Zero Emissions Building Taskforce (ZEBT), Municipal Existing Buildings Workgroup
MEETING 01: January 23, 2020

Member Roster

PRESENT	NAME	PRESENT	NAME
X	Anthony Bernheim, SFO	X	Julia Laue, DPW
X	Eden Brukman, SFE	X	Kay Kim, SFDPH
X	Emilie Hagen, MGBTF* Rep., Atelier10		Masoud Vafaei, RED
	Erin Cooke, SFO	X	Richard Berman, SFPort
X	Eugene Ling, DPW		Roberto Lombardi, SFPL
X	Heather Green, ORCP	X	Sachiko Tanikawa, RED
X	Jaime Seidel, SFPUC	X	Soe Thu, DPW

*MGBTF = Municipal Green Building Task Force

Agenda

- Welcome|Introductions|Context (Eden Brukman - SFE)
- Existing building electrification: Current practices and the next frontier (Emilie Hagen - Atelier10)
- SFPUC Fuel Switching Assessment Report (Jamie Seidel & Daniel Young - SFPUC; Matt Suidan & Robin Liu - Empower)
- Group discussion: Identifying and prioritizing electrification issues (All)

Reference Documents

- SFPUC Fuel Switching Assessment Report (October 2019)
- Focus 2030: A Pathway to Net Zero Emissions (Climate Report, July 2019)
- RED Utilities Checklist for City Building Projects (living document – Author: Sachiko Tanikawa)
- PowerPoint files
- SF Environment ZEBT webpage: https://sfenvironment.org/zebtaskforce

Notes

Identifying and prioritizing electrification issues – Themes for future discussion

Goal-setting:

- Establish new metrics for success: "carbon savings" instead of "energy savings"
- Set a target for how much carbon to reduce (e.g., annually)

Existing building characteristics:

- Define low-hanging fruit based on specific building types
- Use different approaches for small/mid-sized retrofits and major renovations
- Be proactive in identifying projects for action in the near-term (there are always buildings with equipment replacement needs)
- Determine risk – which facilities should go first
    - Perhaps not hospitals?
    - "Historic" designation can be a roadblock (49+ years old)
- City-owned assets only, also consider:
    - who is being served in the building
    - number of people impacted
    - vulnerable/high-needs populations
    - underserved areas – geographical equity
    - city's commitment to the building over time vs exiting plan (less than 10 years?)
    - anticipated building life remaining (avoid those that will be torn down in near/mid-term)
- Leased vs owned space: leverage relationships to change buildings we occupy? (e.g., health clinics)

- PUC customer as a criterion or existing access to super-green energy sources as a way to prioritize projects (vs those outside SF boundary – do those have all GHG free energy sources?)
- Define indicators for equipment 'end of useful life' and how to balance with the ease of replacement
- Compatibility of existing distribution systems inside buildings
- Does the work trigger service upgrades/"reserve capacity" adjustments, PUC/PGE interface

Project scope influences:
- Phased building improvements vs holistic retrofit
- Pairing fuel-switching with other energy efficiency projects to reduce demand, possibly increase design flexibility and installation options
- Battery storage and solar – couple with electrification? (current back-up is diesel)
- Increased time and costs for exploration onsite to define scope (e.g., as-builts, single-line diagrams, haz-mat)
- Code changes to improve efficiency (e.g., eliminate hot water distribution throughout office buildings, replace with point of use)

Funding:
- Develop strategy for Bond opportunities dedicated to electrification retrofits (consider timing, constraints, political will)
    - Could be standalone, similar to Earthquake Safety and Emergency Response Bond (ESER)
    - Could be beneficial if bundled with other themes, i.e. resiliency
    - Could be integrated into existing (e.g., Parks Bond)
- Capital processes and funding sources: Green Bond Fund? Climate Action Bond Initiative? (private offset claim opportunity, access to low cost funding) Grants?
- Quantify value of co-benefits of electrification to support work
- Include triple bottom line cost benefit analysis for projects (carbon, health, maintenance, financial)

Education:
- Maintaining occupant comfort and expectations, heat pumps may have slower start-up
- Training facility operators in new technology (trouble shooting, redefining contract terms, warranties)
- Commissioning and Activation
- Ongoing training for designers and engineers about available technology
- Partner with City College and SF USD