Campus Sustainability Committee

March 5, 2021 - Spring Semester

Introductions

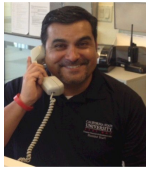
Ex-Officio Members

Brenda Amaral
Manager Parking & Alternative Transportation

Lori Bachand
Associate VP University Communication

Kimberly Baker-Flowers
University Diversity Officer
Designee: Jessika Murphy

Jillian Buckholz
Director of Sustainability



Martin Castillo
Associate VP Campus Life

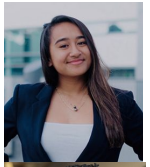
Brian Cook
Associate VP University Extension

Debbie Chaw
Vice President Administration & Finance

Karina Garbesi
Professor

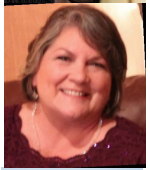
Ryan Heryford
Professor

Edward Inch
Provost



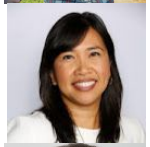
Kea Kaholoaa
ASI Director Sustainability

Winnie Kwofie
Associate VP Facilities Dev & Ops



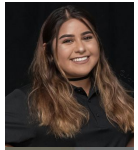
Julie Mielke
Admin Analyst

Patty Oikawa
Professor

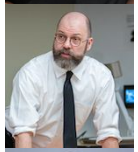


Maureen Pasag
Associate VP Financial Services
Designee: Kim Napoli

Erik Pearson
Environmental Services Manager City of Hayward



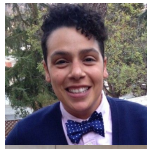
Euridice Sanchez-Martinez
ASI President



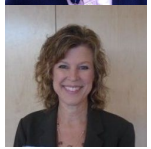
Jason Smith
Chair of Health Sciences, Professor

Jung Sook You
Professor

Designees



Jessika Murphy
DISC Coordinator
Designee for Kim Baker-Flowers



Kim Napoli
University Controller
Designee for Maureen Pasag

Agenda

- Public Comment Period
- Approval/Additions to the Agenda
- Update/Information Items:
  - Chair Update (Jillian Buckholz)
  - ASI (Kea Kaholoa'a)
  - Zero Waste Subcommittee (Maricela Garcia-Flores)
  - Academic Senate Committee on Sustainability (Ryan Heryford)
  - CAP-IT Task Force (Karina Garbesi)
  - Alternative Transportation Subcommittee (Brenda Amaral)
  - Solar IV / Microgrid study (Winnie Kwofie)
- Business
  - Telework Policy Recommendation (Jillian Buckholz)
- Discussion
  - Decarbonization (Karina Garbesi)
- Adjournment
  - Next Meeting: Friday, May 7, 2021

Chair Update

- Sustainability Minor anticipated for Fall 2021, info videos in the works!
- Carbon Commitment
  - Annual GHG inventory and progress report due May 1
  - GHG stakeholders meeting
  - Transportation survey analysis reported to ATC March 10
- STARS progress update
  - AC7: Incentives for Developing Courses / AC8: Campus as a Living Lab
  - EN2: Student Orientation / EN4: Outreach Campaign / EN15: Trademark Licensing
  - OP9: Landscape Management / OP10: Biodiversity
  - PA10: Investment Disclosure
- CSUEB Policy Library
  - Air Travel Offset Policy
  - 100% Recycled Paper Content Policy
  - CSC Policies & Procedures

Important Dates!

- March 16, 2021: Among Us with SustainEastBay Club, UHour
- March 21, 2021 Deadline: Student Sustainability Ambassador program is hiring, apply via SustainEastBay BaySync
- March 25 - 26, 2021: This Way to Sustainability Conference, FREE for students!
  - Sarah Smith (Criminal Justice) and Nikita Bangera (Psychology): “Marketing to save the world: Psychology and Sustainable Marketing”
  - Adrien van Dyke (Health Sciences): “Campus Clean Ups in a Virtual Age”
  - Jillian Buckholz (Sustainability) and Kim Napoli (University Conroller): “Gaining Approval for a Air Travel Offset Policy at Cal State East Bay”
- April 19 - 23, 2021: Earth Week, April 19 - 23

ASI Sustainability Affairs Committee

Chair: Kea Kaholoa'a, ASI Director of Sustainability

The Sustainability Affairs Committee's purpose and duties involve the promotion of environmental awareness in the campus community, partnering with University staff and faculty as well as the Facilities and Operations Department. The committee shall work to develop student programs geared toward the advancement of sustainability on campus. Other duties of the Sustainability Affairs Committee shall be to:

- Poll students on issues of sustainability.
- Promote awareness of campus sustainability efforts through a variety of methods (i.e. social media, tabling, and campus events).
- Develop and maintain partnerships with the University to support environmental sustainability projects.
- Develop and maintain strategies and policies to increase ASI's sustainability performance and reduce the environmental impact of ASI.
- Report to the Board of Directors on matters of sustainability.

Zero Waste Subcommittee

Members:

- Robert Andrews, Director of Facilities Operations
- Jillian Buckholz, Director of Sustainability
- Brian Cravanas, Senior Custodial Coordinator
- Maricela Garcia-Flores, Energy & Utilities Coordinator
- Carlos Jaramillo, Custodial Services Supervisor
- Manuel Ochoa, Grounds Supervisor
- Terri Ramirez, Director of Business Operations

Duties:

- Meet State and CSU zero waste goals
- Reduce waste and waste contamination at Cal State East Bay.

Academic Senate Committee on Sustainability

Chair: Dr. Ryan Heryford, Assistant Professor, English Department

Committee on Sustainability Duties:

- Make policy recommendations to the Academic Senate regarding means to achieve the University's sustainability commitments and goals.
- Promote sustainability as a focus of curricular and co-curricular activities, consistent with the University’s sustainability commitments and goals.
- Promote opportunities for sustainability research and scholarship.
- Report to the Senate annually on the work of the Committee in carrying out the duties described in this section, including but not limited to, monitoring progress toward meeting Senate Sustainability Resolution (06-07 BEC 9) and the educational provisions in university’s Climate Action Plan.

Climate Action Plan Implementation Task Force

Co-Chair: Dr. Karina Garbesi, Director of Environmental Studies and Professor in Anthropology, Geography, and Environmental Studies (AGES) Department

Duties of the Task Force:

- Implement the action steps in the Cal State East Bay Climate Action Plan to meet the campus' 2040 Carbon Neutrality goal.

Alternative Transportation Subcommittee

Co-Chair: Brenda Amaral, Interim Manager of Transportation & Parking Services

Purpose:

- The purpose of the Alternative Transportation Committee is to assist Cal State East Bay in identifying and prioritizing recommended opportunities to improve pedestrian, bicycling, transit and other non-single occupancy vehicle commute modes to overcome barriers to the use by members of the campus community.

Microgrid Study

Winnie Kwofie, AVP Facilities Development & Operations

Background:

Cal State East Bay is pursuing a Microgrid Study to gain a better understanding of the campus' capability to install a self-sufficient energy system that combines one of more kinds of distributed energy that produce power (e.g. solar) with energy storage (e.g. batteries).

This study is part of the process to pursue Solar IV at Cal State East Bay. Solar IV is a Master Enabling Agreement developed by the Chancellor's Office (CO) for low-cost solar energy through a Power Purchasing Agreement by vetted vendors. The opportunity to participate in Solar IV sunsets in 2022.

Business: Telework Policy Recommendation

https://docs.google.com/presentation/d/1t9LYRvZKqJpDneccKWBXI2Q3k5a_ptW8NSnYA-DuE70/edit?usp=sharing

Updates since March 1, 2021:

- Change “Contributors” to “Reviewers”
- DAC Critical Race Theory review:
  - Identities most impacted: Caregivers; Position in Hierarchy; Disability; Transportation Status; Socioeconomic Status
  - With current (2009) policy:
    - Power is with administrators and the university
    - University, MPPs, Unions, and Parking & Alternative Transportation benefit from this power
    - Non-MPPs have less power
    - Loss potential includes jobs and people
  - Major themes: Policy should be consistent for all; Concern about MPP deciding what is best for employee; Clear performance expectations; Create community-care; Include employees in scheduling conversation

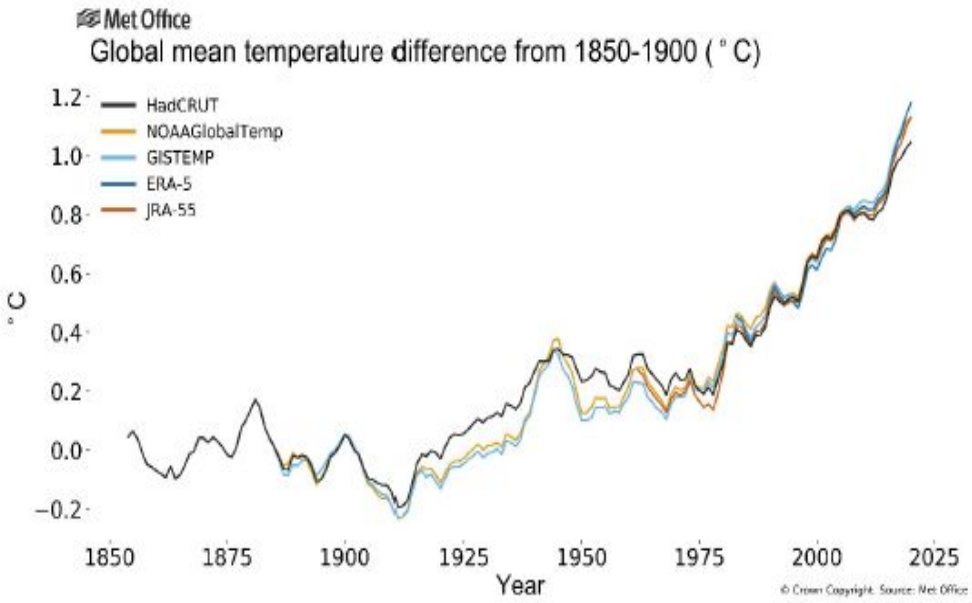
Discussion: Decarbonization

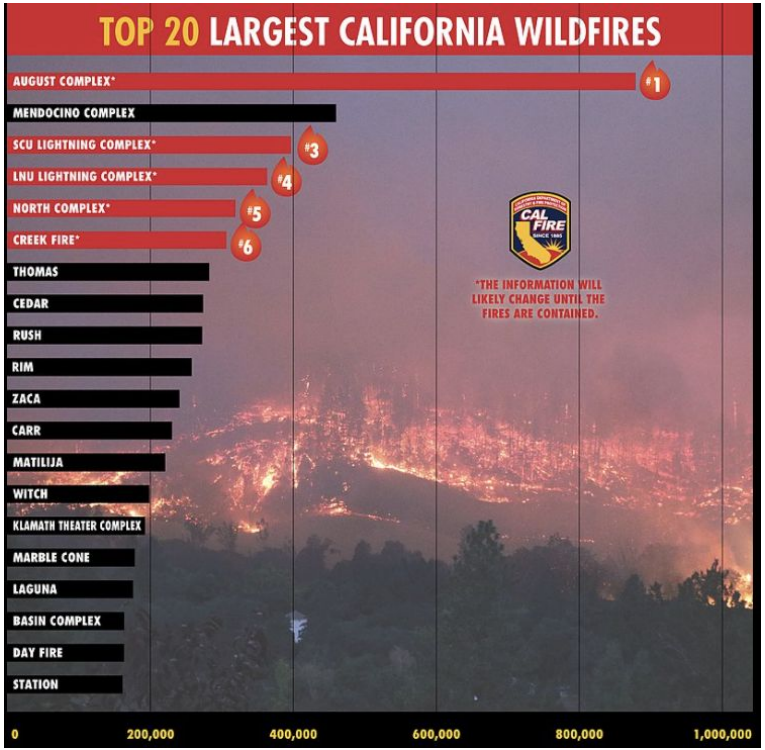
CAP
Why we are doing this?

A brief reminder

Missing the Opportunity to Save the Planet:

Temperatures continue to rise, with disastrous consequences locally and globally



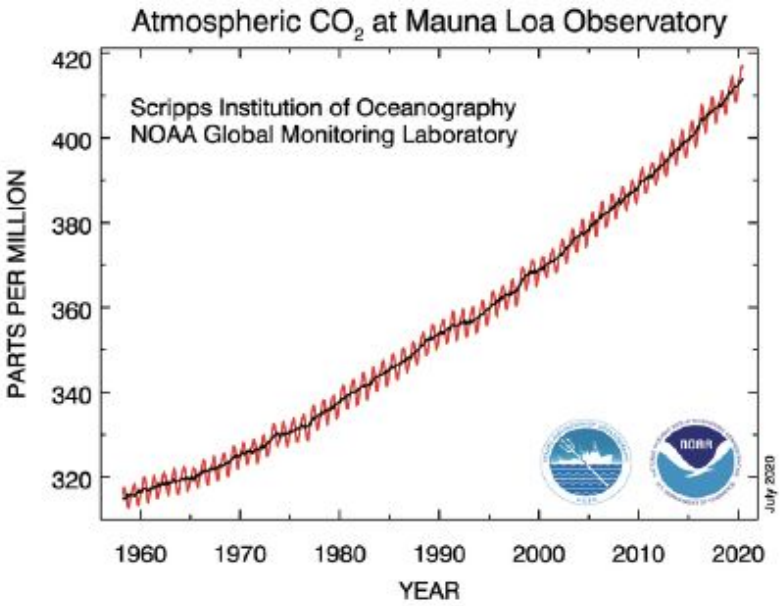


WMO, UNEP, IPCC, et al. United in Science (2020)

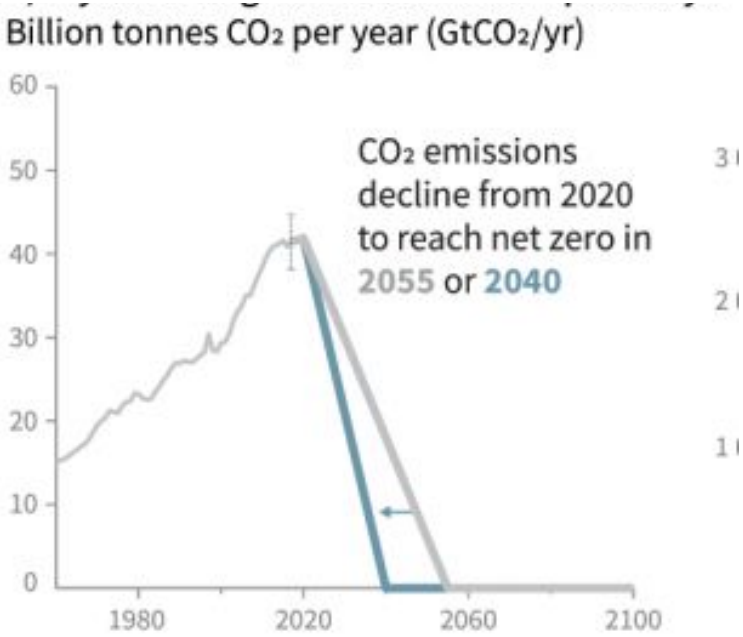
5 of the 20 largest CA fires were in 2020.

Urgent Action Needed to Avoid Exceeding the 1.5C Limit

Atmospheric CO2 concentrations continue to rise



No reductions in emissions to date



WMO, UNEP, IPCC, et al. United in Science (2020 and 2019)

Our campuses' emissions are not declining either.

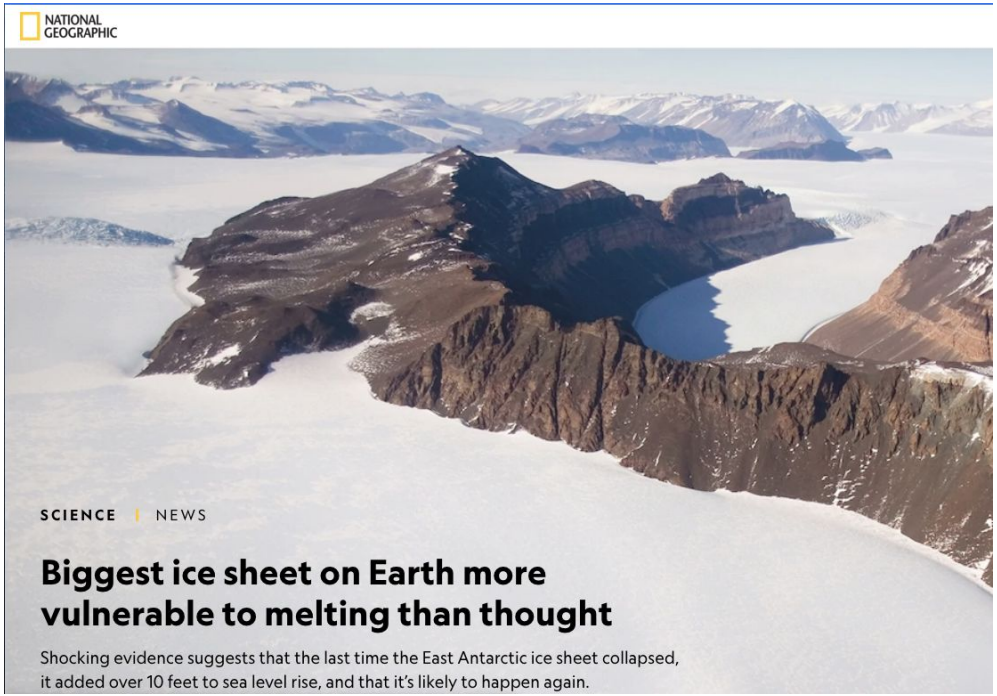
“climate impacts are hitting harder and sooner than climate assessments indicated even a decade ago” and the vulnerabilities larger

“Human-induced climate change is affecting life-sustaining systems, from the top of the mountains to the depths of the oceans”

The poor and people of color disproportionately affected, heat stress, air pollution, disasters.

With the current commitments, the emissions gap in 2030 will be “29–32 GtCO2e, roughly equivalent to the combined emissions of the six largest emitters.”

“It is still possible to bridge the Emissions Gap – but this will require urgent and concerted action by all countries and across all sectors”



WMO et al, United in Science 2019 and 2020

PNAS Proceedings of the National Academy of Sciences of the United States of America

Keyword, Author, c

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RESEARCH ARTICLE

Damage accelerates ice shelf instability and mass loss in Amundsen Sea Embayment

Stef Lhermitte, Sainan Sun, Christopher Shuman, Bert Wouters, Frank Pattyn, J…
+ See all authors and affiliations

PNAS October 6, 2020 117 (40) 24735-24741; first published September 14, 2020;
https://doi.org/10.1073/pnas.1912890117

Edited by Chad Greene, NASA Jet Propulsion Laboratory, Pasadena, CA, and accepted by Editorial Board Member Jean Jouzel July 29, 2020 (received for review July 29, 2019)

Article | Figures & SI | Info & Metrics | PDF

Significance

Pine Island Glacier and Thwaites Glacier in the Amundsen Sea Embayment are among the fastest changing outlet glaciers in Antarctica. Yet, projecting the future of these glaciers remains a major uncertainty for sea level rise. Here we use satellite imagery to show the

the 279th that Senator Sheldon Whitehouse (D-RI) carried his "Time to Wake Up" poster to the Senate floor

Drollet, Bulletin of the Atomic Scientists, March 3, 2021.

Decarbonization Subcommittee of CAP-IT
Progress Report

To CSC, March 5, 2021

From K. Garbesi, Chair
Lorlyn Perry, Maricela Garcia-flores, and Patty Oikawa

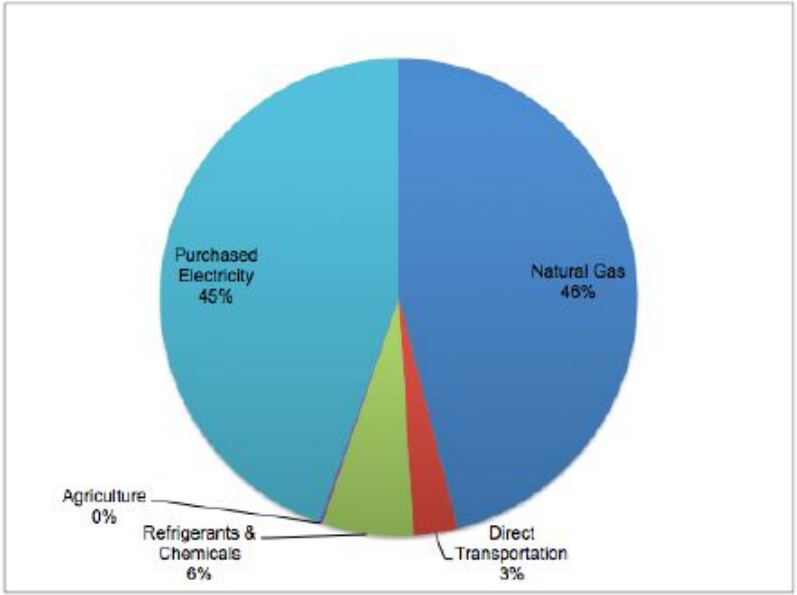
Charge from CAP-IT: Plan our Decarbonization Strategy

Decarbonization?

- Eliminate direct emissions from on-campus fossil-fuel use
- mainly **natural gas use** for space and water heating

Why focus on N-Gas

- Solar IV PV to eliminate GHG from electricity
- N-gas the other big piece, but harder!



GHG emissions that the university has relatively direct control over (excludes commuting)

CAP Commitments: Foundation for the Work (blue eliminate N-gas, green facilitate)

- CAP ACTION ITEMS
  - "**No new natural-gas consuming equipment for space and water heating starting in 2022**" (BLDG2)
  - "Replace space heating, water heating, and cooking equipment with ultra efficient fossil-fuel-free technologies" (BLDG3)
  - maximize energy efficiency (ENG1)
  - Replace utility power with on-site PV (on-campus PV production) (ENG2 - ENG 4)
  - Research emerging energy technologies for carbon savings (PV-source heat pump and thermal storage) (ENG8)
- **Replace natural-gas fueled space and water heating with heat pump technology** (Table III.4 Scope 1)

Why focus on heat pumps?

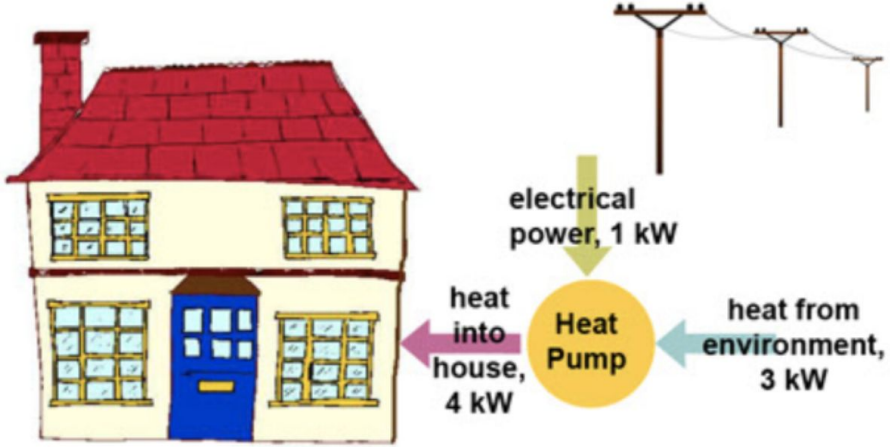


Figure VI.2. Heat pumps deliver more heat energy to the building than they use. Source: http://www.powerknot.com/2011/03/01/cops-eers-and-seers/

Decarbonizing requires stop burning fossil fuels.

Need electric alternative.

Heat pumps run off electricity, and...

Typical heat pumps reduce heating energy use by ¾ (huge energy savings!)

Can supply ALL of our energy needs, using now more electricity than we now use!

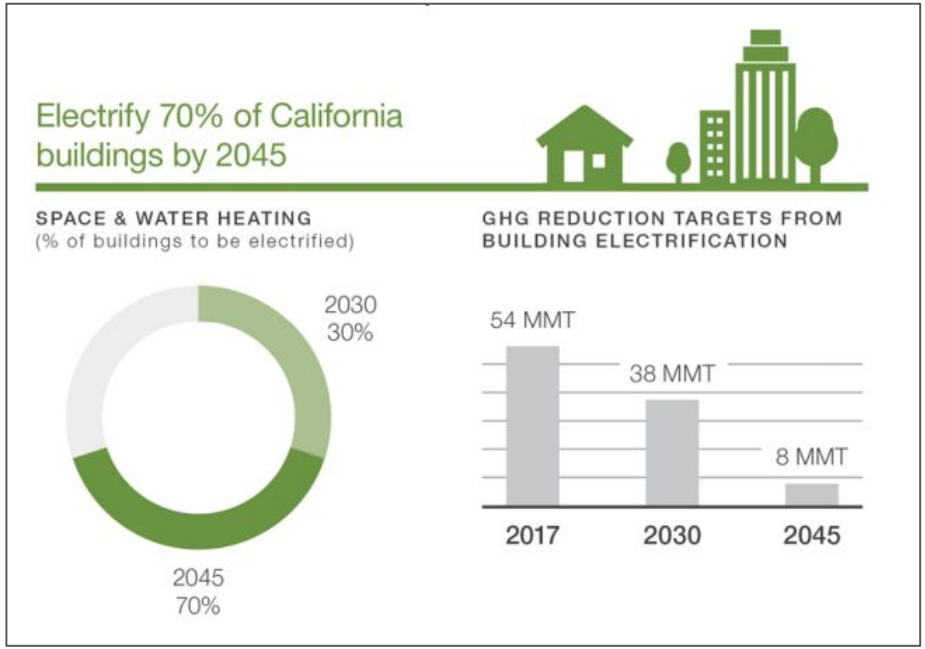
CA and the World are Electrifying for Carbon Neutrality

Climate crisis is creating enormous pressure to electricity buildings

>50 CA cities and counties have or are considering policies to support **all-electric new construction** (Sierra Club), including Hayward, where

“All new residential buildings are required to be all-electric and nonresidential and high-rise residential buildings are electric preferred.”

Driving explosion of the heat pump market.



Problem:

- Heat pumps are a relatively new technology.
- We lack experience with them.
- Most of our buildings are old.
- Therefore focus on heat pump retrofits
- Retrofits more challenging than new construction
- We need plans in place NOW to replace systems as they fail

Solution:

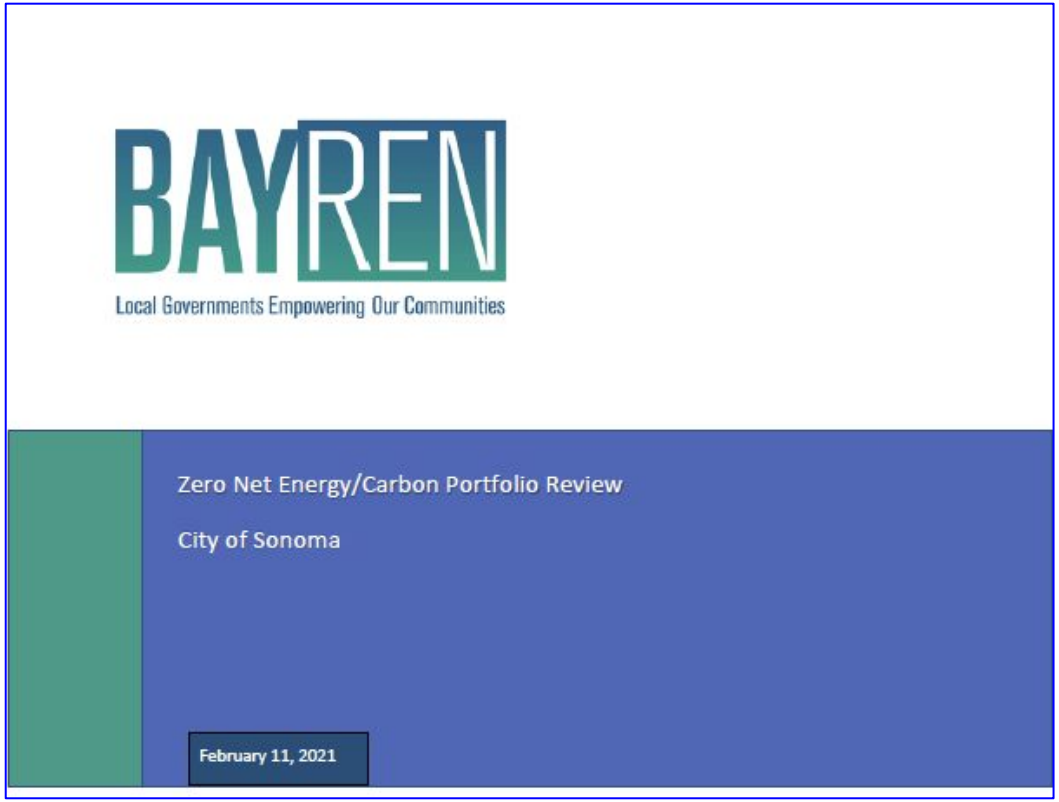
- Get help from experts
- Do the research (Subcommittee and in ENVT 493)

BAYREN Zero Net Energy/Carbon (ZNE/C) Technical Assistance

- BAYREN (a collaboration of 9 Bay Area Counties under ABAG)
  - Provides regional-scale energy efficiency programs, services, and resources
  - Funded by utility ratepayer funds through the California Public Utilities Commission
  - Offer FREE CONSULTING: building-focused recommendations for energy efficiency and renewable energy (including heat pumps)
- BAYREN brought in **kwEngineering** (heat pump expertise)
  - Scoping the consulting project (series of meetings)
  - BAYREN wants to do integrated assessment (energy efficiency and PV)
    - Consistent with our CAP

Current Status

- We have requested kwEngingeering take portfolio approach
  - Seek opportunities among our older high-use buildings, rather than a single building
  - Greater energy and carbon savings
  - City of Sonoma Example
- Pitched to BAYREN



QUESTIONS from BAYREN before approving the project. Are we serious about proceeding?

“Does the University have any plans on implementing recommended measures at the sites included in the scope (Meikeljohn, Music, PE, and A&E [and Residence Halls]) within the next couple years?”

“How much budget has the University earmarked for energy efficiency upgrades to its existing buildings?”

Adjournment

Next Meeting: Friday, May 7, 2021