



HPWH Permitting Pilot

TECH and BayREN

Nancy Barba | December 7, 2023

HPWH Pilot Goals

- Single-day permit for gas to heat pump water heaters by simplify the permitting process.
- Support efforts to train building department staff on heat pump best practices
- Use the pilot to achieve one day permitting across California



Photo credit: Modern Enviro

Permitting Analysis

Data source: TECH HPWH claims from December 2021 through February 2023

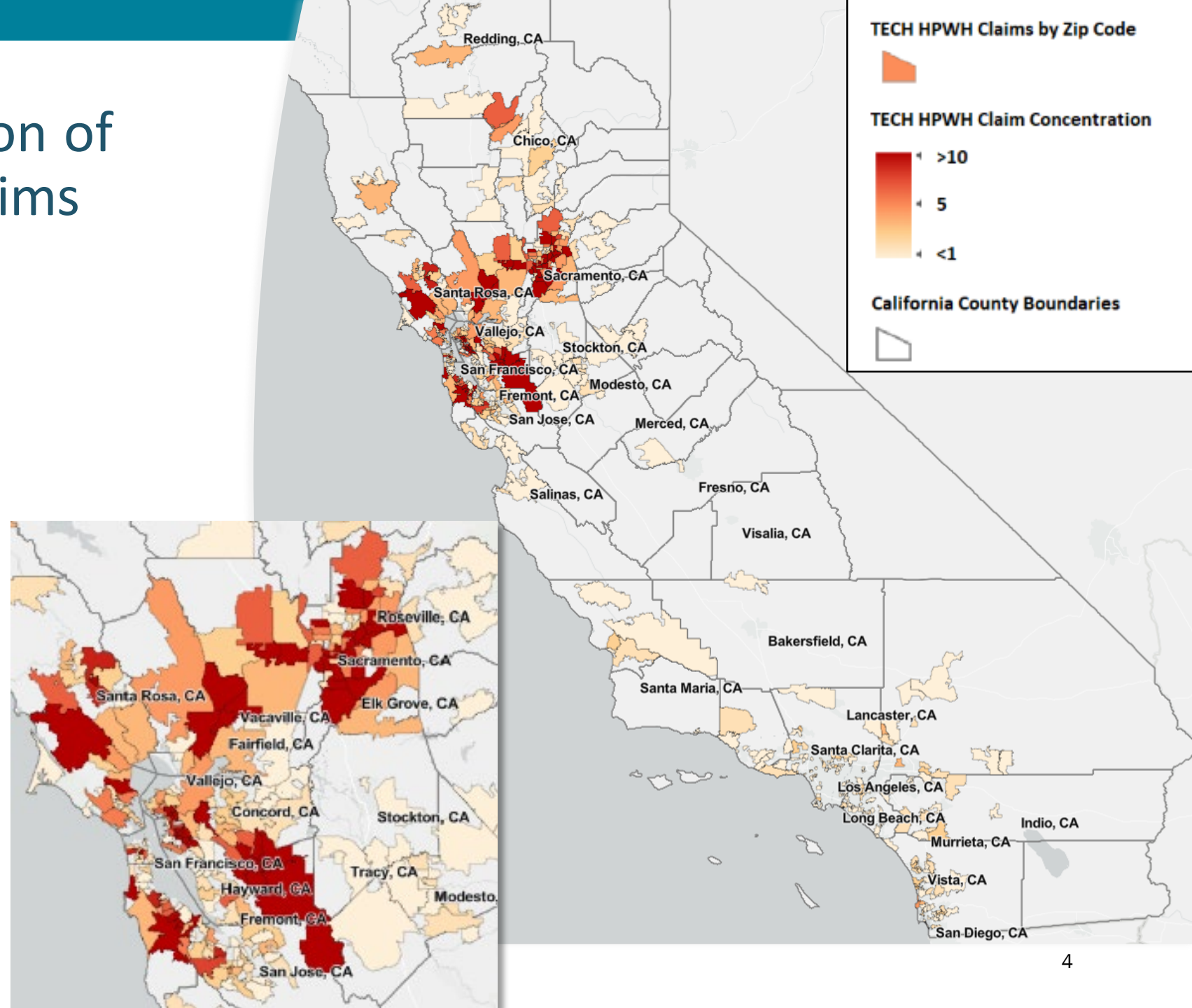
Methods

- Identify jurisdictions for TECH HPWH claims
- Analyze timelines to permit issued
- Informal surveys to jurisdiction staff



Geographic Distribution of Residential HPWH Claims

- Concentration in San Francisco Bay Area and Sacramento Metropolitan Area
- Limited adoption in other parts of CA
- Permit data study is not representative of permitting in CA



Permitting Timelines

- HPWH typical permit milestones
- Critical milestone is Permit Obtained
- Identify barriers to one day permitting

HPWH Permitting Milestones

Permitting offices typically employ a multi-step permit application and approval process. The dates available within a permit record most often reflect one or more of the following steps, in this order:

- **Application:** Date permit application is submitted.
- **Approval:** Date of permit approval.
- **Permit Obtained:** Date permit is issued with authorization to begin construction.
- **Finalized:** Date of final project approval following post-construction inspection.
- **Expiration:** Date of permit expiration.

Permitting Timelines

TECH HPWH Claims Receiving One Day Permits

Application to Permit Approval	Claims (n = 570)	Percent
One day or less	329	58%
2 days or more	241	42%

Jurisdictions with One Day Permits

Application to Permit Approval	Jurisdictions (n = 51)	Percent
One day or less	14	27%
2 days or more	37	73%

- Mean application to permit obtained: 7.99 Days
- 20 out of 51 jurisdictions processed 75% or more of the HPWH permits in one day or less
- 50% of jurisdictions with one day permit are in BayREN

Permitting Timelines – Continued

- Do more claims at a jurisdiction amount to faster permitting approval?

Jurisdiction	Avg. Days to Permit Issued	Permit Sample Count per Jurisdiction	% of Permits w/ Processing Time <= 1 Day
Elk Grove	9.16	82	18%
Livermore	0.00	72	100%
Berkeley	8.29	58	71%
San Jose	2.68	34	88%
Vacaville	1.68	31	84%
Fairfield	9.17	24	42%
Pleasanton	3.92	24	25%
Dublin	2.68	19	84%
San Francisco	0.00	16	100%
El Cerrito	12.81	16	25%
Redwood City	7.53	15	47%

Key Takeaways from Informal Surveys

1. Regional variation of plan check requirements
2. Permit staff familiarity with HPWHs as a technology
3. Staffing levels
4. Trust in, and accessibility of, professional resources
5. Differentiation of technology (HPWH vs. Electric/Gas)
6. Contractor expertise

Thank you!

Nancy Barba
nbarba@frontierenergy.com

