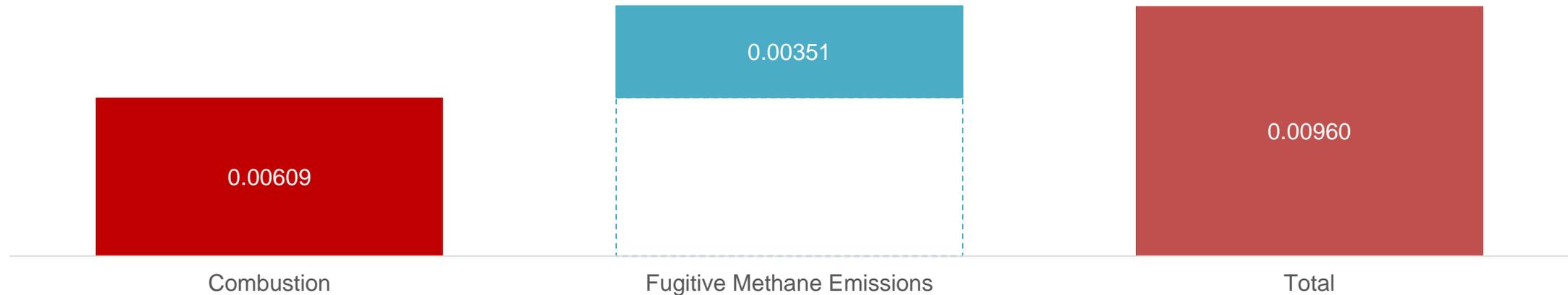
Study	Percent Leak	Analysis Type	Year
EPA Greenhouse Gas Inventory (GHGI)	1.37%	Bottom Up	2014
Brandt	2.35%	Top Down	2014
Miller	3.57%	Top Down	2013
Caulton et al.	7.00%	Lit Review	2014
Burnham	2.75%	Lit Review	2011
Howarth	3.80%	Lit Review	2011
Burnham	2.01%	Lit Review	2011
Howarth	5.80%	Lit Review	2015
Howarth	12.00%	Lit Review	
Alvarez et al.	2.3%	Lit Review	2018



Selecting the Global Warming Potential



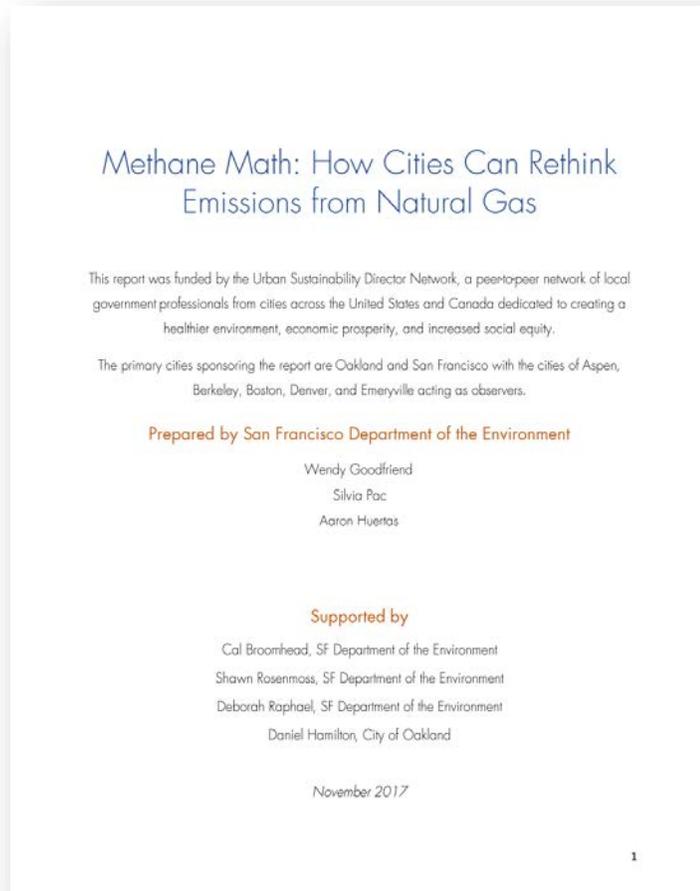
Impact on Emissions Factor



1. Convert therms to cubic meters – 2.74 cubic meters per therm
2. Multiply by methane content of natural gas (95%) to determine cubic meters of methane per therm (2.6).
3. Multiply by density of methane (0.7 kg per cubic meter) – 1.82 kg methane per therm.
4. Multiply by GWP-20 (84x) to determine kg CO₂e per therm of natural gas leaked – 152.9 kg CO₂e/therm
5. Multiply by derived leakage rate (2.3%) to determine GHG emissions associated with fugitive methane emissions per therm of demand – 3.52 kg CO₂e (0.00352 MT CO₂e) of fugitive methane emissions per therm of demand.
6. Add to emissions associated with combustion to determine total emissions per therm including both on-site combustion and upstream fugitive methane emissions – **0.0096 MT CO₂e/therm combusted on-site.**

For GHG Inventories, we've used ICLEI community Protocol Method BE.1.1
Will this be consistent?

2017 - A Call to Action



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Reach Codes

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CEC Work

Simplifying HPWH Permitting Across SMC

An abridged presentation
By Tara Grover

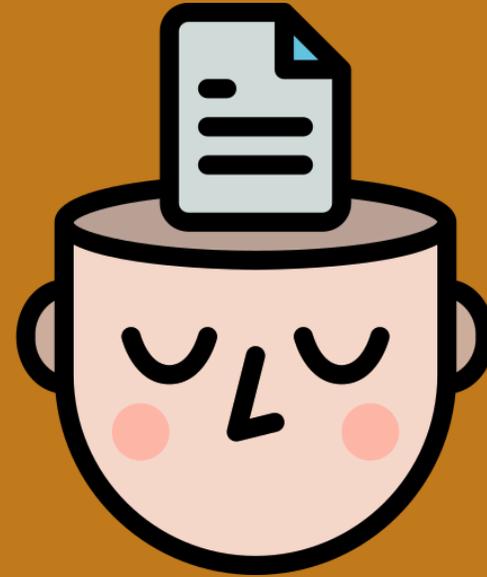




Table of Contents

- Context & Methodology
- Permit & Document Requirements
- General Permitting Process
- Online Process
- Electric Panel Upgrades
- Conclusion
- Appendix
- Q&A

Context & Methodology

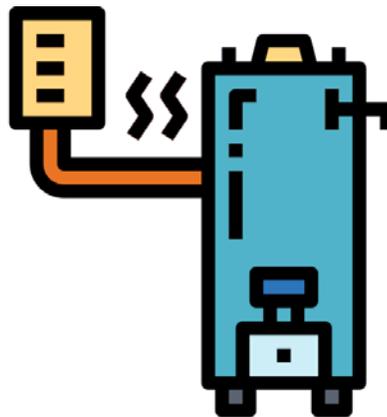


Context

Purpose:

Aid & support future policy efforts to simplify permitting for residents to convert from non-renewable energy sourced to renewable, specifically electric, appliances in homes w/in County of San Mateo(SMC)

- Research scope limited to permit installations for a heat pump water heater (HPWH), switched from natural gas & limited to existing single-family homes.



Methodology

- 1) Contacted city & county bldg. depts. of 18 jurisdictions within SMC to gather HPWH permit info through 6-question survey, using informational resources such as:
 - city websites,
 - phone numbers
 - city staff email addresses
- 2) Contact Info & Permit survey responses recorded in Excel spreadsheet –questions left unanswered
- 3) Included recommendations from persons who've undergone the permit process
- 4) Participated in conversations to coordinate recommendations w/ regional & state entities.
- 5) Assembled data compiled into a report, w/ summations of findings & recommendations for improvements w/ making HPWH permit requirements & costs uniform across SMC



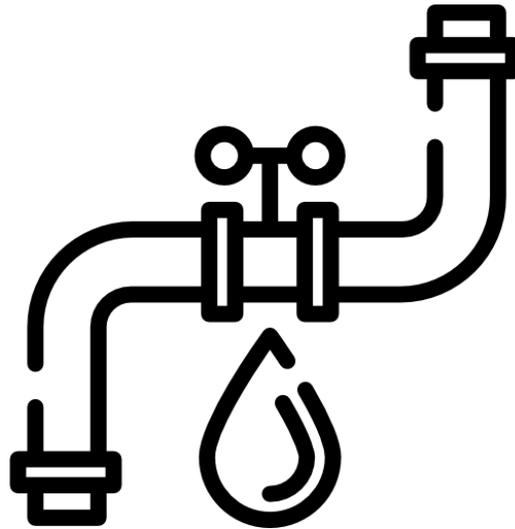
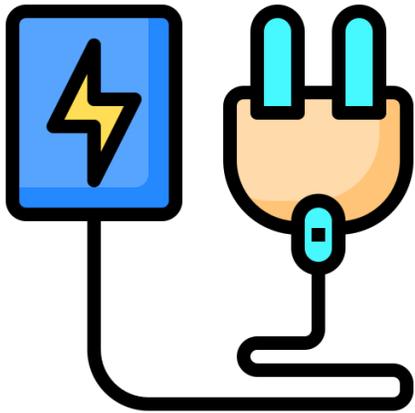
Permit & Document Requirements



Overview of Findings

Question #1: What permit(s) are required to replace a residential gas water heater w/ an electric heat pump water heater?

- Variety of permits used: electrical, plumbing, & mechanical



Overview of Findings



Question #2: What documents are required for submittal? How much do those documents cost? Can calculations & specifications be provided on drawings or must they be separate?

- Most common documents required for HPWH's include:
 - a full site plan
 - load calculations
 - equipment manufacturer specifications
 - energy compliance forms
 - permit application
 - a contractor declaration or owner/builder form
- Average permit application fee ranges btwn 50-250\$

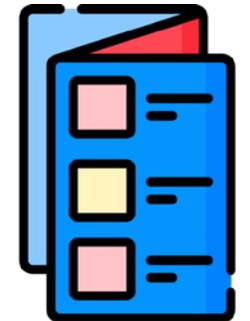




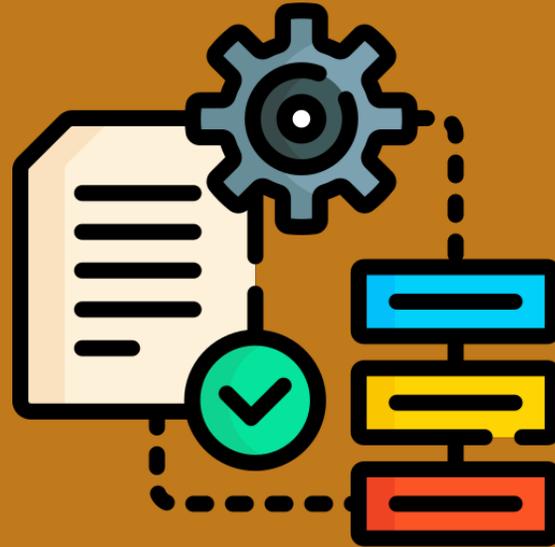
Recommendations



- Create discounted permits for electrification projects* (SVCE)
 - *who can make up the funding in different sources/subsidy
- Develop local jurisdiction-specific submission requirement checklists & prioritize permit applications that meet all items on agency's checklist (SVCE)
- Creation of electrification booklet/pamphlet by bldg. depts. for residents, w/ holistic level of home electrification in mind (Josie Gaillard, Environmental Quality Commissioner Menlo Park)



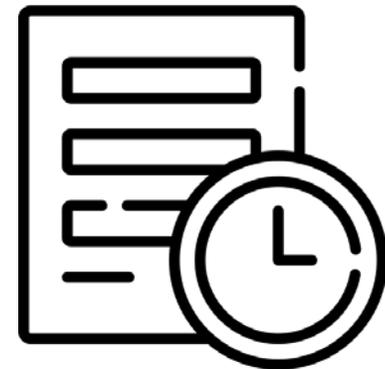
General Permitting Process



Overview of Findings

Question #3: Can this be an over-the-counter process? If not, how long would it (generally) take for plan review?

- Some can, others cannot provide over-the-counter services for HPWH permits
- Average timeline for plan review is either btwn 2 & 20 days, w/ longest review times dependent on complexity of project

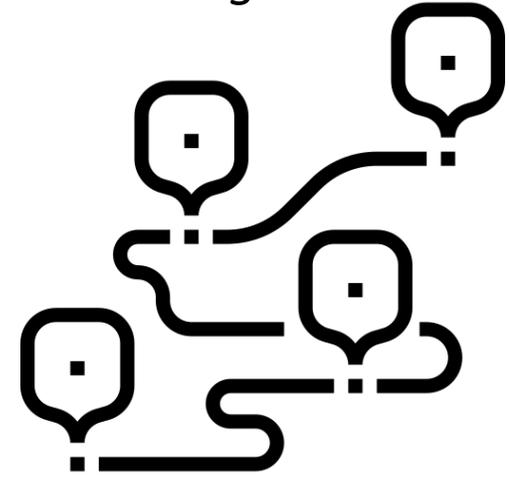


Overview of Findings

Question #5: What is the process for finalizing a permit, and how long does it take (including the final inspection)?

- Overall, the timeline for the entire permitting process rarely noted in responses received
- Some departments also noted timeline of permitting process is dependent on contractor & their pace of work. Another response received from East Palo Alto stated:

"the entire [timeline] really depends on the pace of the workers"



Recommendations

- Aids staff confidence & preparation for processes surrounding electric tech, also improves plan review & inspection processes effectiveness.
 - Trainings could potentially be from 3rd parties: BayREN provides HPWH trainings for bldg. Dept. Staff; well positioned to support this recommendation. (SVCE)
- “Standardize common electrification tech: (SVCE).
 - app req'ts & processes,
 - plan check processes, &
 - inspection guidelines & protocols
 - internal plan review
- Provide training opportunities for bldg. Dept. staff to stay up to date on:
 - new technologies
 - building systems
 - mandates on electrification





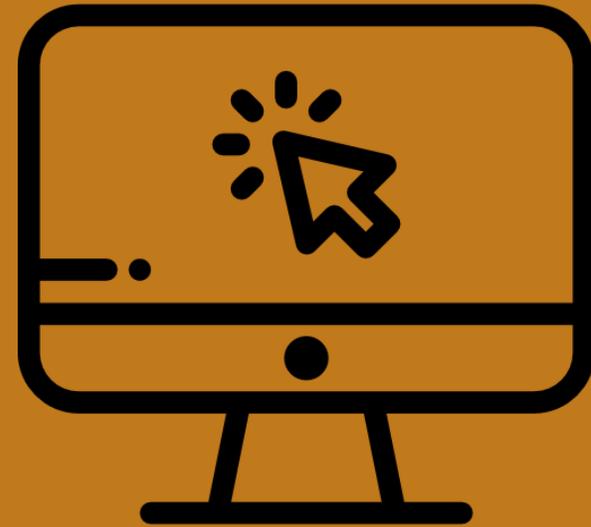
Additional Recommendations



- Ensure permitting processes (inspection, plan review, requirements, procedures) are relatively uniform across county; track & note all electrification data & error trends w/in processes. (SVCE)
- Pre-application meetings are strongly encouraged for large projects that might trigger additional review.(1)
- "In the City of Sacramento, applicants are told up front to design projects to avoid impacts to heritage trees & bio-swales to avoid complications in the review process."(2)



Online Process



Overview of Findings

Survey Question #4: Is an online permit available?

- Due to COVID-19, most cities have a form of online permit available in order to ensure health safety for staff members & applicants.
- Online processes are extremely varied in nature
 - non-automated
 - i.e. permitting staff sends a PDF file through email --> filled in by applicants & sent back through email --> Staff sends secure link for credit card transactions.
 - automated & have webpage/portals for permit apps



Recommendations

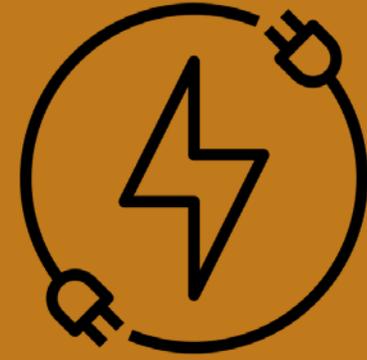


- Accommodating respective jurisdictions needs, create a comprehensive web-based system that supports all steps in permitting processes: (SVCE)

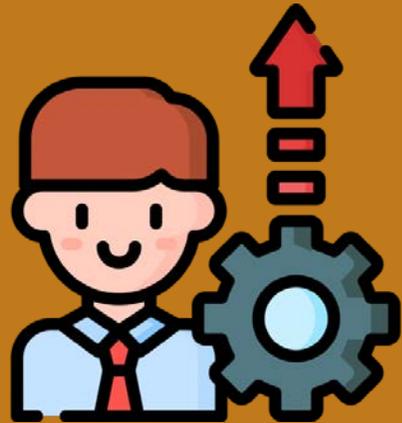
- from application --> submittal
- plan review
- final inspection coordination, etc.



- "Online process found to be more complex in different cities, w' queuing at each step and be more difficult than over-the-counter in some cases."(Gaillard)
- Online secure system used in a trial run w/ a few jurisdictions that have similar procedures, to test efficiencies & bugs.



Electric Panel Upgrades



Overview of Findings

Question #6: How would permit requirements, cost, & wait times change if someone needed an electric panel upgrade to accommodate the water heater? What additional documents are required, how much do they cost, & how much more time would the process take?

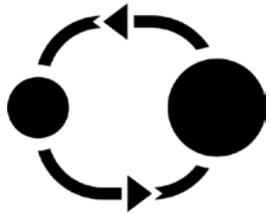
- 1) Majority require licensed electrician / electric contractor
- 2) Most require additional electrical permit application w/ upgrade, despite if applicant already has one for HPWH, additional permit app fees apply
 - Additional fees range from \$50-600 for additional permit processing, including: final inspection & plan review
 - According to data from Portola Valley, East Palo Alto & Foster City:
 - "Wait times may change, because staff may need extra time to process new addition or because of difficulty coordinating PG&E inspection w/ respective jurisdiction on same day for upgrade"



Overview of Findings



Question #6: How would permit requirements, cost, & wait times change if someone needed an electric panel upgrade to accommodate the water heater? What additional documents are required, how much do they cost, & how much more time would the process take?



- Otherwise, panel upgrade & HPWH permits are processed simultaneously
- Most common documents required additionally include:
 - full site plans
 - load calculations
 - updated project valuation.
- Upgrade requirements change depending on size of the new electrical panel

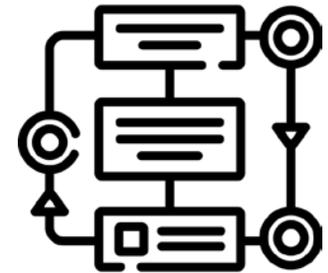




Recommendations

“ Create a document / standardized processes for PG&E when dealing w/ electrification construction projects, I.e. when upgrading to an electric water heater – detail standard process for PG&E work requirements for that electrification scenario.”

-Joe McCluskey – Green Building/Recycling Specialist, City of Burlingame

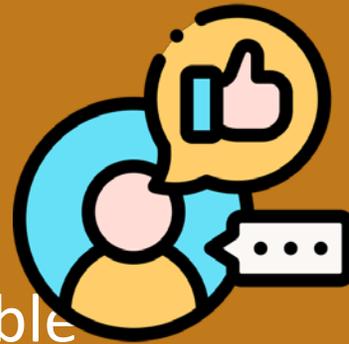


Conclusion





In conclusion, there are here are numerous recommendations that can be made to improve and simplify the various Heat Pump Water Heater permit processes throughout the county, in order to encourage residents to convert from non-renewable energy sourced to renewable, specifically electric, appliances in their homes.



Appendix

- Final Report is available [here](#)
 - SMC Building Jurisdiction Permit Survey Raw Data Spreadsheet is available [here](#)
 - SVCE Electrification Permit Best Practices Guide can be found [here](#)
 - California Governor's Office of Business and Economic Development: EV Charging Station Permitting Guidebook is accessible [here](#)
 - Joe McCluskey – Green Building/Recycling Specialist, City of Burlingame
 - Josie Gaillard, Environmental Quality Commissioner, City of Menlo Park
- ~Graphic Visual Icons used in Presentation found free [here](#)



Thank you for listening! Any Questions?

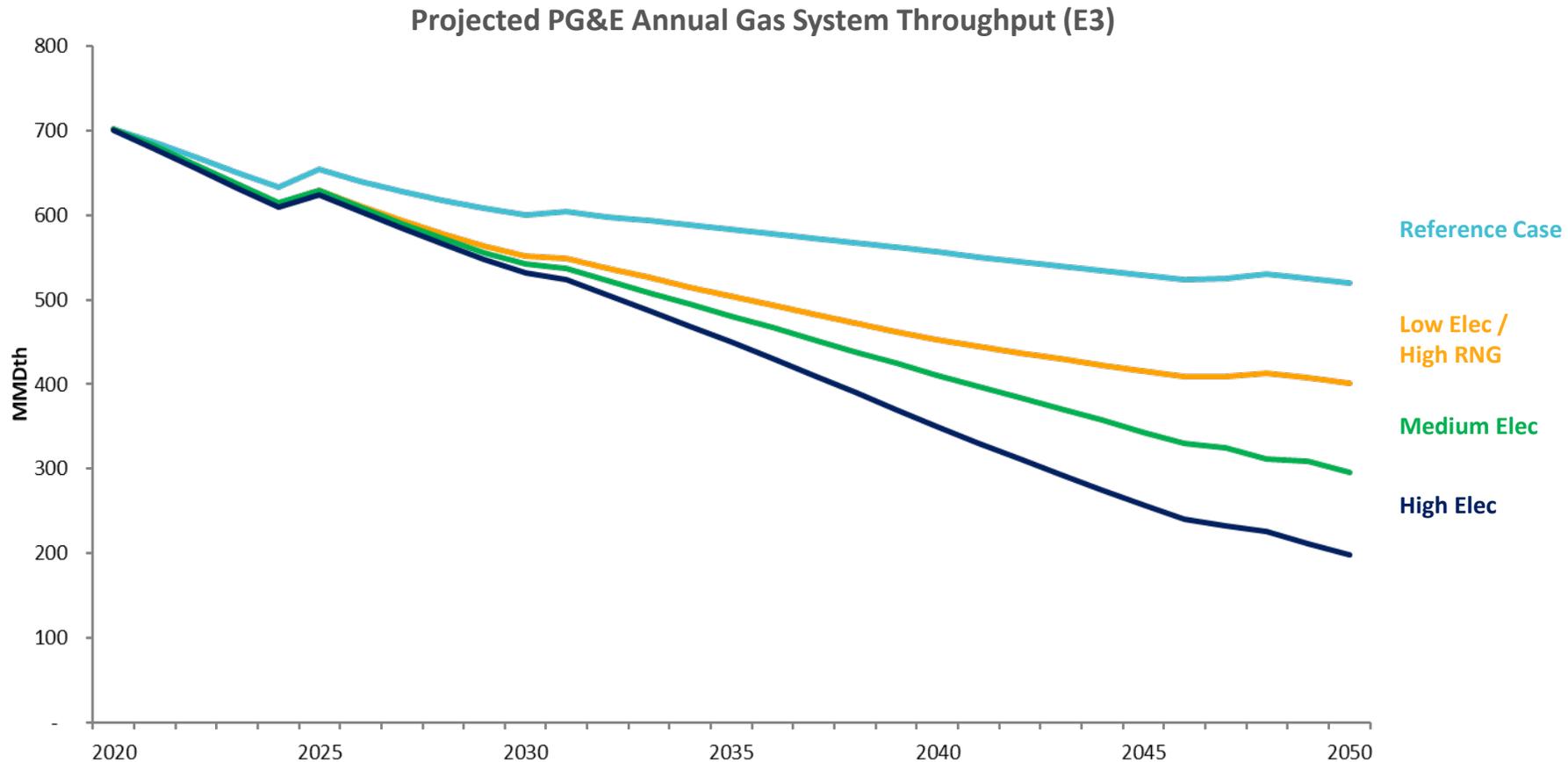
Targeted Electrification

Utility Perspective on California's Gas and Electrification Evolution



Gas demand projected to decline

External analytics suggest that PG&E gas throughput will decline between 2020 and 2050 in response to California's GHG policies

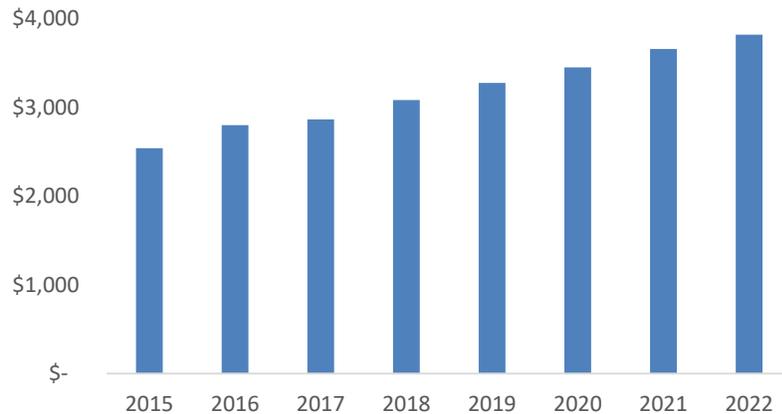


Source: Forecasts provided by E3, informed analysis contained in Gridworks ["California's Gas System in Transition"](#) whitepaper – Sep 2019

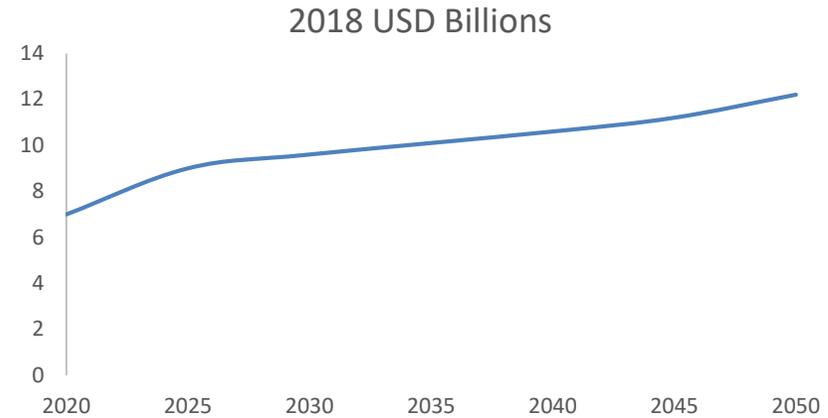
Gas system costs to serve customers projected to rise

Costs to operate the gas system have increased in recent years and are expected to grow through 2050

PG&E Gas Revenue Requirement (GRC + GT&S)

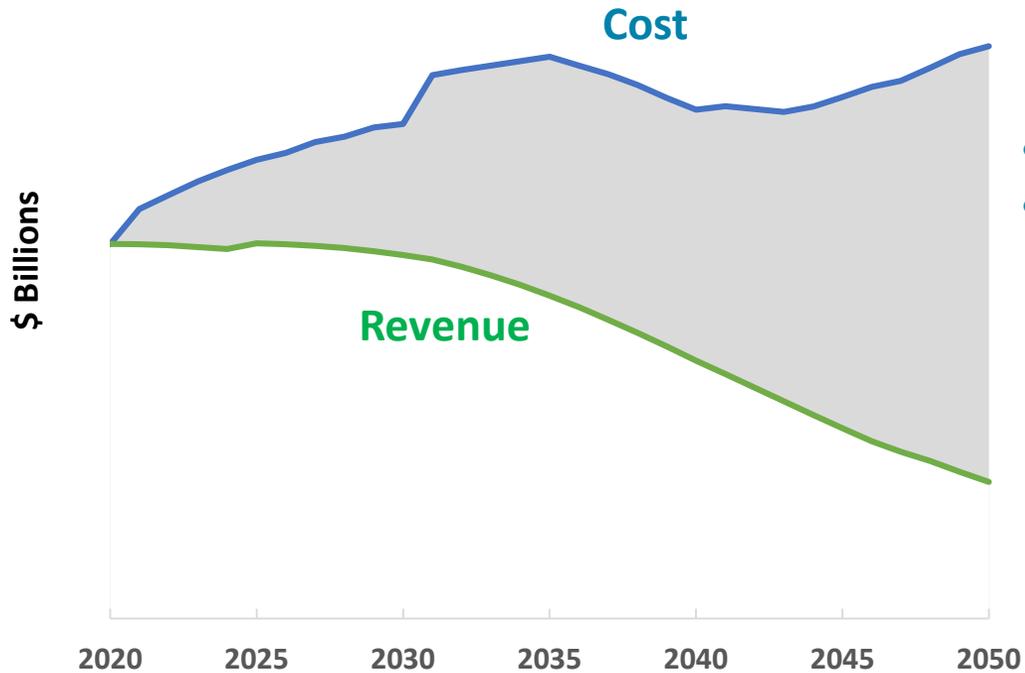


**California Gas Utilities
Forecasted Gas Revenue Requirement (E3)**



Sources: Graph 1(left) – GRC: Adopted 2014-2019; Pending 2020-2022 (Data from Dec 2019) GT&S: Adopted 2014-2022 (Data from Sep 2019)
 Graph 2 (right) – Adopted from CEC’s [“The Challenge of Retail Gas in California’s Low Carbon Future”](#) April 2020 report- (Page 45), based on analysis provided by E3

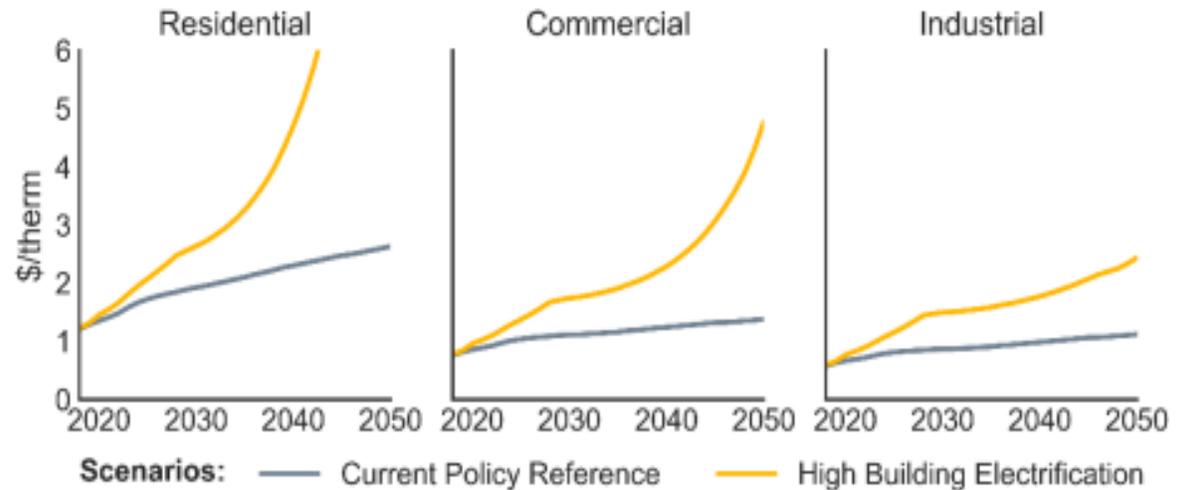
Impact of anticipated gas throughput decline



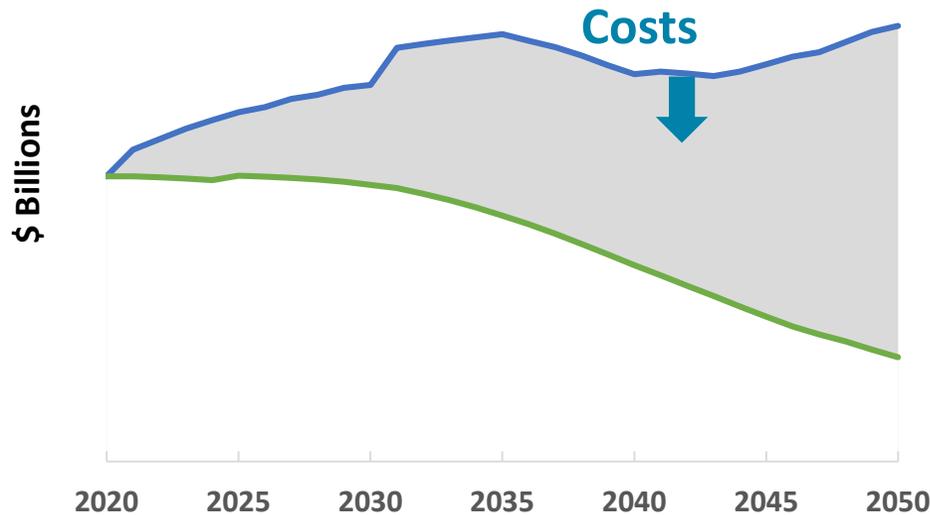
- Affordability and equity challenge
- Mitigating will require multi-prong approach

Illustrative depiction of long-term impacts of throughput decline and growing costs

Projected impact on rates without transition plan (E3)



Building electrification could be part of the solution



Gas system costs can be reduced by avoiding spend that would otherwise take place.

- All-electric new construction that avoids installation of new gas facilities
- Targeted/ “zonal” retrofits that reduce total amount to be recovered from gas customers

PG&E supports equitable, affordable electrification that contributes to achieving California policy goals.

Discretion

PG&E's gas system planning is driven by safety, risk reduction, and compliance.

Funding availability

Rate cases approve work plans, targets, and associated cost recovery for 3-4 year spans; PG&E success measured by achieving rate case objectives.

Demand certainty

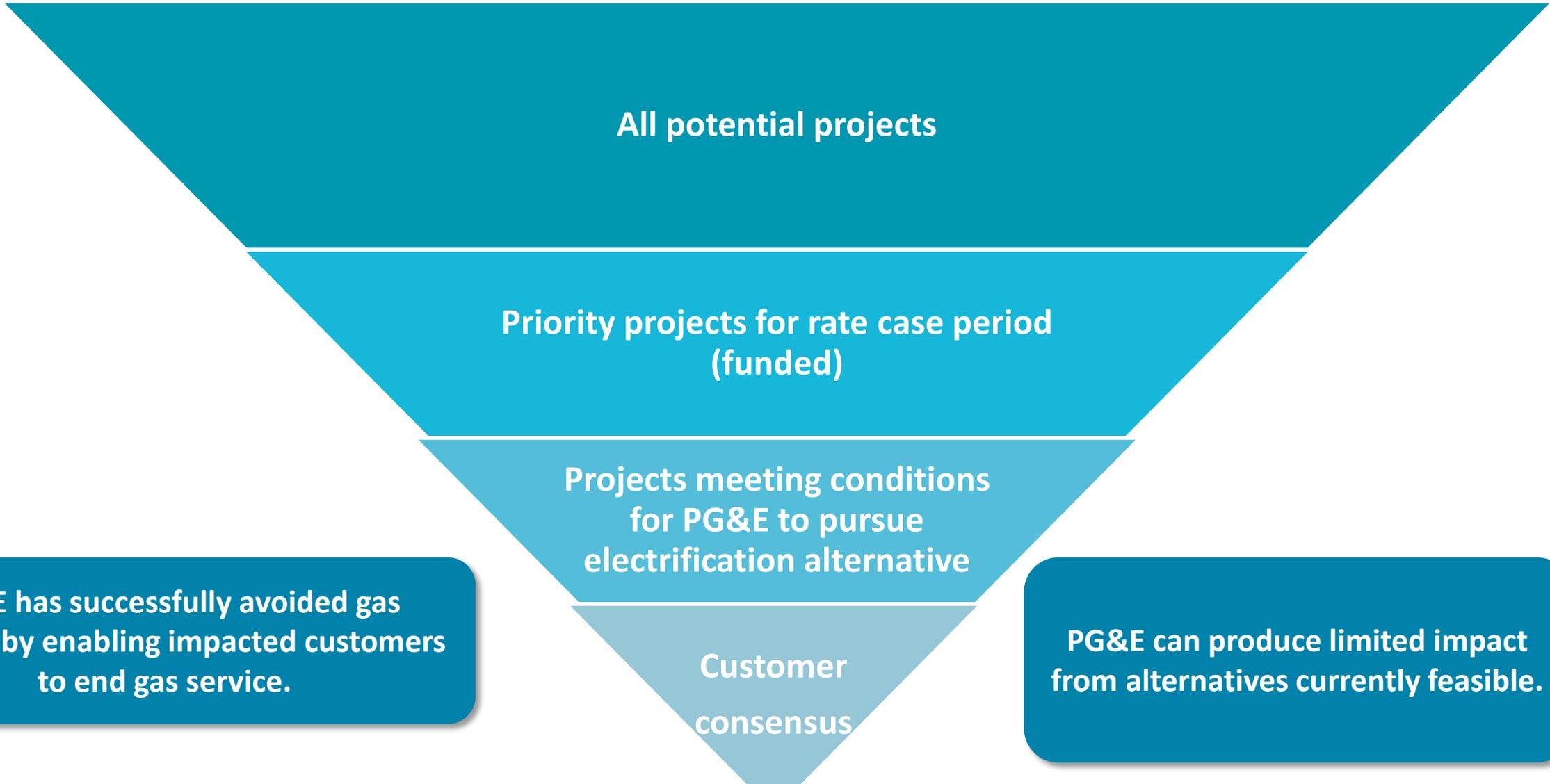
PG&E operational planning must assume existing customers will continue to require service unless/until certain of upcoming changes.

Funding flexibility

PG&E currently lacks regulatory direction, dedicated funding/ability to “repurpose” capital to conduct alternatives to traditional work types (e.g. electrification to avoid a replacement).

Project prediction

Spend on the existing system varies in predictability and scale. Frequency and scope of distribution asset work varies. Transmission work occurs on a scheduled cadence.



Consistent obstacles limit scale and replicability

PG&E has successfully avoided gas projects by deploying electrification. Electrification is not currently a viable alternative to many projects, however.

Most significant barriers:

100% of impacted customers must agree to terminate gas service.

Consensus 

Expense spend needed for electrification option must be competitive with capital or expense required for gas project.

Cost 

Little flexibility around use of rate case funds. Limited pool of expense dollars that could be used for electrification.

Funding 

- These barriers can occur at even the most promising locations
- Without addressing these barriers, targeted electrification will remain unpredictable, costly, and rare—and will play a negligible role in reducing the gap

Example: Electrification to avoid pipeline replacement

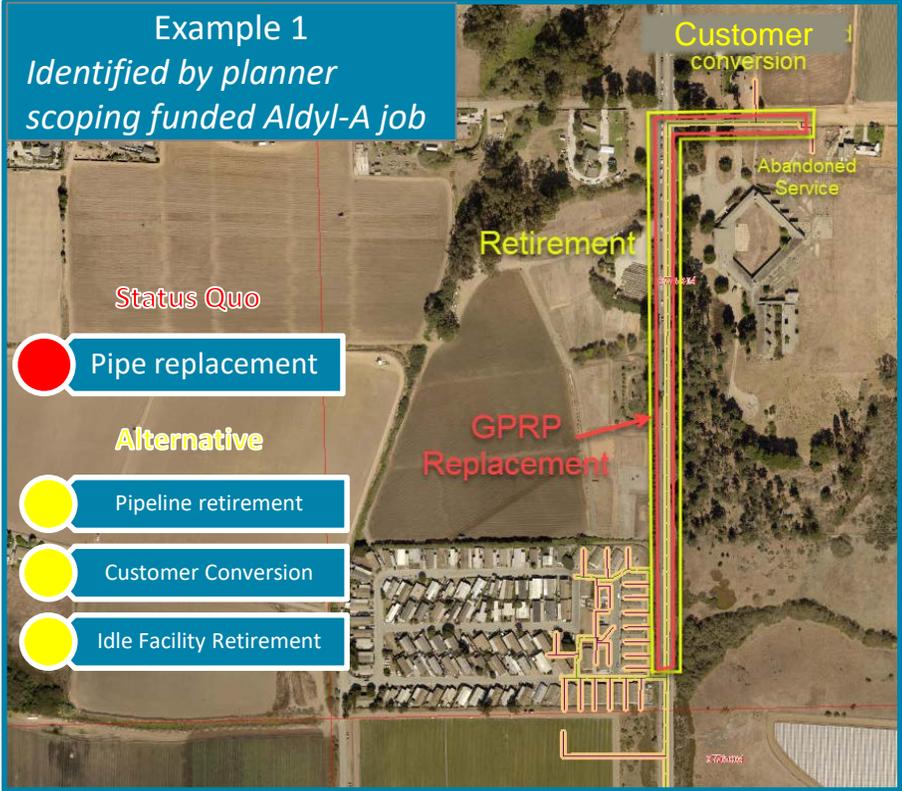
Electrification conversion costs are driven by customer density and pipeline retirement costs, which are dependent on unique geographic considerations and require a fair amount of engineering design to assess.

Example 1

Status Quo	Costs
Pipeline Replacement	\$1.2M
TOTAL	\$1.2M

Alternative	Costs
Pipeline Retirement	\$20K
Customer Conversion	\$130K
(2) Idle Service Retirement	\$6K
TOTAL	\$156K

Example 1 Identified by planner scoping funded Aldyl-A job



Example 2 Identified by searching map for Aldyl-A



Example 2

Status Quo (North Side)	Costs
Replacement	\$412K
TOTAL	\$412k

Electrification (North Side)	Costs
Service Deactivation (17)	\$46k
Customer Conversion (17)	\$595k
Retirement	\$7K
TOTAL	\$648K

PG&E looks forward to working with stakeholders to develop a transition path.



Reducing gas system spend is important for affordability and equity.



Cost, funding, and customer acceptance challenges limit viability and scalability of electrification alternatives.



Incorporating electrification into gas system plans requires certainty.



External resources will be needed to support gas system evolution.

Thank you!

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Fostering Collaboration with School Communities on Climate Action

Andra Yeghoian
Environmental Literacy & Sustainability Coordinator
Naomi Stern
Green Facilities and Operations Analyst

May 2021



SAN MATEO
COUNTY
OFFICE OF
EDUCATION



San Mateo County Environmental Literacy Initiative Overview

What - Who - Why



Background Information Context



2019-20 Data	Public	Private	Total
Districts	23 + COE	N/A	23 + COE
Schools	171	102	203
Students	93,554	18,481	112,035
Teachers	5,123	2,310	7,433

40% Unduplicated (38,543)
 23% EL & 32% FRP
 38% Hispanic/Latino, 28% White, 14.5% Asian,
 8.5% Filipino, 1.6% African American

General San Mateo County

Pop: 765,100+

15 Cities, 5 Towns, & Unincorporated

Median Household Income: \$101,272



COE Overview & Initiative Focus

County Office Functions

Support and Monitor Local Education Agencies

Instruct Special Populations Who Need Unique Support

Offer Instructional and Technical Support

Develop the Education Workforce

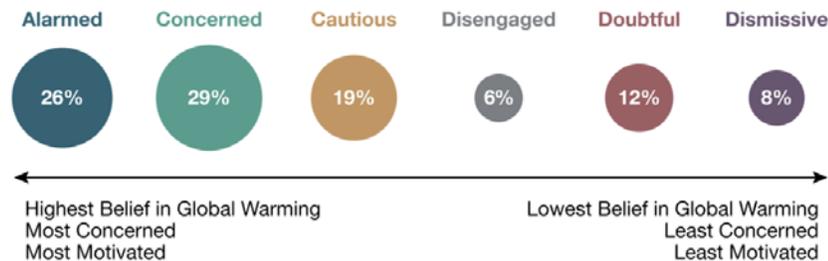
Lead High-Impact County-Wide Initiatives

SMCOE Environmental Literacy & Sustainability Initiative (ELSI) *launched 2017*

Providing "backbone support" to San Mateo County schools in prioritizing environmental literacy, and preparing leaders to integrate environmental sustainability and climate resilient practices across a school's campus, curriculum, community and culture.

Why do we need this work in schools?

- **Public Sector:** Global to local commitments for the environment and climate action
- **Other Sectors and Cultural Institutions:** Business and Industry, Higher Education, Faith Based Communities are all prioritizing climate action
- **Public Opinion has shifted**



December 2020 (n=1,036)



GLOBAL: *Decade of Action has established the environment and climate action as a top priority*



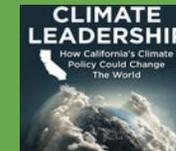
NATIONAL: *Top Priority of the Biden Administration's Build Back Better Efforts*



President Biden's climate team



CALIFORNIA: *Mandates and expectations targeting human impact and climate action*



SAN MATEO COUNTY/CITIES:
*Climate Action Plans
Climate Emergency*



K-12 Schools

Why do we need this work in schools?

High Heat

Least amount of Air Conditioners
Per Capita in the State

Drought

Folsom Lake - January 16, 2011

Habitat Loss

Wildfires

Fires Contribute to the Most
School Closure Days in CA

Extreme Precipitation

Schools Experiencing Flooding

Biodiversity

Air Quality

Canceled Activities and
Adjustments to Routines

Sea level rise

34 Schools Vulnerable this Decade

Ocean impacts

Our districts and schools are already dealing with the impacts of climate change - this will increase in frequency and intensity throughout this decade.

Framework and Goals

4Cs Whole School Sustainability and Climate Resiliency Integration Framework

**Adapted from Sustainable Schools Project & Plymouth University: Andra Yeghoian (ayeghoian@smcoe.org) - 2013*

 CAMPUS	 CURRICULUM	 COMMUNITY & CULTURE
<p><i>Facilities and operations that model sustainable and resilient practices, minimize disruptions for learning and serve as a lab for learning.</i></p>	<p><i>Curriculum that integrates Environmental and Sustainability Education (ESE) and Climate Literacy, as well as solutionary principles and practices.</i></p>	<p><i>Evidence within the “talk” and the “walk” of the school community for prioritizing sustainability and resiliency. And strategic partnerships with community based organizations.</i></p>

STAKEHOLDERS



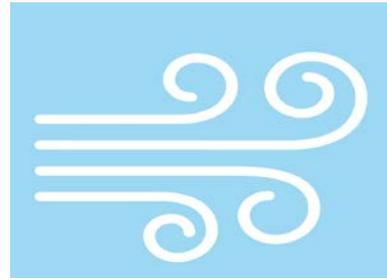
- Strategic Goal: Every district has a baseline assessment, and developed and begun implementing a strategic plan for sustainable and climate resilient efforts
- Strategic Goal: Every student graduates environmentally literate

WHAT: FOCUS AREAS

**Focus Areas
Provide Entry
Points for
Action**



One Planet Living



Air Quality



Energy



Transportation



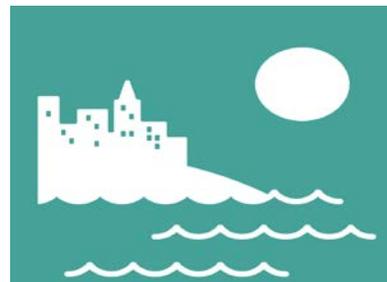
Watersheds



Food



Green Building



Marine Ecosystems
and Shoreline



Land Ecosystems
and Grounds



Waste &
Consumption

Theory of Action

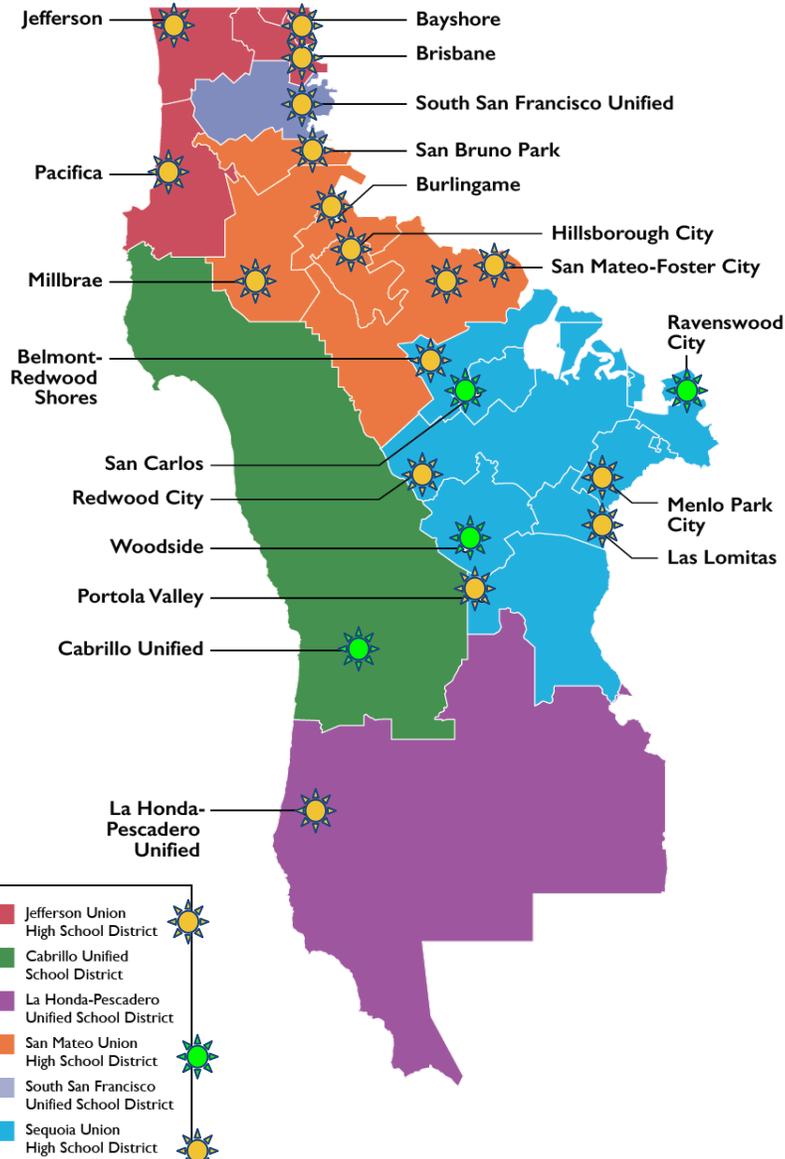
Capacity Building Programs	Developing knowledge, skills, and values for environmental literacy and sustainability
Networking Stakeholders and Elevating Change Makers	Scale-up change by fostering collaboration, sharing best practices, and strengthening communication channels AND Catalyze innovation with leading edge exemplars
Customized Technical Assistance	<ul style="list-style-type: none">- Support with green facilities and operations, as well as climate ready adaptations- Professional development and training for environmental and climate literacy in curriculum- Coaching and training for community and culture integration of environmental efforts

Access to Resources

Website: tinyurl.com/SMCOE-ELSI

Where Are We Now?

San Mateo County Schools: 2020-21



Assessment on Stages of Integrating Sustainability and Climate Resiliency*

STAKEHOLDER BUY-IN	ASSESSMENT AND STRATEGIC PLAN	IMPLEMENTATION	CONTINUOUS IMPROVEMENT
Buy-in is evident from stakeholders at all levels: students, teachers, site administrators, district administrators, and community partners.	The district has contracted with SMCOE to complete a few baseline assessments (i.e. outdoor classrooms and waste), and has worked with other outside agencies on other topics (i.e. energy, and water)	A few focus areas are already into the implementation stage: outdoor learning, zero waste, gardens, etc.	Some of the outdoor learning and gardens are in the continuous improvement stage.

*Learn more about the stages of integration in the Change Management Process Theories [here](#)

III. 4Cs Whole School Integration Summaries and Details

This section provides a summary of how the district has engaged in each aspect of the [whole school sustainability framework](#) - campus (facilities and operations), curriculum and instruction, and overall community engagement and culture. The section also provides highlights of progress for each of the Sustainable and Climate Resilient Schools Focus Areas.

4Cs Whole School Sustainability Integration - General Summary

CAMPUS	Example USD has made a moderate investment in sustainable buildings, and has plans for upcoming projects to include green building practices. Example USD also launched a district wide zero waste initiative in 2020-21 that is their launchpad for other sustainability initiatives.
CURRICULUM	There have been concentrated efforts for environmental literacy (ex: Environmental Science at the High School, teachers participating in SMCOE environmental literacy fellowship). However, the approach has been inconsistent and largely dependent on the teacher's interests.
COMMUNITY & CULTURE	Leadership for sustainability work is happening in all stakeholder groups: teachers, students, and site and district administrators. Furthermore, the district has launched a sustainability committee.

The initiative has become a movement that has spread across San Mateo County School Communities with a number of districts emerging as local and state-wide leaders.

School Stakeholders Leading the way

Board of Education/Trustees

Superintendent

**Human
Resources**

**Business and
Facilities &
Operations**

**Ed Services
(Curriculum &
Instruction)**

**Student
Services**

Site Level Administrators

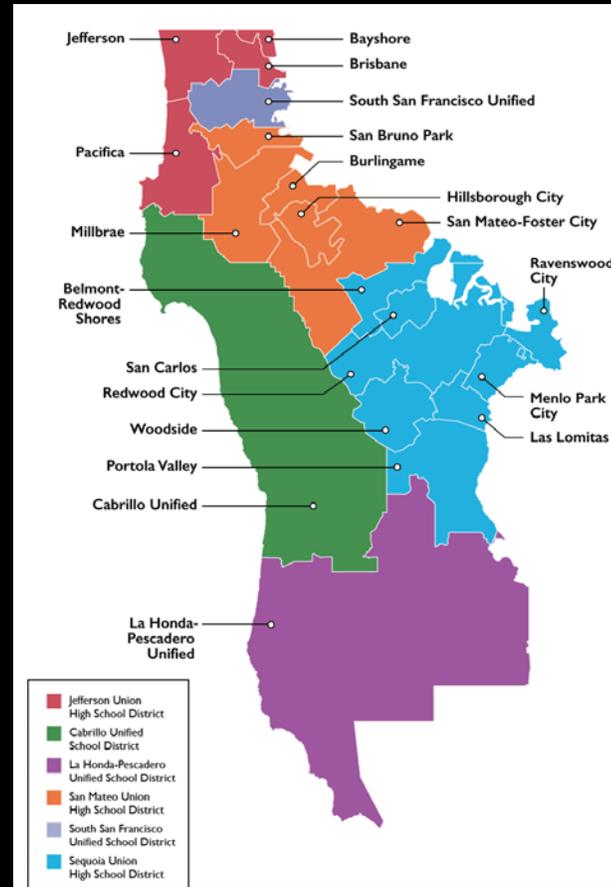
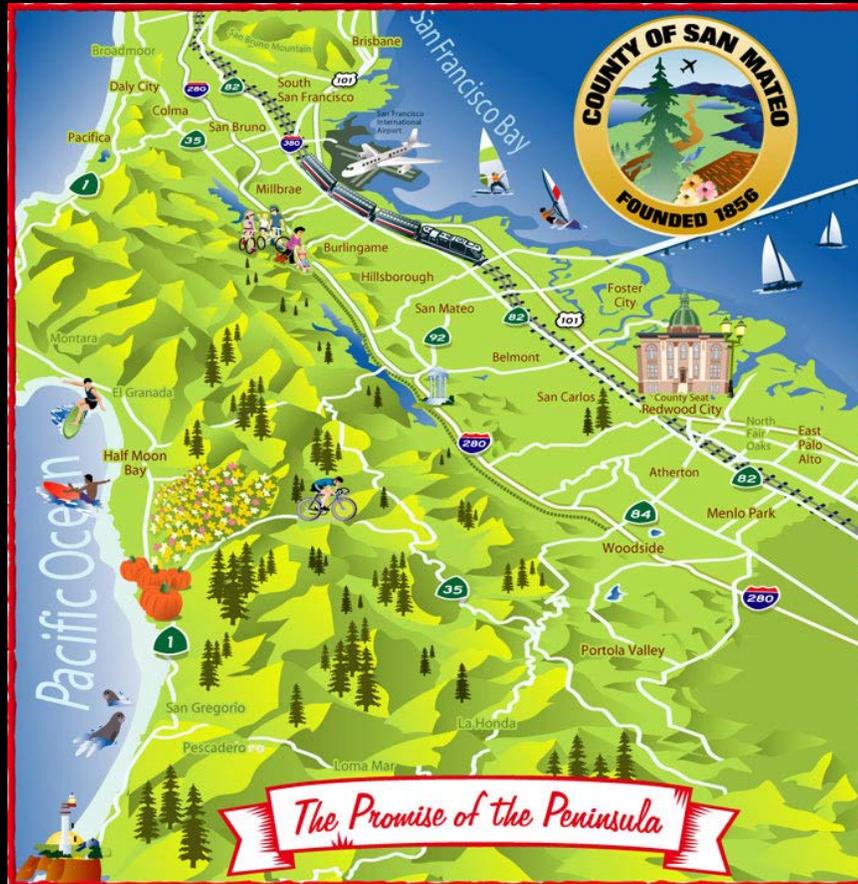
**Faculty and
Staff**

Students

Parents

**Community
Partners**

Schools & City/County CAP Goals



Overview to SMCOE CAP Project

GOALS

- Support school districts in understanding CAP's
- Quickly compare and track CAPs and identify common patterns and trends
- Find opportunities for collaboration between jurisdictions and schools
- Crosswalk of CAP focus areas with ELSI Initiative Focus Areas



BACKGROUND ON EMISSIONS REDUCTIONS AND CLIMATE ACTION PLANS (CAP)

City and county governments use a number of different plans that outline how they will achieve long-term goals. In California, cities and counties are required by State law to have a [General Plan](#), which is a broad, long-range policy document that guides future development, conservation, and land-use. In order to achieve sustainability goals set in a General Plan, or mandated by law, a jurisdiction may adopt additional plans such as a Sustainability Plan, Green Infrastructure Plan, Bicycle and Pedestrian Master Plan, Climate Adaptation Plan, and/or Climate Action Plan.

A *climate action plan (CAP)* is a detailed and strategic framework for tracking and reducing greenhouse gas (GHG) emissions to avoid climatic impacts anticipated if no action is taken. In California, these plans are connected to GHG emissions goals outlined in California state legislation, such as [Assembly Bill \(AB\) 32](#) (2006), and [Senate Bill \(SB\) 32](#) (2016). Municipalities design and utilize climate action plans as customized roadmaps for making informed decisions and understanding where and how to achieve the largest and most cost-effective emissions reductions that are in alignment with other municipal goals. Typically, CAPs include:

1. An inventory of existing GHG emissions
2. Reduction goals or targets
3. Implementation strategy, including a list of analyzed and prioritized reduction actions (or measures)]

Ideally, a climate action plan also identifies required resources and funding mechanisms.

SAN MATEO COUNTY AND CITY CLIMATE ACTION PLANS (CAP)

California and the Bay Area jurisdictions are leaders in climate pledges and plans to reduce GHG emissions. San Mateo County and its municipal jurisdictions in particular are leaders for these efforts due to their aggressive targets ([S.F. Chronicle, 2020](#)). The table below provides an overview of the plans in this region. For a detailed and comparative analysis, visit: [San Mateo County Jurisdiction Sustainability and Climate Action Plans Analysis](#).

Agency	Climate Action Plan Description
 The County of San Mateo	The County of San Mateo (SMC) has two Climate Action Plans (see full history here): 1) a Government Operations Climate Action Plan (GOCAP) - 2021 and 2) a Community Climate Action Plan (CCAP) (to be adopted later in 2021 to update the 2013 Energy Efficiency Climate Action Plan). The GOCAP focuses on reducing emissions from municipal buildings and operations, while the CCAP includes a GHG inventory of all emissions that result from unincorporated areas and a list of measures to reduce those emissions. The County's Office of Sustainability is responsible for the update and implementation of both Plans, ensuring that the County meets its GHG emissions reduction commitments.

CAP Analysis Resource

Navigation Tips

- Front page has side to side comparison and key info for school connections
- Each city has their own tab with specific details on their CAP

Jurisdiction	PROFILE			SCHOOLS				Year Ori Adop
	Population (2019)	Square Miles (land only)	Youth Advisory Committee (Y/N & Link)	School Districts within Boundaries	School District Area (Square Miles)	School District Sustainability Goal? Y/N	Climate Action Plan Link	
Atherton	7,168	5	No	1) Las Lomas ESD 2) Menlo Park City ESD 3) Redwood City ESD 4) Sequoia Union HSD	Unknown	Sequoia Union HSD: Y	Atherton CAP	2016
Belmont	27,097	4.6	Trying to start one? Application	1) Belmont Redwood Shores ESD 2) Sequoia Union HSD	Unknown	Belmont Redwood Shores ESD: N Sequoia Union HSD: Y	Belmont CAP	2017
Brisbane	4,697	20	Yes	1) Brisbane ESD 2) Jefferson Union HSD	Unknown	Unknown	Brisbane CAP	2015
Burlingame	30,576	6	Yes	1) Burlingame ESD 2) San Mateo Union HSD	Unknown	SMUHSD: Y	Burlingame CAP	2009
Colma	1,302	1.9	No	1) Jefferson ESD 2) Jefferson Union HSD	Unknown	Unknown	Colma CAP	2013
County of San Mateo	367,400	455	Yes	All Public School Districts	Unknown		SMC Governmental Geographic CAP	2010

[SMC Jurisdiction CAP Analysis](#)

CAP Analysis Findings

- Understanding of city alignment to state goals
- Schedule for updates
- Understand combination of measures with GHG emissions reduction targets and measures with supportive benefits.

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County of San							SMC Governmental	

- Plans consistently address the focus areas: Energy, Green Buildings, Waste, Water, Transportation
- Plans do not consistently address: Marine Ecosystems, Food, Air Quality, Land Ecosystems
- Schools are included in some of the plans
- Connection to waste and transportation are clearly identified - this is will be critical for school engagement



Next Steps: Opportunities



BACKGROUND ON EMISSIONS REDUCTIONS AND CLIMATE ACTION PLANS (CAP)

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- Get more explicit about school engagement in revised plans
- Work towards shared goals and support school districts to establish Strategic Plans for Sustainable and Climate Resilient Schools that align to CAP goals
- Combine resources and projects during technical assistance
- Schools can become hubs of sustainability and climate resiliency

Next Steps: Challenges



BACKGROUND ON EMISSIONS REDUCTIONS AND CLIMATE ACTION PLANS (CAP)

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- Enforcement for CAP goals relies on state intervention to LEAs
- School districts overlap with multiple jurisdictions
- School districts currently do not have a clear sense of responsibility (need to get a better sense of % of territory)
- Schools lack technical expertise and staff capacity for this work and turnover is challenging if capacity does get built

Question and Answer



What questions do you have for us?

Questions that SMCOE Would like to Explore:

- What are the best ways for district and their schools to collaborate with your city?
- How might the CAP analysis be used as a collaborative shared document with SMCOOS and RICAPS Partners?

THANK YOU!

Andra Yeghoian

ayeghoian@smcoe.org

tinyurl.com/SMCOE-EnvLit

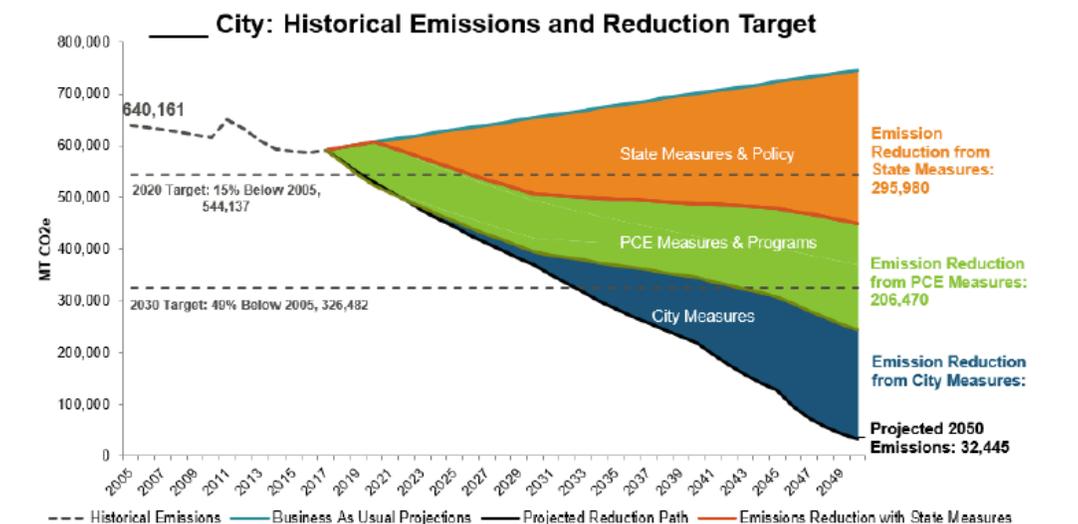
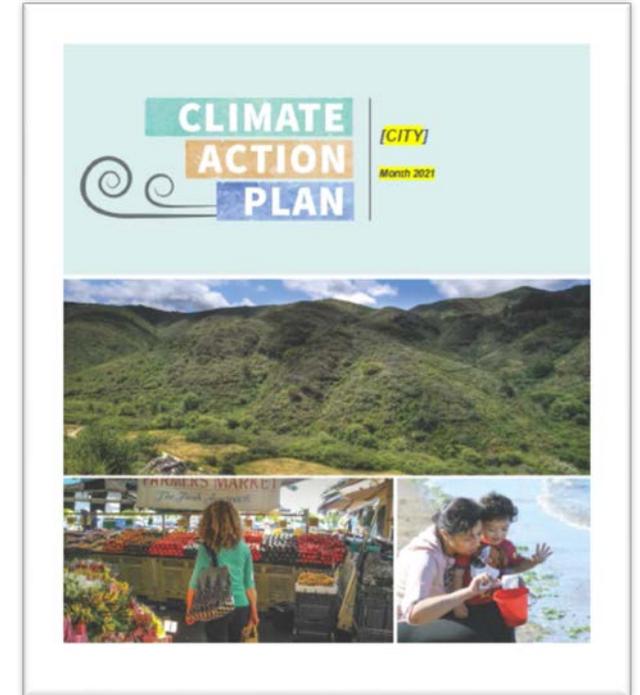




FINAL INFORMATION

Updated RICAPS CAP Template

- Changed references to “50 percent reduction in emissions” to “at least 50 percent”
- Incorporated references to gasoline consumption and added gasoline sales graph
- Gender neutral icons
- Better described PCE’s contribution to GHG reductions



<https://smcenergywatch.org/contact/resources/>

Coming Soon – Updated RICAPS Tools

- Menu of Measures and Forecasting Tool
- Electrification updates
 - Incorporating **burnout** and **panel upgrade** measures
 - Include reduction impact of electrification of **commercial spaces** including hotel, restaurant, retail, and greenhouses, as well as office spaces

RICAPS City Check-In Meetings

With Susan, Denise, and Alexandria



- Climate action plan implementation priorities for 2021
- "Plug-and-play" programs to promote to the community
- Tapping in to coordinated support for municipal facilities

Fill in this [Doodle poll](#) to schedule your meeting now!

Register for BayREN Forum

Building Permits and Clean Technology: Innovations and Challenges



Wednesday, June 9, 2021
9:00AM - 12:00PM
via Zoom

bayrencodes.org/events



RICAPS

Regionally Integrated Climate Action Planning Suite

Next Webinar – Tuesday, June 22 1:30-3pm

Thank you! Let's stay in touch...

John Allan, jallan@smcgov.org (inventories, stormwater)

Alexandria Gallizioli, agallizioli@smcgov.org (municipal, special district, and school facilities; small businesses)

Denise Lin, dlin@smcgov.org (residential, reach codes, trainings, EVs)

Susan Wright, swright@smcgov.org (climate action planning, collaboration on CAP implementation, electrification strategy)

