



SFEnvironment

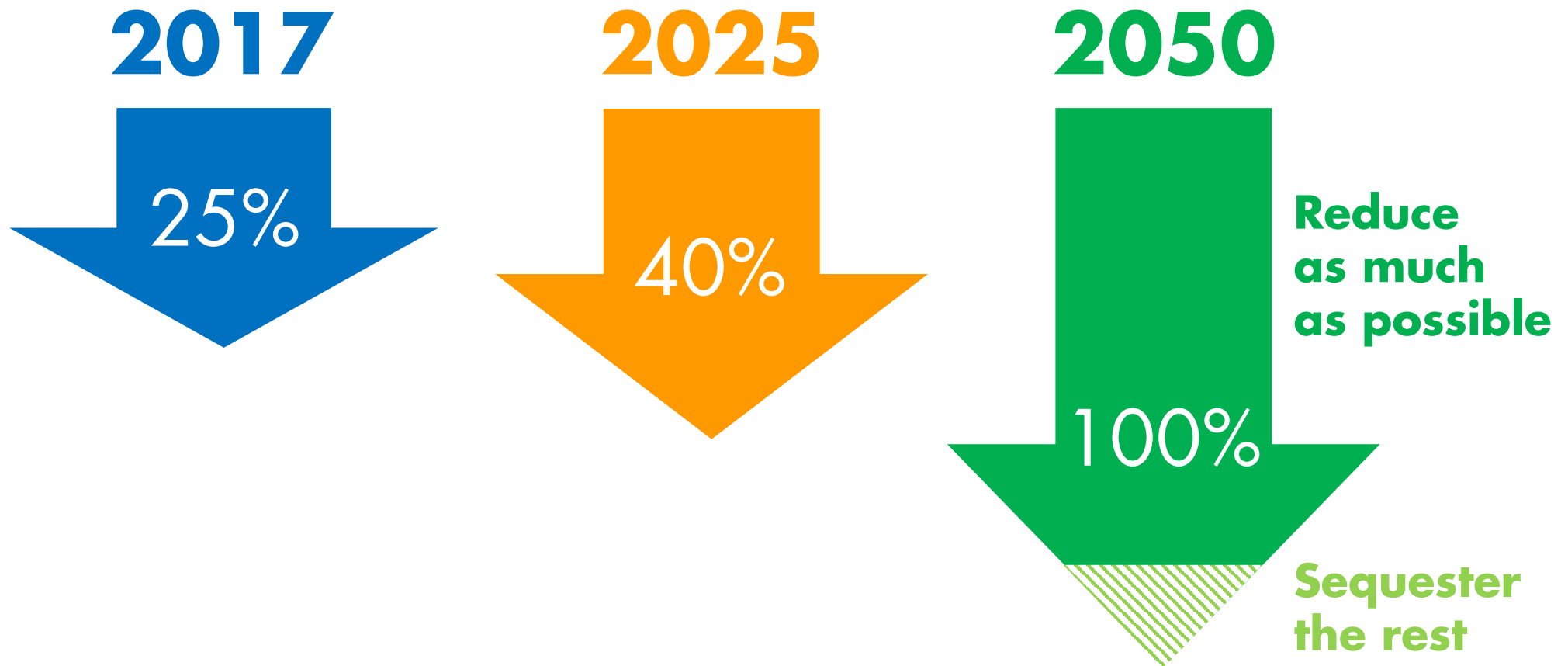
Our home. Our city. Our planet.

A Department of the City and County of San Francisco

2019 Building Code Update

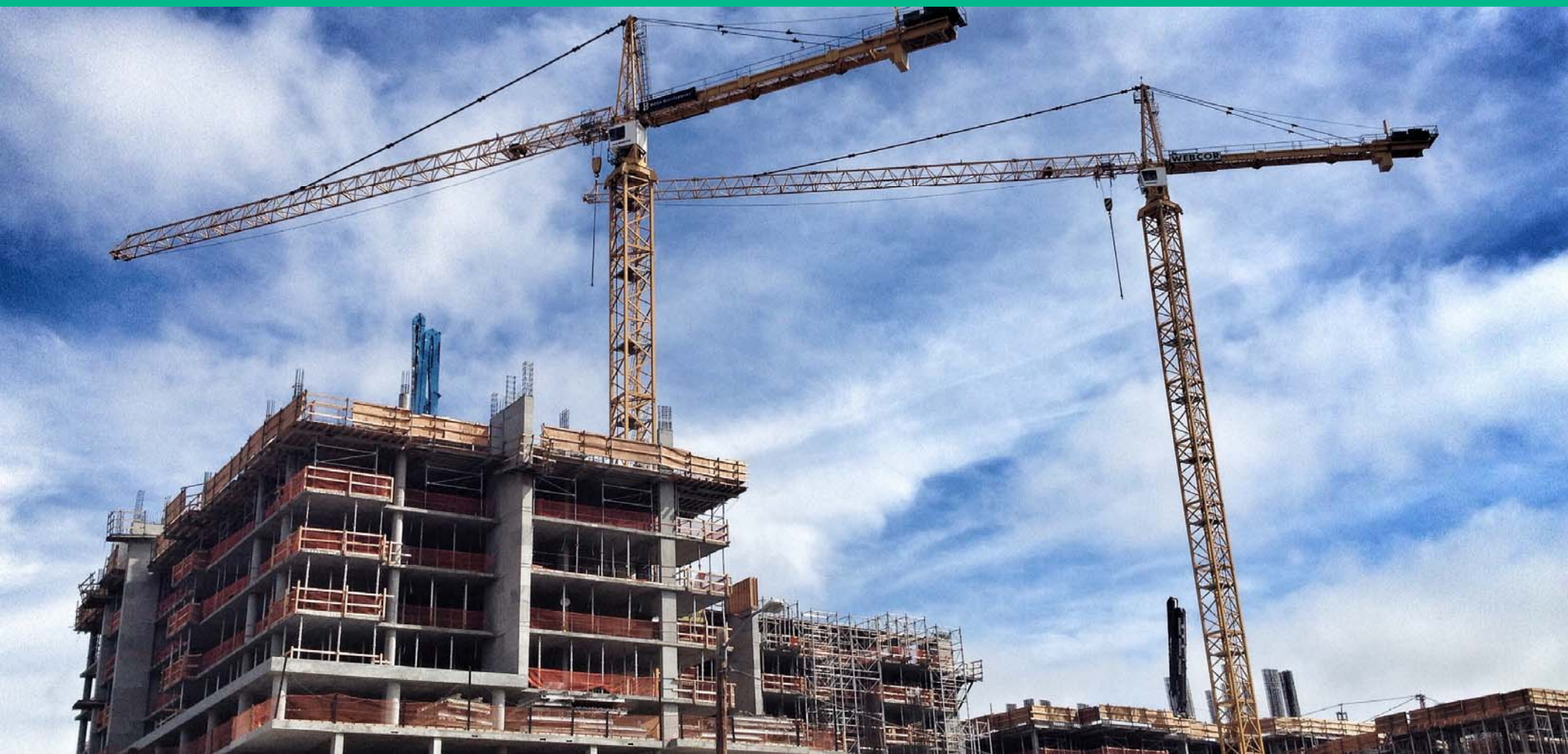


Bold Climate Goals, Aggressive GHG Reduction Targets

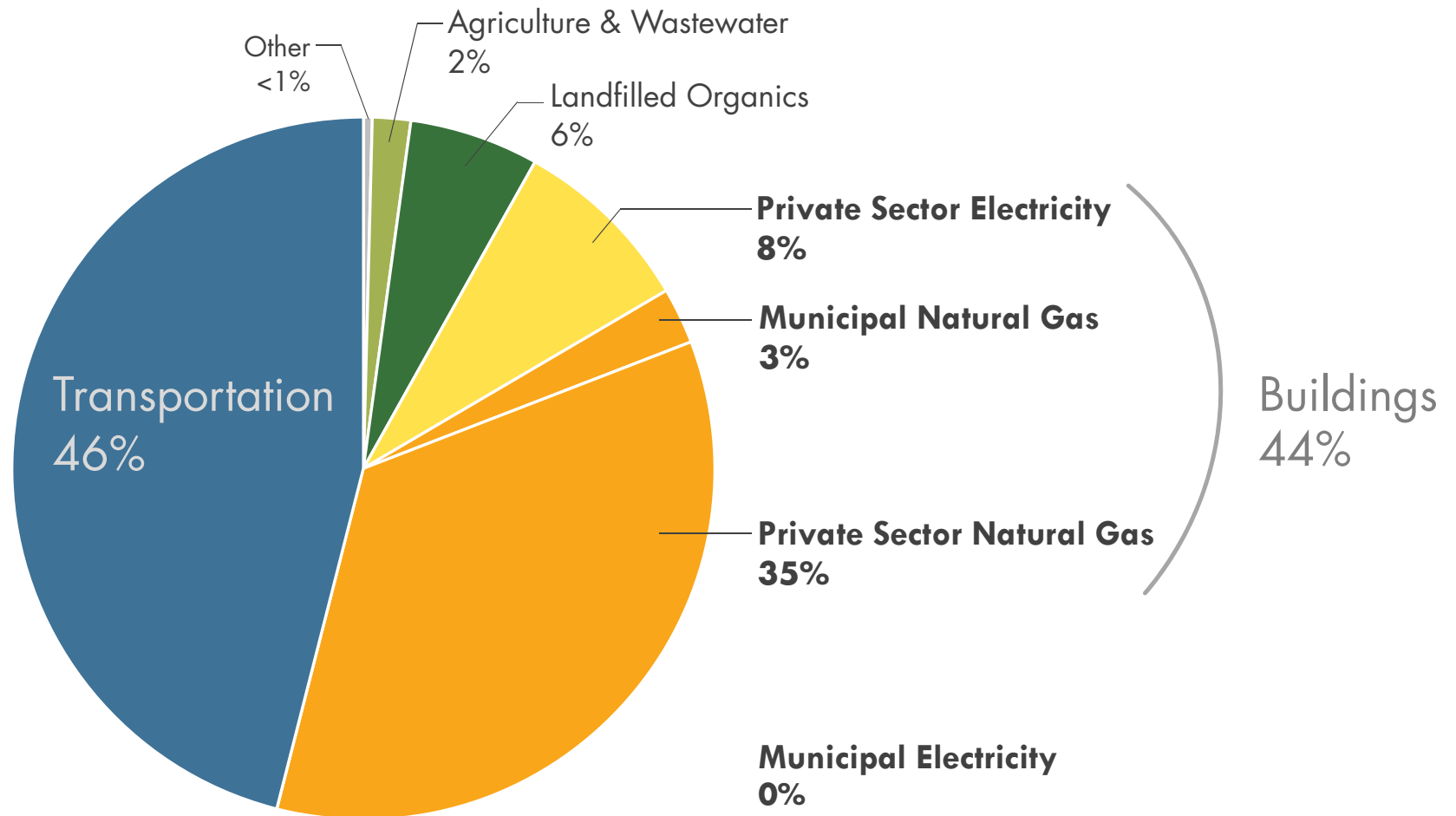




Net Zero Carbon Buildings Declaration



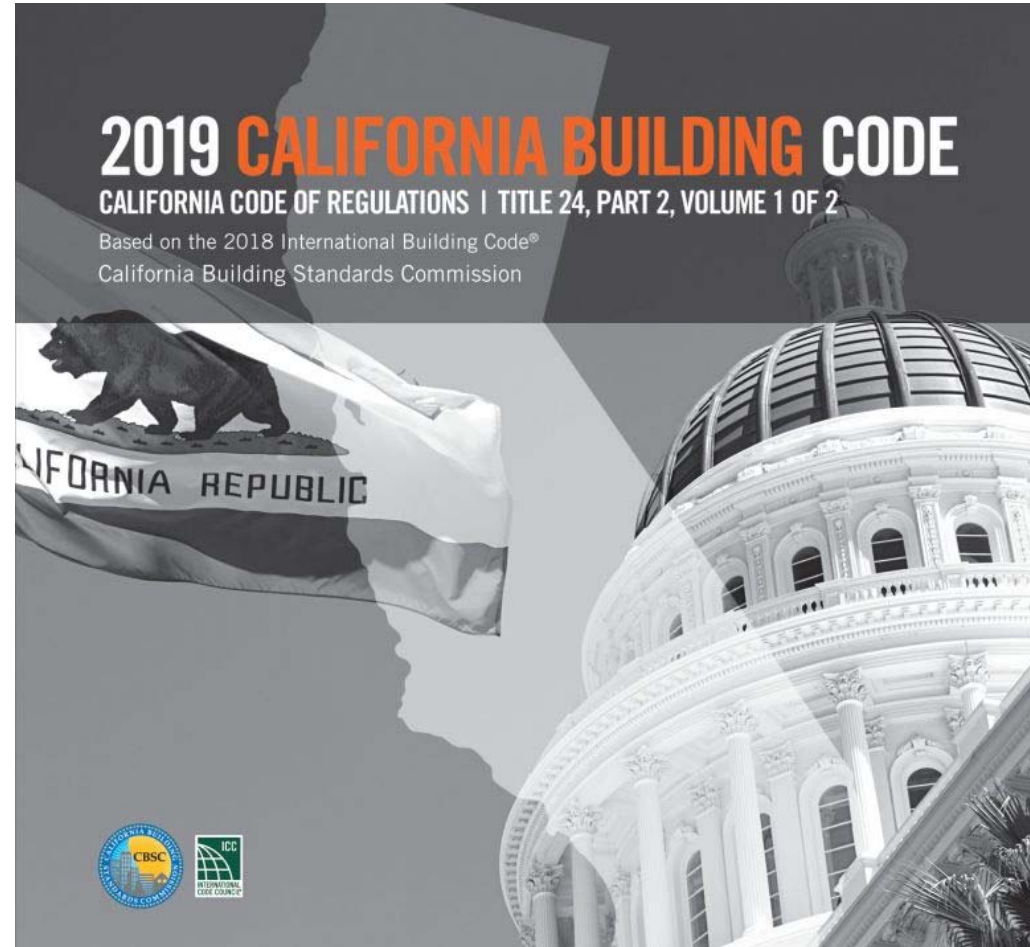
San Francisco's Emissions Sources Today



2019 CA Building Code Update (Every 3 Years)



- Effective 01/01/2020
- San Francisco amends state codes concurrently
- Administratively valuable to implement other building ordinances on the same schedule



Policy Recommendation: All-Electric Preferred



Requirements for new construction and major renovations

		Natural Gas & Electricity: "Mixed-Fuel"	All-Electric:
Env Code Ch 7	Municipal	No Natural Gas Allowed Waiver process available	Meet Code
	Commercial	10% more efficient than Code	
SF Green Building Code	Multifamily ≥4 floors		
	Low-Rise Residential	~25% more efficient than Code	

An Established Waiver Process



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MUNICIPAL GREEN BUILDING WAIVER REQUEST
For projects applying for building permit on or after January 1, 2017, subject to LEED v4 requirements in San Francisco Environment Code Chapter 7 as amended effective April 16, 2017

London N. Breed
Mayor
Deborah O. Raphael
Director

Project Information

Project Name:	Project/Job Number:	Date of Waiver Request:
Project Street Address:	Project Sponsor (City Department):	
Current Design Phase % Completion:	Phone:	Email:
City Project Manager:		

San Francisco Environment Code CHAPTER 7: Green Building Requirements for City Buildings

SEC. 713. WAIVERS.

(a) Waivers from the requirements of this Chapter are available under the following circumstances:

(2) **Cost Prohibitive.** A City department may request a waiver from the Director on a form provided by the Director if compliance with this Chapter is cost prohibitive. The Task Force shall provide the Director with a recommendation with respect to the waiver request. The Director may grant a waiver if the requesting department has:

(A) Demonstrated which specific requirements are cost prohibitive;

(B) If applicable for Section 705, demonstrated that the waiver is economically, environmentally, and health benefits not attainable.

(3) **Alternate Compliance.** A City department may request a waiver from the Director on a form provided by the Director if the department can demonstrate that an independent method of achieving the same or better environmental, economic, and health benefits as the requirements of this Chapter is attainable.



Defined: Major Renovation

“Major Renovation” means any municipal construction project or renovation to an existing structure other than repair or addition. A Major Renovation may include, but is not limited to, a change in occupancy or use, or structural repair to an existing building or facility; or remodeling, rehabilitation, reconstruction, historic restoration, or changes to the plan configuration of wall and full-height partitions, where the scope of work is sufficient to support LEED certification and **extensive enough such that normal building operations cannot be performed while the work is in progress, and/or a new certificate of occupancy, or similar official indication that it is fit and ready for use, is required. Major Renovation does not encompass normal maintenance, reroofing, floor covering, painting, wallpapering, or changes to mechanical and electrical systems.**

- Environment Code, Chapter 7

Example of Major Renovation: The Exploratorium



Images: After - Bruce Damonte

Example of Major Renovation: Garfield Pool



Images: Proposed - Paulett Taggart Architects, Existing - Google

Cost Effectiveness



	Large Office with EV charging stations	Recreation Center with Pool	Outpatient Healthcare
Building Size	498,600 sq ft 12+ floors	20,100 sq ft	26,800 sq ft space for procedures, MRI, offices
Construction Cost	-/+ \$1 per sq ft to project (0.1%)		
	~\$499k of estimated \$274,230,000 total assumes \$550/sq ft	~\$20k of estimated \$10,050,000 total assumes \$500/sq ft	~ \$27k of estimated \$24,120,000 total assumes \$900/sq ft
Payback	5.3 years	10 months	7 months

Calculations based on SFPUC's General Use Municipal Electricity Service Rate

ARUP (2019) *San Francisco Municipal Facility Case Studies*

SF All-Electric Examples: City Family



Southeast Community Center
SFPUC, SFPW



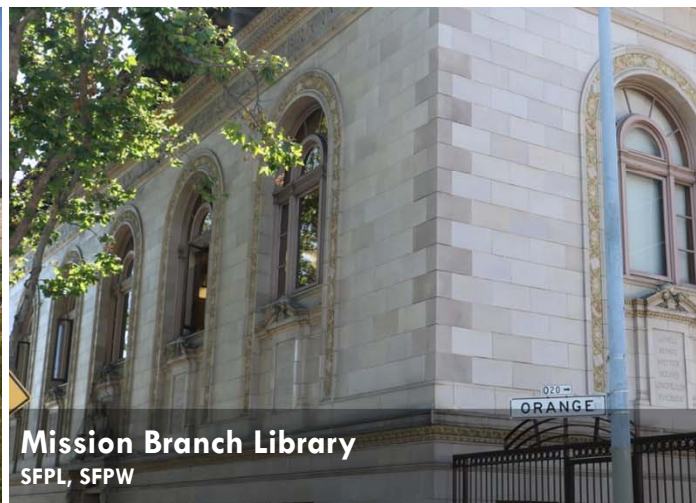
Golden Gate Park Golf Course Clubhouse
RPD, SFPW



Claire Lilienthal Elementary School
SFUSD, Lionakis



Alameda Creek Watershed Center
SFPUC, SFPW



Mission Branch Library
SFPL, SFPW



SFSU Student Housing Blok 6
SFSU, Gould Evans, Point Energy Innovations, BuildGroup

SF All-Electric Examples: Affordable Housing



Casa Adelante, 681 Florida:
TNDC & MEDA, Mithun



Hunters Point Shipyard Block 52:
McCormack Baron Salazar, Mithun



Balboa Upper Yard:
Mission Housing Development, Related, Mithun



Casa Adelante, 2060 Folsom:
TNDC/CCDC, Mithun, YA Studio, AEA



Hunters Point Shipyard Block 54:
McCormack Baron Salazar, Mithun



Maceo May:
CCDC, Swords to Plowshares, Mithun, AEA

A Developer's Perspective

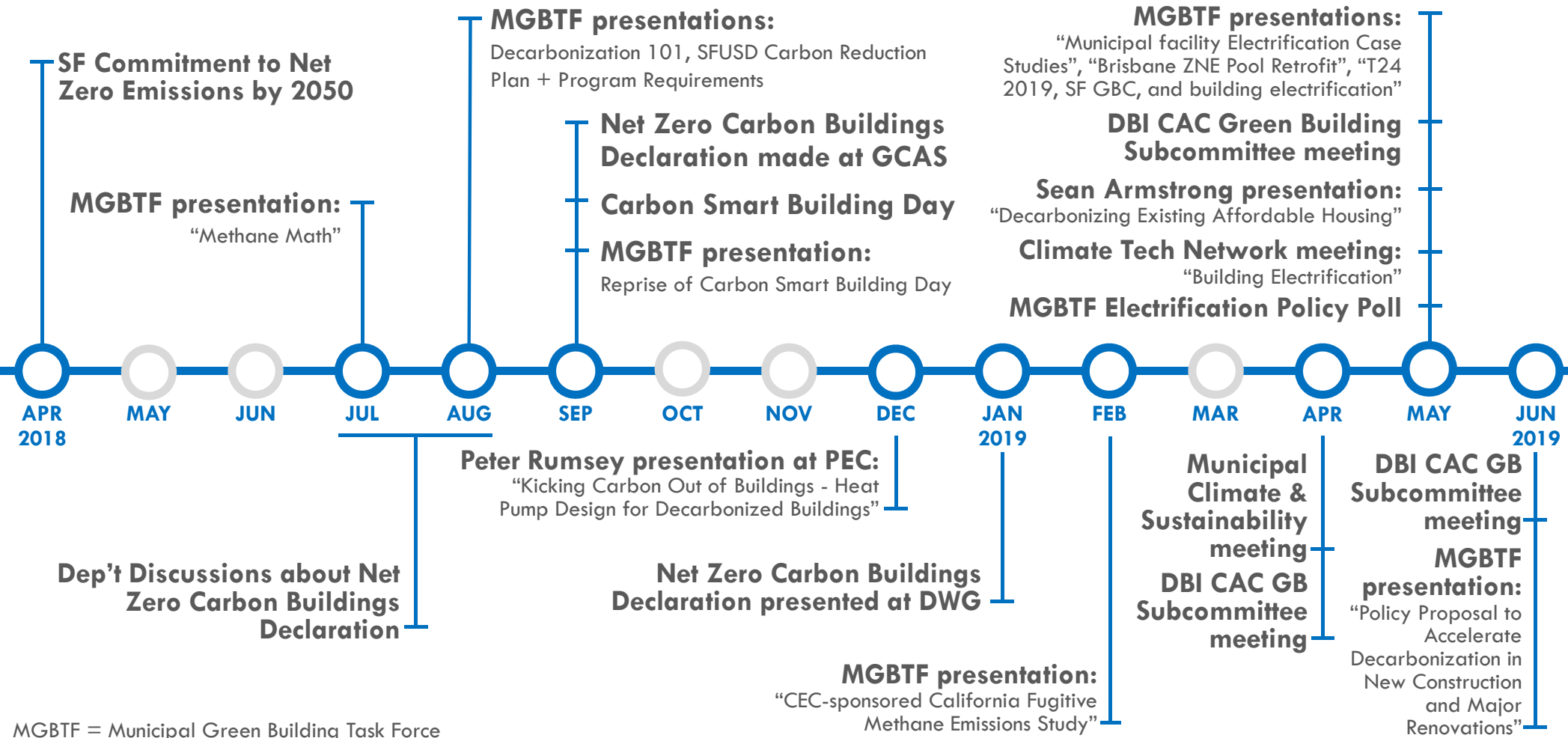


Why CCDC is Building All-Electric:

Design Objective	How All-Electric Supports the Design Objective
High Efficiency	Build more efficient than code
Low Capital Cost	Design is cost neutral
Low Operating Cost	Built right from day one; future-proof design
Ease of Maintenance	Simple systems
Great resident/user experience	Better indoor air quality, comfortable

Image: Maceo May Veterans Apartments, a Project of CCDC, Swords to Plowshares, Mithun, and Association for Energy Affordability

Twelve Months of Outreach and Education



MGBTF = Municipal Green Building Task Force

Next Steps



- Ongoing: Refinements to draft policy language based on input from City departments' staff and leadership
- August: To DBI Code Advisory Committee
- September: To Board of Supervisors Land Use Committee
(along with entire San Francisco Building Code)
- October: To full Board of Supervisors