TOWN OF
SAN ANSELMO
EST. 1907

In the Council Chambers at 525 San Anselmo Avenue, San Anselmo, CA 94960

Town Council
Agenda

Tuesday, September 9, 2025 **7:00 PM**

Meeting held In-Person and via Zoom:

https://us02web.zoom.us/j/84750660335

Or Telephone: +1 669 900 6833 | Webinar ID: 847 5066 0335

How to Submit Comments Before the Meeting: Members of the public are encouraged to submit email correspondence to towncouncil@sananselmo.gov or eComments on the Agendas and Meeting page before the meeting begins.

How to Participate During the Meeting: Members of the public will have the option to speak during the meeting through the Zoom application by using their phone or an electronic device.

For PC, Mac, or smart phone, Use Raise hand function when public comment for an item is requested. It is a button that is located at the top or bottom of your screen, based on your electronic device.

For landline phones, raise hand to be recognized with *9

Please be advised that those participating in the meeting remotely via Zoom do so at their own risk. The Town Council regular meeting will not be cancelled if any technical problems occur during the meeting.

I. Interviews for the Planning Commission - 6:00 PM

Six (6) Interviews by Time, Attachment No. and Applicant Name (10 Minutes Each)
Staff Report (DOC)
6:00 PM Attachment 1- Tara Ticknor- Application no Resume (PDF)
6:10 PM Attachment No. 2- Jacob "Jake" Shemano- Application w/Resume (PDF)
6:20 PM Attachment No. 3- Elizabeth Thomas- Application w/Resume (PDF)
6:30 PM Attachment 4- Paul Corning- Application w/Resume (PDF)
6:40 PM Attachment No. 5- Jennifer Asselstine- Application no Resume (PDF)

6:50 PM Attachment 6- Tim Heiman- Application w/Personal Statement (PDF)

Call to Order. Optional Pledge of Allegiance: The Mayor or a designated Council member will recite the Pledge of Allegiance for members of the Council and the public who wish to join in the recitatior 7:00 PM

Open time for public expression.

The public is welcome to address the Council at this time on matters not on the agenda that are within the jurisdiction of the Council. Please be advised that pursuant to Government Code Section 54954.2, Council is not permitted to discuss or take action on any matter not on the agenda unless it determines that an emergency exists, or that there is a need to take immediate action which arose following posting of the agenda. Comments may be no longer than three minutes and should be respectful to the community.

Written Public Comment
Public Comment - Asselstine (PDF)
Public Comment - Page (PDF)
Public Comment - Crane (PDF)
Public Comment- Correspondence- Dardis (PDF)

Council requests for future agenda items.

Council committee liaison reports, questions and comments to staff; staff miscellaneous items.

Special Presentation. There are no Special Presentations.

1. Consent Agenda:

The opportunity for public comment on consent agenda items will occur prior to Council discussion of the consent agenda. The Council may approve the entire consent agenda with one action. In the alternative, items on the consent agenda may be removed by any Council or staff member, for separate discussion and vote.

1.1 Approval of the Draft Minutes of the Regular Meeting of August 26, 2025
Staff Report (DOC)
Attachment 1- Draft Minutes of the Regular Town Council Meeting of August 26, 2025 (PDF)

1.2 Accept Resignation of Greg Alsterlind from the Bicycle & Pedestrian Advisory Committee
Staff Report (DOC)
Attachment 1- Greg Alsterlind Resignation (DOC)

1.3 Adopt a Proclamation Recognizing and Ratifying Youth Commissioners for 2025/26
Staff Report (DOC)
Youth Commissioners Proclamation (DOC)

1.4 Receive and File Report of Checks Issued, August 2025
Staff Report (DOCX)
Attachment 1 Check Report August 2025 (PDF)

1.5 Accept the Pedestrian Hybrid Beacon Project at Sir Francis Drake Boulevard and Saunders

Avenue and Authorize Staff to File a Notice of Completion
Staff Report (DOC)

2. Public Hearing:

In general, the following procedural order applies to public hearing items:
•Staff Presentation
•Town Council Questions
•PUBLIC COMMENT – limited to 3 minutes/person
•Town Council discussion/action

2.1 Public Hearing, Discussion, and Potential Adoption of an Ordinance Amending Title 9, Chapter 1 (Construction Codes) and Chapter 19 (Green Building Requirements) to Implement the 2025 Tier 1 CALGreen Building Code. This is not a "project" under CEQA (Cal. Pub. Res. Code § 21065).
Staff Report (PDF)
Attachment 1- Draft Ordinance Redline (PDF)
Attachment 2- Application of the 2022 Studies to the 2025 Energy Code (PDF)
Attachment 3- California Energy 2022 Cost-Effectiveness Study- Existing Single Family Building Upgrades (PDF)
Public Comment - Nate (PDF)

3. Council Business Items:

In general, the following procedural order applies to items of business:
•Presentation
•Town Council questions
•PUBLIC COMMENT – limited to 3 minutes/person
•Town Council discussion/action

3.1 Consider Making Appointments to the Planning Commission. Appointing volunteers to serve on a committee is not a "project" under the California Environmental Quality Act (CEQA) because it does not involve an activity that has the potential to cause a direct or reasonably foreseeable physical change in the environment. (Cal. Pub. Res. Code Section 21065).
Staff Report (DOC)
Attachment 1- Tara Ticknor- Application no Resume (PDF)
Attachment 2- Jacob "Jake" Shemano- Application w/Resume (PDF)
Attachment 3- Elizabeth Thomas- Application w/Resume (PDF)
Attachment 4- Paul Corning- Application w/Resume (PDF)
Attachment 5- Jennifer Asselstine- Application no Resume (PDF)
Attachment 6- Tim Heiman- Application w/Personal Statement (PDF)

4. Closed Session

The following procedural order applies to Closed Session items:
•Mayor Announces Closed Session
•PUBLIC COMMENT – limited to 3 minutes/person
•Town Council moves to Conference Room to Convene Closed Session
•Town Council Reconvenes in Open Session- Council Chambers to Report out on any Actions taken during Closed Session

4.1 Conference with Legal Counsel pursuant to Cal. Gov. Code § 54956.9 - Existing Litigation (National Opioid Settlement with Purdue (and certain of its affiliates) and the Sackler family)

Conference with Legal Counsel pursuant to Cal. Gov. Code § 54956.9 - Existing Litigation (Secondary Manufacturers Settlements with Alvogen, Amneal, Apotex, Hikma, Indivior, Mylan, Sun, and Zydus)

Adjourn

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact Town Staff at email savila@sananselmo.gov. Notification at least 48 hours prior to the meeting will enable the Town to make reasonable accommodations to help ensure accessibility to this meeting.

Any writings or documents provided to a majority of the Town Council regarding any item on this agenda after the distribution of the original packet will be made available for public inspection at the public counter at Town Hall located at 525 San Anselmo Avenue.

Notice is hereby given that Council may discuss and/or take action on any or all of the items listed on this agenda. If any of these matters above are challenged in court, you may be limited to raising only those issues you or someone else raised at any public hearing described on this agenda, or in written correspondence delivered at, or prior to, this Council meeting. Judicial review of an administrative decision of the Town Council must be filed with the Court not later than the 90th day following the date of the Council's decision (Code of Civil Procedure Section 1094.6) Any item not under discussion before 10:00 p.m. may be continued to the next regular meeting. Next regular meeting is September 23, 2025.

Administration Department
Town Hall
525 San Anselmo Avenue
San Anselmo, CA 94960
(415) 258-4691

Town Council
Tarrell Kullaway, Mayor
Steve Burdo, Vice Mayor
Eileen Burke, Councilmember
Chantel Walker, Councilmember
Yoav Schlesinger, Councilmember

Staff
David Donery, Town Manager
Linda Kenton, Assistant Town Manager / Town Librarian
Jeff Zuba, Finance and Admin Services Director
Megan Holt Acevedo, Town Attorney
Serge Avila, Town Clerk
Heidi Scoble, Community Development Director
Sean Condry, Public Works Director
Mattie O'Grady, Community Services Director
Mike Norton, Chief of Police
Dan Mahoney, Fire Chief

DECLARATION OF POSTING

This Notice is posted in accordance with Government Code §54954.2(a) or §54956. Members of the public can view electronic agendas and staff reports by accessing the Town of San Anselmo website. Under penalty of perjury, this Agenda was posted to the public at least 72 hours prior to the meeting.

STAFF REPORT

TOWN OF SAN ANSELMO Item #: Interviews

MEETING DATE: September 9, 2025

AGENDA TITLE: Conducting Interviews for the Planning Commission

FROM: Serge Avila, Town Clerk

RECOMMENDATION: For the Town Council to conduct six (6) interviews for the Planning Commission

Below are a total of (6) applicants scheduled to be interviewed by the Town Council.

Interview Time	Name		Board, Committee or Commission
6:00 PM	Tara Ticknor	Applicant	Planning Commission
6:10 PM	Jacob "Jake" Shemano	Applicant	Planning Commission
6:20 PM	Elizabeth Thomas	Applicant	Planning Commission
6:30 PM	Paul Corning	Applicant	Planning Commission
6:40 PM	Jennifer Asselstine	Incumbent	Planning Commission
6:50 PM	Tim Heiman	Incumbent	Planning Commission

The Council will have the opportunity to appoint four voting members to the Planning Commission later today.

FISCAL IMPACT

There would be no direct fiscal impact on the Town to approve this item.

CEQA AND CLIMATE ACTION PLAN CONSISTENCY

The proposed appointment is not a "project" under the California Environmental Quality Act, because it does not involve an activity which has the potential to cause a direct or reasonably foreseeable indirect physical change in the environment. (Cal. Pub. Res. Code § 21065).

ATTACHMENTS

Attachment 1- Tara Ticknor- Application no Resume
Attachment 2- Jacob “Jake” Shemano- Application w/Resume
Attachment 3- Elizabeth Thomas- Application w/Resume
Attachment 4- Paul Corning- Application w/Resume
Attachment 5- Jennifer Asselstine- Application no Resume
Attachment 6- Tim Heiman- Application w/Personal Statement

Item #: Interviews

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Tara
First Name

M
Middle Initial

Ticknor
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Structural Engineer

Employer's Address

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

18

Number of years as a resident in Marin?

20

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

John Merten 415-721-0905 Scott Henderson (415) 521-0564 Kirsten Barre (415) 794-9001

Education Level Achieved *

- [x] College/University Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

N/a

Reasons for this appointment:

Extensive and valuable experience in the construction industry

What are your qualifications for this appointment?

I have worked in the field of structural engineering for 25 years. I have worked on residential, commercial, and public projects. I am very familiar with the construction industry and how building and design impact communities. I have worked on projects in seismic and flood and WUI zones and am familiar with requirements of these projects.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

Housing quantity and affordability and flooding of our downtown areas

LinkedIn Profile

https://www.linkedin.com/in/taraticknor?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=ios_app

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Tara Ticknor

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Jacob "jake" (First Name) | R (Middle Initial) | Shemano (Last Name)

Email Address

Home Address | Suite or Apt

City | State | Postal Code

Primary Phone | Alternate Phone

Occupation

Commercial Real Estate Development

Employer's Address

UNITED GROWTH 1000 FOURTH ST, STE 290 SAN RAFAEL, CA 94901

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

4

Number of years as a resident in Marin?

23

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Victor Mora (415) 542-6550 Nick Christianson (415) 699-9531 Peter Strauss (720) 308-7651

Education Level Achieved *

☑ College/University Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

I have not had the opportunity to serve my community in the past, however, I have had the opportunity to present various projects to public commissions and boards.

Reasons for this appointment:

I'm seeking an appointment to the Planning Commission as I would like to have the opportunity to participate in the project review process and apply my experience in support of project sponsors actively engaged in improving the community. I also believe that my experience can serve as a helpful filter to refine changes to regulation and process.

What are your qualifications for this appointment?

I've spent the last 10 years of my professional life preparing projects to go in front of planning staff and project review boards in a variety of jurisdictions. I have familiarity with the public process, staff review, environmental studies, density bonus law, and California's streamlined residential development legislation.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

1) Ensuring the timely and fair review of all projects without undue delay. 2) Reviewing all staff recommended changes to policy and code through a lens of public impact, enforceability, and practicality.

LinkedIn Profile

https://www.linkedin.com/in/jake-shemano/

J_Shemano_Resume_2025.pdf
Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Jake Shemano

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Jacob “Jake” Shemano

| LinkedIn

EDUCATION

University of Southern California, Los Angeles, CA
B.S., Policy, Planning & Development – Urban Planning & Development, 2005

Cornell University, Ithaca, NY
Commercial Real Estate Certificate, 2020

LICENSES

California Department of Real Estate – Broker License (No. 01848976)

CORE COMPETENCIES

- **Real Estate Development:** 10+ years overseeing residential, mixed-use, and commercial developments nationwide. Deep expertise in entitlements, zoning, environmental review, directing consultants, budgeting, scheduling, and community engagement.
- **Sales, Acquisitions & Leasing:** Proven track record in negotiating purchase agreements, leases, termination agreements, completing due diligence investigations, title review, and managing escrow.
- **Property & Asset Management:** Managed large, diverse portfolios of apartments with expertise in rent control, fair housing laws, refining operating budgets, and vendor/staff oversight.
- **Project Management:** Experienced owners representative responsible for negotiating GC contracts, project oversight, budget management, schedule management, pay application review, and punch listing.
- **Construction:** Practical carpentry skills; proficient in reading blueprints, framing, finish carpentry, and painting.
- **Technology:** Microsoft Office Suite, Google Suite, Dropbox, DocuSign, Adobe Acrobat, tenant tracking databases.

Jacob "Jake" Shemano
181 Tunstead Avenue, San Anselmo, California
(415) 845-5768 | jshemano@gmail.com | LinkedIn

PROFESSIONAL EXPERIENCE

United Growth – San Rafael, CA | *Commercial Real Estate Development*
Development Manager | Sep 2023 – Present

- Oversee full lifecycle of commercial development projects from due diligence through tenant delivery.
- Manage entitlement processes, tenant selection, and landlord deliverables.

Abode Communities – Remote | *Affordable Housing Development*
Senior Acquisitions Manager | Jan 2022 – Sep 2023

- Sourced and modeled new investment opportunities.
- Negotiated purchase, relocation, and termination agreements; led community outreach and entitlements.

Realtex, Inc. – San Francisco, CA | *Multifamily Real Estate Development*
Development / Project Manager | Nov 2014 – Jan 2022

- Directed $55M in land acquisitions and secured entitlements for multiple high-profile developments.
- Led tenant buyouts, consultant coordination, and city agency engagement.

Canyon Pacific Management – San Francisco, CA | *Property Management*
Association Manager | Aug 2013 – Apr 2014

- Managed operations for nine condominium associations and a commercial property (286 units).

Chandler Properties – San Francisco, CA | *Property Management, Sales & Leasing*
Property Manager / Investment Sales & Leasing Associate | Oct 2009 – Jan 2013

- Managed 15 multifamily properties (324 units) across San Francisco.
- Successfully leased 250+ apartments.

AGI Capital – San Francisco, CA | *Residential & Commercial Development*
Development Intern | May 2009 – Sep 2009

- Evaluated foreclosure investment opportunities.
- Assisted in the delivery of a self-storage facility.

Early Career – Carpentry & Construction Roles | 2001 – 2008

- Worked on residential renovations, houseboat construction, and luxury home builds in the San Francisco Bay Area.

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Elizabeth (First Name) | F (Middle Initial) | Thomas (Last Name)

Email Address

Home Address | Suite or Apt

City | State | Postal Code

Primary Phone | Alternate Phone

Occupation

Real Estate Attorney

Employer's Address

DoorDash, Inc. 303 2nd Street San Francisco, CA 94107

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

1

Number of years as a resident in Marin?

16

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Rebecca Fisk - 408-666-0002 Katherine Keon - 415-505-5433 Jimmy Simpson - 203-912-6874

Education Level Achieved *

- [x] Master's Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

2016-2017 - Served on the Marin County Women's Commission, appointed by Kate Sears. Although I ended my term early due to conflicting family responsibilities, I now have more time to dedicate to civic engagement as my children are older now. I am also currently a member of SF CREW (Commercial Real Estate Women) and serve on their Programming Committee.

Reasons for this appointment:

I am a relatively new resident of San Anselmo, having moved here last year with my two older children (ages 15 and 20) in order to be closer to my son's school, San Domenico. I am eager to contribute in a positive way to this Town's vibrancy, friendliness, openness and community-mindedness.

What are your qualifications for this appointment?

I am a seasoned real estate attorney with almost 25 years of broad-based experience, including transactions, zoning and land use, construction, development, and financing. I am also a homeowner and a parent, with a vested interest in helping to maintain the warmth and stability of San Anselmo.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

Smart implementation of the new General Plan, specifically as it relates to pressure on housing and sustainably managing resources. Multiple buildings downtown are vacant. This is both an opportunity and a risk for the Town.

LinkedIn Profile

www.linkedin.com/in/elizabeth-thomas-ab737221

Elizabeth_Thomas_Resume.pdf
Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Elizabeth Thomas

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Elizabeth Thomas
San Anselmo, CA 94960

RELATED WORK EXPERIENCE:

DoorDash, Inc. **San Francisco, CA**
Director, Real Estate Legal *2020 - present*

- Established and built in-house real estate legal function to support rapid national expansion of multiple business units. Manage transactions in North America for all business units including parcel delivery, quick convenience, personal delivery devices, drones and corporate. Asset classes include office, R&D, retail, warehouse, and land.
- Manage and train teams of outside counsel at multiple law firms, and internal attorneys and paralegals.
- Built infrastructure to streamline cohesive legal transaction management. Established portfolio-wide transaction standards and negotiating positions.
- Seconded to internal business unit to accelerate growth of real estate portfolio.

Uber Technologies, Inc. **San Francisco, CA**
Director, Real Estate Legal *2015 - 2020*

- In-house commercial real estate attorney. Managed transactions in the United States for rideshare, autonomous vehicles, air mobility, food delivery, bikes and scooters, freight, and special projects.
- Collaborated with internal finance, insurance, facilities, procurement, business development and corporate groups to set guidelines and policies for leasing and transaction management.

Coblentz Patch Duffy & Bass LLP **San Francisco, CA**
Associate Attorney, Real Estate Group *2011 - 2014*

- Commercial real estate attorney with San Francisco-based law firm ranked top tier real estate firm by Chambers USA.
- Drafted and negotiated office, industrial, retail, and ground leases, purchase and sale agreements, option agreements, listing agreements, easement agreements, and related documents.
- Notable Transactions: leasing office, warehouse and industrial properties for PG&E; leasing multiple new restaurant locations for Boudin Bakery as tenant; leasing portfolio of South Bay properties to technology companies for Equity Office Properties as landlord; leasing portfolio of industrial properties for Morgan Stanley as landlord.

Goulston & Storrs, PC **Boston, MA**
Associate Attorney, Real Estate Group *2006 - 2009*

- Commercial real estate attorney with Boston-based law firm recognized by American Lawyer's AmLaw 200 list.
- Practice included leasing, purchase and sales, development, land use, financing, and affordable housing.
- Notable Transactions: portfolio acquisition of forty-five commercial properties by Beacon Capital Partners from Equity Office Properties; local permitting matters for Blackstone Properties; leasing, acquisition, and permitting of Shire Pharmaceuticals corporate campus; leasing of build-to-suit headquarters for National Grid, certified LEED Platinum.

Simpson Asset Management Company **Boston, MA**
Vice President *2006 - 2011*

- Managed property management company and leasing team for two office buildings in downtown Boston.
- Directed the sale of an office building and adjacent hotel in downtown Washington, D.C. to investment group led by national commercial real estate developer.

Shearman & Sterling LLP **Menlo Park, CA**
Corporate Paralegal – Capital Markets and Mergers & Acquisitions *1998 – 1999*

- Corporate paralegal for public offerings of equity and debt, mergers and acquisitions, and corporate advisory services.
- Notable Transactions: $325 million high-yield debt offering for Amazon.com, secondary public offering for E-Bay, Inc.

Vrolyk & Company LLC **San Francisco, CA**
Corporate Finance Analyst *1996 – 1998*

- Member of six-person team providing merger and acquisition advisory and private equity and debt placement services. Prepared financial analysis and valuations, client presentations, industry reports, and private placement memoranda.

EDUCATION:

Boston College Law School **Newton, MA**
Juris Doctor *May 2006*

Middlebury College **Middlebury, VT**
Bachelor of Arts in International Politics and Economics / French *May 1996*

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Paul
First Name

Middle Initial

Corning
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Retired

Employer's Address

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

3.5

Number of years as a resident in Marin?

7

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Bon Pipkin - (415) 246-6528 Ben Burtt - (415) 456-0591 Kathryn Acevedo - (415) 450-1204

Education Level Achieved *

☑ Master's Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

(•) Yes ( ) No

I would be available to attend additional meetings when they are necessary.

(•) Yes ( ) No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

(•) Yes ( ) No

I have attended meetings of the Board/Commission/Committee as a member of the public.

(•) Yes ( ) No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

I served on the board of the Pacific Heights Residents Association in San Francisco, which included mediation disputes between neighbors over permit applications.

Reasons for this appointment:

I am looking for a way to serve the Town, and have always been interested in real estate, construction projects and planning decisions.

What are your qualifications for this appointment?

I listen and analyze well, and communicate clearly. I can read architectural plans, zoning and planning documents, and building codes. I have mediated disputes between neighbors over proposed construction projects. I have experience with rules and conduct requirements of public meetings. And I have made a commitment to live in San Anselmo.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

The main challenges seem to be supporting development of housing for income-diverse residents, and achieving Housing Element-related objectives, while conforming to the General Plan. and preserving both San Anselmo's essential character and its economic vitality.

LinkedIn Profile

Resume_Paul_Corning_2025.pdf

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Paul Corning

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Paul Corning

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Paul Corning

Clear Academy LLC – Cheyenne, WY (2013-2017)

Principal, Founder – Co-founded startup to develop mobile applications

- Developed Clear English app to help English language learners improve their pronunciation.

BMP Holdings LLC – San Francisco, CA (2007-2010)

CEO, Co-Founder – Co-founded startup to develop social editing technology.

- Developed Daily Paws, a consumer web site to support research in novel collaborative filtering techniques.

Springcreek Advisors LLC – Corte Madera, CA (2003 – 2009)

Director – Joined to help transform a small investment advisory firm.

- Served as acting co-CEO, hired investment advisory and legal teams, recruited permanent CEO.

OpenDesign, Inc. – South San Francisco, CA (2000 – 2001)

Director of Product Management – Experimental peer-to-peer networking startup.

NetSanity, Inc. – Redwood City, CA (1999 – 2000)

Director of Mobile Products – Internet applications for mobile phones.

Diamond Multimedia Systems, Inc. – San Jose, CA (1995 – 1999)

Country Manager (1997 – 1999) – Managed Australia and New Zealand business for a leading manufacturer of personal computer peripheral hardware.

- Incorporated company in Australia, ran sales, marketing and advertising.

Product Line Manager (1997 – 1997)

- Defined and launched consumer hardware/software products..

Fakespace, Inc. – Menlo Park, CA (1993-1994)

Sales and Marketing Manager – Managed sales, wrote business plan for a VR display manufacturer.

SRI International – Menlo Park, CA (1988 – 1993)

Consultant to SRI – Worked for Sciences Division of a non-profit research institute.

- Worked with 3 research teams to win development projects, wrote org plan for $90 million business unit.

Education: **University of California at Berkeley** – Berkeley, CA (*M.B.A.*)
Wesleyan University – Middletown, CT (*B.A.* – *Philosophy*)

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Jennifer
First Name

M
Middle Initial

Asselstine
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Architect and Educator (retired)

Employer's Address

San Anselmo Ave

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

26

Number of years as a resident in Marin?

26

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Deborah Cichocki 415 203-0589 Susan Cronk 415 377-1462 Sue Sherer 415 847-7409

Education Level Achieved *

☑ College/University Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

Member of the Planning Commission since 2021, Chair of the Planning Commission in 2024
Member of the General Plan Advisory Board

Reasons for this appointment:

Interested in promoting housing growth in San Anselmo while maintaining the town's natural environment and architectural attraction.

What are your qualifications for this appointment?

almost 40 years as an architect and architectural educator. I was the Undergraduate Director at the Academy of Art University In San Francisco.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

As mentioned above. - expanding our housing stock - protecting the natural environment and built environment from the forces of climate change

LinkedIn Profile

https://www.linkedin.com/in/jennifer-asselstine-aia-noma-4803b92a?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=ios_app

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Jennifer M Asselstine

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Jennifer Miner Asselstine

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Tim
First Name

L
Middle Initial

Heiman
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Structural Engineer

Employer's Address

Retired

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

22

Number of years as a resident in Marin?

22

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Alan Cascio 415-246-1783 Matt Brazler 415-271-5294 Nancy Grover 415-453-3549

Education Level Achieved *

- [x] Master's Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

(•) Yes ( ) No

I would be available to attend additional meetings when they are necessary.

(•) Yes ( ) No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

(•) Yes ( ) No

I have attended meetings of the Board/Commission/Committee as a member of the public.

(•) Yes ( ) No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

Fund raising committees for our son's elementary and hight schools. Member of SA Planning commisison for almost 8 years in which I have served as Vice-Chair and Chair. I am the current Vice-Chair of the commisson.

Reasons for this appointment:

Since I am retired I have the time and wish to continue being involved in our community. I feel that the planning commission matches ny interests and professional experience.

What are your qualifications for this appointment?

My professional experience working with and undestanding complex code provisions. Also my experience working with other design professionals on residential and commerical projects.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

The development of additional housing in our town by encouraging ADU's and multi-family housing and/or mixed use projects which are in conformance with SA's housing element and blend in with the surrounding neighborhood. As a planning commissioner I have suggested several changes to SA's developemnt code allowing smaller lot sizes and lot line adjustments to non-conforming lots to encourage housing. A second important issue is maintaining a vibrant downtown commercial district by assisting the developemnt of new businesses.

LinkedIn Profile

https://www.linkedin.com/in/tim-heiman-45563511

SA_Planning_Personal_Statement_-6-23-25.pdf

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Tim L. Heiman

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

TIM L. HEIMAN, SE

Personal Statement

I have been a practicing Structural Engineer for over 40 years in the SF Bay Area. During that time I have consulted with Architects and Contractors on a wide variety of residential and commercial projects ranging from senior living facilities and affordable housing projects to hospitals and higher education projects. Thru my work I have gained an understanding of codes and planning issues such as setbacks, height limits, density bonuses and parking requirements. I also understand how development can impact the local community, both positively and negatively.

While not a licensed Architect, my undergraduate Architectural Engineering degree program included three years of pre-architecture and design classes. In addition, I have been exposed to many different types of building design over the years and have a sense when a proposed design fits in with the adjacent surroundings. As a LEED accredited professional, I also understand how the design and construction of the built environment can be done with minimal impact on the environment.

As a practicing Structural Engineer, I feel I can bring a unique perspective to the Planning Commission. While the impact to adjacent buildings due to structural issues are minimal on flatland development that is not necessarily the case on hillside development. Hillside excavations can create slope stability problems and alter drainage patterns both of which can affect neighbors. As a structural engineer, I understand these issues and have worked with Geotechnical and Civil engineers to mitigate these them.

Local Project Experience

During my career I have been the structural engineer many projects throughout the Bay Area including Marin and Sonoma Counties. I also designed my own home in San Anselmo. A partial list of my local projects include:

- Marin Health – Oak Pavilion Hospital Addition & West Wing Renovation
- Kaiser Santa San Rafael - Various Renovation Projects
- Kaiser San Santa Rosa - North Wing Addition & Medical Office Building
- Villa Marin Retirement Residences, San Rafael
- Spring Lake Village Retirement Residences, Santa Rosa

September 5, 2025

To: San Anselmo Town Council

From Ross Asselstine

RE: "Show Us the Money"

A few of my recent cartoons referred to the Flood Zone as being in the positions of:

- Having no access to funds at an ATM. "Insufficient Funds"
- Being broke and out of money. "The Money is Gone"
- Not aware that they have no funds to even do BB2 "The Emperor has no Clothes On"

The last cartoon included a 23 page letter to the Chief Counsel of Marin County and the Director of the Department of Finance dated August 19. I will spare you from re-sending this document to you again. (If you really want another copy, please shout.)

I've had recent productive phone calls with MC that suggest the issues raised are very real. I'm under the impression that they may well conclude their review and assessment this month.

In short, the staff of the District has four problems:

1) They cannot use the tax funds from 1965 / 1983 maintenance agreements for anything but the maintenance of the concrete channel, dredging and levee works. This could pull $4M out of the budget
2) They have to fund all future maintenance of works they have built so far from the Flood Fee of 2007. That could be a VERY high number.
3) Because of items 1) and 2), it is clear to me they don't have funds to demo BB2.
4) I will guess that after a clear-headed study, they are not going to be able to do much else with the small amount remaining. They are obligated to set aside the funds to maintain "stuff".

The issue of "Flood Control" has always been divisive in this community; the projects are either unacceptable as a few were, or were the great range of just plain bad ideas that were not viable. The issue of BB2 is now creating great division within our town, meetings include raised voices, unanswered questions, bad feelings, more frustration and well, you list the rest.

It's not in our collective interest to put the BB2 CLOMR issue on a future agenda if the District simply does not have the money to move forward with it. Why have another meeting until the District gets it's fiscal house in order and clearly states that they do or don't have the funds to cover all obligations?

In essence, their panic and problems, should not create more panic and more problems in San Anselmo.

I strongly recommend that the Council direct SA staff to communicate this or a similar position to the District ASAP. **"Show us the Money"**

Outlook

Agenda 9/09 Open Time

From Garril Page (POP) <obility@comcast.net>
Date Sun 9/7/2025 11:33 AM
To Town Council <towncouncil@sananselmo.gov>; Serge Avila <savila@sananselmo.gov>

CAUTION: External Sender

I tried to submit this for Open Time using eComment but not possible so I hope Serge can make this available to the Town Council, please?
Thank you,

Garril

In considering SAFRR/BB2/CLOMR, I ask that the Council, please, remember the flood district has been aware of concerns about:
1.) SAFRR's impact on the Creek Park redwoods since 2017,
2.) the discrepancy between FEMA low-reading models versus Stetson's 2D models more in synch with high water marks of past floods since 2018, and
3.) the toxic tank under BB2 platform since 2023.
I know the above to be true since I have emails documenting transmission of the information to the district and county.

Instead of being transparent and responding with information they must possess by now, your questions are not answered nor are ours. Is the need to promote SAFRR so over-whelming that such evasion is justified?

There is a new and relevant county flood strategy of which you may be unaware. The removal of concrete channel walls downstream of College of Marin (COM) has begun. An interesting change in the plan and county strategy is the apparent removal of proposed detention basin(s) in favor of high vacant land. The basin(s) were placed to catch sediment generated by increased volume and velocity of storm waters carried downstream by SAFFR and CMC FPMP, thus aiding maintenance of such deposits. Now, marches protective of surrounding land areas have been added instead. In spite of increased O&M costs, this may be environmentally and politically wise: preserve and protect settled neighborhoods with land temporarily vacant and thus, available for public enjoyment.



In case you cannot read the fine print, the signage says:" …Over time rising sea level drowns tidal marshes which become mudflats and then open water. To preserve important habitat, this project includes an area higher than the current tidal marshes that can transition to tidal marsh as sea level rises. This reach has special value because it is in a mixing zone fort tidal water from the Bay and fresh water from Corte Madera Creek…"

Here is a clear indication the district is aware of increasing marine intrusion *and planning projects with that awareness in mind.*

Perhaps San Anselmo should be equally aware? All this fuss about daylighting 130 feet of covered creek is futile in view of the advancing Bay pushing those waters back at us. Especially when hydraulics, models, and residents' flood insurance programs are at issue. Spending Millions of dollars to flood downstream neighbors might be weighted against more meaningful uses of our dollars?

The redwoods of Creek Park and restoration of a beloved local gathering area matter to residents and the vitality of San Anselmo. These are quality of life elements. Why not preserve them?

Yours truly,

Garril Page

Outlook

Town Council Meeting 9.9.25 Public Comments

From John Crane <johncranefilms@gmail.com>
Date Tue 9/9/2025 12:49 PM
To Town Council <towncouncil@sananselmo.gov>
Cc towncouncil@townofross.gov <towncouncil@townofross.gov>; Tarrell Kullaway <tkullaway@sananselmo.gov>; Cyndie Martel <cmartel@townofrossca.gov>; Eileen Burke Contact <EileenBurke100@gmail.com>; Chantel Walker <cwalker@sananselmo.gov>; Yoav Schlesinger <yschlesinger@sananselmo.gov>; Steve Burdo <SBurdo@sananselmo.gov>; Bill Kircher Jr. <cwkmisc@gmail.com>; Elizabeth Robbins <eliz.robbins@gmail.com>; Julie McMillian <jmcmillan@townofrossca.gov>; DEREK Johnson <Derek.Johnson@marincounty.gov>; Dave Donery <ddonery@sananselmo.gov>; tdowlingtor@gmail.com <tdowlingtor@gmail.com>; Mathew Salter <salter4ross@gmail.com>; Gabe Paulson <gpaulson@cityoflarkspur.org>; Frank Egger <fjegger@gmail.com>; Dave Donery <ddonery@sananselmo.gov>

1 attachment (76 KB)
Judd Goodman 9.9.25 .pdf;

CAUTION: External Sender

Please add my comments below and my attached letter to Judd Goodman to the written public comments for tonight's meeting. Thank you.

September 9, 2025
Mayor and Town Council of San Anselmo

Dear Mayor and Council Members.

I would like to call your attention to misinformation in the September 8th, 2025 Marin IJ article: San Anselmo council gets flood control project update

Judd Goodman's made the following statement which is untrue.
“No homes would flood that don’t flood now — that is an important distinction — and no new properties would be added to the floodplain,” Goodman said.

I have lived in my home at 86 Sir Francis Drake Boulevard, for more than 30 years, and I have never flooded. This includes the severe flooding in 2005. For the record, I live in the most impacted neighborhood that will see the greatest increase in Water Surface Elevation, and I only know. of one home that has been previously flooded.

Judd Goodman's claim is misleading, irresponsible and will harm many property owners. It will also increase the Town's potential liability if the CLOMR and BB2 removal proceeds.

I have requested that Judd Goodman send me any and all information he has supporting this statement and the list of the “no homes would flood that don’t flood now". I believe his statement is untrue, and I urge the Town Council to fully investigate his statement and review the documentation as well. The current mitigation efforts based on falsehoods and assumptions that are erroneous are not only unacceptable, but they are underfunded as well. As a result, the current flood control efforts need to cease immediately.

The County has long spread misinformation and made erroneous statements that have the potential to harm individuals and their properties.

Obviously, this is of great concern to impacted property owners such as myself.

Thank you for your attention to this matter.

Respectfully,

John Crane

86 Sir Francis Drake Boulevard, Ross, CA 94957

John Crane Films
415.847.5054
email: johncranefilms@gmail.com



TO: Judd Goodman
FROM: John Crane
DATE: 9.9.25

Dear Judd:

Re: Marin IJ Article September 8, 2025, by Krissy Waite

In the Marin IJ article entitled: San Anselmo council gets flood control project update it is reported that you made the following statement:

"No homes would flood that don't flood now — that is an important distinction — and no new properties would be added to the floodplain," Goodman said.

Is this accurate? If so, please send me a list of the "no homes would flood that don't flood now" without delay. I would like to have it before my meeting with An Bartlett (Technical) and Kurry Foley (Assistant Directory) today at 5 PM regarding questions specific to my property.

For the record, my home did not flood in 2005, and it has never flooded in the more than 30 years I have lived here.

Thank you.

John Crane

86 Sir Francis Drake Boulevard, Ross, CA 94957

6-32 Red Hill Ave.

Cc Bc

Andrew Dardis 22 ISLAND DRIVE
SAN RAFAEL CA 94901

6-32 Red Hill Ave.

Dear Mayor and Consul members
I just wanted to give you a heads up about AT&T's new antenna at 6-32 Red Hill Ave. Spotless Cleaners I am very much against it and here's why. 3 min

I see AT&T as being a very bad neighbor, they have had an antenna down there for 25 years, and they have been in nonconformance, for their use permit, for all that time.

They have never done a RF Compliance Report after they moved their antenna 86' to a different location than where it was approved

I have a hard time believing how Building Department thought, that a flagpole that had no permit no planning commission approval no variance was a good location for antennas.

I did notice, when I was researching the planning commission minutes, which was a page that had recorded, the vote (5-2 Wittenkeller and Cronk to vote no). But I wanted to double check it, so I was able to find the full minutes, and on the front page was the roll call that should only five council members present. Which then made more sense of the notes that ~~that~~ I had found on page 5 of the staff report which Amy Feagans the Planning Director was presenting, and had jotted down the results of the vote and it was 3-2 three no and two yeses as I see it, it didn't get approved.

a work with no permits
Power ? meter

SAN ANSELMO PLANNING COMMISSION
MINUTES OF DECEMBER 6, 1999

The San Anselmo Planning Commission was convened in the Council Chamber by Chair Zwick at 7:30 p.m.

CALL TO ORDER

Commissioners present: Chair Zwick, Vice Chair Cronk, Commissioners House, Wittenkeller and Dowd

Staff present: Planning Director Feagans and Senior Planner Wight

OPEN TIME FOR PUBLIC EXPRESSION

No one spoke during this time.

CONSENT AGENDA

1. **Minutes** – November 15, 1999

2. **V-9940 – Gary Dowd, 156 Morningside Drive**, A/P 5-142-32, a 3'6" side yard variance for a portable spa and a deck approximately 150 square feet (Code requires 8'); and a 3'6" height variance for a gazebo over the spa (Code maximum is 8'), located on property within the R-1 Zoning District. (Staff person: Feagans)

3. **DR-9942 – Scott Sanders, 80 South Oak Avenue,** A/P 7-241-70, Adoption of Resolution 9913, to approve Design Review amendment for a single family dwelling, located within the R-1H Zoning District (Staff person: Wight)

At the request of Chair Zwick all items are to be removed from Consent Agenda and opened for discussion.

Item1: Minutes: Commissioner House questioned the motion made on the Use Permit Amendment, noting that it was her intention to state that all new uses under 1,200 should be reviewed as an Administrative Use Permit, and those uses over 1,200 square feet would be heard by the Commission. Discussion ensued among the Commission. There did not seem to be a consensus. Staff suggested that the item be renoticed so it can be discussed again at a future public hearing.

M/s House/Wittenkeller, and unanimously passed (5-0), to direct staff to renotice the item for a future meeting.

Item 2: 156 Morningside Drive: Commissioner Dowd recused himself because he is the applicant for 156 Morningside Drive. M/s House/Wittenkeller, and unanimously passed (4-0), to approve the application based on the findings and conditions as set forth in the staff report.

Item 3: 80 South Oak Avenue: The neighbor, Theresa Tamley, 951 So. Oak Avenue, asked if the exterior color was going to have Planning Commission or administrative review. Ms. Wight responded that the color will be reviewed at the Planning Commission and has been included as a condition of approval in the resolution. M/s House/Wittenkeller and passed (5-1 Zwick to vote no), based on Resolution 9913.

Chair Zwick advised all parties of interest of the ten-day appeal period.

PUBLIC HEARING

4. **DR-9941 – Dan Hillman, 853 San Anselmo Avenue**, A/P 7-162-06, Design Review of the second stories of three apartment units (the main house is to be raised with parking below, and a proposed new second building will have two stories with two living units) on property located within the R-3 Zoning District. (Staff person: Wight)

Ms. Wight presented the staff report.

Glen Jarvis, architect representing the applicant, said that he has done work in the past in San Anselmo. Prior to starting on the project they wanted to know what was acceptable so they walked the neighborhood and spoke with staff. They wanted to present a project that did not need a variance. They are trying to make the units like small homes rather than apartments. The ground floor opens up to yards, the rear is the sunny aspect of the building and the parking is underneath. Living spaces have 9' ceilings and they are working on a rental for a family that can't afford a house. The yards are private and they tried to be sensitive to the neighboring houses. He presented photographs of other apartment developments in the neighborhood. Their proposal is better than the other apartments. They have reduced the entrance into the parking area so there is additional screening. The parking is essentially in garages, which does not appear to be

7. **UP-9912 – Geoffrey Koblick, 32 Red Hill Avenue,** A/P 6-201-56, Conditional Use Permit to construct two panel antennas 4'(length) x 1'(width) x 5"(deep) on the existing flag pole. An equipment box approximately 5'(length) x 2'(width) x 4'5"(height) will also be located along the east side of the existing building, located within the C-3 Zoning District. (Staff person: Feagans)

Ms. Feagans presented the staff report.

Chair Zwick asked who they would co-exist with because the way he read the Ordinance was that this would not be a stand-alone site. Ms. Feagans stated that she would let the applicant address that question.

Jay Wallace, attorney representing Cellular One, said that the project complies fully with the ordinance guidelines. This project has taken a lot of effort to comply with the town ordinance. Driving east, the flagpoles are not noticeable. What is really seen driving to the west is the concrete retaining wall. He is not aware of any other carrier seeking to place antennas on the pole although it is not impossible to accommodate more than one carrier.

Commissioner Cronk asked if there would be a flag flying from the pole.

Mr. Koblick, building owner, stated that they would be happy to have a flag fly on the pole if the Commission wants it.

Commissioner Wittenkeller said he tends to favor staying with the times but his concern about this was that the flagpole itself was a political issue at one time. Previous owners of the building wanted the right to fly the flag and now this owner is exercising the right as an owner and not using it for the intended use. He cannot vote in favor of this.

Mr. Koblick said he looked at this more as a good spot for coverage for the cell site, versus building a new structure to hold the antenna.

Commissioner Dowd stated that it is a fine spot for the antenna and a condition could be placed on the approval that they fly the flag.

Commissioner House said she had no problem with the proposal and that it looks unobtrusive and there should be no inclusive right. If a flag flew there, it might draw more attention to the pole.

Commissioner Cronk said she is aware of the practical and economical benefit. She said there is no question in her mind in how this would look and could never have approved the flagpole. She cannot approve the application.

Commissioner Dowd stated that he cautioned the Commission on limiting the number uses on the pole.

Mr. Koblick stated that he was also approached by Sprint.

Chair Zwick stated that his feeling is to ask the Council what their intent was in the ordinance with respect to multiple uses.

M/s Dowd/House, and passed (5-2 Wittenkeller and Cronk to vote no), to approve the application based on the findings and conditions as set forth in the staff report.

Chair Zwick advised all parties of interest of the ten-day appeal period.

1999 CUP for 2 panel antennas on flagpole and equipment

4. This permit and each condition contained herein shall be binding upon applicant and any transferor, or successor in interest.

5. If construction is not commenced within one year from the date of final action, the permit becomes null and void. However, this discretionary action may be renewed by the Planning Director for a maximum period of one (1) year provided the applicant places such a request in writing to the Planning Director showing good cause prior to the expiration of the discretionary action.

V. ATTACHMENTS

1. Proposed Planset
2. Project Description
3. Use Permit Application

Respectfully submitted,

Amy Feagans

Amy Feagans, Planning Director

cc: Christy Beltran, Cellular One
Jay Wallace, Attorney

Sprint - up inside flag pole

Brian - mostly in favor of cell sites ~~ok~~ but can't vote for this since its on the flag pole

[redacted] - Gary - wants them on Town owned structures

Judy - Not a problem w/ it no exclusive right to Cellular One's ~~right~~ use of the poole

1 user

Wants it unobtrusive as possible

Susan - economic benefit
Visible - would not approve flag pole

Marty Zwick.
- Ask counsel about Co-locating
- doesn't bother it

3-2

From: Elise Semonian
To: deejurach27@gmail.com
Cc: Elise Semonian
Subject: 32 Red Hill
Date: Monday, May 14, 2018 6:47:10 PM

Hello,

I left a message for you. I hope I wrote down the correct number.
At this time, the Town regulations require a use permit for any cellular equipment. Use permits can only be approved by the Planning Commission. The Planning Commission did approve the existing equipment. However, they also approved specific dimensions for the equipment and only 2 panels. So, I can't find the building permit application to be in conformance with the existing use permit for the site and a modification to the use permit is necessary. The Planning Commission may not be able to deny the use permit – but the equipment modification still has to be approved by the Planning Commission.
We will need a report confirming the RF levels are within what is allowable that takes into account levels of exposure for the public near the site and also residences on the hillside adjacent to the site and the RF from the existing cellular equipment on the site next door.
-Elise

Elise H. Semonian
Planning Director
(415) 258-4636
esemonian@townofsananselmo.org

STAFF REPORT

TOWN OF SAN ANSELMO Item #: 1.1

MEETING DATE: September 9, 2025

AGENDA TITLE: Approval of the Draft Minutes of the Regular Town Council Meeting of the August 26, 2025

FROM: Serge Avila, Town Clerk

RECOMMENDATION: For Council to consider the approval of the Draft Minutes of the Regular Town Council meeting of August 26, 2025.

ATTACHMENT:

Attachment 1- August 26, 2025 Draft Minutes

San Anselmo Draft Council Minutes
Regular Meeting
Town Council Chambers and via Zoom
Tuesday, August 26, 2025

Interviews for the General Plan Advisory Committee- High School Student Representative and Racial Equity Committee- 6:00 p.m.

The Council interviewed Isabel Little, June Greeley, Nico Less, Regina Deangelis, and Cassandra "Rene" Lopez

Call to Order: Optional Pledge of Allegiance- 7:00 PM

COUNCILMEMBERS PRESENT: Tarrell Kullaway (Mayor)
Steve Burdo (Vice Mayor)
Eileen Burke
Yoav Schlesinger
Chantel Walker

STAFF MEMBERS PRESENT: Dave Donery, Town Manager
Megan Acevedo, Town Attorney
Serge Avila, Town Clerk
Heidi Scoble, Community Development Director
Sean Condry, Public Works Director
Linda Kenton, Town Librarian

Open Time for Public Expression

Ms. Sue Saunders thanked staff and the Town Council for making San Anselmo a leader in the climate crisis.

Ms. Peggy Alamonto was concerned about what was going on at 60 Greenfield Avenue. The building remains vacant.

Ms. Flora Meyer stated the friendly vibe and historic character of San Anselmo has been compromised by the recent paid parking system.

Mr. Benedetto Chico, speaking on behalf of the Chamber of Commerce, stated neither the Chamber nor the majority of merchants were in favor of or asked for the new paid parking system. The system is complicated and not working.

Ms. Karen Mendelow, member of the Climate Action Committee, thanked the Library and the Public Works Department for supporting the Monarch Butterfly Habitat Project.

Ms. Mary Edwards stated she met an elderly woman who was very upset about getting a parking ticket. She is against the new parking system.

Ms. Lori Burlinger, business owner, stated she was opposed to the paid parking system. It should be repealed.

Ms. Belinda McGuire, merchant, was opposed to the paid parking system and stated empty

parking spaces equals empty stores.

Ms. Sara Robinson offered several recommendations if the parking system remains in place in terms of accessibility.

Mr. Jeff Kroot agreed with the comments made about the new parking system. It is not working and is hurting the businesses.

Ms. Doss stated she has a salon on San Anselmo Avenue and the new parking system is inconvenient for her clients. The times should be adjusted- two hours is not enough.

Ms. Linda Gridley stated San Anselmo is a charming Town and the new signs do not fit in- they are too industrial.

Mr. Pat Townsley, merchant, stated his business has been negatively impacted by the new parking system. The Town is losing Sales Tax Revenue.

Mr. Frank Gomez agreed that the paid parking system has negatively impacted the businesses.

Ms. Tanya Rodriguez stated the new paid parking system is degrading the charm of the Town.

Mr. Ben Lucassi stated he was neutral on the parking system but was concerned about the impact to the businesses.

Ms. Lori Sperling, business owner, stated the meters are a deterrent to parking.

Victor stated the Town does not need meters it needs enforcement.

Ms. Cary Mangely, merchant, stated the two-hour time limit is crazy.

Ms. Carlina Borg, merchant, was opposed to the new parking system.

Mayor Kullaway stated the Council will be discussing and taking action on the parking issue at the September 23rd meeting. The Economic Development Committee will be discussing this issue at its September 9th meeting.

Council requests for future agenda items; Committee liaison reports; questions and comments to staff; miscellaneous items

Councilmember Burdo reported he attended the Ross Valley Fire Board meeting; the Countywide Evacuation Drill is scheduled for September 6th; the Sidewalk CPR Demo was held on Saturday at Station 21; he attended the Central Marin Police Authority meeting; asked staff about the status of his January request regarding the timing of the Flood Horn.

Councilmember Burke reported she went to the PDD Hazard Awareness Warning Center (HAWK) in San Ramon; attended the Second Annual Baldy Dash and came in 90th out of 170!

Councilmember Walker reported on information from Cal Cities; toured Station 20; the Best of Marin included San Anselmo businesses.

Councilmember Schlesinger reported on the recent Marin Wildfire Prevention Authority (MWPA) Board meeting; encouraged everyone to attend Ember Stomp; today is International Dog Day.

Mayor Kullaway announced the event at Stafford Lake honoring the sacred Tule reeds will be

held on September 14th.

Librarian Kenton invited everyone to the first San Anselmo Repair Fair in the Council Chambers on Saturday, September 13th from 1:00 p.m. to 4:00 p.m. She talked about the Halloween Costume Swap.

Public Works Director Condry stated staff will be making a presentation to the Council regarding on-going projects including the Robson Harrington paint job and the use of AI to run the Hub traffic signals.

Special Presentation

There are no Special Presentations.

1. Consent Agenda

1.1 Approved the Draft Minutes of the Regular Town Council Meeting of Tuesday, July 22, 2025 and Approved the Special Meeting Minutes of Wednesday, August 6, 2025

1.2 Received and Filed the Financial Report on Recreation Fund ending July 31, 2025

1.3 Received and Filed Revenue and Expenditure Reports, July 2025

1.4 Received and Filed a Report of Checks Issued for the Month of July 2025

1.5 Approved an Agreement with Sleepy Hollow Fire Protection District and Approved for Contribution Toward Fire Station 20 Renovation Project

1.6 Approved Notice of Completion for Robson House Exterior Repairs and Repaint

1.7 Adopted Resolution No. 2025-4595 Approving a Publicly Available Pay Schedule in Accordance with California Public Employees Retirement Systems (CalPERS) Regulations

1.8 Response to Marin County Civil Grand Jury Report: The Worrisome Future of Marin Housing- NIMBY Resistance Takes a Backseat to Economic Reality

1.9 Accepted the Committees' Decision to Conclude Christiana Conser's membership on the Open Space Committee

1.10 Received and Filed Tax Equity Rebate Program Overview and 2025 Rebate Summary

Councilmember Burdo stated he want to pull item #1.5 for discussion

Councilmember Walker referred to item #1.8 and asked staff for an update at a future meeting.

M/s, Burdo/Burke, Motion to approve the Consent Calendar with the removal of item #1.5. AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

1.5 Approved an Agreement with Sleepy Hollow Fire Protection District and Approve for Contribution Toward Fire Station 20 Renovation Project

Councilmembers Burdo, Burke, and Walker thanked everyone involved.

M/s, Burdo/Walker, Motion to approve Consent Calendar item #1.5.
AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

Council Business

2.1 Consider Making Appointments to the Bicycle & Pedestrian Advisory Committee, General Plan Advisory Committee, and Racial Equity Committee

Town Clerk Avila presented the staff report. Staff answered questions from the Council regarding the appointment of alternate and non-voting members; Councilmember Walker spoke about the process for keeping candidates who are not selected interested in future vacancies.

Mayor Kullaway opened the meeting to public comments.

Mr. Frank Gomez supported Cassandra Lopez for the Racial Equity Committee position.

Mayor Kullaway closed the meeting to public comments.

M/s, Burke/Walker, Motion to appoint Ken Husband to the Bicycle & Pedestrian Advisory Committee.
AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

M/s, Walker/Burdo, Motion to appoint Nico Less to the General Plan Advisory Committee as the Youth Commissioner.
AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

M/s, Walker/Burdo, Motion to re-appoint April Hewes, Navruz Avloni, Tiffany McElroy, and Frank Gomez to the Racial Equity Committee
AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

M/s, Burdo/Walker, Motion to appoint Cassandra Lopez to the Racial Equity Committee
AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

2.2 Designate a Voting Delegate and Alternate(s) for the League of California Cities Annual Conference October 8-10, 2025

Town Clerk Avila presented the staff report. There were no questions from the Council.

Mayor Kullaway opened the meeting to public comments.

There were no comments.

Mayor Kullaway closed the meeting to public comments.

M/s, Burke/Walker, Motion to designate Vice Mayor Burdo as the voting delegate and Councilmember Walker as the alternate for the League of California Cities Annual Conference October 8-10, 2025.
AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

The Council took a brief break at 8:26 PM

The Council reconvene in the Council Chambers at 8:28 PM

2.3 Receive the County Flood Control District update on the San Anselmo Flood Risk

Reduction Project

Town Manager Donery and Public Works Director Condry presented the staff report. Chris Blunk Interim Public Works Director, and Judd Goodman, Senior Civil Engineer for the County Flood Control and Water Conservation District gave a PowerPoint presentation that included the following: 1) Building Bridge 2 Removal; 2) Conditional Letter of Map Revision (CLOMR) Application; 3) Flooding Process; 4) Storm Scenarios; 5) Expected Benefit to Homes and Businesses; 6) Town and Community Comments; 7) Proposed Mitigations; 8) CLOMR Process Evaluation; 9) Two Flooding Sources; 10) Rise in Creek Floodwater if BB2 Removed; 11) Example of Proposed Mitigation-Garage; 12) FEMA Required Letters Sent if Possible Change to Flood Map; 13) What Happens Beyond the Project Study Limits? 14) Conclusions of BB2 Removal; 15) Flood Model Differences; 16) Tree Management Plan; 17) Trees Adjacent to BB2; 18) Project Modifications Proposed to Protect Trees; 19) Tree Monitoring During Construction; 20) Tree Monitoring After Construction; 21) Flood Zone 9: 3 Revenue Sources; 22) Flood Zone 9 Project Funding; 23) Flood Zone 9 Operations & Maintenance Funding; 24) Next Steps; 25) Public Outreach Efforts Under Way; 26) BB2 Removal Project- Challenges. Staff and the consultants answered questions from the Council regarding whether the 1-D or 2-D model was used when talking about the number of structures and properties affected; if flooding is currently touching the 22 of the 38 affected structures and if there are proposed mitigation measures; if the pressure of additional water would impact these structures; if there is an increase in flood water in the 1-D or 2-D model; if the 2-D model used the 4% change of flood event scenario; if they have to use the 1% for FEMA purposes; how the Environmental Impact Report (EIR) applies to the 1-D model that FEMA uses and whether they need to prepare a new EIR; the timeline for the “apples-to-apples” comparison; why a short-turn around was needed for the letter of concurrence; how the district plans to improve its communication to the public; how the owners of the impacted properties were notified and if the district has met with them; if there is an increase in the number of affected properties when using the 2-D model and considering the 100-year flood; if there is a budget for mitigation work for the number of affected parcels shown in the 1-D model; the efficacy of the project using the 2-D model; if there is funding for using eminent domain if a homeowner refused mitigation; if refusal by one affected homeowner could kill the project; if the current Fund Balance was around $12 million; if there is a method for a homeowner to contest a determination regarding mitigations; challenges facing the project not included in tonight’s slide presentation; when the district would return to the Council for feedback; if the district could look at the feasibility of accessing the plaza.

Mayor Kullaway opened the meeting to public comments.

Mr. Jeff Kroot stated three of the four structural reports say the bridge is fine. The fourth report says it is fine but could collapse during a major earthquake. Demolishing the bridge will cause flooding downstream and liability to the Town.

Ms. Benedetto Chico, speaking as a business owner, stated this process has taken a very long time. Residents want this area opened up and used by the public. The county should have answers to resident’s questions.

Mr. Keith March stated he lives downstream on Sir Francis Drake Boulevard in the affected area. His home and office would not be affected by a flood but he has an access bridge running over the creek. He is concerned about his safety. The Winship Bridge needs to be fixed before BB2 is removed.

Mr. Pat Townsley, owner of Creekside Pizza, wanted the fence removed. He understood that the Winship Bridge was the first project that needed to go and that there would be upstream mitigation. They need to look at the bigger picture and the other bridges that make up the flood system.

Ms. Jennifer Motta, 82 Sir Francis Drake Boulevard, stated her home will be impacted by the rise in the base flood elevation. This project will harm her property and many others.

Mr. Philip Chidos stated he owns two commercial properties in the flood zone. There are County resources that are unaccounted for with no real return on investment (ROI).

Ms. Rosanne dalBello stated her arborist report does not agree with the one submitted by the County with respect to the Tree Management Plan. She discussed some of the discrepancies between the Tree Management Plan and the engineering drawings.

Mr. Ford Greene stated at a Flood Zone 9 meeting in 2022 it was estimated that the mitigations costs would be between $3 million and $11 million. It is now $400,000. It would hurt the property owners to try to make the project viable by reducing the cost of mitigation.

Ms. Paula Spencer, a business owner, asked the Council to deny the County permit for the demolition of BB2.

Ms. Ann Politzer stated tonight's CLOMR presentation has changed from the one she heard at the Ross Town Council meeting. The asserted benefits are restricted to the 10-year flood and represent a 14% reduction in damages and losses. This is a lousy return on a $58 million investment.

Mayor Kullaway closed the meeting to public comments.

Councilmember Burdo thanked everyone for his or her testimony. He heard some new information tonight. He looks forward to seeing the "apples to apples" comparisons using the models.

Councilmember Burke stated tonight's presentation raises more questions than it answered. She is concerned about how receptive homeowners will be to the mitigation offers. This is the key to the project. She would like to see the 2-D model run for the 100-year flood and the fence removed as soon as possible.

Councilmember Walker stated the consultants talked about changes and that would be useful to see in the future.

Councilmember Schlesinger discussed the "different tools for different rules" approach. This approach is misleading because a model is not only a tool but also defines what we see. He would like to see the "apples to apples" comparison as soon as possible.

Mayor Kullaway was concerned about the legal liability for San Anselmo. There are a lot of good things and concerning things about the project.

M/s, Burke/Walker, Motion to adjourn the meeting at 10:38 p.m.
AYES: Burdo, Burke, Schlesinger, Walker, Mayor Kullaway

Respectfully submitted,

Toni DeFrancis,
Recording Secretary

STAFF REPORT

TOWN OF SAN ANSELMO Item #: 1.2

MEETING DATE: September 9, 2025

AGENDA TITLE: Accept the Resignation of Greg Alsterlind from the Bicycle & Pedestrian Advisory Committee

FROM: Serge Avila, Town Clerk

RECOMMENDATION: For the Council to accept the resignation of Greg Alsterlind and direct staff to recruit to fill the vacant positions.

BACKGROUND:

On August 25, 2025, Town staff received written notice from Greg Alsterlind, resigning from his position on the BPAC. The Bicycle & Pedestrian Advisory Committee deeply appreciate Greg's contributions and unwavering dedication and extend their sincere thanks for his service.

With this resignation, the Council may direct staff to begin recruiting and fill the vacancy.

FISCAL IMPACT

None.

CEQA AND CLIMATE ACTION PLAN CONSISTENCY

Accepting the boards, committees, and commissions' resignations is not defined as a project under CEQA (Section 15378 CEQA Guidelines).

ATTACHMENTS

Attachment 1- Greg Alsterlind Redacted Email

From: Greg Alsterlind
Date: August 25, 2025 at 3:51:29 PM PDT
To: Scott Schneider <sschneider@sananselmo.gov>
Subject: BPAC resignation

CAUTION: External Sender

Scott- after four years of serving and learning the time it takes to be useful, I have to step aside. Please let the group know my position is available. Thank you for all of your support. I believe you have been a great find for this town and I you continue with your success. Best

Greg

STAFF REPORT

TOWN OF SAN ANSELMO Item #: 1.3

MEETING DATE: September 9, 2025

AGENDA TITLE: Adopt Proclamation to Welcome, Recognize and Ratify Youth Commissioners for the Year 2025/26

FROM: Administration

RECOMMENDATION: For Town Council to Consider Adopting a Proclamation Recognizing and Ratifying All Town Youth Commissioners for the Year 2025/26

BACKGROUND

The Town of San Anselmo annually promotes the opportunity to become a Town of San Anselmo Youth Commissioner. Youth Commissioners serve as full voting members on a wide variety of Town Committees for one full year from July to June of the following year. During this time Youth Commissioners have the opportunity to serve their community, represent the school they're currently attending, learn about municipal government, and boost their college applications.

DISCUSSION/ANALYSIS

The following Youth Commissioners have been interviewed and appointed by and to the various boards, committees, and commissions:

Youth Commissioners for 2025/26	
Board, Committee, Commission	**Youth Commissioner Name:**
Arts Commission	Julia Wise
	Hanna Janson
	Esme Charles
	Ryan Cunningham

Bicycle and Pedestrian Advisory Committee	Jack DeNitto
	Liam Rosenbaum
Climate Action Commission	Ainsley Sullivan
	Isaac Terry
General Plan Advisory Committee	Nico Less
Historical Commission	Charlie Fee
	Stella Gueits
Library Advisory Board	Campbell Stoughton
Open Space	Claier Palmer
	Nico Less
Parks & Recreation Commission	Liam Rosenbaum
	Molly Ehrlinspiel
	Max Brasler

The Town of San Anselmo would like to welcome and ratify all Youth Commissioners, acknowledging their volunteer community service as an integral part of the Town's operations.

FISCAL IMPACT
None

CEQA AND CLIMATE ACTION PLAN CONSISTENCY
Adopting a proclamation to recognize the 2025/26 Town Youth Commissioners is not a "project" under the California Environmental Quality Act, because it does not involve an activity that has the potential to cause a direct or reasonably foreseeable indirect physical change in the environment. (Cal. Pub. Res. Code § 21065).

ATTACHMENTS
Attachment 1- Proclamation

PROCLAMATION

The Town of San Anselmo is pleased to welcome and recognize

YOUTH COMMISSIONER
FOR 2025-2026

WHEREAS; the Town of San Anselmo annually promotes the opportunity to become a Youth Commissioner; and

WHEREAS; Youth Commissioners serve as full voting members on a wide variety of Town Boards, Commissions, and Committees; and

WHEREAS; Youth Commissioners commit to a one-year term, starting on the month of July and ending in June of the following year; and

WHEREAS; Youth Commissioners have the opportunity to serve their community, represent the school they're currently attending, learn about municipal government, and to boost their college applications; and

WHEREAS; the Town of San Anselmo's Boards, Committees, and Commissions have interviewed and appointed more than ten Youth Commissioners for the current year;

NOW, THEREFORE, be it proclaimed, that the Town of San Anselmo, in appreciation of all Youth Commissioners' devotion and service to our Town, desires that there should be a public record of recognition for their community service.

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of September, two thousand twenty-five.

_____

Tarrell Kullaway, Mayor

STAFF REPORT

TOWN OF SAN ANSELMO Item #:1.4

MEETING DATE: September 9, 2025

AGENDA TITLE: Report of Checks Issued, August 2025

FROM: Jeff Zuba, Finance & Admin Services Director

RECOMMENDATION: That the Town Council acknowledges, and files warrant numbers 100258 to 100384 issued during the month of August and bank draft numbers DFT06290-DFT06297, DFT06300-DFT06303, and DFT06325in a total amount of $,2,793,906.99.

BACKGROUND

This report is an itemization of payments made to vendors during the months of August 2025. It also includes wires to Bank of America for August 2025 payrolls, including payments for retirement and health benefits. The Bank of America account is used for payroll-related items.

The following warrants were voided or canceled in August 2025: 100262 and 100265 .

ATTACHMENTS

Attachment #1: Check Report August 2025

Town of San Anselmo

Check Report

By Check Number

Date Range: 08/01/2025 - 08/31/2025

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: AP-AP - OPERATING POOL						
03521	Acumen Industrial Hygiene, Inc.	08/07/2025	Regular	0.00	1,400.00	100258
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
TSA2506	Invoice	03/17/2025	03.17.2025 - DEBRIS CONTAINMENT AND	0.00	1,400.00	
	15.41.63117	CONSTRUCTION - BUILDI	03.17.2025 - DEBRIS CONTAINM	1,400.00		
03778	Adelso Rodas	08/07/2025	Regular	0.00	1,500.00	100259
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
R16237	Invoice	08/04/2025	08.04.2025 - REFUND - ROAD BOND 441 L	0.00	1,500.00	
	01.00.20314	ROAD BOND	08.04.2025 - REFUND - ROAD B	1,500.00		
02986	Albertsons/Safeway	08/07/2025	Regular	0.00	220.24	100260
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
435109-063025-1	Invoice	06/30/2025	06.30.2025 - REC - CAMPKIDMARIN MINI	0.00	15.59	
	21.63.62985	CAMP KIDMARIN MINI S	06.30.2025 - REC - CAMPKIDMA	15.59		
435443-070225-1	Invoice	07/02/2025	07.02.2025 - REC DEPT - CAMPKIDMARIN	0.00	50.27	
	21.63.62985	CAMP KIDMARIN MINI S	07.02.2025 - REC DEPT - CAMPK	50.27		
805427-070925-1	Invoice	07/09/2025	07.09.2025 - REC DEPT - CAMPKIDMARIN	0.00	82.96	
	21.63.62985	CAMP KIDMARIN MINI S	07.09.2025 - REC DEPT - CAMPK	82.96		
806511-070925-1	Invoice	07/09/2025	07.09.2025 - REC - CAMPKIDMARIN MIGH	0.00	71.42	
	21.63.62984	CAMP KIDMARIN MIGHT	07.09.2025 - REC - CAMPKIDMA	71.42		
02920	Amazon Business	08/07/2025	Regular	0.00	4,376.80	100261
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
134L-DF71-4GN7	Invoice	07/23/2025	07.23.2025 - REC - CAMPKIDMARIN SUPP	0.00	75.65	
	21.63.62985	CAMP KIDMARIN MINI S	07.23.2025 - REC - CAMPKIDMA	75.65		
13F4-YCWY-DWR	Invoice	07/28/2025	07.28.2025 - REC - CAMPKIDMARIN MIGH	0.00	315.96	
	21.63.62984	CAMP KIDMARIN MIGHT	07.28.2025 - REC - CAMPKIDMA	315.96		
13RT-X7N6-CHNY	Invoice	07/29/2025	07.29.2025 - REC - MADDIE PINO GIFT BA	0.00	73.17	
	21.64.61185	SPECIAL EVENT EXPENSE	07.29.2025 - REC - MADDIE PIN	73.17		
17C1-W1RJ-FPVK	Invoice	07/12/2025	07.12.2025 - ST&PK - ANTI RUST SPRAY	0.00	57.78	
	01.42.62200	DEPARTMENTAL SUPPLIE	07.12.2025 - ST&PK - ANTI RUST	57.78		
17RC-313C-VGNC	Invoice	07/16/2025	07.16.2025 - ST&PK - A FRAME SIDEWALK	0.00	954.60	
	60.14.62903	LIVE ON THE AVENUE	07.16.2025 - ST&PK - A FRAME	954.60		
1FKC-DMR6-DC9	Invoice	07/29/2025	07.29.2025 - REC - CAMPKIDMARIN MIGH	0.00	177.15	
	21.63.62984	CAMP KIDMARIN MIGHT	07.29.2025 - REC - CAMPKIDMA	177.15		
1HH4-GYY9-693C	Invoice	08/04/2025	08.04.2025 - REC - CAMPKIDMARIN MIGH	0.00	415.17	
	21.63.62984	CAMP KIDMARIN MIGHT	08.04.2025 - REC - CAMPKIDMA	415.17		
1KKF-T64D-63FY	Invoice	08/04/2025	08.04.2025 - REC - CAMPKIDMARIN MIGH	0.00	274.32	
	21.63.62984	CAMP KIDMARIN MIGHT	08.04.2025 - REC - CAMPKIDMA	274.32		
1KXW-11K4-1HD	Invoice	07/23/2025	07.23.2025 - REC - ROBSON SUPPLIES	0.00	375.44	
	21.63.61187	ROBSON AFTER SCHOOL	07.23.2025 - REC - ROBSON SUP	375.44		
1PMN-7RT1-1TK1	Invoice	08/03/2025	08.03.2025 - REC - CAMPKIDMARIN MIGH	0.00	365.33	
	21.63.62984	CAMP KIDMARIN MIGHT	08.03.2025 - REC - CAMPKIDMA	365.33		
1PMN-7TR1-GHV	Invoice	08/04/2025	08.04.2025 - LIB - THERMAL CAMERA	0.00	180.25	
	27.71.62200	DEPARTMENTAL SUPPLIE	08.04.2025 - LIB - THERMAL CA	180.25		

Check Report **Date Range: 08/01/2025 - 08/31/2025**

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
1PNG-9VTF-DPRP	Invoice	07/28/2025	07.28.2025 - REC - CAMPKIDMARIN MIGH	0.00	226.89	
	21.63.62985	CAMP KIDMARIN MINI S	07.28.2025 - REC - CAMPKIDMA		226.89	
1Q1P-RWJG-96R	Invoice	07/23/2025	07.23.2025 - CDD - LAPTOP STAND/PAPER	0.00	99.84	
	01.18.62000	OFFICE SUPPLIES	07.23.2025 - CDD - LAPTOP STA		33.27	
	01.19.62200	DEPARTMENTAL SUPPLIE	07.23.2025 - CDD - LAPTOP STA		33.28	
	01.41.62000	OFFICE SUPPLIES	07.23.2025 - CDD - LAPTOP STA		33.29	
1R9R-M7RV-936	Invoice	08/04/2025	08.04.2025 - REC - ROBSON SUPPLIES	0.00	393.86	
	21.63.61187	ROBSON AFTER SCHOOL	08.04.2025 - REC - ROBSON SUP		393.86	
1TKX-WD16-6Q3	Invoice	07/29/2025	07.29.2025 - REC - CAMPKIDMARIN MINI	0.00	17.31	
	21.63.62985	CAMP KIDMARIN MINI S	07.29.2025 - REC - CAMPKIDMA		17.31	
1TKX-WD16-KDG	Invoice	07/30/2025	07.30.2025 - REC - WIRELESS MOUSE	0.00	10.79	
	21.65.62000	OFFICE SUPPLIES	07.30.2025 - REC - WIRELESS M		10.79	
1VG1-4Y7C-D6M	Invoice	07/29/2025	07.29.2025 - REC - CAMPKIDMARIN MIGH	0.00	76.10	
	21.63.62985	CAMP KIDMARIN MINI S	07.29.2025 - REC - CAMPKIDMA		76.10	
1X4G-4P1G-KKF6	Invoice	07/30/2025	07.30.2025 - REC - ROBSON SUPPLIES	0.00	287.19	
	21.63.61187	ROBSON AFTER SCHOOL	07.30.2025 - REC - ROBSON HO		287.19	
	Void	08/07/2025	Regular	0.00	0.00	100262
00001	AT&T Calnet	08/07/2025	Regular	0.00	63.16	100263
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
576-07272025	Invoice	07/27/2025	576 - TH CHAMBERS PHONE - 06.27.25-07	0.00	63.16	
	41.41.61701	UTILITIES	576 - TH CHAMBERS PHONE - 0		63.16	
00388	Baker & Taylor	08/07/2025	Regular	0.00	956.58	100264
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
2039177316	Invoice	07/11/2025	07.11.2025 - CHILDREN'S BOOKS	0.00	18.43	
	01.71.62302	CHILDRENS BOOKS	07.11.2025 - CHILDREN'S BOOK		18.43	
2039177317	Invoice	07/11/2025	07.11.2025 - CHILDREN'S BOOKS	0.00	52.45	
	01.71.62302	CHILDRENS BOOKS	07.11.2025 - CHILDREN'S BOOK		52.45	
2039177411	Invoice	07/11/2025	07.11.2025 - ADULT BOOKS	0.00	21.88	
	27.71.62301	ADULT BOOKS	07.11.2025 - ADULT BOOKS		21.88	
2039177412	Invoice	07/11/2025	07.11.2025 - ADULT BOOKS	0.00	27.96	
	27.71.62301	ADULT BOOKS	07.11.2025 - ADULT BOOKS		27.96	
2039177413	Invoice	07/11/2025	07.11.2025 - ADULT BOOKS	0.00	23.87	
	27.71.62301	ADULT BOOKS	07.11.2025 - ADULT BOOKS		23.87	
2039177414	Invoice	07/11/2025	07.11.2025 - ADULT BOOKS	0.00	45.11	
	27.71.62301	ADULT BOOKS	07.11.2025 - ADULT BOOKS		45.11	
2039188377	Invoice	07/18/2025	07.18.2025 - ADULT BOOKS	0.00	47.74	
	27.71.62301	ADULT BOOKS	07.18.2025 - ADULT BOOKS		47.74	
2039188378	Invoice	07/18/2025	07.18.2025 - ADULT BOOKS	0.00	32.44	
	27.71.62301	ADULT BOOKS	07.18.2025 - ADULT BOOKS		32.44	
2039188379	Invoice	07/18/2025	07.18.2025 - ADULT BOOKS	0.00	17.86	
	27.71.62301	ADULT BOOKS	07.18.2025 - ADULT BOOKS		17.86	
2039188380	Invoice	07/18/2025	07.18.2025 - ADULT BOOKS	0.00	25.84	
	27.71.62301	ADULT BOOKS	07.18.2025 - ADULT BOOKS		25.84	
2039193666	Invoice	07/22/2025	07.22.2025 - ADULT BOOKS	0.00	22.55	
	27.71.62301	ADULT BOOKS	07.22.2025 - ADULT BOOKS		22.55	
2039193667	Invoice	07/22/2025	07.22.2025 - ADULT BOOKS	0.00	372.30	
	27.71.62301	ADULT BOOKS	07.22.2025 - ADULT BOOKS		372.30	
2039193668	Invoice	07/22/2025	07.22.2025 - ADULT BOOKS	0.00	66.37	
	27.71.62301	ADULT BOOKS	07.22.2025 - ADULT BOOKS		66.37	
2039193669	Invoice	07/22/2025	07.22.2025 - ADULT BOOKS	0.00	30.29	

Check Report **Date Range: 08/01/2025 - 08/31/2025**

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
	27.71.62301 ADULT BOOKS		07.22.2025 - ADULT BOOKS		30.29	
2039193670	Invoice	07/22/2025	07.22.2025 - ADULT BOOKS	0.00	14.25	
	27.71.62301 ADULT BOOKS		07.22.2025 - ADULT BOOKS		14.25	
2039193671	Invoice	07/22/2025	07.22.2025 - ADULT BOOKS	0.00	21.24	
	27.71.62301 ADULT BOOKS		07.22.2025 - ADULT BOOKS		21.24	
5019585031	Invoice	07/01/2025	07.01.2025 - CHILDREN'S BOOKS	0.00	28.79	
	01.71.62302 CHILDRENS BOOKS		07.01.2025 - CHILDREN'S BOOK		28.79	
H72846680	Invoice	07/01/2025	07.01.2025 - VIDEOS	0.00	24.89	
	01.71.62307 VIDEOS		07.01.2025 - VIDEOS		24.89	
H72846720	Invoice	07/01/2025	07.01.2025 - VIDEOS	0.00	17.50	
	01.71.62307 VIDEOS		07.01.2025 - VIDEOS		17.50	
H72896830	Invoice	07/10/2025	07.10.2025 - VIDEOS	0.00	44.82	
	01.71.62307 VIDEOS		07.10.2025 - VIDEOS		44.82	
	Void	08/07/2025	Regular	0.00	0.00	100265
00007	Bay Cities Joint Power Insurance Authority	08/07/2025	Regular	0.00	6,678.63	100266
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
BCJPIA-0322-202	Invoice	06/30/2025	07.25.2025 - LIABILITY/WORKERS COMP -	0.00	6,678.63	
	40.21.61906	LIABILITY INSURANCE CLA	07.25.2025 - LIABILITY/WORKER	4,397.00		
	40.21.61907	WORKERS COMPENSATIO	07.25.2025 - LIABILITY/WORKER	2,281.63		
00061	Bill Jacobson	08/07/2025	Regular	0.00	337.50	100267
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
1657	Invoice	07/30/2025	07.30.2025 - SANHUB AUDIO ARCHIVE - J	0.00	337.50	
	01.12.61150	OUTSIDE SERVICES-OTHE	07.30.2025 - SANHUB AUDIO AR	337.50		
03946	BlueTriton Brands Inc	08/07/2025	Regular	0.00	187.95	100268
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
05G8720212838	Invoice	07/24/2025	07.24.2025 - WATER DELIVERY - JUL 2025	0.00	187.95	
	21.65.62200	DEPARTMENTAL SUPPLIE	07.24.2025 - WATER DELIVERY -	187.95		
00032	Brady Industries, NorCal	08/07/2025	Regular	0.00	549.44	100269
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
10378626	Invoice	07/21/2025	07.21.2025 - CORPYARD - JANITORIAL SUP	0.00	549.44	
	41.41.61501	BLDG. MAINT-JANITORIAL	07.21.2025 - CORPYARD - JANIT	549.44		
00193	CalMat Company	08/07/2025	Regular	0.00	694.55	100270
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
2507-017847	Invoice	07/30/2025	07.30.2025 - BUS HUB - DRAINAGE/CRUS	0.00	694.55	
	01.81.62200	DEPARTMENTAL SUPPLIE	07.30.2025 - BUS HUB - DRAINA	694.55		
03135	CentralSquare Technologies	08/07/2025	Regular	0.00	6,268.12	100271
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
443687	Invoice	08/01/2025	08.01.2025 - HORIZON CLOUD TRAKIT AN	0.00	6,268.12	
	42.21.61150	OUTSIDE SERVICES-OTHE	08.01.2025 - HORIZON CLOUD T	6,268.12		
02315	Coastland Civil Engineering Inc.	08/07/2025	Regular	0.00	1,485.00	100272
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
62322	Invoice	06/30/2025	06.30.2025 - BLDG DEPT SERVICES - JUN 2	0.00	1,485.00	
	01.41.61150	OUTSIDE SERVICES-OTHE	06.30.2025 - BLDG DEPT SERVIC	1,485.00		
02524	Code Source	08/07/2025	Regular	0.00	5,676.00	100273

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Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
11940	Invoice	06/18/2025	06.18.2025 - INITIAL REVIEW - 39 BENNIT	0.00	1,627.00	
	01.41.61157	PLAN CHECKING	06.18.2025 - INITIAL REVIEW - 3	1,627.00		
11945	Invoice	07/03/2025	07.03.2025 - INITIAL REVIEW - 10 CREST R	0.00	1,303.00	
	01.19.61150	OUTSIDE SERVICES-OTHE	07.03.2025 - INITIAL REVIEW - 1	1,303.00		
11951	Invoice	07/17/2025	07.17.2025 - COMPLETE PLAN REVIEW 15	0.00	1,767.00	
	01.19.61150	OUTSIDE SERVICES-OTHE	07.17.2025 - COMPLETE PLAN R	1,767.00		
11956	Invoice	07/27/2025	07.27.2025 - RECHECK REVIEW - 20 WOO	0.00	979.00	
	01.19.61150	OUTSIDE SERVICES-OTHE	07.27.2025 - RECHECK REVIEW -	979.00		
00072	Comcast	08/07/2025	Regular	0.00	183.73	100274
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
049-07222025	Invoice	07/22/2025	049 - TH UTILITIES - 07.27.25-08.26.25	0.00	183.73	
	41.41.61701	UTILITIES	049 - TH UTILITIES - 07.27.25-08	183.73		
03853	Dana V. Beck	08/07/2025	Regular	0.00	7,500.00	100275
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
RVFH INVOICE 14	Invoice	07/18/2025	07.18.2025 - RVFH20 ONSITE PROJECT M	0.00	7,500.00	
	15.32.63100	CONSTRUCTION	07.18.2025 - RVFH20 ONSITE PR	7,500.00		
03567	DARCY BELL	08/07/2025	Regular	0.00	1,090.72	100276
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0014991	Invoice	06/30/2025	07.30.2025 - SNACK SHACK RECEIPTS - EN	0.00	1,090.72	
	01.82.62206	Snack Shack	07.30.2025 - SNACK SHACK REC	1,090.72		
00533	Davis Sign Company	08/07/2025	Regular	0.00	560.45	100277
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
40197	Invoice	07/28/2025	07.28.2025 - AFRAME INSERTS - TRAFFIC	0.00	327.75	
	14.41.63123	CAPITAL OUTLAY - SIGNAL	07.28.2025 - AFRAME INSERTS -	327.75		
40229	Invoice	08/04/2025	08.04.2025 - MEMORIAL SIGNS UPDATE	0.00	180.26	
	15.81.63100	CONSTRUCTION	08.04.2025 - MEMORIAL SIGNS	180.26		
40230	Invoice	08/01/2025	08.01.2025 - LOTA QR CODE PATCHES VAL	0.00	52.44	
	60.14.62903	LIVE ON THE AVENUE	08.01.2025 - LOTA QR CODE PAT	52.44		
01320	DC Electric Group Inc	08/07/2025	Regular	0.00	9,921.00	100278
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
477404	Invoice	07/23/2025	07.23.2025 - CORPYARD EV CHARGING	0.00	9,921.00	
	15.41.63100	CONSTRUCTION	07.23.2025 - CORPYARD EV CHA	9,921.00		
00266	Edwin P Gurka, Jr	08/07/2025	Regular	0.00	838.75	100279
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
14-2025	Invoice	07/23/2025	07.23.2025 - ARBORIST SERVICES - JUL 20	0.00	838.75	
	01.81.61105	OUTSIDE SERVICES-TREES	07.23.2025 - ARBORIST SERVICE	838.75		
00087	Elite Tree Service	08/07/2025	Regular	0.00	21,395.09	100280
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
2025-7-10	Invoice	07/18/2025	07.18.2025 - FIRE CLEARANCE ROBSON/S	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	07.18.2025 - FIRE CLEARANCE R	2,880.00		
2025-7-11	Invoice	07/18/2025	07.18.2025 - FIRE CLEARANCE MEMORIAL	0.00	2,880.00	
	01.81.61104	OUTSIDE SERVICES-GROU	07.18.2025 - FIRE CLEARANCE	2,880.00		

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
2025-7-12	Invoice	07/18/2025	07.18.2025 - FIRE CLEARANCE DOG PARK	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	07.18.2025 - FIRE CLEARANCE D		2,880.00	
2025-7-13	Invoice	07/18/2025	07.18.2025 - FIRE CLEARANCE SA/SR GULL	0.00	2,962.97	
	35.41.61150	OUTSIDE SERVICES-OTHE	07.18.2025 - FIRE CLEARANCE S		2,962.97	
2025-7-14	Invoice	07/25/2025	07.25.2025 - EMERGENCY TREE REMOVAL	0.00	2,880.00	
	01.81.61105	OUTSIDE SERVICES-TREES	07.25.2025 - EMERGENCY TREE		2,880.00	
2025-7-15	Invoice	07/25/2025	07.25.2025 - CENTER/CREEK RDS - TREE R	0.00	3,600.00	
	01.42.61144	Medians	07.25.2025 - CENTER/CREEK RD		1,300.00	
	01.81.61105	OUTSIDE SERVICES-TREES	07.25.2025 - CENTER/CREEK RD		2,300.00	
2025-7-16	Invoice	07/28/2025	07.28.2025 - WINDSHIELD REPLACEMENT	0.00	432.12	
	35.41.61150	OUTSIDE SERVICES-OTHE	07.28.2025 - WINDSHIELD REPL		432.12	
2025-7-9	Invoice	07/18/2025	07.18.2025 - FIRE CLEARANCE IDLEWOOD	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	07.18.2025 - FIRE CLEARANCE I		2,880.00	
02777	Elizabeth Flanagan	08/07/2025	Regular	0.00	91.00	100281
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
08042025-4	Invoice	08/04/2025	08.04.2025 - PAINTING WORKSHOPS - JUL	0.00	91.00	
	21.62.61171	ADULT CULTURE SERVICE	08.04.2025 - PAINTING WORKS		91.00	
03396	Emily B. Stucky	08/07/2025	Regular	0.00	875.00	100282
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
0625	Invoice	06/30/2025	07.29.2025 - SING AND STOMP - JUN 202	0.00	500.00	
	01.71.61132	OUTSIDE SVCS-PROGRAM	07.29.2025 - SING AND STOMP -		500.00	
0725	Invoice	07/29/2025	07.29.2025 - SING AND STOMP - JUL 2025	0.00	375.00	
	01.71.61132	OUTSIDE SVCS-PROGRAM	07.29.2025 - SING AND STOMP -		375.00	
00092	Ewing Irrigation Products	08/07/2025	Regular	0.00	109.74	100283
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
26849560	Invoice	07/14/2025	07.14.2025 - MEMORIAL PARK - IRRIGATI	0.00	109.74	
	01.42.62200	DEPARTMENTAL SUPPLIE	07.14.2025 - MEMORIAL PARK -		109.74	
00017	Fairfax Building Supply Co. Inc.	08/07/2025	Regular	0.00	326.62	100284
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
299866	Invoice	07/16/2025	07.16.2025 - WASP/HORNET KILLER & HA	0.00	9.93	
	41.41.61150	OUTSIDE SERVICES-OTHE	07.16.2025 - WASP/HORNET KIL		9.93	
299917	Invoice	07/17/2025	07.17.2025 - ICC - CONNECTORS/HARDW	0.00	75.87	
	31.41.61506	BLDG. MAINT-OTHER	07.17.2025 - ICC - CONNECTORS		75.87	
299939	Invoice	07/18/2025	07.18.2025 - FERTILIZER	0.00	41.81	
	95.41.61150	OUTSIDE SERVICES-OTHE	07.18.2025 - FERTILIZER		41.81	
300082	Invoice	07/21/2025	07.21.2025 - MEDIUM SAN/MALLET/LEVE	0.00	67.62	
	01.81.62200	DEPARTMENTAL SUPPLIE	07.21.2025 - MEDIUM SAN/MA		67.62	
300189	Invoice	07/23/2025	07.23.2025 - MEDIUM SAND	0.00	32.34	
	01.81.62200	DEPARTMENTAL SUPPLIE	07.23.2025 - MEDIUM SAND		32.34	
300310	Invoice	07/25/2025	07.25.2025 - FERTILIZER	0.00	20.91	
	95.41.61150	OUTSIDE SERVICES-OTHE	07.25.2025 - FERTILIZER		20.91	
300384	Invoice	07/28/2025	07.28.2025 - CREEK PARK - FENCE SUPPLI	0.00	78.14	
	01.81.62200	DEPARTMENTAL SUPPLIE	07.28.2025 - CREEK PARK - FENC		78.14	
04034	George Masker	08/07/2025	Regular	0.00	77,377.50	100285

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Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
43781A	Invoice	07/18/2025	07.18.2025 - ROBSON EXTERIOR PAINTIN	0.00	19,344.37	
	15.41.63117	CONSTRUCTION - BUILDI	07.18.2025 - ROBSON EXTERIOR	19,344.37		
43781B	Invoice	06/30/2025	07.18.2025 - ROBSON EXTERIOR PAINTIN	0.00	58,033.13	
	15.41.63117	CONSTRUCTION - BUILDI	07.18.2025 - ROBSON EXTERIOR	58,033.13		
03776	GFDS Engineers, Inc.	08/07/2025	Regular	0.00	4,165.00	100286
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
25037.00-2	Invoice	06/30/2025	07.15.2025 - SA LIBRARY - JUN 2025	0.00	4,165.00	
	41.41.63117	CONSTRUCTION - BUILDI	07.15.2025 - SA LIBRARY - JUN 2	4,165.00		
03712	Gridscape Solutions, Inc.	08/07/2025	Regular	0.00	30,318.87	100287
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
SAL/10/2025	Invoice	06/04/2025	06.04.2025 - RESILIENT HUB - MILESTONE	0.00	14,952.06	
	15.90.63100	CONSTRUCTION	06.04.2025 - RESILIENT HUB - M	14,952.06		
SAL/11/2025	Invoice	07/30/2025	Resilient Hub: COR #4 Charger & Cor #5 Fl	0.00	15,366.81	
	15.90.63100	CONSTRUCTION	Resilient Hub: COR #4 Charger &	15,366.81		
02399	HdL Coren & Cone	08/07/2025	Regular	0.00	2,302.58	100288
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
SIN052769	Invoice	07/28/2025	07.28.2025 - CONTRACT SVCS PROP TAX -	0.00	2,302.58	
	01.12.61150	OUTSIDE SERVICES-OTHE	07.28.2025 - CONTRACT SVCS P	2,302.58		
02586	HdL Software LLC	08/07/2025	Regular	0.00	1,997.86	100289
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
SIN052364	Invoice	06/30/2025	06.30.2025 - NEW ACCOUNTS PROCESSED	0.00	1,997.86	
	01.12.61150	OUTSIDE SERVICES-OTHE	06.30.2025 - NEW ACCOUNTS P	1,997.86		
03332	Heidi Scoble	08/07/2025	Regular	0.00	41.78	100290
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0014985	Invoice	07/28/2025	07.28.2025 - REIMB - CELEBRATORY SUPP	0.00	41.78	
	01.18.62000	OFFICE SUPPLIES	07.28.2025 - REIMB - CELEBRAT	41.78		
02236	HooplaDigital	08/07/2025	Regular	0.00	968.39	100291
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
507536011	Invoice	07/31/2025	07.31.2025 - DIGITAL ACCOUNT - LIBRARY	0.00	968.39	
	27.71.62309	E BOOKS	07.31.2025 - DIGITAL ACCOUNT	968.39		
03913	Independent Distribution Collective LLC	08/07/2025	Regular	0.00	2,899.20	100292
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0014992	Invoice	08/04/2025	08.04.2025 - SHOW/CONCERT MGMT - A	0.00	2,350.00	
	60.14.62903	LIVE ON THE AVENUE	08.04.2025 - SHOW/CONCERT	2,350.00		
REIM-LOTA-2025-	Invoice	08/05/2025	08.05.2025 - REIMB - LOTA EQUIPMENT	0.00	549.20	
	21.64.61185	SPECIAL EVENT EXPENSE	08.05.2025 - REIMB - LOTA EQUI	549.20		
03837	Ivy Tzur	08/07/2025	Regular	0.00	13,380.00	100293

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Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
11	Invoice	08/04/2025	08.04.2025 - PROJECT MGMT - 06.30.25-0	0.00	13,380.00	
	01.41.61150	OUTSIDE SERVICES-OTHE	08.04.2025 - PROJECT MGMT -	2,676.00		
	14.41.63127	SAFE ROUTES	08.04.2025 - PROJECT MGMT -	4,014.00		
	15.32.63100	CONSTRUCTION	08.04.2025 - PROJECT MGMT -	4,014.00		
	41.41.63117	CONSTRUCTION - BUILDI	08.04.2025 - PROJECT MGMT -	2,676.00		
00022	Jackson's Hardware Inc.	08/07/2025	Regular	0.00	387.96	100294
182918	Invoice	07/24/2025	07.24.2025 - GENERAL SUPPLIES/HARDW	0.00	387.96	
	01.42.62200	DEPARTMENTAL SUPPLIE	07.24.2025 - GENERAL SUPPLIES	387.96		
03581	Jocelyn K Lee	08/07/2025	Regular	0.00	150.00	100295
9	Invoice	07/22/2025	07.22.2025 - MONDAY STORYTIME SUB 0	0.00	150.00	
	01.71.61132	OUTSIDE SVCS-PROGRAM	07.22.2025 - MONDAY STORYTI	150.00		
03934	John D'Andrea	08/07/2025	Regular	0.00	30.00	100296
INV0014987	Invoice	07/31/2025	07.31.2025 - REFUND - BUSINESS LICENSE	0.00	30.00	
	01.00.42001	BUSINESS LICENSE TAX	07.31.2025 - REFUND - BUSINES	30.00		
02558	Kanopy	08/07/2025	Regular	0.00	844.00	100297
463081	Invoice	07/31/2025	07.31.2025 - VIDEOS - LIBRARY - JUL 2025	0.00	844.00	
	27.71.62307	VIDEOS	07.31.2025 - VIDEOS - LIBRARY -	844.00		
04032	Karen Mendelow	08/07/2025	Regular	0.00	66.44	100298
INV0014997	Invoice	07/29/2025	07.29.2025 - REIMB - CAC GARDEN PROJE	0.00	66.44	
	90.41.61150	OUTSIDE SERVICES-OTHE	07.29.2025 - REIMB - CAC GARD	66.44		
01707	Kevin Keith	08/07/2025	Regular	0.00	675.00	100299
INV0014995	Invoice	08/04/2025	08.04.2025 - CAMP BACKWARDS FIELD TR	0.00	675.00	
	21.63.61184	CAMP KIDMARIN MIGHT	08.04.2025 - CAMP BACKWARD	337.50		
	21.63.61207	CAMP KIDMARIN MINI SE	08.04.2025 - CAMP BACKWARD	337.50		
03549	Kid's Choice Camps LLC	08/07/2025	Regular	0.00	3,248.50	100300
07282025-2	Invoice	07/28/2025	07.28.2025 - DUNGEONS & DRAGONS CA	0.00	826.00	
	21.63.61186	SPECIALTY CAMPS SERVIC	07.28.2025 - DUNGEONS & DRA	826.00		
08042025-5	Invoice	08/04/2025	08.04.2025 - CARPENTRY FOR KIDS - WEE	0.00	60.00	
	21.63.61186	SPECIALTY CAMPS SERVIC	08.04.2025 - CARPENTRY FOR KI	60.00		
INV0014993	Invoice	08/04/2025	08.04.2025 - CARPENTRY FOR KIDS - WEE	0.00	2,362.50	
	21.63.61186	SPECIALTY CAMPS SERVIC	08.04.2025 - CARPENTRY FOR KI	2,362.50		
04006	Kyocera Document Solutions Northern Californ	08/07/2025	Regular	0.00	139.37	100301

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
55E1838991	Invoice	07/29/2025	07.29.2025 - CONTRACT BASE RATE 06.13	0.00	139.37	
	42.21.63003	COMPUTER HARDWARE/	07.29.2025 - CONTRACT BASE R	139.37		
03417	Lindsey Klein	08/07/2025	Regular	0.00	86.21	100302
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0014984	Invoice	07/24/2025	07.24.2025 - REIMB - INTERN SENDOFF L	0.00	86.21	
	01.18.61150	OUTSIDE SERVICES-OTHE	07.24.2025 - REIMB - INTERN SE	86.21		
00377	Luis Quezada	08/07/2025	Regular	0.00	6,671.00	100303
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0014990	Invoice	07/24/2025	07.24.2025 - USA SOCCER CAMP 07/14	0.00	3,538.50	
	21.63.61183	CAMP SPORTS SERVICES	07.24.2025 - USA SOCCER CAM	3,538.50		
INV0014994	Invoice	08/05/2025	08.05.2025 - USA SOCCER CAMP 07/28	0.00	3,132.50	
	21.63.61183	CAMP SPORTS SERVICES	08.05.2025 - USA SOCCER CAM	3,132.50		
00029	Marin IT	08/07/2025	Regular	0.00	41,928.09	100304
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
2025-127824	Invoice	06/13/2025	06.13.2025 - AGREEMENT IT MGMT SUPP	0.00	5,026.37	
	01.21.61150	OUTSIDE SERVICES-OTHE	06.13.2025 - AGREEMENT IT M	5,026.37		
2025-127990	Invoice	06/30/2025	07.11.2025 - ONSITE SUPPORT/SSL RENE	0.00	5,819.99	
	01.21.61150	OUTSIDE SERVICES-OTHE	07.11.2025 - ONSITE SUPPORT/	5,819.99		
2025-128144	Invoice	06/30/2025	07.16.2025 - AGMNT MANAGED OFFICE3	0.00	2,005.50	
	01.21.61150	OUTSIDE SERVICES-OTHE	07.16.2025 - AGMNT MANAGED	2,005.50		
2025-128261	Invoice	06/30/2025	07.25.2025 - AGREEMENT IT MGMT SUPP	0.00	5,026.67	
	01.12.61150	OUTSIDE SERVICES-OTHE	07.25.2025 - AGREEMENT IT M	5,026.67		
2025-128323	Invoice	06/30/2025	06.30.2025 - WORK STN REPLACEMENTS	0.00	24,049.56	
	01.00.48064	BUILDING TECHNICAL FEE	06.30.2025 - WORK STN REPLAC	4,703.24		
	01.21.61150	OUTSIDE SERVICES-OTHE	06.30.2025 - WORK STN REPLAC	15,236.28		
	01.41.61150	OUTSIDE SERVICES-OTHE	06.30.2025 - WORK STN REPLAC	2,055.02		
	01.71.61150	OUTSIDE SERVICES-OTHE	06.30.2025 - WORK STN REPLAC	2,055.02		
01036	Matrix HG Inc	08/07/2025	Regular	0.00	270.00	100305
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
188150	Invoice	07/28/2025	07.28.2025 - BOILER PUMP LEAK	0.00	270.00	
	41.41.61150	OUTSIDE SERVICES-OTHE	07.28.2025 - BOILER PUMP LEA	270.00		
00372	Miller Pacific	08/07/2025	Regular	0.00	1,758.50	100306
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
38577	Invoice	06/30/2025	07.23.2025 - FH20 PHASE 2&3 - OCT 2024	0.00	1,758.50	
	15.32.63100	CONSTRUCTION	07.23.2025 - FH20 PHASE 2&3 -	1,758.50		
01916	NATIONAL ACADEMY OF ATHLETICS	08/07/2025	Regular	0.00	2,431.80	100307
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0014989	Invoice	07/24/2025	07.24.2025 - FLAG FOOTBALL 07/21	0.00	2,431.80	
	21.63.61183	CAMP SPORTS SERVICES	07.24.2025 - FLAG FOOTBALL 07	2,431.80		
01388	NCSI	08/07/2025	Regular	0.00	185.00	100308
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
58271	Invoice	06/01/2025	06.01.2025 - REC DEPT BACKGROUND CH	0.00	148.00	
	21.65.61137	FINGERPRINTING	06.01.2025 - REC DEPT BACKGR	148.00		

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
60333	Invoice 08/01/2025	08.01.2025 - BACKGROUND CHECKS - REC		0.00	37.00	
	21.65.61137 FINGERPRINTING	08.01.2025 - BACKGROUND CHE		37.00		
01346	Nerviani Paving Inc	08/07/2025	Regular	0.00	13,500.00	100309
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
7701	Invoice 07/10/2025	07.10.2025 - ASPHALT REPLCMNT - 43/45		0.00	13,500.00	
	15.41.63109 UNPROGRAMMED DRAIN	07.10.2025 - ASPHALT REPLCMN		13,500.00		
00165	Pacific Telemanagement Services - PTS	08/07/2025	Regular	0.00	93.00	100310
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
2144778	Invoice 07/24/2025	07.24.2025 - TH PAYPHONE - AUG 2025		0.00	93.00	
	01.42.61705 UTILITIES-TELEPHONE	07.24.2025 - TH PAYPHONE - AU		93.00		
03397	Patrick O' Neill	08/07/2025	Regular	0.00	34,603.00	100311
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
184	Invoice 06/16/2025	06.16.2025 - FH20 CONSTRUCTION - JAN-		0.00	34,603.00	
	15.32.63100 CONSTRUCTION	06.16.2025 - FH20 CONSTRUCTI		34,603.00		
04031	Positive Coaching Alliance	08/07/2025	Regular	0.00	500.00	100312
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
INV-85799	Invoice 07/30/2025	07.30.2025 - TRAINING FOR YOUTH SOCC		0.00	500.00	
	21.61.61164 SOCCER SERVICES	07.30.2025 - TRAINING FOR YO		500.00		
02839	Quadient Finance USA, Inc	08/07/2025	Regular	0.00	1,000.00	100313
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
274-07212025	Invoice 06/30/2025	07.21.2025 - TH POSTAGE - JUN 2025		0.00	1,000.00	
	01.12.62003 POSTAGE	07.21.2025 - TH POSTAGE - JUN		200.00		
	01.18.62003 POSTAGE	07.21.2025 - TH POSTAGE - JUN		200.00		
	01.41.62003 POSTAGE	07.21.2025 - TH POSTAGE - JUN		200.00		
	01.71.62003 POSTAGE	07.21.2025 - TH POSTAGE - JUN		200.00		
	01.82.62003 POSTAGE	07.21.2025 - TH POSTAGE - JUN		200.00		
03579	Recreation Reimagined Inc	08/07/2025	Regular	0.00	4,854.50	100314
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
07282025-1	Invoice 07/28/2025	07.28.2025 - CAMP WILDFLOWER - WEEK		0.00	2,044.00	
	21.63.61186 SPECIALTY CAMPS SERVIC	07.28.2025 - CAMP WILDFLOWE		2,044.00		
08042025-3	Invoice 08/04/2025	08.04.2025 - BABYSITTER TRAINING - WEE		0.00	2,810.50	
	21.63.61186 SPECIALTY CAMPS SERVIC	08.04.2025 - BABYSITTER TRAIN		2,810.50		
03696	Sequoia Ecological Consulting, Inc.	08/07/2025	Regular	0.00	8,204.85	100315
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
000002025251	Invoice 06/02/2025	06.02.2025 - SORICH BOTANICAL SURVEYS		0.00	8,204.85	
	35.41.61150 OUTSIDE SERVICES-OTHE	06.02.2025 - SORICH BOTANICA		8,204.85		
03590	The Marin Dojo, Inc.	08/07/2025	Regular	0.00	144.00	100316
Payable #	**Payable Type** **Post Date**	**Payable Description**		**Discount Amount**	**Payable Amount**	
	Account Number **Account Name**	**Item Description**		**Distribution Amount**		
07282025-3	Invoice 07/28/2025	07.28.2025 - TAI CHI - JUL 2025		0.00	144.00	
	21.62.61171 ADULT CULTURE SERVICE	07.28.2025 - TAI CHI - JUL 2025		144.00		
00211	Tim Musselman	08/07/2025	Regular	0.00	200.00	100317

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0014996	Invoice	04/16/2025	04.16.2025 - BREAKFAST WITH SANTA 202	0.00	200.00	
	60.14.62926	BREAKFAST WITH SANTA	04.16.2025 - BREAKFAST WITH S	200.00		
03207	Toni DeFrancis	08/07/2025	Regular	0.00	340.00	100318
2025-PC721	Invoice	07/29/2025	07.29.2025 - TRANSCRIPTION PC 07/21	0.00	180.00	
	01.12.60010	TEMPORARY HELP	07.29.2025 - TRANSCRIPTION P	180.00		
2025-TC722	Invoice	08/02/2025	08.02.2025 - TRANSCRIPTION TC 07/22	0.00	160.00	
	01.12.61150	OUTSIDE SERVICES-OTHE	08.02.2025 - TRANSCRIPTION T	160.00		
00696	Town of Fairfax	08/07/2025	Regular	0.00	16,637.49	100319
4-2025-0630	Invoice	06/30/2025	07.25.2025 - REIMB - CLIMATE ACTION CR	0.00	16,637.49	
	90.41.61100	OUTSIDE SERVICES	07.25.2025 - REIMB - CLIMATE A	16,637.49		
00215	Transbay Lock	08/07/2025	Regular	0.00	191.19	100320
94198	Invoice	07/24/2025	07.24.2025 - TENNIS COURT KEYS	0.00	191.19	
	01.81.61150	OUTSIDE SERVICES-OTHE	07.24.2025 - TENNIS COURT KEY	191.19		
00220	Underground Service Alert of Northern Californ	08/07/2025	Regular	0.00	2,965.80	100321
2025176567	Invoice	07/21/2025	07.21.2025 - MEMBERSHIP DUES 2025	0.00	2,965.80	
	01.42.61101	OUTSIDE SERVICES-PROF	07.21.2025 - MEMBERSHIP DUE	2,965.80		
00033	Water Components & Building Supply	08/07/2025	Regular	0.00	291.56	100322
30669154	Invoice	07/24/2025	07.24.2025 - CORPYARD - MANHOLE HOO	0.00	291.56	
	01.42.62200	DEPARTMENTAL SUPPLIE	07.24.2025 - CORPYARD - MAN	291.56		
03454	Willdan Engineering	08/07/2025	Regular	0.00	4,218.75	100323
002-35377	Invoice	06/30/2025	07.18.2025 - BLDG/SAFETY PLAN CHECKS	0.00	4,218.75	
	01.41.61157	PLAN CHECKING	07.18.2025 - BLDG/SAFETY PLA	4,218.75		
02818	Yara Fraser	08/07/2025	Regular	0.00	130.00	100324
13	Invoice	07/22/2025	07.22.2025 - SATURDAY STORYTIME SUB 0	0.00	130.00	
	01.71.61132	OUTSIDE SVCS-PROGRAM	07.22.2025 - SATURDAY STORYTI	130.00		
03932	Acevedo and Longfellow LLP	08/21/2025	Regular	0.00	8,492.00	100325
35	Invoice	08/03/2025	08.03.2025 - GENERAL LEGAL SERVICES - J	0.00	8,189.50	
	01.16.61138	GENERAL COUNSEL LEGA	08.03.2025 - GENERAL LEGAL SE	8,189.50		
36	Invoice	08/03/2025	08.03.2025 - PLANNING LEGAL SERVICES -	0.00	302.50	
	01.16.61138	GENERAL COUNSEL LEGA	08.03.2025 - PLANNING LEGAL S	302.50		
02920	Amazon Business	08/21/2025	Regular	0.00	2,170.38	100326

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
1646-V3T9-4N6Y	Invoice	08/06/2025	08.06.2025 - REC - CAMP KIDMARIN MIG	0.00	22.53	
	21.63.62984	CAMP KIDMARIN MIGHT	08.06.2025 - REC - CAMP KIDM	22.53		
16GX-1X7P-3CDG	Invoice	08/07/2025	08.07.2025 - REC - CAMP KIDMARIN MINI	0.00	32.46	
	21.63.62985	CAMP KIDMARIN MINI S	08.07.2025 - REC - CAMP KIDM	32.46		
17PG-7DL6-FG41	Invoice	07/21/2025	07.21.2025 - REC - CLASSROOM RUG	0.00	125.63	
	21.63.62979	PARKSIDE SUPPLIES	07.21.2025 - REC - CLASSROOM	125.63		
1G6L-K7WD-1M6	Invoice	08/11/2025	08.11.2025 - REC - OFFICE SUPPLIES	0.00	16.34	
	21.65.62000	OFFICE SUPPLIES	08.11.2025 - REC - OFFICE SUPP	16.34		
1HX9-TRD1-99LT	Invoice	08/06/2025	08.06.2025 - REC - CAMP KIDMARIN MIG	0.00	80.50	
	21.63.62984	CAMP KIDMARIN MIGHT	08.06.2025 - REC - CAMP KIDM	80.50		
1MLN-XHG1-WG	Invoice	08/05/2025	08.05.2025 - REC - CAMP KIDMARIN MIG	0.00	495.89	
	21.63.62984	CAMP KIDMARIN MIGHT	08.05.2025 - REC - CAMP KIDM	495.89		
1NL3-HRPM-FCT6	Invoice	08/08/2025	08.08.2025 - ST&PK - PLASTIC SHEETING	0.00	753.18	
	31.41.61506	BLDG. MAINT-OTHER	08.08.2025 - ST&PK - PLASTIC S	753.18		
1NQV-LGVY-7WL	Invoice	07/18/2025	07.18.2025 - ST&PK - CONCRETE ANCHOR	0.00	64.94	
	01.42.62909	SUPPLIES-TRAFFIC CONTR	07.18.2025 - ST&PK - CONCRETE	64.94		
1RQV-GGTK-DW3	Invoice	08/06/2025	08.06.2025 - REC - CAMP KIDMARIN MINI	0.00	153.91	
	21.63.62985	CAMP KIDMARIN MINI S	08.06.2025 - REC - CAMP KIDM	153.91		
1TC1-LYCM-43RT	Invoice	08/07/2025	08.07.2025 - ST&PK - GARDEN HOSE REEL	0.00	218.49	
	31.41.61506	BLDG. MAINT-OTHER	08.07.2025 - ST&PK - GARDEN H	218.49		
1TKY-TQQF-7D93	Invoice	08/06/2025	08.06.2025 - REC - OFFICE SUPPLIES	0.00	12.86	
	21.65.62000	OFFICE SUPPLIES	08.06.2025 - REC - OFFICE SUPP	12.86		
1TY1-XP6V-69CP	Invoice	08/11/2025	08.11.2025 - REC - CAMP KIDMARIN MINI	0.00	193.65	
	21.63.62985	CAMP KIDMARIN MINI S	08.11.2025 - REC - CAMP KIDM	193.65		
03299	Answer MTI	08/21/2025	Regular	0.00	176.60	100327
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
000037-217-931	Invoice	08/01/2025	08.01.2025 - CALL CENTER SERVICE - JUL	0.00	176.60	
	01.41.61150	OUTSIDE SERVICES-OTHE	08.01.2025 - CALL CENTER SERV	176.60		
02806	AQUASCAPE POOL SERVICE	08/21/2025	Regular	0.00	209.00	100328
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
34805	Invoice	07/31/2025	07.31.2025 - MONTHLY POOL SERVICE - J	0.00	209.00	
	14.81.61150	OUTSIDE SERVICES-OTHE	07.31.2025 - MONTHLY POOL SE	209.00		
03903	Argo Construction, Inc.	08/21/2025	Regular	0.00	327,384.62	100329
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
G702-FH20-6	Invoice	08/01/2025	08.01.2025 - FH20 CONSTRUCTION - PAY	0.00	327,384.62	
	15.32.63100	CONSTRUCTION	08.01.2025 - FH20 CONSTRUCTI	327,384.62		
01385	Asian Art Museum Foundation of San Francisco	08/21/2025	Regular	0.00	200.00	100330
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
INV0015164	Invoice	08/14/2025	08.14.2025 - PRESENTATIONS - AUG/SEP 2	0.00	200.00	
	01.71.61132	OUTSIDE SVCS-PROGRAM	08.14.2025 - PRESENTATIONS -	200.00		
00408	Astro Jump of Northbay	08/21/2025	Regular	0.00	429.00	100331

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Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
38449991	Invoice	08/20/2025	01.29.2025 - CAMP KIDMARIN BULL RIDE	0.00	429.00	
	21.63.61184	CAMP KIDMARIN MIGHT	01.29.2025 - CAMP KIDMARIN B	214.50		
	21.63.61207	CAMP KIDMARIN MINI SE	01.29.2025 - CAMP KIDMARIN B	214.50		
00001	AT&T Calnet	08/21/2025	Regular	0.00	365.85	100332
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
574-08102025	Invoice	08/10/2025	574 - ALL DEPTS CENTREX - 07.10.25-08.0	0.00	273.23	
	41.41.61701	UTILITIES	574 - ALL DEPTS CENTREX - 07.1	273.23		
579-08102025	Invoice	08/10/2025	579 - TRAFFIC SIGNAL MODEM - 07.10.25	0.00	31.28	
	01.41.61705	UTILITIES-TELEPHONE	579 - TRAFFIC SIGNAL MODEM -	31.28		
580-08102025	Invoice	08/10/2025	580 - ROBSON HOUSE - 07.10.25-08.09.25	0.00	61.34	
	34.41.61705	UTILITIES-TELEPHONE	580 - ROBSON HOUSE - 07.10.2	61.34		
03848	Avenues Development	08/21/2025	Regular	0.00	1,787.50	100333
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
TOSA-9	Invoice	08/11/2025	08.11.2025 - SR2S PROJECT MGMT - AUG	0.00	1,787.50	
	14.41.63127	SAFE ROUTES	08.11.2025 - SR2S PROJECT MG	1,787.50		
00388	Baker & Taylor	08/21/2025	Regular	0.00	274.66	100334
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
2039198669	Invoice	07/25/2025	07.25.2025 - CHILDREN'S BOOKS	0.00	15.32	
	01.71.62302	CHILDRENS BOOKS	07.25.2025 - CHILDREN'S BOOK	15.32		
2039206800	Invoice	07/29/2025	07.29.2025 - ADULT BOOKS	0.00	18.25	
	27.71.62301	ADULT BOOKS	07.29.2025 - ADULT BOOKS	18.25		
2039206801	Invoice	07/29/2025	07.29.2025 - ADULT BOOKS	0.00	11.78	
	27.71.62301	ADULT BOOKS	07.29.2025 - ADULT BOOKS	22.71		
	27.71.62301	ADULT BOOKS	CREDIT MEMO #0003317174 (O	-10.93		
2039206802	Invoice	07/29/2025	07.29.2025 - ADULT BOOKS	0.00	18.22	
	27.71.62301	ADULT BOOKS	07.29.2025 - ADULT BOOKS	18.22		
2039206803	Invoice	07/29/2025	07.29.2025 - ADULT BOOKS	0.00	23.86	
	27.71.62301	ADULT BOOKS	07.29.2025 - ADULT BOOKS	23.86		
2039206804	Invoice	07/29/2025	07.29.2025 - ADULT BOOKS	0.00	24.20	
	27.71.62301	ADULT BOOKS	07.29.2025 - ADULT BOOKS	24.20		
2039206805	Invoice	07/29/2025	07.29.2025 - ADULT BOOKS	0.00	23.87	
	27.71.62301	ADULT BOOKS	07.29.2025 - ADULT BOOKS	23.87		
2039209939	Invoice	07/30/2025	07.30.2025 - CHILDREN'S BOOKS	0.00	21.58	
	01.71.62302	CHILDRENS BOOKS	07.30.2025 - CHILDREN'S BOOK	21.58		
2039209940	Invoice	07/30/2025	07.30.2025 - CHILDREN'S BOOKS	0.00	15.98	
	01.71.62302	CHILDRENS BOOKS	07.30.2025 - CHILDREN'S BOOK	15.98		
2039209941	Invoice	07/30/2025	07.30.2025 - CHILDREN'S BOOKS	0.00	32.72	
	01.71.62302	CHILDRENS BOOKS	07.30.2025 - CHILDREN'S BOOK	32.72		
2039221761	Invoice	08/07/2025	08.07.2025 - CHILDREN'S BOOKS	0.00	17.65	
	27.71.62302	CHILDRENS BOOKS	08.07.2025 - CHILDREN'S BOOK	17.65		
H73035690	Invoice	07/23/2025	07.23.2025 - VIDEOS	0.00	21.61	
	01.71.62307	VIDEOS	07.23.2025 - VIDEOS	21.61		
H73136370	Invoice	08/07/2025	08.07.2025 - VIDEOS	0.00	29.62	
	01.71.62307	VIDEOS	08.07.2025 - VIDEOS	29.62		
03886	BELDEN Consulting Engineers	08/21/2025	Regular	0.00	900.00	100335

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
39883	Invoice	07/31/2025	07.31.2025 - MEMORIAL PARK EV CHARGI	0.00	900.00	
	15.41.63100	CONSTRUCTION	07.31.2025 - MEMORIAL PARK E	900.00		
04040	Bennett Industries, Inc.	08/21/2025	Regular	0.00	1,075.90	100336
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
31817	Invoice	08/05/2025	08.05.2025 - REC - STAFF SWAG	0.00	1,075.90	
	21.65.62200	DEPARTMENTAL SUPPLIE	08.05.2025 - REC - STAFF SWAG	1,075.90		
00193	CalMat Company	08/21/2025	Regular	0.00	1,185.66	100337
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
2504-258387	Invoice	04/24/2025	04.24.2025 - MEMORIAL PARK - MINI BAR	0.00	318.31	
	01.42.62200	DEPARTMENTAL SUPPLIE	04.24.2025 - MEMORIAL PARK -	318.31		
2508-023018	Invoice	08/07/2025	08.07.2025 - TOPSOIL MIX - BUS STOP	0.00	156.58	
	01.42.62905	SUPPLIES-GROUNDS	08.07.2025 - TOPSOIL MIX - BUS	156.58		
2508-023178	Invoice	08/07/2025	08.07.2025 - TOP SOIL MIX - BUS HUB	0.00	234.87	
	01.42.62905	SUPPLIES-GROUNDS	08.07.2025 - TOP SOIL MIX - BU	234.87		
2508-023236	Invoice	08/07/2025	08.07.2025 - TOPSOIL MIX - BUS STOP	0.00	234.87	
	01.42.62905	SUPPLIES-GROUNDS	08.07.2025 - TOPSOIL MIX - BUS	234.87		
2508-025505	Invoice	08/12/2025	08.12.2025 - TOPSOIL MIX - BUS STOP	0.00	241.03	
	01.42.62905	SUPPLIES-GROUNDS	08.12.2025 - TOPSOIL MIX - BUS	241.03		
01534	Christine O'Rourke	08/21/2025	Regular	0.00	8,451.55	100338
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
999	Invoice	08/12/2025	08.12.2025 - GENERAL PLAN UPDATE - JU	0.00	8,451.55	
	01.18.61150	OUTSIDE SERVICES-OTHE	08.12.2025 - GENERAL PLAN UP	8,451.55		
02581	CSG Consultants	08/21/2025	Regular	0.00	2,580.50	100339
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
B251043	Invoice	08/01/2025	08.01.2025 - BUILDING PLAN REVIEW SVC	0.00	2,580.50	
	01.19.61150	OUTSIDE SERVICES-OTHE	08.01.2025 - BUILDING PLAN RE	2,580.50		
03853	Dana V. Beck	08/21/2025	Regular	0.00	7,200.00	100340
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
RVFH INVOICE 15	Invoice	08/01/2025	08.01.2025 - RVFH20 ONSITE PROJECT M	0.00	7,200.00	
	15.32.63100	CONSTRUCTION	08.01.2025 - RVFH20 ONSITE PR	7,200.00		
01320	DC Electric Group Inc	08/21/2025	Regular	0.00	10,661.53	100341
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
475906	Invoice	12/31/2024	12.31.2024 - M1008 TS RESPONSE - DEC 2	0.00	1,422.20	
	01.42.61707	UTILITIES-SIGNALS	12.31.2024 - M1008 TS RESPON	1,422.20		
476089	Invoice	01/31/2025	01.31.2025 - M1008 TS RESPONSE - JAN 2	0.00	783.92	
	01.42.61707	UTILITIES-SIGNALS	01.31.2025 - M1008 TS RESPON	783.92		
476859	Invoice	04/30/2025	04.30.2025 - M1007 TS ROUTINE - APR 20	0.00	2,336.22	
	01.42.61707	UTILITIES-SIGNALS	04.30.2025 - M1007 TS ROUTIN	2,336.22		
476918	Invoice	04/30/2025	04.30.2025 - M1008 TS RESPONSE - APR 2	0.00	6,119.19	
	01.42.61707	UTILITIES-SIGNALS	04.30.2025 - M1008 TS RESPON	6,119.19		
03194	East Bay Tire Co	08/21/2025	Regular	0.00	1,031.55	100342

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Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
2165678	Invoice	08/11/2025	08.11.2025 - JOHN DEERE TIRES	0.00	1,031.55	
	01.42.62988	VEHICLE-FUEL/OIL/TIRES	08.11.2025 - JOHN DEERE TIRES	1,031.55		
00266	Edwin P Gurka, Jr	08/21/2025	Regular	0.00	430.00	100343
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
18-2025	Invoice	08/06/2025	08.06.2025 - ARBORIST SERVICES - JUL/A	0.00	430.00	
	01.42.61105	OUTSIDE SERVICES-TREES	08.06.2025 - ARBORIST SERVICE	430.00		
00087	Elite Tree Service	08/21/2025	Regular	0.00	16,630.00	100344
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
2025-8-2	Invoice	08/01/2025	08.01.2025 - FIRE CLEARANCE - WEEDWH	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	08.01.2025 - FIRE CLEARANCE -	2,880.00		
2025-8-3	Invoice	08/01/2025	08.01.2025 - FIRE CLEARANCE - MADRON	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	08.01.2025 - FIRE CLEARANCE -	2,880.00		
2025-8-5	Invoice	08/08/2025	08.08.2025 - FIRE CLEARANCE - CENTER/	0.00	2,230.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	08.08.2025 - FIRE CLEARANCE -	2,230.00		
2025-8-6	Invoice	08/08/2025	08.08.2025 - FIRE CLEARANCE - CENTER/	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	08.08.2025 - FIRE CLEARANCE -	2,880.00		
2025-8-7	Invoice	08/08/2025	08.08.2025 - FIRE CLEARANCE - CENTER/	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	08.08.2025 - FIRE CLEARANCE -	2,880.00		
2025-8-8	Invoice	08/08/2025	08.08.2025 - FIRE CLEARANCE - CENTER/	0.00	2,880.00	
	35.41.61150	OUTSIDE SERVICES-OTHE	08.08.2025 - FIRE CLEARANCE -	2,880.00		
00240	Erik Johannson	08/21/2025	Regular	0.00	16,940.00	100345
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
INV0015166	Invoice	08/07/2025	08.07.2025 - CANON SWIM + TENNIS FY2	0.00	15,092.00	
	21.63.61183	CAMP SPORTS SERVICES	08.07.2025 - CANON SWIM + TE	15,092.00		
INV0015170	Invoice	06/30/2025	08.07.2025 - CANON SWIM + TENNIS FY2	0.00	1,848.00	
	21.63.61183	CAMP SPORTS SERVICES	08.2	1,848.00		
00017	Fairfax Building Supply Co. Inc.	08/21/2025	Regular	0.00	282.72	100346
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
300515	Invoice	07/31/2025	07.31.2025 - FERTILIZER/GLOVES	0.00	28.74	
	95.41.61150	OUTSIDE SERVICES-OTHE	07.31.2025 - FERTILIZER/GLOVE	28.74		
300682	Invoice	08/04/2025	08.04.2025 - TOWN HALL BATHROOM HA	0.00	44.30	
	41.41.61150	OUTSIDE SERVICES-OTHE	08.04.2025 - TOWN HALL BATH	44.30		
300917	Invoice	08/10/2025	08.10.2025 - FLOWER BASKET FERTILIZER	0.00	41.81	
	95.41.61150	OUTSIDE SERVICES-OTHE	08.10.2025 - FLOWER BASKET F	41.81		
300947	Invoice	08/11/2025	08.11.2025 - HILLDALE PARK - GATE HARD	0.00	96.85	
	01.81.62200	DEPARTMENTAL SUPPLIE	08.11.2025 - HILLDALE PARK - G	96.85		
301046	Invoice	08/13/2025	08.13.2025 - LUMBER	0.00	71.02	
	01.42.62200	DEPARTMENTAL SUPPLIE	08.13.2025 - LUMBER	71.02		
04043	Fiona O'Sullivan	08/21/2025	Regular	0.00	18,095.14	100347
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
INV0015172	Invoice	08/20/2025	08.20.2025 - SOCCER CAMP	0.00	18,095.14	
	21.63.61183	CAMP SPORTS SERVICES	08.20.2025 - SOCCER CAMP	18,095.14		
02278	Gardeners' Guild	08/21/2025	Regular	0.00	6,975.00	100348

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Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
122003	Invoice	07/01/2025	07.01.2025 - ICC - MAINTENANCE - JUL 20	0.00	277.00	
	21.65.61507	ICC LANDSCAPING MAINT	07.01.2025 - ICC - MAINTENANC	277.00		
122036	Invoice	06/01/2025	06.01.2025 - ICC - MAINTENANCE - JUN 2	0.00	277.00	
	21.65.61507	ICC LANDSCAPING MAINT	06.01.2025 - ICC - MAINTENANC	277.00		
122233	Invoice	08/01/2025	08.01.2025 - SFD MEDIANS - AUG 2025	0.00	1,143.00	
	01.42.61144	Medians	08.01.2025 - SFD MEDIANS - AU	1,143.00		
122270	Invoice	08/01/2025	08.01.2025 - RED HILL MEDIAN - AUG 202	0.00	2,461.00	
	01.42.61144	Medians	08.01.2025 - RED HILL MEDIAN -	2,461.00		
122271	Invoice	08/01/2025	08.01.2025 - IMGTN PK/TH PK/MAG LOT -	0.00	2,333.00	
	01.81.61104	OUTSIDE SERVICES-GROU	08.01.2025 - IMGTN PK/TH PK/	1,166.50		
	14.81.61150	OUTSIDE SERVICES-OTHE	08.01.2025 - IMGTN PK/TH PK/	1,166.50		
122335	Invoice	08/01/2025	08.01.2025 - ISABEL COOK CENTER - AUG	0.00	277.00	
	21.65.61507	ICC LANDSCAPING MAINT	08.01.2025 - ISABEL COOK CENT	277.00		
122369	Invoice	07/31/2025	07.31.2025 - IMAGTN PK/MAGNOLIA LOT	0.00	207.00	
	14.81.61150	OUTSIDE SERVICES-OTHE	07.31.2025 - IMAGTN PK/MAGN	207.00		
00021	Good & Clean Company Inc	08/21/2025	Regular	0.00	15,040.00	100349
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
75715	Invoice	08/06/2025	08.06.2025 - GENERAL CLEANING - JUL 20	0.00	13,720.00	
	31.41.61501	BLDG. MAINT-JANITORIAL	08.06.2025 - GENERAL CLEANIN	2,825.00		
	34.41.61501	BLDG. MAINT-JANITORIAL	08.06.2025 - GENERAL CLEANIN	1,775.00		
	41.41.61501	BLDG. MAINT-JANITORIAL	08.06.2025 - GENERAL CLEANIN	6,705.00		
	60.14.62903	LIVE ON THE AVENUE	08.06.2025 - GENERAL CLEANIN	2,415.00		
75716	Invoice	08/06/2025	08.06.2025 - LOWER TH CLEANING - JUL 2	0.00	1,320.00	
	41.41.61501	BLDG. MAINT-JANITORIAL	08.06.2025 - LOWER TH CLEANI	1,320.00		
02606	Halleh Besharati	08/21/2025	Regular	0.00	11,990.85	100350
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
08112025-3	Invoice	08/11/2025	08.11.2025 - COZY COMPANION WEEK 8	0.00	4,410.00	
	21.63.61186	SPECIALTY CAMPS SERVIC	08.11.2025 - COZY COMPANION	4,410.00		
08182025-2	Invoice	08/18/2025	08.18.2025 - CLAY AND PLAY - WEEK 9	0.00	7,580.85	
	21.63.61186	SPECIALTY CAMPS SERVIC	08.18.2025 - CLAY AND PLAY -	7,580.85		
00020	Hannibal's Inc Electrical Construction	08/21/2025	Regular	0.00	1,724.31	100351
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
25366	Invoice	08/11/2025	08.11.2025 - COUNCIL CHAMBERS OUTLE	0.00	1,724.31	
	41.41.61150	OUTSIDE SERVICES-OTHE	08.11.2025 - COUNCIL CHAMBE	1,724.31		
00022	Jackson's Hardware Inc.	08/21/2025	Regular	0.00	16.38	100352
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
183531	Invoice	08/01/2025	08.01.2025 - CHAINSAW FILE/GUIDE	0.00	16.38	
	01.81.62200	DEPARTMENTAL SUPPLIE	08.01.2025 - CHAINSAW FILE/G	16.38		
03008	Jara, Inc,	08/21/2025	Regular	0.00	1,768.50	100353
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0015165	Invoice	08/20/2025	08.20.2025 - CAMP KIDMARIN MINI/MIG	0.00	1,768.50	
	21.63.61184	CAMP KIDMARIN MIGHT	08.20.2025 - CAMP KIDMARIN	1,161.00		
	21.63.61207	CAMP KIDMARIN MINI SE	08.20.2025 - CAMP KIDMARIN	607.50		
00586	Jay Nelson	08/21/2025	Regular	0.00	3,860.00	100354

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Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0015031	Invoice	06/01/2025	06.26.2025 - HUB TREE LIGHT REPAIRS	0.00	3,860.00	
	01.81.61150	OUTSIDE SERVICES-OTHE	06.26.2025 - HUB TREE LIGHT R	3,860.00		
04037	Kenneth Mayer	08/21/2025	Regular	0.00	2,750.53	100355
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
R16291	Invoice	08/11/2025	08.11.2025 - REFUND - PENALTY/OVERPY	0.00	2,750.53	
	01.00.48057	PLANNING FEES	08.11.2025 - REFUND - PENALTY	2,750.53		
03549	Kid's Choice Camps LLC	08/21/2025	Regular	0.00	4,161.08	100356
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
08182025-1	Invoice	08/18/2025	08.18.2025 - CARPENTRY FOR KIDS - WEE	0.00	1,260.00	
	21.63.61186	SPECIALTY CAMPS SERVIC	08.18.2025 - CARPENTRY FOR KI	1,260.00		
INV0015169	Invoice	08/11/2025	08.11.2025 - CARPENTRY FOR KIDS - WEE	0.00	2,901.08	
	21.63.61186	SPECIALTY CAMPS SERVIC	08.11.2025 - CARPENTRY FOR KI	2,901.08		
00115	Kone Inc	08/21/2025	Regular	0.00	3,430.86	100357
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
871760472	Invoice	08/01/2025	08.01.2025 - ELEVATOR MAINT - AUG-OCT	0.00	3,430.86	
	41.41.61150	OUTSIDE SERVICES-OTHE	08.01.2025 - ELEVATOR MAINT -	3,430.86		
04036	Land Construction	08/21/2025	Regular	0.00	400.00	100358
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
R16246	Invoice	08/05/2025	08.05.2025 - REFUND - ROAD BOND 135	0.00	400.00	
	01.00.20314	ROAD BOND	08.05.2025 - REFUND - ROAD B	400.00		
02579	LTS of Marin	08/21/2025	Regular	0.00	3,333.81	100359
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
1761	Invoice	08/05/2025	08.05.2025 - 2014 CHEVY SILVERADO - AC	0.00	3,333.81	
	01.81.61602	VEHICLE MAINTENANCE/	08.05.2025 - 2014 CHEVY SILVE	3,333.81		
00377	Luis Quezada	08/21/2025	Regular	0.00	3,629.50	100360
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0015168	Invoice	08/12/2025	08.12.2025 - USA SOCCER CAMPS	0.00	3,629.50	
	21.63.61183	CAMP SPORTS SERVICES	08.12.2025 - USA SOCCER CAM	3,629.50		
00121	Marin I J - 2072661 AD	08/21/2025	Regular	0.00	316.56	100361
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
0001451580	Invoice	07/31/2025	07.31.2025 - COLUMN PUBLIC NOTICES - J	0.00	316.56	
	01.12.61151	LEGAL NOTICES	07.31.2025 - COLUMN PUBLIC N	316.56		
00029	Marin IT	08/21/2025	Regular	0.00	6,720.00	100362
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
2025-128386	Invoice	08/06/2025	08.06.2025 - AGREEMENNT HOSTED BAC	0.00	1,000.00	
	42.21.61150	OUTSIDE SERVICES-OTHE	08.06.2025 - AGREEMENNT HOS	1,000.00		
2025-128389	Invoice	08/06/2025	08.06.2025 - AGREEMENT ONSITE SUPPO	0.00	5,720.00	
	42.21.61150	OUTSIDE SERVICES-OTHE	08.06.2025 - AGREEMENT ONSI	5,720.00		
03804	Martin/Martin Inc.	08/21/2025	Regular	0.00	8,728.75	100363

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	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
24.0770-00008	Invoice	06/05/2025	06.05.2025 - FH20 - DESIGN DEV/CD/CA -	0.00	7,818.75	
	15.32.63100	CONSTRUCTION	06.05.2025 - FH20 - DESIGN DEV	7,818.75		
24.0770-00010	Invoice	08/11/2025	08.11.2025 - FH20 - DESIGN DEV/CD/CA -	0.00	910.00	
	15.32.63100	CONSTRUCTION	08.11.2025 - FH20 - DESIGN DEV	910.00		
03846	Michael E. Alexin	08/21/2025	Regular	0.00	350.00	100364
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0015167	Invoice	08/14/2025	08.14.2025 - COLORIST CONSULTING - ICC	0.00	350.00	
	21.65.63100	CAPITAL OUTLAY - CONST	08.14.2025 - COLORIST CONSUL	350.00		
03368	Munselle Civil Engineering	08/21/2025	Regular	0.00	2,040.00	100365
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
44750	Invoice	07/31/2025	07.31.2025 - THIRD PARTY PLAN REVIEW	0.00	2,040.00	
	01.00.20340	PERMIT DEPOSITS	07.31.2025 - THIRD PARTY PLAN	2,040.00		
03698	Newton Oldfather	08/21/2025	Regular	0.00	5,750.00	100366
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
R16263	Invoice	08/13/2025	08.13.2025 - REFUND - ROAD BOND 68 S	0.00	5,750.00	
	01.00.20314	ROAD BOND	08.13.2025 - REFUND - ROAD B	5,750.00		
03524	Northwest Cascade, Inc.	08/21/2025	Regular	0.00	3,138.41	100367
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
0555014714	Invoice	07/29/2025	07.29.2025 - UNIT RENTALS - 07.29.25-08.	0.00	3,138.41	
	01.81.61150	OUTSIDE SERVICES-OTHE	07.29.2025 - UNIT RENTALS - 07	1,046.00		
	60.14.62903	LIVE ON THE AVENUE	07.29.2025 - UNIT RENTALS - 07	2,092.41		
03211	ODP Business Solutions LLC	08/21/2025	Regular	0.00	231.33	100368
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
432549599001	Invoice	07/23/2025	07.23.2025 - LIBRARY - DOORSTOP	0.00	28.63	
	01.71.62200	DEPARTMENTAL SUPPLIE	07.23.2025 - LIBRARY - DOORST	28.63		
432549986001	Invoice	07/23/2025	07.23.2025 - LIBRARY - DISH DETERGENT	0.00	38.30	
	01.71.62200	DEPARTMENTAL SUPPLIE	07.23.2025 - LIBRARY - DISH DE	38.30		
433591044001	Invoice	08/08/2025	08.08.2025 - ADMIN - ENVELOPES & PAPE	0.00	164.40	
	01.12.62000	OFFICE SUPPLIES	08.08.2025 - ADMIN - ENVELOP	164.40		
00992	OverDrive Inc.	08/21/2025	Regular	0.00	678.95	100369
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
02883CO252433	Invoice	08/06/2025	08.06.2025 - LIBRARY - AUDOBOOKS/EBO	0.00	678.95	
	27.71.62309	E BOOKS	08.06.2025 - LIBRARY - AUDOBO	678.95		
03884	Pacific Mobile Structures, Inc.	08/21/2025	Regular	0.00	6,116.91	100370
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV-00475199	Invoice	09/01/2025	09.01.2025 - FH20 TEMP FACILTIES - SEP 2	0.00	6,116.91	
	15.32.63100	CONSTRUCTION	09.01.2025 - FH20 TEMP FACILTI	6,116.91		
04038	Pacific States Petroleum, Inc.	08/21/2025	Regular	0.00	1,708.73	100371
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
2336038-IN	Invoice	05/19/2025	05.19.2025 - UNLEADED 87 - 350 GAL	0.00	1,708.73	
	01.42.62988	VEHICLE-FUEL/OIL/TIRES	05.19.2025 - UNLEADED 87 - 35	1,708.73		

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
03523	Parametrix, Inc	08/21/2025	Regular	0.00	382.50	100372

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
69697	Invoice	08/08/2025	08.08.2025 - CONSTRUCTION SUPPORT S	0.00	382.50
	14.41.63123	CAPITAL OUTLAY - SIGNAL	08.08.2025 - CONSTRUCTION S	382.50	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
02554	Parkmobile LLC	08/21/2025	Regular	0.00	3,631.20	100373

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
INV-US032-2025-	Invoice	07/31/2025	07.31.2025 - END USER FEES - JUL 2025	0.00	3,631.20
	13.42.61114	OUTSIDE SRV: PARKING	07.31.2025 - END USER FEES - J	3,631.20	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
01139	Phillips Seabrook Associates	08/21/2025	Regular	0.00	880.00	100374

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
250315	Invoice	08/07/2025	08.07.2025 - FH20 - CASP INSPECTIONS - J	0.00	880.00
	15.32.63100	CONSTRUCTION	08.07.2025 - FH20 - CASP INSPE	880.00	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
00038	Rafael Lumber	08/21/2025	Regular	0.00	74.57	100375

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
104890	Invoice	07/30/2025	07.30.2025 - ICC - FLOODLIGHT/LUMBER	0.00	74.57
	31.41.61506	BLDG. MAINT-OTHER	07.30.2025 - ICC - FLOODLIGHT/	74.57	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
03835	Ralph Wedge	08/21/2025	Regular	0.00	551.25	100376

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
INV0015162	Invoice	08/07/2025	08.07.2025 - FH20 - DWG/SPECS REVIEW	0.00	551.25
	15.32.63100	CONSTRUCTION	08.07.2025 - FH20 - DWG/SPECS	551.25	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
03346	Sage Energy Consulting - NV5 Inc.	08/21/2025	Regular	0.00	2,363.75	100377

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
465767	Invoice	08/13/2025	08.13.2025 - MUNI RESILIENCY CENTER -	0.00	2,363.75
	15.90.63100	CONSTRUCTION	08.13.2025 - MUNI RESILIENCY	2,363.75	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
03304	Scott Fletcher	08/21/2025	Regular	0.00	125.00	100378

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
INV0015163	Invoice	08/13/2025	08.13.2025 - HONORARIUM - AUTHOR TA	0.00	125.00
	01.71.61132	OUTSIDE SVCS-PROGRAM	08.13.2025 - HONORARIUM - A	125.00	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
02936	SMITH'S PEST MANAGEMENT	08/21/2025	Regular	0.00	309.00	100379

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
355631	Invoice	07/28/2025	07.28.2025 - IMAGINATION PARK - MISC S	0.00	309.00
	14.81.61150	OUTSIDE SERVICES-OTHE	07.28.2025 - IMAGINATION PAR	309.00	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
04041	TeamSnap, Inc.	08/21/2025	Regular	0.00	232.53	100380

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
INV00091312	Invoice	08/14/2025	08.14.2025 - COACHES TRAINING - 2025 Y	0.00	232.53
	21.61.61164	SOCCER SERVICES	08.14.2025 - COACHES TRAININ	232.53	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
00215	Transbay Lock	08/21/2025	Regular	0.00	145.00	100381

Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**	
94114	Invoice	07/31/2025	07.31.2025 - TOWN HALL LOCK REPROGR	0.00	145.00
	41.41.61150	OUTSIDE SERVICES-OTHE	07.31.2025 - TOWN HALL LOCK	145.00	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
00033	Water Components & Building Supply	08/21/2025	Regular	0.00	1,294.85	100382

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
30669673	Invoice	07/31/2025	07.31.2025 - LIBRARY - CHANNELS/GRATE	0.00	204.02	
	15.41.63122	BIKE AND PEDESTRIAL CO	07.31.2025 - LIBRARY - CHANNE	2,228.95		
	15.41.63122	BIKE AND PEDESTRIAL CO	CREDIT MEMO #30669739	-2,024.93		
30669674	Invoice	07/31/2025	07.31.2025 - PAINTHOLDER	0.00	145.74	
	01.42.62200	DEPARTMENTAL SUPPLIE	07.31.2025 - PAINTHOLDER	145.74		
30670003	Invoice	08/05/2025	08.05.2025 - BUS STOP - MIRADRAIN	0.00	128.78	
	01.42.62200	DEPARTMENTAL SUPPLIE	08.05.2025 - BUS STOP - MIRAD	128.78		
30670545	Invoice	08/12/2025	08.12.2025 - HDPE PIPES	0.00	787.88	
	01.81.62200	DEPARTMENTAL SUPPLIE	08.12.2025 - HDPE PIPES	787.88		
30670548	Invoice	08/12/2025	08.12.2025 - STRAP RATCHET	0.00	28.43	
	01.81.62200	DEPARTMENTAL SUPPLIE	08.12.2025 - STRAP RATCHET	28.43		
03454	Willdan Engineering	08/21/2025	Regular	0.00	7,271.00	100383
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
010-63050	Invoice	08/18/2025	08.18.2025 - COST ALLCTN PLN/COMP CO	0.00	7,271.00	
	01.12.61150	OUTSIDE SERVICES-OTHE	08.18.2025 - COST ALLCTN PLN/	7,271.00		
03052	ZUMAR	08/21/2025	Regular	0.00	501.58	100384
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
10897	Invoice	07/31/2025	07.31.2025 - ONE WAY ARROWS	0.00	501.58	
	01.42.62200	DEPARTMENTAL SUPPLIE	07.31.2025 - ONE WAY ARROWS	501.58		
00007	Bay Cities Joint Power Insurance Authority	08/11/2025	Bank Draft	0.00	716,603.00	DFT06206
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
BCJPIA-0020-202	Invoice	07/02/2025	07.02.2025 - 2025-2026 ANNUAL DEPOSI	0.00	716,603.00	
	40.21.60201	WORKERS COMPENSATIO	07.02.2025 - 2025-2026 ANNUA	200,917.00		
	40.21.60201	WORKERS COMPENSATIO	07.02.2025 - 2025-2026 ANNUA	15,000.00		
	40.21.61153	LIABILITY INSURANCE PRE	07.02.2025 - 2025-2026 ANNUA	350,614.00		
	40.21.61153	LIABILITY INSURANCE PRE	07.02.2025 - 2025-2026 ANNUA	127,366.00		
	40.21.61188	Cyber Liability Program Pr	07.02.2025 - 2025-2026 ANNUA	22,706.00		
00362	Town of San Anselmo	08/06/2025	Bank Draft	0.00	361,445.60	DFT06290
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
INV0015029	Invoice	08/06/2025	8-15-2025 TSA To Fund Payroll	0.00	361,445.60	
	01.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	245,927.32		
	01.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	3,519.60		
	01.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	482.11		
	01.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	-1,280.38		
	13.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	730.67		
	13.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	-1.38		
	15.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	11,599.61		
	15.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	-41.25		
	19.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	13,742.59		
	21.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	75,794.85		
	27.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	7,059.44		
	31.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	378.41		
	34.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	378.41		
	41.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	378.50		
	42.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	710.22		
	95.00.20299	PAYROLL PAYABLE	8-15-2025 TSA To Fund Payroll	2,066.88		
00072	Comcast	08/05/2025	Bank Draft	0.00	162.20	DFT06291

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
426-08052025	Invoice	08/05/2025	426 - CREEK CAMERA - 07.14.25-08.13.25	0.00	162.20	
	42.21.61150	OUTSIDE SERVICES-OTHE	426 - CREEK CAMERA - 07.14.25	162.20		
00181	Ross Valley Fire Department	08/18/2025	Bank Draft	0.00	515,037.10	DFT06292
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
INV0015030	Invoice	08/18/2025	08.18.2025 - RVFD MEMBER CONTRIBUTI	0.00	515,037.10	
	01.32.61139	RVFS CONTRACT	08.18.2025 - RVFD MEMBER CO	491,482.68		
	15.32.61150	OUTSIDE SERVICES-OTHE	08.18.2025 - RVFD MEMBER CO	23,554.42		
03344	CSG Forte Payments Inc.	08/10/2025	Bank Draft	0.00	1,179.33	DFT06294
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
0014014822	Invoice	07/31/2025	07.31.2025 - REC DEPT - CREDIT CARD PR	0.00	1,179.33	
	21.65.61177	PROCESSING FEES	07.31.2025 - REC DEPT - CREDIT	1,179.33		
03344	CSG Forte Payments Inc.	08/10/2025	Bank Draft	0.00	443.85	DFT06295
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
0014014516	Invoice	07/31/2025	07.31.2025 - REC DEPT - CREDIT CARD PR	0.00	443.85	
	21.65.61177	PROCESSING FEES	07.31.2025 - REC DEPT - CREDIT	443.85		
00128	Pacific Gas & Electric	08/12/2025	Bank Draft	0.00	1,035.91	DFT06296
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
355-08122025	Invoice	08/12/2025	355 - CORPYARD UTILITIES - 07.02.25-08.0	0.00	1,035.91	
	41.41.61701	UTILITIES	355 - CORPYARD UTILITIES - 07.	1,035.91		
00128	Pacific Gas & Electric	08/11/2025	Bank Draft	0.00	10.47	DFT06297
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
717-08112025	Invoice	08/11/2025	717 - CORPYARD UTILITIES - 07.04.25-08.0	0.00	10.47	
	41.41.61701	UTILITIES	717 - CORPYARD UTILITIES - 07.	10.47		
00072	Comcast	08/11/2025	Bank Draft	0.00	266.16	DFT06300
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
583-08112025	Invoice	08/11/2025	583 - CORPYARD INTERNET - 07.21.25-08.	0.00	266.16	
	41.41.61701	UTILITIES	583 - CORPYARD INTERNET - 07.	266.16		
00128	Pacific Gas & Electric	08/15/2025	Bank Draft	0.00	2,003.44	DFT06301
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
146-08152025	Invoice	08/15/2025	146 - EV CHARGING - 07.06.25-08.05.25	0.00	2,003.44	
	13.42.61114	OUTSIDE SRV: PARKING	146 - EV CHARGING - 07.06.25-0	2,003.44		
00128	Pacific Gas & Electric	08/28/2025	Bank Draft	0.00	170.94	DFT06302
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
216-08282025	Invoice	08/28/2025	216 - IMAGINATION PARK - 07.06.25-08.0	0.00	170.94	
	14.81.61701	UTILITIES-ELECTRICITY	216 - IMAGINATION PARK - 07.0	170.94		
00089	Employment Development Department	08/13/2025	Bank Draft	0.00	6,014.00	DFT06303
Payable #	**Payable Type**	**Post Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
	Account Number	**Account Name**	**Item Description**	**Distribution Amount**		
L1799721936	Invoice	06/30/2025	07.30.2025 - EMPLOYMENT TAX	0.00	6,014.00	
	40.21.61908	STATE UNEMPLOYMENT I	07.30.2025 - EMPLOYMENT TAX	6,014.00		
00362	Town of San Anselmo	08/21/2025	Bank Draft	0.00	296,474.88	DFT06325

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Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
	Account Number	Account Name	Item Description	Distribution Amount		
INV0015194	Invoice	08/21/2025	8.31.2025 TSA To Fund Payroll	0.00	296,474.88	
	01.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		202,395.66	
	01.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		3,519.60	
	01.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		482.11	
	01.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		-1,280.38	
	13.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		560.90	
	13.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		-1.38	
	15.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		9,509.79	
	15.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		-41.25	
	19.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		11,982.51	
	21.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		61,496.20	
	27.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		4,409.75	
	31.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		221.62	
	34.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		221.62	
	41.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		221.64	
	42.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		838.79	
	95.00.20299	PAYROLL PAYABLE	8.31.2025 TSA To Fund Payroll		1,937.70	

Bank Code AP Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	256	125	0.00	893,060.11
Manual Checks	0	0	0.00	0.00
Voided Checks	0	2	0.00	0.00
Bank Drafts	13	13	0.00	1,900,846.88
EFT's	0	0	0.00	0.00
	269	**140**	**0.00**	**2,793,906.99**

All Bank Codes Check Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	256	125	0.00	893,060.11
Manual Checks	0	0	0.00	0.00
Voided Checks	0	2	0.00	0.00
Bank Drafts	13	13	0.00	1,900,846.88
EFT's	0	0	0.00	0.00
	269	**140**	**0.00**	**2,793,906.99**

Fund Summary

Fund	Name	Period	Amount
99	POOLED CASH - OPERATING	8/2025	2,793,906.99
			2,793,906.99

STAFF REPORT

TOWN OF SAN ANSELMO Item #: 1.5

MEETING DATE: September 9, 2025

AGENDA TITLE: Accept the Pedestrian Hybrid Beacon Project at Sir Francis Drake Boulevard and Saunders Avenue and Authorize Staff to File a Notice of Completion

FROM: Scott Schneider, Asst. Public Works Director

RECOMMENDATION: That the Town Council accepts the Pedestrian Hybrid Beacon Project at Sir Francis Drake Boulevard and Saunders Avenue and authorizes staff to file a Notice of Completion.

BACKGROUND AND DISCUSSION

The Town Council approved the Pedestrian Hybrid Beacon project, also known as a HAWK crossing, at the August 27, 2024 Council meeting, and authorized staff to bid the project.

The Council authorized the Town Manager to award the construction contract to Columbia Electric at the October 8, 2024 meeting. Construction was delayed due to the long lead time required to secure the controller cabinet. When the cabinet was received in late May, the Town suggested delaying construction until school was out for the summer to reduce traffic and pedestrian impacts, and the contractor agreed. Construction started on June 16, and the signal was activated on July 14. The construction was completed in mid-August with the completion of the battery backup system.

The project replaced the existing Rectangular Rapid Flashing Beacon on Sir Francis Drake Boulevard at Saunders Avenue with a hybrid beacon (also known as a HAWK signal) that operates with red lights to improve safety.

FISCAL IMPACT

The construction contract was awarded to Columbia Electric, Inc. for $120,759.20. Change orders for replacement of the previously damaged existing Type 1A pole ($15,495) and additional sidewalk repairs and striping changes ($1,526.29) increased the cost by $17,021.29. The project was completed substantially in accordance with

the project plans and specifications, and fully available for use on July 16, 2025. The final construction cost was $137,780.49.

Funding for the project was included in the Town's 2024/2025 Budget and Work Plan - Grant Fund for $204,000 from the Transportation Authority of Marin. The grant covered the entire design and construction amount, plus $19,201 of staff time.

CEQA ANDCLIMATE ACTION PLAN/BICYCLE AND PEDESTRIAN MASTER PLAN CONSISTENCY

The Town found this project to be categorically exempt from the requirement for the preparation of environmental documents under the California Environmental Quality Act (CEQA) under CEQA Guidelines Section 15301 Class 1, because they involve rehabilitation of existing streets, sidewalks, and gutters that will not create additional automobile lanes and involve negligible or no expansion of use. (14 Cal. Code Regs. § 15301). None of the exceptions to this Class 1 categorical exemption apply in this instance (14 Cal. Code Regs. § 15300.2). Specifically, successive projects of the same type in the same location will not cause significant cumulative impacts, as there are no successive projects planned at this time. There are no unusual circumstances presented by this project and the project will not result in damage to scenic resources within a designated state scenic highway. Finally, the project will not cause a substantial adverse change in the significance of a historical resource, as no historical resources will be impacted.

This project is listed in the project list of the Bicycle and Pedestrian Master Plan, and will improve the safety of pedestrians and bicyclists crossing the street. The project is consistent with the Climate Action Plan 2030 Transportation Measures T-2 Bicycling and T-3 Walking.

ATTACHMENTS

None

STAFF REPORT

TOWN OF SAN ANSELMO Item #: 2.1

MEETING DATE: September 9, 2025

AGENDA TITLE: Public Hearing, Discussion, and Potential Introduction of an Ordinance Amending Title 9, Chapter 1 (Construction Codes) and Chapter 19 (Green Building Requirements) to Implement the 2025 Tier 1 CALGreen Building Code; and finding that the Council's action is not a "project" under CEQA (Cal. Pub. Res. Code § 21065)

FROM: Bridget Wipfler, Climate Action Coordinator
Eric Robbe, Building Official
Heidi Scoble, Community Development Director

RECOMMENDATION

1. Hold a public hearing to consider a proposed Ordinance amending Title 9, Chapter 1 (Construction Codes) and Chapter 19 (Green Building Requirements) to Implement the 2025 Tier 1 CALGreen Building Code, considering the time constraints established by with Assembly Bill 130; and making associated CEQA finding (Attachment 1).
2. Motion to introduce the Ordinance Amendment by title only and to waive future readings in their entirety.

BACKGROUND AND DISCUSSION

In June, the Governor signed into law Assembly Bill 130, which freezes local jurisdictions' ability to modify state residential building codes, including "green" and "reach" codes, through June 1, 2031 with certain limited exceptions. The purpose of AB 130 is to encourage and streamline the construction of residential units. Jurisdictions that desire to adopt more stringent green or reach building codes must do so by the state deadline of October 1, 2025.

As explained further below, the Town already has in place certain environmental building codes. Staff has brought this item to the Council for its consideration as to whether it would like to adopt additional building code amendments before the October 1 deadline.

What are Green Building Codes?
The state sets certain minimum building code standards every 3 years, which local jurisdictions must adopt and enforce. The Town Council adopts these codes by reference and they are generally contained in San Anselmo Municipal Code Title 9. The 2025 state building code update will go into effect on January 1, 2026.

Green building codes are a certain type of building code that are designed to reduce environmental impacts. These requirements encourage practices such as:

- Using less energy and water,
- Reducing reliance on fossil fuels,
- Recycling construction waste,
- Improving indoor air quality, and
- Supporting healthier, more resilient communities.

California's statewide green building code, known as CALGreen (Title 24, Part 11), was first adopted in 2010 and is updated every three years.

In addition to "green" building codes, "reach" codes, may be adopted locally to go beyond the state regulations to reflect local priorities, such as wildfire risk, seismic safety, or climate action goals.

Until recently, local jurisdictions have been authorized to adopt local amendments to the state building codes based on localized conditions and priorities. However, effective October 1, 2025, AB 130 pauses local jurisdictions' ability to modify building codes (including green building and reach codes) in order to encourage housing development.

State Moratorium on Local Residential Green Building Codes Through June 1, 2031
AB 130 establishes a statewide moratorium on new or amended residential building standards from October 1, 2025, through June 1, 2031, with limited exceptions for emergency health and safety measures, fire hardening, and standards equivalent to those in effect as of January 1, 2025. The law also suspends the State Building Standards Commission's approval of residential code amendments during this period. However, the 2025 California Building Standards Code, released in July 2025, will take effect as scheduled on January 1, 2026, providing a narrow window for local jurisdictions to adopt or amend residential codes, including reach codes, before the moratorium begins.

Given the constraints of AB 130 and the late release of the 2025 CALGreen Code, the Town faces an unusually short timeline to consider, review, analyze, and adopt local amendments. After October 1, 2025, no new residential building standards, including reach codes, may be adopted until 2031. This compressed timeline limits opportunities

for technical analysis and public outreach. Nonetheless, the Town may adopt advanced measures before October 1, 2025, with the option to adjust or relax them based on future findings or community input.

Green Building Requirements in San Anselmo
During the 2022 California Building Code updates, the Town elected to adopt the state's CALGreen Tier 1 standards. The Tier 1 framework allows San Anselmo to go beyond the base code using a package of enhancements consistent with other jurisdictions. In addition, as described below, the Town relies on its local Green Building Ordinance for enhanced energy standards, which provides more flexible compliance pathways.

Current 2022 Tier 1 Measures Enforced in San Anselmo:
- EV-capable wiring
- Construction waste diversion
- Water efficiency
- Electrification measures

In September 2023, San Anselmo also adopted local green building standards and reach codes. For example, the Town adopted Ordinance No. 1181, incorporating Marin County's Flexible Compliance Pathway (FlexPath) for remodels. FlexPath allows projects to achieve a target score by selecting from a menu of energy efficiency and electrification measures, giving builders and homeowners flexibility to implement measures that best suit their project.

2025 State Green Building Code
2025 Statewide Mandatory Green Building Measures (without Tier 1) ("CalGreen"):
- EV-ready wiring for single-family homes
- Higher Electric Vehicle Supply Equipment (EVSE) requirements for multifamily and nonresidential buildings
- Embodied carbon compliance for large projects
- Bicycle parking (multifamily & nonresidential)
- Heat pump and photovoltaic baselines in the energy code

See the Comparison Table of the 2022 Tier 1 vs. 2025 Mandatory CalGreen and 2025 Tier 1 Measures on the following page:

How Green Building Requirements Are Changing

Feature / Requirement	2022 Tier 1 (San Anselmo)	2025 CALGreen Mandatory (applies statewide)	2025 CALGreen Tier 1 (Optional – can be adopted by cities)	What Changed / Key Takeaway	Potential Cost Impact*
EV Infrastructure	Homes had to be "EV-capable" (basic wiring for a future charger).	New homes must be "EV-ready" (wiring plus capacity to plug in). Larger buildings need more EV charging stations.	May require even more EV-ready spaces or allow added flexibility in how they're installed.	Stronger EV requirements; more chargers for apartments and businesses.	**$500–$1,000 per single-family home**; **$3,000–$6,000 per EV space in multifamily/commercial**
Energy / Electrification	Extra efficiency measures were optional. Tier 1 energy rules were not adopted locally.	New buildings must use **heat pumps for heating and hot water** and install **solar panels**.	Cities can choose stricter efficiency rules, such as higher-performing heat pumps, more solar, or requiring energy modeling.	Big change: heat pumps and solar are now required statewide.	**Heat pump: $4,000–$8,000 per home**; **Solar: $12,000–$20,000 per home**; higher for multifamily/commercial
Heat Pumps	Encouraged but not required.	Required for heating and hot water in most new homes and many commercial buildings.	May require higher-efficiency models or additional electrification measures.	Clear statewide shift toward all-electric buildings.	**$4,000–$8,000 (residential system)**; **$15,000–$30,000 (commercial/multifamily system)**
Water Efficiency	Water-saving fixtures required.	Same requirements as 2022.	May require even greater water savings or provide extra incentives.	No big changes unless Tier 1 is adopted.	**$200–$500 per home**; higher for large landscape projects
Construction Waste	Builders had to divert construction debris from landfills.	Same requirement.	May require diverting a higher percentage of waste or recycling more material types.	Slightly stronger recycling rules under Tier 1.	**$500–$2,000 per project** (admin + hauling fees)
Bicycle Parking	Not required.	Required for new apartments and commercial buildings.	Expands to include hotels and motels as well.	Bike parking now required for more project types.	**$400–$800 per bike space**
Embodied Carbon (Building Materials)	Not required.	Not required.	Large projects (>50,000 sq. ft.) must show reduced carbon impact from building materials.	Tier 1 introduces cradle-to-grave life cycle analysis & GHG reduction.	**$50,000–$150,000 per large project** (life-cycle assessment + design changes)
Special Inspection	The Town hired inspectors.	Not required.	Inspections required, but the property owner must hire them.	Shifts cost and responsibility from Town to builder/owner.	**$2,000–$5,000 per project** (varies by scope)
Structural Retention (Large Projects)	Not required.	Not required.	Big projects (>50,000 sq. ft.) must keep ≥75% of main structure instead of demolishing and rebuilding.	Encourages reuse of large buildings instead of tearing them down.	**$100,000+ per large project**, but may save demolition/rebuild costs

The transition from 2022 Tier 1 to 2025 Tier 1 is expected to have minimal cost impacts for most residential projects, as many new measures, such as bicycle parking and inspection responsibilities, do not involve major construction changes. Multifamily and nonresidential projects may see higher upfront costs, particularly for EVSE upgrades, embodied carbon compliance, and structural retention requirements, but these measures can generate long-term energy and operational savings.

Policy Options for Council

Considering the Town's current Green Building regulations and the mandatory 2025 Green Building requirements, to further strengthen San Anselmo's commitment to climate action leadership, the Council may consider the following options:

1. Adopt the 2025 CALGreen Tier 1 Measures
- Continues San Anselmo's leadership on climate action.
- Aligns with nearby cities (San Rafael, Mill Valley, Larkspur, and Tiburon) and the County of Marin that are also moving to Tier 1.
- May increase costs for some projects, with the most significant upfront expenses typically for multifamily and nonresidential buildings**,** primarily due to EV infrastructure and HVAC requirements**.**

2. Exempt Accessory Dwelling Units (ADUs) from Tier 1
- Reduces costs for small-scale infill housing projects.
- Decreases the number of ADUs contributing to climate goals.

3. Maintain or Lower the Remodel Threshold
- Current trigger: 750 square feet.
- Some neighboring jurisdictions are lowering to 500 square feet.
- Staff recommends keeping the 750 square foot threshold to avoid disproportionate costs for small remodels.

4. Modify the Flexible Compliance Pathway (FlexPath)
- Could limit FlexPath requirements to homes built before 1992 and because federal incentives for newer homes are expiring. Post-1992 homes are already relatively efficient due to the Title 24 building standards, so the largest climate and cost benefits come from targeting older homes.
- Reduce staff time and complexity for builders of newer homes, since those homes often already comply with modern energy and building standards.

5. Continue Using the 2022 Tier 1 Flexible Compliance Pathway (FlexPath)
- Maintains consistency with the Town's current approach by carrying forward the 2022 Tier 1 FlexPath into the next Building Code cycle.

6. Continue Using the 2022 Tier 1 Flexible Compliance Pathway (FlexPath) with modification to Exempt ADUs and homes built after 1992.
    - Maintains consistency with the Town's current approach by carrying forward the 2022 Tier 1 FlexPath into the next Building Code cycle.
    - Exempts ADUs, reducing costs for small-scale infill housing projects.
    - Limits FlexPath requirements to homes built before 1992, focusing on properties with the greatest potential for energy and emissions reduction.

What are other Marin jurisdictions doing?

Jurisdiction	2022 CALGreen Tier 1 Adopted?	Flexible Compliance Pathway pre 2025?	Square Footage Trigger (SF A/A)	Planning to adopt 2025 Tier 1 (energy, non-energy, and EV measures)	FlexPath square footage update plan
Unincorporated Marin	Yes (selected project types)	Yes	≥ 750 sq ft	Yes, only non-energy and EV measures	Adjust sq ft trigger to 500
Belvedere	No reach policy on record (2022 cycle)	No	—	No	No change
Corte Madera	No, just some EV reach codes	Yes	≥ 750 sq ft	No	Adjust sq ft trigger to 500
Fairfax	Yes	Yes	≥ 200 sq ft	In conversation	No change
Larkspur	They currently have Tier 1 (non-energy)	No	—	They are considering Flex Path for adoption in November	No
Mill Valley	Adopted 2022 Tier 1 in 2023	No	—	All Tier 1 measures	Adopt Flex path at 500 sq ft and collapsed vintages
Novato	Adopted Tier 1 (non-energy) in 2022	No	—	Planning to adopt Tier 1 non-energy measures	No changes
Ross	No reach policy on record (2022 cycle)	No	—	No	No changes
San Anselmo	Tier 1 was adopted in 2022 as a part of the regular building code update.	Yes	≥ 750 sq ft	In conversation	Considering lowering to 500 sq ft
San Rafael	No	Yes	≥ 500 sq ft	No	Updating FlexPath target scores
Sausalito	No	No	—	Considering adoption of Tier 1	—
Tiburon	Yes, Tiburon opted in to Tier 1 (non-energy) when they adopted the 2022 Building Code	Yes but never enforced	≥ 750 sq ft	Yes	Adjust to 500 Sq ft and collapsed vintages

In summary, staff is requesting that the Town Council consider adopting the 2025 CALGreen Tier 1 Code along with the Town's local reach code. (See proposed Ordinance Amendment at Attachment 1).

Based on preliminary review, the 2025 amendments are anticipated to have minimal impacts on single-family residences compared to the existing 2022 Tier 1 standards. However, they may result in greater financial impacts for multifamily and nonresidential projects, particularly due to requirements related to EV infrastructure, embodied carbon compliance, and structural retention.

As a cautious approach, and consistent with the Town's commitment to green building, the Council may choose to adopt the 2025 Tier 1 regulations at this time. If the requirements later prove to be overly burdensome or do not achieve the intended outcomes, the Council retains the ability to amend the standards to make them less stringent or to suspend them altogether. Under AB 130, such adjustments can be made with relative ease. However, AB 130 prohibits strengthening the regulations or adding enhanced green building requirements after June 1, 2031. In other words, if the Town Council does not adopt the 2025 CalGreen Tier 1 before October 1, it will not have the opportunity to adopt more stringent regulations for at least six years.

If the Council elects to adopt the ordinance, staff recommends:

- Exempting Accessory Dwelling Units (ADUs) from Tier 1 requirements,
- Exempting new construction for homes built after 1992, and
- Maintaining the current 750-square-foot remodel threshold for Flex Path applicability.

This approach balances the Town's climate leadership goals with cost considerations and regulatory flexibility for property owners.

The proposed Ordinance Amendment includes these recommendations. In addition, the proposed Ordinance Amendment includes with the findings required to enact local amendments and modifications to state building standards (Cal Health & Safety Code §§ 17958, 17958.5, 17958.7 and 1894.5).

FISCAL IMPACT

No direct Town costs beyond staff review/enforcement.

GENERAL PLAN CONSISTENCY

If the Council adopts the proposed Green Building regulation amendments, the Ordinance will advance the goals and policies of the San Anselmo General Plan, particularly those related to Sustainability and Conservation. The General Plan emphasizes reducing

greenhouse gas emissions, improving energy and water efficiency, encouraging renewable energy, and promoting sustainable building practices.

Adoption of this Ordinance will support these objectives by:

- Requiring higher-performance building standards,
- Supporting implementation of the Town's Climate Action Plan, and
- Ensuring consistency with regional and statewide sustainability efforts.

Specifically, the Ordinance aligns with:

- **Policy M13**: The Town and County shall take measures to reduce inefficient or unnecessary energy or natural resource consumption. Recyclable and biodegradable materials shall be utilized, and used materials shall be recycled or reused whenever possible.
- **Policy M1**: Air, water, and noise pollution shall be prevented or minimized.

CEQA AND CLIMATE ACTION PLAN CONCISTENCY

The Council's consideration of the 2025 Building Code does not constitute a "project" under the California Environmental Quality Act (CEQA), as it does not involve an activity that could cause a direct or reasonably foreseeable indirect physical change to the environment (Cal. Pub. Res. Code § 21065).

This report is consistent with the Town's adopted Climate Action Plan (CAP), particularly measures related to building decarbonization, electric vehicle readiness, active transportation, and reach codes, including:

- **E-4: Green Building Reach Code** – Explore adopting a green building ordinance for new and remodeled residential and commercial projects that requires methods and efficiency standards exceeding State codes. This includes consideration of photovoltaic systems and all-electric building systems, modeled after the County's green building ordinance.

ATTACHMENTS

1. Draft Ordinance Redline
2. Application of the 2022 Studies to the 2025 Energy Code
3. California Energy 2022 Cost-Effectiveness Study- Existing Single Family Building Upgrades

ORDINANCE NO. XXX

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF SAN ANSELMO AMENDING TITLE 9 (BUILDING REGULATIONS) CHAPTER 1 (CONSTRUCTION CODES) AND CHAPTER 19 (GREEN BUILDING REQUIREMENTS) TO ADOPT THE 2025 CALIFORNIA GREEN BUILDING STANDARDS CODE TO REFLECT LOCAL CONDITIONS

WHEREAS, green building is a practice of design, construction and maintenance techniques that have been demonstrated to have a significant positive effect on energy, water and resource conservation, waste management and pollution generation and on the health and productivity of building occupants over the life of the building; and

WHERE AS, on August 24, 2010, the Town Council adopted its first green building regulations through Ordinance No. 1076, which was codified in San Anselmo Municipal Code Title 9 (Building Regulations), Chapter 19 (Green Building Requirements); and

WHERE AS, on November 12, 2019, the Town Council adopted by reference the California Construction Codes, including the 2019 California Green Building Standards Code (CALGreen) (Title 24 Part 11); and

WHERE AS, on April 28, 2020, the Town Council adopted Ordinance No. 1145 to repeal and replace San Anselmo Municipal Code Title 9 (Building Regulations), Chapter 19 (Green Building Requirements) to adopt the County of Marin's Green Building Reach Code provisions; and

WHERE AS, on November 15, 2022, the Town Council adopted by reference the California Construction Codes, including the 2022 version of CALGreen pursuant to Ordinance No. 1168, which was codified in San Anselmo Municipal Code Title 9 (Building Regulations); and

WHERE AS, on August 22, 2023, the Town Council adopted Ordinance No. 1181to repeal and replace Title 9 (Building Regulations) Chapter 19 (Green Building Requirements) to adopt amendments to the California Green Building Standards Code to reflect local conditions; and

WHERE AS, the 2025 California Building Standards Code, California Code of Regulations, Title 24 ("Title 24") has been amended and adopted by the California Building Standards Commission; and

WHERE AS, California Health and Safety Code Sections 17958, 17958.5, 17958.7 and 18941.5 establish the authority for a city to adopt and make local amendments and modifications to the building standards in the California Building Standards Code to establish more restrictive building standards than those contained in the California Building Standards Code; and

WHERE AS, California Health and Safety Code Sections 17958,17958.5, 17958.7 and 18941.5 permit a city to make such local amendments and modifications as the city determines are reasonably necessary because of local climatic, geological or topographical conditions; and

WHERE AS, California Health and Safety Code Sections 17958, 17958.5, 17958.7 and 18941.5 require a city, before making any amendments and modifications to the California Building Standards Code, make an express finding that such amendments and modifications are reasonably necessary because of local climatic, geological or topographical conditions; and

WHERE AS, Government Code Section 50022.2 permits enactment of city ordinances that adopt codes or statutes, including codes of the State of California, by reference; and

WHERE AS, notice of the Ordinance was published in accordance with Government Code Sections 50022.3 and 6066; and that such notice was sufficient to give notice to interested persons of the purpose of the ordinance and the subject matter thereof; and

WHERE AS, the San Anselmo Climate Action Commission is requesting Town Council consideration of adopting amendments to San Anselmo Municipal Code Title 9 (Building Regulations), Chapter 19 (Green Building Requirements) to incorporate the 2025 Tier 1 provisions; and

WHERE AS, the Town Council wishes to maintain Green Building requirements that are well-suited to the Town and promote consistency with Green Building Standards across Marin jurisdictions.

NOW, THEREFORE, THE TOWN COUNCIL OF THE TOWN OF SAN ANSELMO DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. Environmental Review
Adoption of this Ordinance does not require review under the California Environmental Quality Act (CEQA) because it does not constitute a "project" pursuant to California Public Resources Code section 21065 and CEQA Guidelines section 15378, as its adoption does not involve an activity that has the potential to cause a direct or reasonably foreseeable indirect physical change in the environment.

SECTION 2. Findings
Pursuant to Section 17958.5, 17958.7 and 18941.4 of the California Health and Safety Code, the Town Council of the Town of San Anselmo determines that the modifications to the 2022 California Green Building Standards Code Chapters 3, 4 and 5, as set forth in this subchapter, are reasonably necessary because of San Anselmo's local topographical and environmental conditions. Specifically, the steep terrain, narrow roads, proximity to the San Andreas and Hayward seismic faults, and the potential flooding of the San Anselmo Creek are unique conditions that require special consideration whenever construction is proposed within the Town. Additionally, due to the high temperatures, humidity, rainfall, wind, and the lack of water supply for domestic use and fire suppression, the Town is susceptible to wildfires resulting from climate change.

SECTION 3. Amend Title 9 (Building Regulations), Chapter 1 (Construction Codes), Article 1 (Construction Codes), Section 9-1.101 is hereby amended as:

(j) 2025 California Green Building Standards Code (CAL Green) (Title 24 Part 11) including Appendix A4 and A5.

SECTION 4. Repeal and Replace Title 9 (Building Regulations) Chapter 19 (Green Building Requirements) is hereby repealed and replaced with the following in its entirety:

Chapter 19 GREEN BUILDING REQUIREMENTS

9-19.010 Purpose.

The purpose of this chapter is to meet or exceed all applicable mandatory measures of the California Green Building Standards Code known as California Code of Regulations, Part 11 of Title 24 and to enhance the long-term public health and welfare by contributing to the overall reduction of greenhouse gas emissions and improving the environmental and economic health of the Town through the efficient design, construction, operation, maintenance and deconstruction of buildings and site development by incorporating green building practices and materials. The green building provisions referenced in this chapter are designed to achieve the following objectives in San Anselmo:

(1) Increase energy efficiency in buildings;

(2) Reduce consumption of fossil fuels;

(3) Encourage water and resource conservation;

(4) Reduce waste generated by construction projects;

(5) Reduce long-term building operating and maintenance costs;

(6) Improve indoor air quality and occupant health;

(7) Contribute to meeting state and local commitments to reduce greenhouse gas emissions; and

(8) Satisfy all applicable mandatory measures of the ~~2022~~ 2025 California Green Building Standards Code (Title 24, Part 11) of the California Code of Regulations.

9-19.015 Applicability.

The provisions of this chapter shall apply to all construction or development projects defined below as a "covered project."

9-19.020 Definitions.

For the purposes of interpreting this chapter and the associated standards for compliance, the following terms are defined as follows. When the definitions below differ from those contained elsewhere in this title, the provisions of this chapter shall apply. These definitions are additional to those outlined in Chapter 2 of the CALGreen Code.

(1) "~~2022~~ 2025 California Energy Code" refers to the requirements outlined in the ~~2022~~ 2025 edition of the California Energy Code known as California Code of Regulations, Part 6 of Title 24.

(2) "All-electric building" or "All-electric design" means a building or plans for a building that uses a permanent supply of electricity as the source of energy for all space heating (including but not limited to fireplaces), water heating (including but not limited to pools and spas), cooking appliances (including but not limited to barbeques), and clothes drying appliances, and has no natural gas or propane plumbing installed in the building or within the property lines. An all-electric building may also include solar thermal collectors.

(3) "Accessory Dwelling Unit (ADU)" means a residential unit that meets ~~the definition of an accessory dwelling unit as outlined in Section 10-6.102~~ all of the regulations outlined in Title

10, Chapter 6, Accessory Dwelling Units of the San Anselmo Municipal Code and as set forth in California Government Code sections 65852.2 and 65852.22. ~~, Title 10, Chapter 6. This states that "an attached or detached residential dwelling unit that provides complete independent living facilities for one (1) or more persons and is located on the same lot as the proposed or existing primary residence. It shall include permanent provisions for living, sleeping, eating, cooking, and sanitation. An accessory dwelling unit also includes an efficiency unit, as defined in Section 17958.1 of the Health and Safety Code, and a manufactured home, as defined in Section 18007 of the Health and Safety Code." For purposes of this subchapter, ADU also covers Junior ADUs and detached or attached ADUs.~~

(4) "Automatic Load Management System (ALMS)" means a control system designed to manage load across one (1) or more electric vehicle supply equipment (EVSE), circuits, panels, and to share electrical capacity and/or automatically manage power at each connection point. ALMS systems shall be designed to deliver no less than 3.3 kVa (208/240 volt, 16-ampere) to each EV capable, EV ready or EVCS space served by the ALMS, and meet the requirements of California Electrical Code Article 625. The connected amperage to the building site for the EV charging infrastructure shall not be lower than the required connected amperage per California Green Building Standards Code, Title 24, Part 11.

(5) "CALGreen" refers to the California Green Building Standards Code, as included in Title 24, Part 11 of the California Code of Regulations.

(6) "CALGreen mandatory" means those measures that are required under Title 24, Part 11. Residential mandatory measures are contained in CALGreen Chapter 4. Nonresidential mandatory measures are contained in CALGreen Chapter 5.

(7) "CALGreen Tier 1" refers to required pre-requisite and elective measures in addition to the CALGreen mandatory measures, as outlined in CALGreen Appendix A4.602~~1.4~~ for residential projects and CALGreen Appendix A5.601.2 for nonresidential projects.

(8) "Commercial kitchen" means non-retail food facility devoted to the commercial preparation, production, and cooking of food and beverages for on-site or off-site consumption.

(9) "Conductor ready" means adding 10 gauge 4 wire for any laundry room remodel for future appliance electric upgrades and/or adding 8 gauge 4 wire for any kitchen remodel for future appliance electric upgrades.

(10) "Cooking equipment" means equipment intended for commercial use, including ovens, ranges, and cooking appliances for use in a commercial kitchen and restaurant where food is dispensed.

(11) "Covered project(s)" means a development project provided below as set forth by the standards for compliance outlined in Section 9-19.050 of the San Anselmo Municipal Code, Table 1, 2, or 3 for which one (1) or more building permits are required:

(i) All residential and nonresidential new construction buildings as defined below in Section 9-19.020 (28); and/or

(ii) Additions or alterations to an existing single-family residential building, except for any projects less than 500 hundred square feet or seven hundred and fifty (750) square feet. Conductor ready required for laundry room and kitchen remodels regardless of remodel size;

(iii) Substantial improvements to an existing single-family residential building.

(12) "Direct current fast charging (DCFC)" means a parking space provided with electrical infrastructure that meets the following conditions:

(i) A minimum of 48 kVa (480 volt, 100-ampere) capacity wiring.

(ii) Electric vehicle supply equipment (EVSE) located within three (3) feet of the parking space providing a minimum capacity of 80-ampere.

(13) "Electric vehicle (EV) capable space" means a vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support EV charging.

(14) "Electric vehicle (EV) ready space" means a vehicle space which is provided with a branch circuit; any necessary raceways, both underground and/or surface mounted, to support EV charging, terminating in a receptacle or a charger.

(15) "Electric vehicle charging space (EV Space)" means a space intended for future installation of EV charging equipment and charging of electric vehicles.

(16) "Electric vehicle charging station (EVCS)" means a parking space that includes installation of electric vehicle supply equipment (EVSE) at an EV ready space. An EVCS space may be used to satisfy EV ready space requirements. EVSE shall be installed in accordance with the California Electrical Code, Article 625.

(17) "Level 1 (L1) EV ready" means a parking space that is served by a complete electric circuit with the following requirements:

(i) A minimum of 2.2 kVa (110/120 volt, 20-ampere) capacity wiring.

(ii) A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.

(iii) Conduit oversized to accommodate future Level 2 EV Ready (208/240 volt, 40-ampere) at each parking space.

(18) "Level 2 (L2) EV ready" means a parking space that is served by a complete electric circuit with the following requirements:

(i) A minimum of 8.3 kVa (208/240 volt, 40-ampere) capacity wiring.

(ii) A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 30-ampere.

(19) "Electric vehicle supply equipment (EVSE)" means the conductors, including the undergrounded, grounded and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets or apparatus installed for the purpose of transferring energy between the premises wiring and the electric vehicle.

(20) "Essential services building" means a facility as defined by the California Health and Safety Code section 16007, as amended from time to time. For purposes of this chapter, essential services buildings are publicly owned and/or publicly operated buildings whose purpose is to safeguard the public health and safety. Essential services buildings generally exclude privately owned residences and/or commercial buildings; except that, privately owned commercial buildings may qualify as essential services buildings to the extent they are publicly operated to safeguard the public health and safety.

(21) "Food service establishment" means any new construction building with construction plans for a commercial kitchen or cooking equipment.

(22) "Industrial process heat" shall be defined as a process or manufacturing equipment for which sustained temperatures typically in excess of three hundred fifty (350) degrees Ff~~f~~ahrenheit are required and demonstrably not achievable with commercial electric equipment.

(23) "Low Power Level 2 electric vehicle charging receptacle" means a parking space that is served by a complete electric circuit with the following requirements:

(i) A minimum of 4.1 kVa (208/240 volt, 20-ampere) capacity wiring.

(ii) A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.

(iii) Conduit oversized to accommodate future level 2 EV Ready (208/240 volt, 40-ampere) at each parking space.

(24) "Mixed-fuel" means a building or unit in a building that is plumbed for the use of natural gas or propane as fuel for space heating, water heating, cooking or clothes drying appliances or has gas plumbing within a building or within the property lines of the premises connected to a gas meter or propane tank.

(25) "Modified parking lot" shall be those for which paving material and curbing is removed.

(26) "Natural gas" has the same meaning as "Fuel Gas" as defined in the California Plumbing Code and Mechanical Code.

(27) "Natural gas infrastructure" means fuel gas piping, other than service pipe, in or in connection with a building, structure or within the property lines of premises, extending from the point of delivery at the meter, service meter assembly, outlet of the service regulator, service shutoff valve, or final pressure regulator, whichever is applicable, as specified in the California Mechanical Code and Plumbing Code.

(28) "Newly constructed" means a building that has never before been used or occupied for any purpose. Also means "newly constructed" as defined in the California Building Code ~~2022~~2025.

(29) "Qualified green building rater" means an individual who has been trained and certified as a CALGreen inspector, LEED AP w/a specialty, GreenPoint rater, PHIUS consultant, or has similar qualifications and certifications if acceptable to the Chief Building Official.

(30) "Single-family" means a building designed for and/or occupied exclusively by one (1) family. It is used herein to describe one and two-family dwellings and townhouses with attached private garages. It also includes factory-built, modular housing units, constructed in compliance with the California Building Code.

(31) "Substantial improvement" means any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds fifty (50%) percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the Building Official and that are the minimum necessary to assure safe living conditions.

2. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

9-19.030 Requirements for additions and alterations - Local amendments to ~~2022~~ 2025 California Energy Code.

Pursuant to Section 9-1.101(h) of the San Anselmo Municipal Code, the Town has adopted the ~~2022~~ 2025 edition of the California Energy Code known as California Code of Regulations, Part 6 of Title 24 with additions, and deletions as provided in this subchapter.

The provisions of this subchapter shall constitute local amendments to the cross-referenced provisions of the ~~2022~~ 2025 California Energy Code and shall be deemed to replace the cross-referenced sections of said Code with the respective provisions set forth in this subchapter.

The California Energy Code, Title 24, Part 6, is hereby amended as underlined and struck through:

Section 100.0 of Subchapter 1 of the ~~2022~~ 2025 California Energy Code is modified to add new section (i) as follows:

(i) Single-Family Building Remodel Energy Reach Code - Purpose and Intent. In addition to all requirements of the California Energy Code applicable to existing single-family building additions and alterations, the energy efficiency and renewable energy measures specified in Section 150.0(w) shall be required for covered projects of mixed-fuel buildings.

Section 100.1(b) is modified by adding the following definitions:

"All-electric building" or "All-electric design" as defined in Section 9-19.020 (2) of the San Anselmo Municipal Code.

"Covered project(s)" as defined in Section 9-19.020 (11), of the San Anselmo Municipal Code.

"Mixed-fuel" building as defined in Section 9-19.020 (24), of the San Anselmo Municipal Code.

Section 150.0 Single-Family Residential Buildings - Mandatory Features and Devices, first two (2) paragraphs, are modified to read as follows:

Existing single-family residential buildings shall comply with the applicable requirements of Sections 150(a) through 150.0(v), and covered existing single-family projects, other than projects identified as all-electric construction for new residential buildings in Section 9-24.01 et seq. of the San Anselmo Municipal Code, shall comply with the applicable requirements of Section 150.0(w).

NOTE: The requirements of Sections 150.0(a) through 150.0(v) apply to new construction. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.0(a) through 150.0(v) also apply to additions or alterations, with the exception that covered existing single-family projects, other than projects identified as all-electric construction for new residential buildings in Section 9-24.01 et seq. of the San Anselmo Municipal Code, shall also be required to comply with Section 150.0(w).

A new Section (w), is added to Section 150.0 as follows:

(w) Requirements for a covered project are outlined by project type in Table 1 of Section 9-19.050 of the San Anselmo Municipal Code. A covered existing single-family project, as defined in Section 9-19.020 (11)(ii) of the San Anselmo Municipal Code, that includes an electrical panel upgrade, a kitchen remodel or a laundry room remodel shall comply with the requirements for Measure ER2 in Table 2 of Section 9-19.050 of the San Anselmo Municipal Code. In addition, a covered existing single-family project in a building originally permitted for construction on or before December 31, 2010 shall install a set of measures from the Measure Menu in Table 2 of Section 9-19.050 of the San Anselmo Municipal Code, to achieve a total measure point score that is equal to or greater than the target score in said table and shall conform to the List of Measure Specifications in Table 3 of Section 9-19.050 of the San Anselmo Municipal Code, except as otherwise described below:

(i) Projects identified as all-electric construction for new residential buildings in Section 9-24.01 et seq. of the San Anselmo Municipal Code.

(ii) Projects less than 500 hundred sf or seven hundred and fifty (750) square feet that are not considered substantial improvements.

(iii) Substantial improvements to an existing single-family residential building.

~~(iii) Projects that are limited solely to a newly created attached Accessory Dwelling Units (ADUs) or Junior Accessory Dwelling Unit (JADU) as defined in Section 9-19.020 (3), San Anselmo Municipal Code. A newly created ADU and JADU shall include either additions or conversions of existing space.~~

(iv) Mobile homes, manufactured housing, or factory-built housing as defined in Division 13 of the California Health and Safety 12 Code (commencing with Section 17000 of the Health and Safety Code).

(v) If due to conditions specific to the project, it is technically or economically infeasible to achieve compliance, the Chief Building Official may reduce the target score and/or waive some or all of the mandatory requirements.

(vi) If the applicant demonstrates that the energy budget of the proposed building, as calculated under Section 150.1(b), would be less than or equal to the energy budget of the building if it otherwise complied with this Section, 150.0(w).

(vii) A resident owner or occupant demonstrates that they qualify for the California Alternative Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) program may comply by installing, to the specifications in Table 3 of Section 9-19.050 of the San Anselmo Municipal Code the following:

(a) E1: Lighting Measures; and

(b) E2: Water Heating Package.

In addition, all mandatory measures listed in Table 2 of Section 9-19.050 of the San Anselmo Municipal Code shall be installed.

9-19.040 Requirements for electric vehicle infrastructure - Local amendments to ~~2022~~ 2025 CALGreen California Green Building Standards Code.

Pursuant to Section 9-1.101(j) of the San Anselmo Municipal Code, the Town has adopted the ~~2022~~ 2025 edition of the California Green Building Standards Code known as California Code of Regulations, Part 11 of Title 24 (herein referred to as CALGreen Code), including Division A4.6 for Tier 1 with additions, and deletions as provided in this subchapter. Requirements are outlined by project type in Table 1 of Section 9-19.050 of the San Anselmo Municipal Code.

The provisions of this subchapter shall constitute local amendments to the cross-referenced provisions of the ~~2022~~ 2025 CALGreen Code and shall be deemed to replace the cross-referenced sections of said code with the respective provisions set forth in this subchapter.

Section 202 of Chapter 2 of the ~~2022~~ 2025 CALGreen Code is hereby amended as underlined and struck through:

Automatic Load Management System (ALMS). A control system designed to manage load across one (1) or more electric vehicle supply equipment (EVSE), circuits, panels and to share electrical capacity and/or automatically manage power at each connection point. ALMS systems shall be designed to deliver no less than 3.3 kVa (208/240 volt, 16-ampere) to each EV capable, EV ready or EVCS space served by the ALMS, and meet the requirements of California Electrical Code Article

625. The connected amperage to the building site for the EV charging infrastructure shall not be lower than the required connected amperage per California Green Building Standards Code, Title 24 Part 11.

Direct current fast charging (DCFC). A parking space provided with electrical infrastructure that meets the following conditions:

i. A minimum of 48 kVa (480 volt, 100-ampere) capacity wiring.

ii. Electric vehicle supply equipment (EVSE) located within three (3) feet of the parking space providing a minimum capacity of 80-ampere.

Electric vehicle charging station (EVCS). A parking space that includes installation of electric vehicle supply equipment (EVSE) at an EV ready space. An EVCS space may be used to satisfy EV ready space requirements. EVSE shall be installed in accordance with the California Electrical Code, Article 625.

Electric Vehicle (EV) ready space. [HCD] A vehicle space which is provided with a branch circuit; any necessary raceways, both underground and/or surface mounted; to accommodate EV charging, terminating in a receptacle or a charger.

Electric Vehicle (EV) capable space. A vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support EV charging.

Level 2 (L2) EV capable. A parking space provided with electrical infrastructure that meets the following requirements:

i. Conduit that links a listed electrical panel with sufficient capacity to a junction box or receptacle located within three (3) feet of the parking space.

ii. The conduit shall be designed to accommodate at least 8.3 kVa (208/240 volt, 40-ampere) per parking space. Conduit shall have a minimum nominal trade size of one (1) inch inside diameter and may be sized for multiple circuits as allowed by the California Electrical Code. Conduit shall be installed at a minimum in spaces that will be inaccessible after construction, either trenched underground or where penetrations to walls, floors, or other partitions would otherwise be required for future installation of branch circuits, and such additional elements deemed necessary by the Building Official. Construction documents shall indicate future completion of conduit from the panel to the parking space, via the installed inaccessible conduit.

iii. The electrical panel shall reserve a space for a 40-ampere overcurrent protective device space(s) for EV charging, labeled in the panel directory as "EV CAPABLE."

iv. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40-amperes.

v. The parking space shall contain signage with at least a twelve (12) inches font adjacent to the parking space indicating the space is EV capable.

Level 1 (L1) EV ready. A parking space that is served by a complete electric circuit with the following requirements:

i. A minimum of 2.2 kVa (110/120 volt, 20-ampere) capacity wiring.

ii. A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.

iii. Conduit oversized to accommodate future Level 2 EV Ready (208/240 volt, 40-ampere) at each parking space.

Level 2 (L2) EV Ready. A parking space that is served by a complete electric circuit with the following requirements:

i. A minimum of 8.3 kVa (208/240 volt, 40-ampere) capacity wiring.

ii. A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 30-ampere.

Low Power Level 2 (L2) EV Ready. A parking space that is served by a complete electric circuit with the following requirements:

i. A minimum of 4.1 kVA (208/240 Volt, 20-ampere) capacity wiring.

ii. A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.

iii. Conduit oversized to accommodate future Level 2 EV ready (208/240 volt, 40-ampere) at each parking space.

Off-street loading spaces. [BSC-CG, DSA-SS] An area, other than a public street, public way, or other property (and exclusive of off-street parking spaces), permanently reserved or set aside for the loading or unloading of motor vehicles, including ways of ingress and egress and maneuvering areas. Whenever the term "loading space" is used, it shall, unless the context clearly requires otherwise, be construed as meaning off-street loading space. This excludes designated passenger loading/unloading.

Section 301.1 of Chapter 3 of the ~~2022~~ 2025 CALGreen Code is hereby amended as underlined and struck through:

301.1 Scope. Buildings shall be designed to comply with applicable requirements of San Anselmo Green Building Requirements beginning at Section 9-19.010, San Anselmo Municipal Code, and shall also include the green building measures specified as mandatory in the application checklists contained in this code.

Section 301.1.1 of Chapter 3 of the ~~2022~~ 2025 CALGreen Code is hereby amended as underlined and struck through:

301.1.1 Additions and alterations [HCD]. The mandatory provisions of Chapter 4 shall be applied to additions and alterations of existing residential buildings, in accordance with applicable requirements of San Anselmo Green Building Requirements beginning at Section 9-19.010, San Anselmo Municipal Code. The requirements shall apply only to and/or within the specific area of the addition or alteration.

The mandatory provisions of Section 4.106.4.2~~1.1~~ may apply to additions or alterations of existing parking facilities or the addition of new parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.1.2 for application.

NOTE: Repairs including, but not limited to, resurfacing, restriping, and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

Section 301.3 of Chapter 3 of the ~~2022~~ 2025 CALGreen Code is hereby amended as underlined and struck through:

301.3 Nonresidential additions and alterations [BSC-CG]. The provisions of individual sections of Chapter 5 apply to new construction and building additions and alterations (for occupancies within the authority of California Building Standards Commission). Code sections relative to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

Section 4.106.4 of Chapter 4 of the ~~2022~~ 2025 CALGreen Code is hereby amended as underlined and struck through:

4.106.4 Electric vehicle (EV) charging for residential construction shall comply with Section 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (zero emission vehicle signs and pavement markings) or its successor(s). Calculation for spaces shall be rounded up to the nearest whole number.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one (1) or more of the following conditions:

1.1. Where there is no local utility power supply or the local utility is unable to supply adequate power.

1.2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.

2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities and without electrical panel upgrade or new panel installation. Detached ADUs, attached ADUs, and JADUs without additional parking but with electrical panel upgrades or new panels must have reserved breakers and electrical capacity according to the requirements of A4.106.8.1.

3. Multifamily building projects that have approved entitlements before the code effective date.

4. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with this code section.

4.106.4.2~~1~~ Multifamily dwellings, with parking facilities. Requirements apply to parking spaces that are assigned or leased to individual dwelling units, as well as unassigned residential parking. Visitor or common area parking is not included.

4.106.4.2.2~~1.1~~ New construction. Fifteen percent (15%) of dwelling units with parking spaces shall be EVCS with Level 2 EV ready. ALMS shall be permitted to reduce load when multiple vehicles are charging. Eighty-five percent (85%) of dwelling units with parking spaces shall be provided with a Low Power Level 2 EV ready space. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A. EVCS shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B.

NOTE: The total number of EV spaces should be one-hundred percent (100%) of dwelling units or one-hundred percent (100%) of parking spaces, whichever is less.

4.106.4.1.2 Additions and alterations of existing buildings.

1. When parking facilities upgrade the service panel or parking lot surface is modified, including the removal of paving material and curbing, comply with the number of spaces designated for the project type as outlined in Table 1 of Section 9-19.050 of the San Anselmo Municipal Code.

Upgrades shall be required at currently designated vehicle parking spaces. Upgrades shall be required for remaining parking spaces after meeting the accessibility requirements of California Building Code Chapters 11A and 11B.

2. When new parking facilities are added and ALMS is installed, the ALMS system must be designed to deliver no less than 2.2 kVa (110/120 volt, 20-ampere).

4.106.4.2.2.1~~3~~ Electric vehicle charging stations (EVCS).

Electric vehicle charging stations required by Sections 4.106.4.1 and 4.106.4.2, shall comply with Section 4.106.4.3.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels, and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1~~3.1~~ Location.

EVCS shall comply with at least one (1) of the following options:

1. The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2. The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.3.1 and Section 4.106.4.3.2, Item 3.

4.106.4.2.2.1.1.1~~3.2~~ Dimensions.

The charging spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be eighteen (18) feet (5486 mm).

2. The minimum width of each EV space shall be nine (9) feet (2743 mm).

3. One (1) in every twenty-five (25) charging spaces, but not less than one (1), shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is twelve (12) feet (3658 mm).

a. Surface slope for this EV space and the aisle shall not exceed one (1) unit vertical in forty-eight (48) units horizontal (2.083 percent slope) in any direction.

Exception: Where the Town of San Anselmo Municipal Code permits parking space dimensions that are less than the minimum requirements stated in this section 4.106.4.3.2, and the compliance with which would be infeasible due to particular circumstances of a project, an exception may be granted while remaining in compliance with California Building Code Section Tables 11B-228.3.2.1 and 11B-812, as applicable.

4.106.4.4 Direct current fast charging stations (DCFC). One (1) DCFC may be substituted for up to five (5) EVCS to meet the requirements of sections 4.106.4.1 and 4.106.4.2. Where ALMS serve DCFC stations, the power demand from the DCFC shall be prioritized above Level 1 and Level 2 spaces.

Section A4.106.8 of the ~~2022~~ 2025 CALGreen Code is hereby amended as underlined and struck through:

New construction shall comply with Section A4.106.8.1 to facilitate future installation and use of electric vehicle chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

Section A4.106.9.2 of the ~~2022~~ 2025 CALGreen Code is hereby included as a requirement for new multifamily buildings.

Provide on-site bicycle parking for at least one (1) bicycle per every one (1) dwelling unit. Acceptable parking facilities shall be conveniently reached from the street and may include, but not be limited to:

1. Covered, lockable enclosures with permanently anchored racks for bicycles.

2. Lockable bicycle rooms with permanently anchored racks.

3. Lockable, permanently anchored bicycle lockers.

Section 5.106.5.3 of the ~~2022~~ 2025 CALGreen Code is hereby amended as underlined and struck through:

5.106.5.3 Electric vehicle (EV) charging. Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with Section 5.106.5.3.1 and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code. Accessible EVCS shall be provided in accordance with the California Building Code Chapter 11B Section 11B-228.3. For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (zero emission vehicle signs and pavement markings) or its successor(s). Calculation for spaces shall be rounded up to the nearest whole number.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one (1) or more of the following conditions:

a. Where there is no local utility power supply.

b. Where the local utility is unable to supply adequate power.

c. Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with this code section.

Section A5.106.5 of Appendix A5 of the ~~2022~~ 2025 CALGreen Code is hereby amended as struck through:

A5.106.5 Electric Vehicle (EV) charging. Construction shall comply with Section A5.106.5.3.1 or A5.106.5.3.2, and in accordance with regulations in the California Building Code and the California Electrical Code. Accessible EVCS shall be provided in accordance with the California Building Code Chapter 11B Section 11B-228.3. For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (zero emission vehicle signs and pavement markings) or its successor(s). Calculation for spaces shall be rounded up to the nearest whole number.

Exceptions:

1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one (1) of the following conditions:

a. Where there is no local utility power supply.

b. Where the local utility is unable to supply adequate power.

c. Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section A5.106.5, may adversely impact the construction cost of the project.

2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with this code section.

A5.106.5.3 Nonresidential Occupancies - Shared Parking Facilities.

A5.106.5.3.1 New Construction - Tier 1.

Table A5.106.5.3.1 shall be used to determine the number of EV capable spaces required. Refer to section 5.106.5.3 for design space requirements.

When EV capable spaces are provided with EVSE to create EVCS per Table A5.106.5.3.1.

TABLE A5.106.5.3.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	~~TIER 1~~ NUMBER OF REQUIRED EV CAPABLE SPACES	~~TIER 1 NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)~~[2] Other than office and retail number of required EVCS	Office and retail number of required EVCS
10—9	2	~~0~~ 1	2
10—25	5	~~0~~ 3	4
26—50	11	~~2~~ 6	8
51—75	19	~~3~~ 10	14
76—100	26	4 13	20
101—150	38	~~6~~ 19	29
151—200	53	~~9~~ 27	40
201 and over	30 percent of total[1]	50~~25~~ percent of EV capable spaces[1]	75 Percent of EV capable spaces

1. Calculation for spaces shall be rounded up to the nearest whole number.

2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.

A5.106.5.3.2 Additions and alterations of existing buildings.

1. When parking facilities upgrade the service panel or parking lot surface is modified, including the removal of paving material and curbing, comply with the number of spaces designated for the project type as outlined in Table 1 of Section 9-19.050 of the San Anselmo Municipal Code. Upgrades shall be required at currently designated vehicle parking spaces. Upgrades shall be required for remaining parking spaces after meeting the accessibility requirements of California Building Code Chapters 11A and 11B.

2. When new parking facilities are added and ALMS is installed, the ALMS system must be designed to deliver no less than 2.2 kVa (110/120 volt, 20-ampere).

A5.106.5.4 Direct current fast charging stations. One (1) DCFC may be substituted for up to five (5) EVCS to meet the requirements of Section 5.106.5.3. Where ALMS serve DCFC stations, the power demand from the DCFC shall be prioritized above Level 1 and Level 2 spaces.

Section 5.106.5.4 of the ~~2022~~ 2025 CALGreen Code is hereby amended as struck through:

5.106.5.4 Electric vehicle charging readiness: medium-duty and heavy-duty. [N]

Construction shall comply with Section 5.106.5.4.1 to facilitate future installation of electric vehicle supply equipment (EVSE). Construction for warehouses, grocery stores and retail stores with planned off-street loading spaces shall also comply with Section 5.106.5.4.1 for future installation of medium- and heavy-duty EVSE. Accessible EVCS shall be provided in accordance with the California Building Code Chapter 11B Section 11B-228.3. For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

Exceptions:

1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one (1) of the following conditions:

a. Where there is no local utility power supply.

b. Where the local utility is unable to supply adequate power.

c. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

5.106.5.4.1 Warehouses, grocery stores and retail stores with planned off-street loading spaces.

[N] In order to avoid future demolition when adding EV supply and distribution equipment, spare raceway(s) or busway(s) and adequate capacity for transformer(s), service panel(s) or subpanel(s) shall be installed at the time of construction in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

1. The transformer, main service equipment and subpanels shall meet the minimum power requirement in Table 5.106.5.4.1 to accommodate the dedicated branch circuits for the future installation of EVSE.

2. The construction documents shall indicate one (1) or more location(s) convenient to the planned off-street loading space(s) reserved for medium- and heavy-duty ZEV charging cabinets and charging dispensers, and a pathway reserved for routing of conduit from the termination of the raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s), as shown in Table 5.106.5.5.14~~.1~~.

3. Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium- and heavy-duty EVSE will be located and shall terminate in close proximity to the potential future location of the charging equipment for medium- and heavy-duty vehicles.

4. The raceway(s) or busway(s) shall be of sufficient size to carry the minimum additional system load to the future location of the charging for medium- and heavy-duty EVs as shown in Table 5.106.5.5.14~~.1~~.

TABLE 5.106.5.5.14~~.1~~, Raceway Conduit and Panel power Requirements for Medium-and-Heavy-Duty EVSE [N]

Building type	Building Size (sq. ft.)	Number of Off-street loading spaces	Additional capacity Required (kVa) for Raceway & Busway and Transformer & Panel
Grocery	10,000 to 90,000	1 or 2	200
		3 or Greater	400

	Greater than 90,000	1 or Greater	400
Manufacturing Facilities	10,000 to 50,000	1 or 2	200
	10,000 to 50,000	3 or greater	400
	Greater than 50,000	1 or greater	400
Office Building	10,000 to 135,000	1 or 2	200
	10,000 to 135,000	3 or greater	400
	Greater than 135,000	1 or greater	400
Retail	10,000 to 135,000	1 or 2	200
		3 or Greater	400
	Greater than 135,000	1 or Greater	400
Warehouse	20,000 to 256,000	1 or 2	200
		3 or Greater	400
	Greater than 256,000	1 or Greater	400

9-19.050 Standards for compliance.

The San Anselmo Green Building Requirements define compliance thresholds for different projects that are covered by this ordinance. These standards are summarized below in Table 1. The energy efficiency and electrification measures menu and specifications are detailed in Tables 2 and 3.

Table 1: Requirements by Project Type and Size			
Project Type and Size	Green Building Requirements	Energy Efficiency Requirements	Electric Vehicle Requirements
Single and Two-Family New Construction	CALGreen Tier 1	Meet the standards outlined for the project in the ~~2022~~ 2025 California Energy Code	Comply with CALGreen Measure A4.106.8.1, Tier 1
Multifamily Residential New Construction	CALGreen Tier 1 Install long-term bike parking per CALGreen A4.106.~~8~~9.2, as modified by Section 9-19.040		Of the total parking spaces, (i) ~~15% Level 2 (L2) EVCS~~ Hotel and Motel 60 % (ii) ~~85% Low-Power Level 2 (LPL2) EV Ready~~ Multifamily 40 %
Nonresidential New Construction	CALGreen Tier 1	Meet the standards outlined for the project in the ~~2022~~ 2025 California Energy Code	For Nonresidential: comply with CALGreen Measure A5.106.5.3.1, ~~Tier 1~~; AND For Nonresidential Grocery, Retail, or Warehouses planning off-street medium-heavy-duty loading spaces: comply with CALGreen Measure 5.106.5.4
Single and Two-Family Additions and Alterations less than 500 square feet or 750 square feet	CALGreen Mandatory Conductor ready required for laundry room and kitchen remodels regardless of remodel size.	Meet the standards outlined for the project in the ~~2022~~ 2025 California Energy Code	If the project is upgrading the main electrical service panel, comply with CALGreen Measure A4.106.8.1, Tier 1
Single and Two-Family Additions and Alterations 500 square feet or 750 square feet or greater; and Substantial Improvements	CALGreen Tier 1	Using the Measure Menu in Table 2, achieve a total score that is equal to or greater than the Target Score for the applicable climate zone and install the electric readiness measures (ER2) as applicable in Table 3	If the project is upgrading the main electrical service panel, comply with CALGreen Measure A4.106.8.1, Tier 1

Multifamily Residential Additions and Alterations less than 500 square feet or 750 square feet	CALGreen Mandatory Conductor ready required for laundry room and kitchen remodels regardless of remodel size.	Meet the standards outlined for the project in the ~~2022~~ 2025 California Energy Code	If the service panel is modified, add designated electrical capacity for 20% of onsite parking spaces to be Level 2 EV Ready. If parking lot surface is modified (paving material and curbing removed): ~~;hg0;~~ (i) Add raceway to a minimum of 50% of exposed parking spaces, OR ~~;hg0~~; (ii) Add raceway to a minimum of 20% of exposed parking spaces and install at minimum 5% EVCS to parking spaces requiring any combination of Level 2 and Direct Current Fast Charging EVSE, except at least one Level 2 EVSE shall be provided. Where existing electrical service will not be upgraded in the existing project scope, designate capacity for parking spaces to the maximum extent that does not require an upgrade to existing electrical service.
Multifamily Residential Additions and Alterations 500 square feet or 750 square feet or greater; and Substantial Improvements	CALGreen Tier 1		
Nonresidential Additions and Alterations			

The following conditions also apply to Table 1:

(a) Cumulative new construction or remodels during the preceding 36-month period from the acceptance of this application shall be considered as a single covered project, and subject to the highest compliance threshold based on the cumulative project size or valuation.

(b) Mixed-use (residential and commercial) projects must comply either with the applicable covered project requirements for the respective residential and commercial portions of the project or may propose to utilize a mixed-use rating system, subject to approval by the chief building official.

The following are exceptions to Table 1:

(1) Where the requirements of Tier 1 are infeasible as a result of the market, economy, or technology available as determined by the chief building official ~~(CBO),~~ the chief building official ~~CBO~~ may provide an alternative or waive the requirement.

Table 2: Energy and Electrification Menu of Measures by Climate Zone			
Measure		Climate Zone	Steps
		2	1) Choose your Climate Zone using CEC toolfinder[1]
Specification	Spec. ID (Refer to Table 3)	Target Score	2) Minimum Target Score needed to comply (1 point = 1 MMBTU savings per yr.)
		8	
Lighting	E1	Mandatory	

Water Heating Package	E2	1	**3) Choose a measure or a combination of measures that adds up to the minimum target score above based on CZ. Measures listed as "Mandatory" MUST be installed.** **4) Use the Specification Number (Spec. ID) column as a key and conform to the specifications in Table 3 below. Table 3 describes, specifies, and details compliance with each corresponding measure.**
Air Sealing	E3	1	
R-49 Attic Insulation	E4	1	
Duct Sealing	E5	1	
New Ducts + Duct Sealing	E6	2	
PV + Electric Ready Pre-Wire	ER1	12	
Electric Readiness Measures	ER2	Mandatory (if remodeling kitchen, laundry, or upgrading panel)	
HPWH	FS1	12	
High Eff HPWH	FS2	13	
HVAC Heat Pump	FS3	13	
High Eff HVAC Heat Pump	FS4	14	
Heat Pump Clothes Dryer	FS5	1	
Induction Cooktop	FS6	1	
[1] California Energy Commission climate zone tool finder at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/climate-zone-tool-maps-and.			

The following conditions also apply to Table 2:

(a) Unless otherwise specified, the requirements shall apply to the entire dwelling unit, not just the additional or altered portion.

(b) Measures from the Measure Menu in Table 2 and specified in Table 3, that already exist in the home, may be counted towards compliance with these requirements, unless otherwise specified in Table 3.

(c) Measures from the Measure Menu in Table 2 that are to be installed to satisfy requirements under the State Energy Code, Title 24, Part 6, may also be counted towards compliance with these requirements. Where these requirements conflict with other Energy Code requirements, the stricter requirements shall prevail.

Table 3. List of Measure Specifications	
ID	Measure Specification
Energy Measures	
E1	Lighting Measures—Replace all interior and exterior screw-in incandescent, halogen, and compact fluorescent lamps with LED lamps. Install photocell controls on all exterior lighting luminaires.
E2	Water Heating Package: Add exterior insulation meeting a minimum of R-6 to existing storage water heaters. Insulate all accessible hot water pipes with pipe insulation a minimum of ¾ inch thick. This includes insulating the supply pipe leaving the water heater, piping to faucets underneath sinks, and accessible pipes in attic spaces or crawlspaces. Upgrade fittings in sinks and showers to meet current California Green Building Standards Code (Title 24, Part 11) Section 4.303 water efficiency requirements. ~~;hg0;~~**Exception 1:** Water heater blanket is not required on water heaters less than 20 gallons. ~~;hg0;~~**Exception 2:** Water heater blanket not required if application of a water heater blanket voids the warranty on the water heater. ~~;hg0;~~**Exception 3:** Upgraded fixtures are not required if existing fixtures have rated or measured flow rates of no more than ten percent greater than ~~2022~~ 2025 California Green Building Standards Code (Title 24, Part 11) Section 4.303 water efficiency requirements. ~~;hg0;~~**Exception 4:** Water heaters with factory installed insulation of R-24 or greater.
E3	Air Sealing: Seal all accessible cracks, holes, and gaps in the building envelope at walls, floors, and ceilings. Pay special attention to penetrations including plumbing, electrical, and mechanical vents, recessed can light luminaires, and windows. Weather-strip doors if not already present. Verification shall be conducted following a prescriptive checklist that outlines which building aspects need to be addressed by the permit applicant and verified by an inspector. Compliance can also be demonstrated with blower door testing conducted by a certified HERS Rater no more than three years prior to the permit application date that either: ~~;hg0;~~ a) Shows at least a 30 percent reduction from pre-retrofit conditions; or ~~;hg0;~~ b) Shows that the number of air changes per hour at 50 Pascals pressure difference (ACH50) does not exceed ten. If combustion appliances are located within the pressure boundary of the building, conduct a combustion safety test by a professional certified by the Building Performance Institute in accordance with the ANSI/BPI-1200-S-2017 Standard Practice for Basic Analysis of Buildings[1], the Whole House Combustion Appliance Safety Test Procedure for the Comfortable Home Rebates Program 2020 or the California Community Services and Development Combustion Appliance Safety Testing Protocol.
E4	R-49 Attic Insulation: Attic insulation shall be installed to achieve a weighted assembly U-factor of 0.020 or insulation installed at the ceiling level shall have a thermal resistance of R-49 or greater for the insulation alone. Recessed downlight luminaires in the ceiling shall be covered with insulation to the same depth as the rest of the ceiling. Luminaires not rated for insulation contact must be replaced or fitted with a fire-proof cover that allows for insulation to be installed directly over the cover. **Exception:** In buildings where existing R-30 is present and existing recessed downlight luminaires are not rated for insulation contact, insulation is not required to be installed over the luminaires.

E5	Duct Sealing: Air seal all space conditioning ductwork to meet the requirements of the ~~2022~~ 2025 Title 24 Section 150.2(b)1E. The duct system must be tested by a HERS Rater no more than three years prior to the Covered Single Family Project permit application date to verify the duct sealing and confirm that the requirements have been met. This measure may not be combined with the New Ducts and Duct Sealing measure in this Table.
E6	New Ducts + Duct Sealing: Replace existing space conditioning ductwork with new R-8 ducts that meet the requirements of ~~2022~~ 2025 Title 24 Section 150.0(m)11. This measure may not be combined with the Duct Sealing measure in this Table. To qualify, a preexisting measure must have been installed no more than three years before the Covered Single Family Project permit application date.
E7	Windows: Replace all existing windows with high performance windows with an area-weighted average U-factor no greater than 0.32.
E8	R-13 Wall Insulation: Install wall insulation in all exterior walls to achieve a weighted U-factor of 0.102 or install wall insulation in all exterior wall cavities that shall result in an installed thermal resistance of R-13 or greater for the insulation alone.
Fuel Substitution Measures	
FS1	Heat Pump Water Heater (HPWH): Replace all existing electric resistance and natural gas storage water heaters with heat pump water heaters.
FS2	High Efficiency Heat Pump Water Heater (HPWH): Replace all existing electric resistance and natural gas storage water heaters with heat pump water heaters with a Northwest Energy Efficiency Alliance (NEEA) Tier 3 or higher rating.
FS3	HVAC Heat Pump: Replace all existing gas space heating system and existing electric resistance heating systems with electric heat pump systems.
FS4	High Efficiency HVAC Heat Pump: Replace all existing gas space heating system and existing electric resistance heating systems with electric heat pump systems with a SEER rating of 21 or greater and an HSPF rating of 11 or greater.
FS5	Heat Pump Clothes Dryer: Replace all existing gas or electric resistance clothes dryers with heat pump dryers with no resistance element and cap the gas lines.
FS6	Induction Cooktop: Replace all existing gas and electric resistance stove tops with inductive stove tops and cap the gas lines.
Solar PV and Electric-Readiness Measures	
ER1	PV+ Electric Ready Pre-Wire: ~~;hg0;~~For New PV Systems: Install a new solar PV system that meets the requirements of ~~2022~~ 2025 Title 24 Section 150.1(c)14 and upgrade the service panel to meet the requirements of ER2.G. and install any two of the other measures from ER2.A - ER2.F. ~~;hg0;~~For Existing PV Systems: If the home already has an existing PV system, to claim credit for this measure, ER1, upgrade the service panel to meet the requirements of ER2.G. and install any two of the other measures from ER2.A—ER2.F.
ER2	Electric Readiness Measures: To claim credit for Item ER1, in addition to the solar PV system installed, upgrade the panelboard to meet the requirements of

	Item ER2.G and install any two of the other measures ER2.A—ER2.F, below to allow for installation of electric appliances at a future date. For any Covered Project, if the service panel is being upgraded, install any two of the other measures below. If the laundry room is being remodeled, comply with Item ER2.D and upgrade the panelboard to meet the requirements of Item ER2.G. If the kitchen is being remodeled, comply with Item ER2.C and upgrade the service panel to meet the requirements of Item ER2.G. ~~;hg0;~~ A. Heat Pump Water Heater Ready, as specified in Section 150.0(n)1. ~~;hg0;~~ B. Heat Pump Space Heater Ready, as specified in Section 150.0(t). ~~;hg0;~~ C. Electric Cooktop Ready, as specified in Section 150.0(u). ~~;hg0;~~ D. Electric Clothes Dryer Ready, as specified in Section 150.0(v). ~~;hg0;~~ E. Energy Storage Systems (ESS) Ready, as specified in Section 150.0(s). ~~;hg0;~~ F. EV Charger Ready. Install a listed raceway for an EV charger, that meets the requirements of the California Green Building Standards Code (Title 24, Part 11) Section A4.106.8.1, Tier 1 and 2, which otherwise applies to new construction. ~~;hg0;~~ G. Upgrade the panelboard serving the individual dwelling to either: ~~;hg0;~~ (i) A minimum 200 amp panel with a minimum 225 amp busbar rating to accommodate future connection of electric appliances, including heat pump water heaters, heat pump space heaters, electric cooktops, electric clothes dryers as specified in California Energy Code Section 150.0 (n), (t), (u) and (v) and Level 2 electric vehicle supply equipment; or, ~~;hg0;~~ (ii) Provide electrical load calculations and appliance specifications for serving all of these end-uses with a minimum 100-amp panel. **Exception**: If an electrical permit is not otherwise required for the project other than compliance with this Item, ER2.

9-19.060 Incentives for compliance.

In addition to the required standards for compliance, the Town Council may establish by resolution, financial or application processing incentives and/or award or recognition programs to encourage higher levels of green building compliance for a project.

9-19.070 Administrative procedures.

The procedures for compliance with the provisions of this chapter shall include, but not be limited to the following:

(a) *Project design*. Applicants for a covered project are strongly encouraged to involve a qualified green building rater in the initial design phases of the project in advance of submittal of an application to determine applicable green building compliance thresholds and the most cost effective and appropriate means of achieving compliance.

(b) *Planning applications*. If a discretionary planning application is required for a covered project, applicants should be prepared to identify expected green building measures to be included in the project to achieve the compliance thresholds. Applicants should identify any anticipated difficulties in achieving compliance and any exemptions from the requirements of this chapter that may be requested.

(c) *Building plan check review*. Upon submittal of an application for a building permit, building plans for any covered project shall include a green building program description and completed checklist. The checklist shall be incorporated onto a separate full-sized plan sheet included with the building plans. Evidence that the project, as indicated by the project plans and green building program description, will achieve the standards for compliance outlined in Section 9-19.050 shall be provided prior to issuance of a building permit.

(d) *Changes during construction*. During the construction process, alternate green building measures may be substituted, provided that documentation of the proposed change and the project's continued ability to achieve the standards for compliance to the chief building official shall be provided.

(e) *Final building inspection*. Prior to final building inspection and occupancy for any covered project, evidence that project construction has achieved the required compliance set forth in the standards for compliance outlined in Section 9-19.050 shall be provided. The Chief Building Official shall review the documentation submitted by the applicant and determine whether the project has achieved the compliance threshold as set forth in the standards for compliance outlined in Section 19.04.140. If the Chief Building Official determines that the applicant has met these requirements, the final building inspection may proceed.

(f) *Conflict with other laws*. The provisions of this chapter are intended to be in addition to and not in conflict with other laws, regulations and ordinances relating to building construction and site development. If any provision of this chapter conflicts with any duly adopted and valid statutes or regulations of the federal government or the State of California, the federal or state statutes or regulations shall take precedence.

9.19.080 Exemptions.

(a) The provisions of this chapter shall not apply to:

(1) Buildings which are temporary (such as construction trailers).

(2) Building area which is not or is not intended to be conditioned space.

(3) Any requirements of this chapter which would impair the historic integrity of any building listed on a local, state or federal register of historic structures, as determined by the Chief Building Official and as regulated by the California Historic Building Code (Title 24, Part 8). In making such a determination, the Chief Building Official may require the submittal of an evaluation by an architectural historian or similar expert.

(4) Accessory Dwelling Units as defined in Section 9-19.020(3).

(5) All residential and nonresidential buildings structures constructed after 1992.

(b) As outlined in the ~~2022~~ 2025 CALGreen Code, Sections 4.106.4 and A5.106.5, applicants may be exempted from the electric vehicle changing requirements on a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one (1) or more of the following conditions:

(1) Where there is no commercial power supply or the local utility is unable to supply adequate power.

(2) Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Sections 4.106.4 and A5.106.5 may adversely impact the construction cost of the project.

(3) ADUs and JADUs without additional parking facilities.

(4) Parking spaces accessible only by automated mechanical car parking systems are not required to comply with CALGreen Code Sections 4.106.4 and A5.106.5

(c) Hardship or infeasibility exemption. If an applicant for a covered project believes that circumstances exist that make it a hardship or infeasible to meet the requirements of this chapter, the applicant may request an exemption as set forth below. In applying for an exemption, the burden is on the applicant to show hardship or infeasibility.

(1) *Application*. Based on the following, the applicant shall identify in writing the specific requirements of the standards for compliance that the project is unable to achieve and the circumstances that make it a hardship or infeasible for the project to comply with this chapter. The applicant may not petition for relief from any requirement of the ~~2022~~ 2025 California Energy Code (Title 24, Part 6) and referenced standards, or the ~~2022~~ 2025 California Green Building Standards (Title 24, Part 11) of the California Building Standards Code. Circumstances that constitute hardship or infeasibility shall include one (1) of the following:

a. That the cost of achieving compliance is disproportionate to the overall cost of the project;

b. That strict compliance with these standards would create or maintain a hazardous condition(s) and present a life safety risk to the occupants.

(2) *Granting of exemption*. If the chief building official determines that it is a hardship or infeasible for the applicant to fully meet the requirements of this chapter and that granting the requested exemption will not cause the building to fail to comply with the ~~2022~~ 2025 California Energy Code (Title 24, Part 6) and referenced standards, or the -2025 California Green Building Standards (Title 24, Part 11) of the California Building Standards Code, the chief building official shall determine the maximum feasible threshold of compliance reasonably achievable for the project. In making this determination, the chief building official shall consider whether alternate, practical means of achieving the objectives of this chapter can be satisfied, such as reducing comparable energy use at an off-site location within the county. If an exemption is granted, the applicant shall be required to comply with this chapter in all

other respects and shall be required to achieve the threshold of compliance determined to be achievable by the Chief Building Official.

(3) *Denial of exception*. If the chief building official determines that it is reasonably possible for the applicant to fully meet the requirements of this chapter, the request shall be denied, and the applicant shall be notified of the decision in writing. The project and compliance documentation shall be modified to comply with the standards for compliance.

(4) *Appeal*. Any aggrieved applicant or person may appeal the determination of the chief building official regarding the granting or denial of an exemption or compliance with any other provision of this chapter. An appeal of a determination of the chief building official shall be filed in writing and processed in accordance with the provisions of Section 10-1.06 of this Code.

SECTION 5. Severability. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or unlawful, such decision shall not affect the validity of the remaining portions of this ordinance. The Town Council hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional or unlawful.

SECTION 6. Effective Date. This ordinance shall take effect on January 1, 2026, but it may not be enforced by the Town until it has been approved by the California Energy Commission (Cal. Pub. Res. Code §25402.1(h)(2)). Within fifteen (15) days after its adoption, a summary of the ordinance shall be published with the names of those Town Council members voting for and against the ordinance and the Town Clerk shall post in the office of the town clerk a certified copy of the full text of the adopted ordinance along with the names of the members voting for and against the ordinance. Prior to the effective date, a copy of this Ordinance shall be filed with the California Building Standards Commission complete with local findings for each local amendment to the California Building Standards Code, as required by Cal. Health and Safety § 17959.

The foregoing ordinance was introduced at a regular meeting of the San Anselmo Town Council on the 9th day of September, 2025 and was adopted at a regular meeting on the XX day of September, 2025 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:
RECUSED:

APPROVED:_____
Tarrell Kullaway, Mayor

ATTEST:_____
Serge Avila, Town Clerk

CALIFORNIA ENERGY CODES & STANDARDS
A STATEWIDE UTILITY PROGRAM



Application of the 2022 Studies to the 2025 Energy Code:
Existing Single Family Building Upgrades

Prepared by:
Frontier Energy, Inc
Misti Bruceri & Associates, LLC

Prepared for:
Kelly Cunningham, Codes and Standards Program, Pacific Gas and Electric

Revision: 1.0
Last modified: 2025/08/15

SDGE™ SOUTHERN CALIFORNIA EDISON® Energy for What's Ahead® PG&E Pacific Gas and Electric Company®

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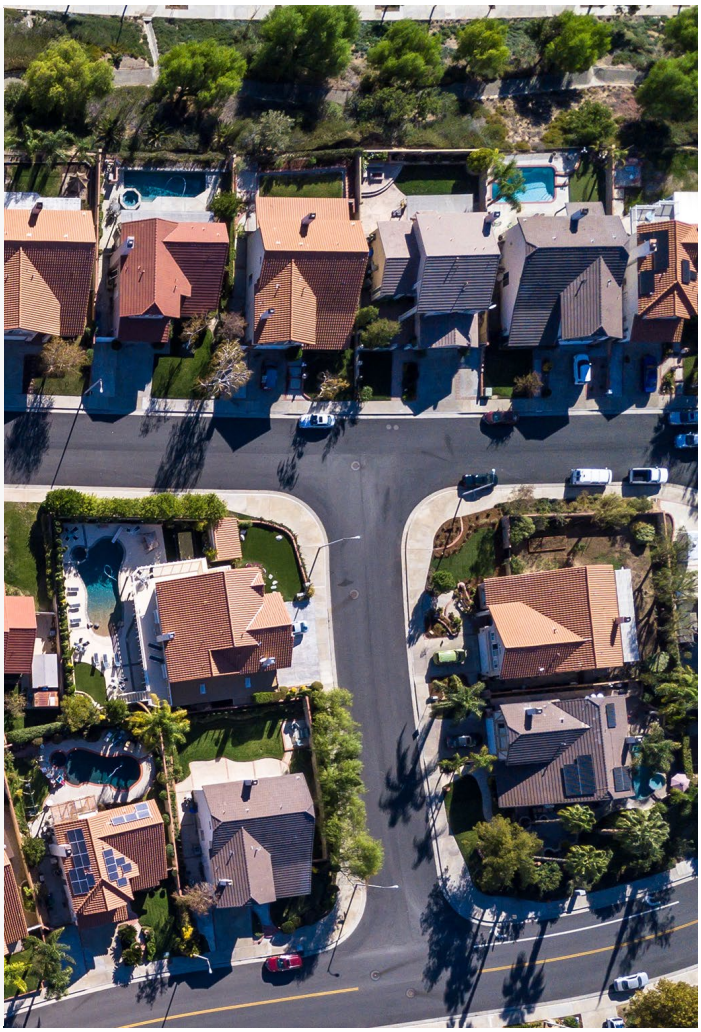


Table 1 Summary of Revisions

Date	Description	Reference (page or section)
8/15/2025	Original Release	N/A

Acronym List

B/C – Lifecycle Benefit-to-Cost Ratio

CASE – Codes and Standards Enhancement

CFL – Compact Fluorescent Lamps

CPAU – City of Palo Alto Utilities

CPUC – California Public Utilities Commission

CZ – California Climate Zone

kWh – Kilowatt Hour

NPV – Net Present Value

PG&E – Pacific Gas and Electric Company

PV – Photovoltaic

SCE – Southern California Edison

SDG&E – San Diego Gas and Electric

SMUD – Sacramento Municipal Utility District

SoCalGas – Southern California Gas Company

Therm – Unit for quantity of heat that equals 100,000 British thermal units

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1 Summary

The California Codes and Standards (C&S) Reach Codes program provides technical support to local governments considering adopting a local ordinance (reach code) intended to support meeting local and/or statewide energy efficiency and greenhouse gas reduction goals. The program facilitates adoption and implementation of the code when requested by local jurisdictions by providing resources such as cost-effectiveness studies, model language, sample findings, and other supporting documentation.

In April 2024, the Statewide Reach Codes Team published the 2022 Cost-Effectiveness Study: Existing Single Family Building Upgrades. This study focuses on existing single family buildings identifying cost-effective measures and measure package upgrades in all 16 California climate zones. The study was conducted to complement Part 6 of the California Building Code (the Energy Code) for the 2022 code cycle, effective January 1, 2023. In the 2019 code cycle the 2019 Cost-Effectiveness Study: Existing Single Family Residential Building Upgrades study included outdoor lighting and a water heater package that was discontinued in the 2022 study but has been brought back in this memo by request from jurisdictions. The studies document the estimated costs, benefits, energy impacts and greenhouse gas emission reductions that may result from implementing an ordinance to help local leadership, residents, and other stakeholders make informed policy decisions.

The Statewide Reach Codes Team reviewed the cost-effectiveness study for impacts of code changes implemented in the 2025 Energy Code. Measures that are now required by code may alter the results presented in the 2022 study. Below is a summary of the changes to the additions and alterations for residential buildings sections of the 2025 Energy Code.

- Mandatory wall insulation R-value has been increased from R-13 to R-15. [Section 150.2(a) of the Energy Code]
- Prescriptive window U-factor has decreased from 0.30 to 0.27 in Climate Zones 1-5, 11-14, and 16. [Section 150.2(b)1B of the Energy Code]

The wall insulation measure has been re-evaluated with R-15 instead of R-13. There is generally a slight increase in utility cost savings as expected with the increase in efficiency. However, there is not a substantial impact on the cost-effectiveness results.

For the prescriptive window U-factor, the original study modeled U-0.28 in all climate zones. This updated memo drops the U-factor from 0.28 to 0.27 in all climate zones. The SHGC is maintained at 0.23 for climate zone 2, 4, and 6-15 and 0.35 for CZ 1, 3, 5, 16. There is minimal impact on the cost-effectiveness results due to this update. However, there are two instances in the 1978-1991 vintage where cost-effectiveness flips from cost-effective to not cost-effective. Climate zone 4 in PGE territory utilizing standard rates and the modest gas escalation is no longer cost-effective on-bill by the smallest margin. Climate zone 10 in SDGE territory utilizing CARE rates and the modest gas escalation has also become no longer cost-effective on-bill.

The 2022 study included a whole building air sealing measure defined as a 30% reduction in air leakage. A new measure – air sealing of the ceiling floor, representing a 14% reduction in air leakage – is added in this memo. Further details and cost-effectiveness results are provided in Section 2.

Lighting measures were previously presented in the 2019 Cost-Effectiveness Study: Existing Single Family Residential Building Upgrades study but were not analyzed in the 2022 study. Updated cost-effectiveness analysis for this measure is presented in Section 3.

The water heating package measure was previously presented in 2019 Cost-Effectiveness Study: Existing Single Family Residential Building Upgrades study. Updated cost-effectiveness analysis for this measure is presented in Section 4.

The 3 kW PV measure from the 2022 study is revised here with an updated cost-effectiveness analysis that accounts for the elimination of the Federal Solar tax credit December 31, 2025. Additional details and analysis are provided in Section 5.

The 2022 report, model ordinance language and other resources are posted on the C&S Reach Codes Program website at LocalEnergyCodes.com. Local jurisdictions that are considering adopting an ordinance may contact the program for further technical support at info@localenergycodes.com.

2 Air Sealing at the Ceiling

Unlike full air sealing, which has previously been presented, air sealing of the ceiling floor may be an attractive measure for an attic remodel project. The whole building air sealing measure estimated a 30% reduction in air leakage, while air sealing at the ceiling measure results in a 14% reduction in air leakage.

Table 2 through Table 7 present the cost-effectiveness results for the air sealing at the ceiling plane measure. The estimated incremental cost for air sealing at the ceiling plane is $1,963 which is from the 2022 Residential Additions and Alterations CASE Report (Statewide CASE Team, 2020).

Table 2. [Pre-1978] Air Sealing at the Ceiling (Std)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	First-year Utility Savings	Lifecycle NPV Savings		
				2025 LSC NPV	On-Bill NPV Modest Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$1,963	$33	($465)	($997)	($432)
CZ02	PGE	$1,963	$18	($1,114)	($1,433)	($1,118)
CZ03	PGE	$1,963	$17	($1,180)	($1,463)	($1,171)
CZ04	PGE	$1,963	$25	($1,081)	($1,290)	($979)
CZ04	CPAU	$1,963	$21	($1,081)	($1,379)	($1,069)
CZ05	PGE	$1,963	$16	($1,230)	($1,500)	($1,235)
CZ05	PGE/SCG	$1,963	$14	($1,230)	($1,555)	($1,325)
CZ06	SCE/SCG	$1,963	($2)	($1,797)	($1,987)	($1,937)
CZ07	SDGE	$1,963	($3)	($1,813)	($2,008)	($1,934)
CZ08	SCE/SCG	$1,963	$7	($1,680)	($1,775)	($1,703)
CZ09	SCE/SCG	$1,963	$10	($1,597)	($1,693)	($1,592)
CZ10	SCE/SCG	$1,963	$17	($1,497)	($1,540)	($1,420)
CZ10	SDGE	$1,963	$23	($1,497)	($1,366)	($1,237)
CZ11	PGE	$1,963	$32	($1,014)	($1,120)	($816)
CZ12	PGE	$1,963	$22	($1,147)	($1,348)	($1,064)
CZ12	SMUD/PGE	$1,963	$17	($1,147)	($1,468)	($1,190)
CZ13	PGE	$1,963	$31	($1,114)	($1,162)	($918)
CZ14	SCE/SCG	$1,963	$32	($897)	($1,130)	($832)
CZ14	SDGE	$1,963	$42	($897)	($845)	($519)
CZ15	SCE/SCG	$1,963	$40	($1,297)	($1,041)	($946)
CZ16	PGE	$1,963	$30	($581)	($1,071)	($551)

Table 3. [1978-1991] Air Sealing at the Ceiling (Std)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	First-year Utility Savings	Lifecycle NPV Savings		
				2025 LSC NPV	On-Bill NPV Modest Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$1,963	$23	($931)	($1,292)	($903)
CZ02	PGE	$1,963	$13	($1,364)	($1,570)	($1,341)
CZ03	PGE	$1,963	$10	($1,480)	($1,668)	($1,496)
CZ04	PGE	$1,963	$16	($1,330)	($1,522)	($1,292)
CZ04	CPAU	$1,963	$13	($1,330)	($1,575)	($1,356)
CZ05	PGE	$1,963	$11	($1,447)	($1,649)	($1,466)
CZ05	PGE/SCG	$1,963	$10	($1,447)	($1,684)	($1,522)
CZ06	SCE/SCG	$1,963	($1)	($1,830)	($1,967)	($1,934)
CZ07	SDGE	$1,963	($4)	($1,896)	($2,040)	($1,991)
CZ08	SCE/SCG	$1,963	$4	($1,797)	($1,860)	($1,813)
CZ09	SCE/SCG	$1,963	$5	($1,747)	($1,823)	($1,764)
CZ10	SCE/SCG	$1,963	$10	($1,663)	($1,722)	($1,652)
CZ10	SDGE	$1,963	$14	($1,663)	($1,603)	($1,517)
CZ11	PGE	$1,963	$25	($1,264)	($1,320)	($1,096)
CZ12	PGE	$1,963	$16	($1,380)	($1,520)	($1,314)
CZ12	SMUD/PGE	$1,963	$12	($1,380)	($1,604)	($1,402)
CZ13	PGE	$1,963	$23	($1,364)	($1,373)	($1,199)
CZ14	SCE/SCG	$1,963	$22	($1,230)	($1,397)	($1,182)
CZ14	SDGE	$1,963	$28	($1,230)	($1,212)	($974)
CZ15	SCE/SCG	$1,963	$32	($1,463)	($1,225)	($1,154)
CZ16	PGE	$1,963	$21	($1,014)	($1,357)	($1,001)

Table 4. [1992-2010] Air Sealing at the Ceiling (Std)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	First-year Utility Savings	Lifecycle NPV Savings		
				2025 LSC NPV	On-Bill NPV Modest Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$1,963	$14	($1,314)	($1,550)	($1,309)
CZ02	PGE	$1,963	$9	($1,530)	($1,687)	($1,529)
CZ03	PGE	$1,963	$7	($1,613)	($1,744)	($1,618)
CZ04	PGE	$1,963	$11	($1,530)	($1,653)	($1,501)
CZ04	CPAU	$1,963	$9	($1,530)	($1,701)	($1,557)
CZ05	PGE	$1,963	$7	($1,613)	($1,759)	($1,637)
CZ05	PGE/SCG	$1,963	$6	($1,613)	($1,788)	($1,686)
CZ06	SCE/SCG	$1,963	$1	($1,863)	($1,936)	($1,911)
CZ07	SDGE	$1,963	$0	($1,896)	($1,944)	($1,911)
CZ08	SCE/SCG	$1,963	$3	($1,830)	($1,885)	($1,851)
CZ09	SCE/SCG	$1,963	$3	($1,780)	($1,892)	($1,853)
CZ10	SCE/SCG	$1,963	$6	($1,763)	($1,814)	($1,767)
CZ10	SDGE	$1,963	$8	($1,763)	($1,741)	($1,681)
CZ11	PGE	$1,963	$14	($1,530)	($1,581)	($1,437)
CZ12	PGE	$1,963	$10	($1,580)	($1,693)	($1,560)
CZ12	SMUD/PGE	$1,963	$8	($1,580)	($1,737)	($1,606)
CZ13	PGE	$1,963	$12	($1,580)	($1,643)	($1,531)
CZ14	SCE/SCG	$1,963	$12	($1,530)	($1,639)	($1,503)
CZ14	SDGE	$1,963	$16	($1,530)	($1,537)	($1,382)
CZ15	SCE/SCG	$1,963	$17	($1,680)	($1,572)	($1,532)
CZ16	PGE	$1,963	$14	($1,314)	($1,556)	($1,314)

Table 5. [Pre-1978] Air Sealing at the Ceiling (CARE)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	First-year Utility Savings	Lifecycle NPV Savings		
				2025 LSC NPV	On-Bill NPV Modest Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$1,963	$26	($465)	($1,212)	($766)
CZ02	PGE	$1,963	$14	($1,114)	($1,550)	($1,302)
CZ03	PGE	$1,963	$13	($1,180)	($1,574)	($1,343)
CZ04	PGE	$1,963	$18	($1,081)	($1,459)	($1,216)
CZ04	CPAU	$1,963	$0	($1,081)	($1,963)	($1,963)
CZ05	PGE	$1,963	$12	($1,230)	($1,604)	($1,395)
CZ05	PGE/SCG	$1,963	$11	($1,230)	($1,648)	($1,467)
CZ06	SCE/SCG	$1,963	($1)	($1,797)	($1,969)	($1,928)
CZ07	SDGE	$1,963	($1)	($1,813)	($1,976)	($1,918)
CZ08	SCE/SCG	$1,963	$5	($1,680)	($1,824)	($1,768)
CZ09	SCE/SCG	$1,963	$8	($1,597)	($1,764)	($1,686)
CZ10	SCE/SCG	$1,963	$12	($1,497)	($1,659)	($1,566)
CZ10	SDGE	$1,963	$16	($1,497)	($1,546)	($1,443)
CZ11	PGE	$1,963	$23	($1,014)	($1,353)	($1,116)
CZ12	PGE	$1,963	$17	($1,147)	($1,503)	($1,279)
CZ12	SMUD/PGE	$1,963	$11	($1,147)	($1,623)	($1,406)
CZ13	PGE	$1,963	$22	($1,114)	($1,394)	($1,205)
CZ14	SCE/SCG	$1,963	$23	($897)	($1,352)	($1,120)
CZ14	SDGE	$1,963	$30	($897)	($1,163)	($905)
CZ15	SCE/SCG	$1,963	$27	($1,297)	($1,334)	($1,266)
CZ16	PGE	$1,963	$24	($581)	($1,270)	($859)

Table 6. [1978-1991] Air Sealing at the Ceiling (CARE)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	First-year Utility Savings	Lifecycle NPV Savings		
				2025 LSC NPV	On-Bill NPV Modest Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$1,963	$18	($931)	($1,442)	($1,135)
CZ02	PGE	$1,963	$10	($1,364)	($1,658)	($1,477)
CZ03	PGE	$1,963	$8	($1,480)	($1,734)	($1,598)
CZ04	PGE	$1,963	$12	($1,330)	($1,627)	($1,446)
CZ04	CPAU	$1,963	$0	($1,330)	($1,963)	($1,963)
CZ05	PGE	$1,963	$8	($1,447)	($1,719)	($1,575)
CZ05	PGE/SCG	$1,963	$7	($1,447)	($1,746)	($1,619)
CZ06	SCE/SCG	$1,963	($0)	($1,830)	($1,959)	($1,933)
CZ07	SDGE	$1,963	($2)	($1,896)	($2,003)	($1,964)
CZ08	SCE/SCG	$1,963	$3	($1,797)	($1,886)	($1,848)
CZ09	SCE/SCG	$1,963	$4	($1,747)	($1,859)	($1,813)
CZ10	SCE/SCG	$1,963	$7	($1,663)	($1,790)	($1,736)
CZ10	SDGE	$1,963	$10	($1,663)	($1,710)	($1,641)
CZ11	PGE	$1,963	$18	($1,264)	($1,500)	($1,325)
CZ12	PGE	$1,963	$12	($1,380)	($1,631)	($1,469)
CZ12	SMUD/PGE	$1,963	$8	($1,380)	($1,716)	($1,558)
CZ13	PGE	$1,963	$16	($1,364)	($1,545)	($1,411)
CZ14	SCE/SCG	$1,963	$16	($1,230)	($1,545)	($1,378)
CZ14	SDGE	$1,963	$20	($1,230)	($1,422)	($1,233)
CZ15	SCE/SCG	$1,963	$22	($1,463)	($1,460)	($1,410)
CZ16	PGE	$1,963	$16	($1,014)	($1,491)	($1,211)

Table 7. [1991-2010] Air Sealing at the Ceiling (CARE)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	First-year Utility Savings	Lifecycle NPV Savings		
				2025 LSC NPV	On-Bill NPV Modest Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$1,963	$11	($1,314)	($1,642)	($1,452)
CZ02	PGE	$1,963	$7	($1,530)	($1,749)	($1,625)
CZ03	PGE	$1,963	$6	($1,613)	($1,793)	($1,693)
CZ04	PGE	$1,963	$8	($1,530)	($1,729)	($1,609)
CZ04	CPAU	$1,963	$0	($1,530)	($1,963)	($1,963)
CZ05	PGE	$1,963	$5	($1,613)	($1,804)	($1,708)
CZ05	PGE/SCG	$1,963	$5	($1,613)	($1,827)	($1,747)
CZ06	SCE/SCG	$1,963	$1	($1,863)	($1,940)	($1,920)
CZ07	SDGE	$1,963	$0	($1,896)	($1,944)	($1,918)
CZ08	SCE/SCG	$1,963	$2	($1,830)	($1,905)	($1,879)
CZ09	SCE/SCG	$1,963	$2	($1,780)	($1,908)	($1,878)
CZ10	SCE/SCG	$1,963	$4	($1,763)	($1,855)	($1,819)
CZ10	SDGE	$1,963	$6	($1,763)	($1,805)	($1,758)
CZ11	PGE	$1,963	$10	($1,530)	($1,685)	($1,572)
CZ12	PGE	$1,963	$7	($1,580)	($1,759)	($1,654)
CZ12	SMUD/PGE	$1,963	$5	($1,580)	($1,802)	($1,700)
CZ13	PGE	$1,963	$9	($1,580)	($1,732)	($1,644)
CZ14	SCE/SCG	$1,963	$9	($1,530)	($1,722)	($1,615)
CZ14	SDGE	$1,963	$11	($1,530)	($1,652)	($1,529)
CZ15	SCE/SCG	$1,963	$12	($1,680)	($1,696)	($1,667)
CZ16	PGE	$1,963	$11	($1,314)	($1,645)	($1,454)

3 Lighting Measures

LED lighting and exterior lighting control measures were previously evaluated in the 2019 Cost-Effectiveness Study: Existing Single Family Residential Building Upgrades study. These measures are not included in the 2022 Cost-Effectiveness Study: Existing Single Family Building Upgrades study, but have been re-evaluated and included in this memo. The updated analysis follows the same methodology as the 2019 study, but with updated costs for equipment and updated utility rates.

The three measures evaluated are LED lighting, exterior photosensor, and LED lighting plus photosensor. Table 8 through Table 10 show the results for the different lighting measures evaluated. Each measure is explained in more detail below.

LED Lighting: Replace screw-in (A-based for lamps) incandescent lamps and compact fluorescent lamps (CFLs) with light-emitting diode (LED) A-lamps. This analysis was conducted external to the energy model and evaluated replacement of a 13 W CFL lamp with an 9.6 W LED lamp operating 620 hours annually. Annual hour estimates were based on whole building average hours of operation from a 2010 lighting study by KEMA (KEMA, 2010). Lifetime assumptions were 10,000 hours for CFLs and 25,000 hours for LED lamps. For incremental cost calculations it was assumed CFLs have a lifetime of 15 years, are installed five years prior to the retrofit, and would need to be replaced at year ten and 25.

Exterior Lighting Controls/Photosensor: Evaluation of exterior lighting controls was completed on a per-luminaire basis external to the energy model and assumes a screw-in photosensor control is installed in outdoor lighting luminaires. Energy savings of 12.1 kWh per year was applied based on analysis done by the Consortium for Energy Efficiency, assuming LED lamps, 2.6 hours per day of operation, and that photosensor controls reduce operating hours on average 20 percent each day (CEE, 2014). Energy savings will be higher for incandescent or CFL luminaires.

Exterior Lighting Controls/Photosensor+LED: An additional evaluation was completed for exterior lighting controls on a per-luminaire basis external to the energy model and assumes a screw-in photosensor control is installed in outdoor lighting luminaires and incandescent lamps CFLs are replaced with light-emitting diode (LED) A-lamps. Energy savings of 14.3 kWh per year was applied based on the sum of the LED lighting and Exterior Lighting Controls with Photosensor kWh energy savings.

For the measures including a LED, a cost of $3.49 for LED dimmable A19 lamp 60 W equivalent is used. A cost of $1.74 is used for an equivalent CFL product which was used to estimate total replacement costs at years 10 and 25. Costs are based on a single LED lamp replacement. For the photosensor, an incremental cost of $12.62, based on a screw-in photosensor control, was obtained from an on-line product search of available products. A five-year lifetime for this type of control was assumed.

Table 8. [All Vintages] LED Lamp vs. CFL

Climate Zone	Electric/ Gas Utility	Measure Cost	Electricity Savings	First Year Utility Cost Savings	Customer On-Bill Modest Gas Escalation		Customer On-Bill High Gas Escalation	
					B/C Ratio	NPV	B/C Ratio	NPV
CZ01	PGE	$1.75	2.2	$0.77	10.05	$15.82	10.58	$16.74
CZ02	PGE	$1.75	2.2	$0.86	11.26	$17.94	11.85	$18.98
CZ03	PGE	$1.75	2.2	$0.78	10.14	$15.99	10.68	$16.92
CZ04	PGE	$1.75	2.2	$0.80	10.39	$16.42	10.94	$17.38
CZ04	CPAU	$1.75	2.2	$0.41	5.32	$7.56	5.60	$8.05
CZ05	PGE	$1.75	2.2	$0.78	10.14	$15.99	10.67	$16.92
CZ05	PGE/SCG	$1.75	2.2	$0.78	10.14	$15.99	10.67	$16.92
CZ06	SCE/SCG	$1.75	2.2	$0.66	8.44	$13.01	8.99	$13.97
CZ07	SDGE	$1.75	2.2	$0.95	13.15	$21.24	13.03	$21.04
CZ08	SCE/SCG	$1.75	2.2	$0.74	9.51	$14.89	10.14	$15.98
CZ09	SCE/SCG	$1.75	2.2	$0.71	9.17	$14.29	9.77	$15.33
CZ10	SCE/SCG	$1.75	2.2	$0.73	9.38	$14.65	9.99	$15.72
CZ10	SDGE	$1.75	2.2	$1.07	14.86	$24.24	14.74	$24.02
CZ11	PGE	$1.75	2.2	$0.85	11.05	$17.57	11.63	$18.59
CZ12	PGE	$1.75	2.2	$0.79	10.32	$16.29	10.86	$17.24
CZ12	SMUD/PGE	$1.75	2.2	$0.47	6.08	$8.88	6.40	$9.44
CZ13	PGE	$1.75	2.2	$0.86	11.27	$17.96	11.86	$19.00
CZ14	SCE/SCG	$1.75	2.2	$0.74	9.58	$15.00	10.21	$16.10
CZ14	SDGE	$1.75	2.2	$1.06	14.68	$23.93	14.56	$23.71
CZ15	SCE/SCG	$1.75	2.2	$0.78	10.01	$15.75	10.66	$16.90
CZ16	PGE	$1.75	2.2	$0.77	9.98	$15.71	10.51	$16.62

Table 9. [All Vintages] Exterior Photosensor

Climate Zone	Electric/ Gas Utility	Measure Cost	Electricity Savings	First Year Utility Cost Savings	Customer On-Bill Modest Gas Escalation		Customer On-Bill High Gas Escalation	
					B/C Ratio	NPV	B/C Ratio	NPV
CZ01	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ02	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ03	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ04	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ04	CPAU	$54.03	12.1	$2.12	0.89	($5.69)	0.94	($3.15)
CZ05	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ05	PGE/SCG	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ06	SCE/SCG	$54.03	12.1	$3.48	1.45	$24.36	1.55	$29.48
CZ07	SDGE	$54.03	12.1	$5.07	2.27	$68.58	2.25	$67.53
CZ08	SCE/SCG	$54.03	12.1	$3.48	1.45	$24.36	1.55	$29.48
CZ09	SCE/SCG	$54.03	12.1	$3.48	1.45	$24.36	1.55	$29.48
CZ10	SCE/SCG	$54.03	12.1	$3.48	1.45	$24.36	1.55	$29.48
CZ10	SDGE	$54.03	12.1	$5.07	2.27	$68.58	2.25	$67.53
CZ11	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ12	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ12	SMUD/PGE	$54.03	12.1	$1.46	0.62	($20.73)	0.65	($18.98)
CZ13	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74
CZ14	SCE/SCG	$54.03	12.1	$3.48	1.45	$24.36	1.55	$29.48
CZ14	SDGE	$54.03	12.1	$5.07	2.27	$68.58	2.25	$67.53
CZ15	SCE/SCG	$54.03	12.1	$3.48	1.45	$24.36	1.55	$29.48
CZ16	PGE	$54.03	12.1	$4.16	1.75	$40.75	1.85	$45.74

Table 10. [All Vintages] LED and Photosensor

Climate Zone	Electric/ Gas Utility	Measure Cost	Electricity Savings	First Year Utility Cost Savings	Customer On-Bill Modest Gas Escalation		Customer On-Bill High Gas Escalation	
					B/C Ratio	NPV	B/C Ratio	NPV
CZ01	PGE	$55.77	14.3	$4.93	2.01	$56.57	2.12	$62.48
CZ02	PGE	$55.77	14.3	$5.02	2.05	$58.70	2.16	$64.72
CZ03	PGE	$55.77	14.3	$4.94	2.02	$56.74	2.12	$62.66
CZ04	PGE	$55.77	14.3	$4.95	2.03	$57.17	2.13	$63.12
CZ04	CPAU	$55.77	14.3	$2.53	1.03	$1.87	1.09	$4.90
CZ05	PGE	$55.77	14.3	$4.94	2.02	$56.74	2.12	$62.66
CZ05	PGE/SCG	$55.77	14.3	$4.94	2.02	$56.74	2.12	$62.66
CZ06	SCE/SCG	$55.77	14.3	$4.13	1.67	$37.37	1.78	$43.45
CZ07	SDGE	$55.77	14.3	$6.02	2.61	$89.82	2.59	$88.57
CZ08	SCE/SCG	$55.77	14.3	$4.22	1.70	$39.25	1.82	$45.46
CZ09	SCE/SCG	$55.77	14.3	$4.19	1.69	$38.65	1.80	$44.82
CZ10	SCE/SCG	$55.77	14.3	$4.21	1.70	$39.01	1.81	$45.20
CZ10	SDGE	$55.77	14.3	$6.14	2.66	$92.82	2.64	$91.55
CZ11	PGE	$55.77	14.3	$5.00	2.05	$58.33	2.15	$64.33
CZ12	PGE	$55.77	14.3	$4.95	2.02	$57.05	2.13	$62.98
CZ12	SMUD/PGE	$55.77	14.3	$1.93	0.79	($11.85)	0.83	($9.54)
CZ13	PGE	$55.77	14.3	$5.02	2.05	$58.71	2.16	$64.73
CZ14	SCE/SCG	$55.77	14.3	$4.22	1.71	$39.37	1.82	$45.58
CZ14	SDGE	$55.77	14.3	$6.13	2.66	$92.51	2.64	$91.24
CZ15	SCE/SCG	$55.77	14.3	$4.26	1.72	$40.12	1.83	$46.38
CZ16	PGE	$55.77	14.3	$4.92	2.01	$56.46	2.12	$62.36

4 Water Heating Package

This package includes the following:

- R-6 water heater blanket
- R-3 hot water pipe insulation
- Low flow fixtures: two low flow showerheads and three sink aerators.

This analysis assumes the homeowner installs these measures themselves and therefore no labor costs. Costs are based on Home Depot prices from August of 2025. The water heater package is evaluated over a 15-year analysis period and assumes the modest gas escalation rate.

Table 11. [All Vintages] Water Heating Package

Climate Zone	Electric/ Gas Utility	Measure Cost	Gas Savings (therms)	First Year Utility Cost Savings	Customer On-Bill	
					B/C Ratio	NPV
CZ01	PGE	$125.68	14.69	$31.11	3.96	$371.76
CZ02	PGE	$125.68	15.60	$35.20	4.48	$437.15
CZ03	PGE	$125.68	15.70	$31.43	4.00	$376.88
CZ04	PGE	$125.68	16.05	$32.62	4.15	$395.78
CZ04	CPAU	$125.68	16.05	$31.99	4.07	$385.77
CZ05	PGE	$125.68	15.83	$31.37	3.99	$375.88
CZ05	PGE/SCG	$125.68	15.83	$28.29	3.60	$326.59
CZ06	SCE/SCG	$125.68	16.67	$29.18	3.71	$340.84
CZ07	SDGE	$125.68	16.75	$37.25	4.74	$469.81
CZ08	SCE/SCG	$125.68	16.78	$29.36	3.74	$343.80
CZ09	SCE/SCG	$125.68	16.66	$29.27	3.72	$342.34
CZ10	SCE/SCG	$125.68	16.58	$28.99	3.69	$337.73
CZ10	SDGE	$125.68	16.58	$37.77	4.80	$478.19
CZ11	PGE	$125.68	15.87	$32.96	4.19	$401.32
CZ12	PGE	$125.68	15.90	$32.85	4.18	$399.47
CZ12	SMUD/PGE	$125.68	15.90	$32.85	4.18	$399.47
CZ13	PGE	$125.68	16.32	$33.00	4.20	$401.93
CZ14	SCE/SCG	$125.68	16.11	$29.79	3.79	$350.57
CZ14	SDGE	$125.68	16.11	$39.23	4.99	$501.49
CZ15	SCE/SCG	$125.68	17.40	$30.16	3.84	$356.50
CZ16	PGE	$125.68	15.14	$31.75	4.04	$381.87

5 PV

The results for 3 kW PV have been updated from the 2022 study to remove the federal solar tax credit from the cost-effectiveness calculations. The removal of the solar tax credit has a substantial impact on many climate zones across all vintages and will impact the FlexPath.

The following describes the impacts and changes to cost-effectiveness from the 2022 study. These observations are utilizing standard rates. Previously, with the solar tax credit, the 3 kW PV measure in the pre-1978 vintage was on-bill cost effective in all climate zones using both the modest and high gas escalation rates. However, with the credit removed, Climate Zones 1-3, 5, 6, and 12 are no longer cost effective on-bill for both the modest and high gas escalations.

Previously for the 1978-1991 vintage the only cases that were not on-bill cost effective were climate zones 2 and 6 utilizing the modest gas escalation. Now, with the credit removed, many more climate zones are no longer cost effective. Using the modest gas escalation, climate zones 1-3, 5, 6, 12, and 16 are not cost effective on-bill. Using the high gas escalation, climate zones 1-3, 5, 6, and 12 (SMUD) are not cost effective on-bill.

Previously for the 1992-2010 vintage the following cases were not cost effective on-bill: climate zones 1-3, 5, and 6 utilizing the modest gas escalation and climate zone 6 using the high gas escalation. With the credit removed an increased number of climate zones are no longer cost effective. Using the modest gas escalation, climate zones 1-3, 4 (PGE) 5-9, 10 (SCE/SCG),12, and 16 are not cost effective on-bill. Using the high gas escalation, climate zones 1-3, 4 (PGE), 5-7, 9, 12, and 16 are not cost effective on-bill.

The cost-effectiveness results are presented in Table 12 through Table 1717.

Table 12. [Pre-1978] 3 kW PV without Solar Tax Credit (Std)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	On-Bill Savings			
			On-Bill B/C Modest Gas Escalation	On-Bill NPV Modest Gas Escalation	On-Bill B/C High Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$13,726	0.80	($3,074)	0.85	($2,410)
CZ02	PGE	$13,726	0.80	($3,072)	0.85	($2,409)
CZ03	PGE	$13,726	0.77	($3,567)	0.81	($2,930)
CZ04	PGE	$13,726	1.11	$1,652	1.16	$2,564
CZ04	CPAU	$13,726	1.38	$5,983	1.45	$7,123
CZ05	PGE	$13,726	0.78	($3,431)	0.82	($2,786)
CZ05	PGE/SCG	$13,726	0.78	($3,431)	0.82	($2,786)
CZ06	SCE/SCG	$13,726	0.87	($2,118)	0.92	($1,231)
CZ07	SDGE	$13,726	1.31	$4,886	1.30	$4,711
CZ08	SCE/SCG	$13,726	1.30	$4,655	1.38	$5,984
CZ09	SCE/SCG	$13,726	1.18	$2,821	1.26	$4,030
CZ10	SCE/SCG	$13,726	1.29	$4,622	1.38	$5,948
CZ10	SDGE	$13,726	1.99	$15,550	1.97	$15,284
CZ11	PGE	$13,726	1.55	$8,684	1.64	$9,967
CZ12	PGE	$13,726	1.07	$1,117	1.13	$2,002
CZ12	SMUD/PGE	$13,726	0.93	($1,109)	0.98	($342)
CZ13	PGE	$13,726	1.80	$12,597	1.90	$14,085
CZ14	SCE/SCG	$13,726	1.58	$9,098	1.68	$10,717
CZ14	SDGE	$13,726	2.15	$17,983	2.13	$17,695
CZ15	SCE/SCG	$13,726	2.24	$19,477	2.39	$21,774
CZ16	PGE	$13,726	1.04	$579	1.09	$1,435

Table 13. [1978-1991] 3 kW PV without Solar Tax Credit (Std)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	On-Bill Savings			
			On-Bill B/C Modest Gas Escalation	On-Bill NPV Modest Gas Escalation	On-Bill B/C High Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$13,726	0.77	($3,570)	0.81	($2,932)
CZ02	PGE	$13,726	0.71	($4,549)	0.75	($3,963)
CZ03	PGE	$13,726	0.74	($4,106)	0.78	($3,497)
CZ04	PGE	$13,726	1.00	$7	1.05	$833
CZ04	CPAU	$13,726	1.35	$5,517	1.42	$6,633
CZ05	PGE	$13,726	0.75	($3,985)	0.79	($3,369)
CZ05	PGE/SCG	$13,726	0.75	($3,985)	0.79	($3,369)
CZ06	SCE/SCG	$13,726	0.73	($4,249)	0.78	($3,501)
CZ07	SDGE	$13,726	1.17	$2,623	1.16	$2,466
CZ08	SCE/SCG	$13,726	1.20	$3,086	1.27	$4,313
CZ09	SCE/SCG	$13,726	1.09	$1,487	1.17	$2,609
CZ10	SCE/SCG	$13,726	1.18	$2,884	1.26	$4,097
CZ10	SDGE	$13,726	1.85	$13,356	1.84	$13,108
CZ11	PGE	$13,726	1.41	$6,420	1.48	$7,583
CZ12	PGE	$13,726	0.97	($512)	1.02	$287
CZ12	SMUD/PGE	$13,726	0.93	($1,109)	0.98	($342)
CZ13	PGE	$13,726	1.63	$9,953	1.72	$11,302
CZ14	SCE/SCG	$13,726	1.42	$6,655	1.52	$8,115
CZ14	SDGE	$13,726	2.00	$15,653	1.98	$15,386
CZ15	SCE/SCG	$13,726	1.94	$14,686	2.06	$16,670
CZ16	PGE	$13,726	0.95	($737)	1.00	$49

Table 1414. [1992-2010] 3 kW PV without Solar Tax Credit (Std)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	On-Bill Savings			
			On-Bill B/C Modest Gas Escalation	On-Bill NPV Modest Gas Escalation	On-Bill B/C High Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$13,726	0.71	($4,475)	0.75	($3,885)
CZ02	PGE	$13,726	0.73	($4,198)	0.77	($3,593)
CZ03	PGE	$13,726	0.72	($4,411)	0.76	($3,817)
CZ04	PGE	$13,726	0.80	($3,121)	0.84	($2,459)
CZ04	CPAU	$13,726	1.16	$2,477	1.22	$3,433
CZ05	PGE	$13,726	0.73	($4,299)	0.76	($3,700)
CZ05	PGE/SCG	$13,726	0.73	($4,299)	0.76	($3,700)
CZ06	SCE/SCG	$13,726	0.61	($6,143)	0.65	($5,520)
CZ07	SDGE	$13,726	0.94	($931)	0.93	($1,057)
CZ08	SCE/SCG	$13,726	0.98	($242)	1.05	$767
CZ09	SCE/SCG	$13,726	0.88	($1,890)	0.94	($988)
CZ10	SCE/SCG	$13,726	0.96	($676)	1.02	$305
CZ10	SDGE	$13,726	1.51	$8,054	1.50	$7,852
CZ11	PGE	$13,726	1.10	$1,569	1.16	$2,477
CZ12	PGE	$13,726	0.80	($3,169)	0.84	($2,510)
CZ12	SMUD/PGE	$13,726	0.93	($1,109)	0.98	($342)
CZ13	PGE	$13,726	1.27	$4,170	1.33	$5,215
CZ14	SCE/SCG	$13,726	1.15	$2,295	1.22	$3,470
CZ14	SDGE	$13,726	1.66	$10,386	1.65	$10,164
CZ15	SCE/SCG	$13,726	1.37	$5,788	1.46	$7,191
CZ16	PGE	$13,726	0.81	($3,006)	0.85	($2,338)

Table 1515. [Pre-1978] 3 kW PV without Solar Tax Credit (CARE)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	On-Bill Savings			
			On-Bill B/C Modest Gas Escalation	On-Bill NPV Modest Gas Escalation	On-Bill B/C High Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$13,726	0.62	($6,030)	0.65	($5,522)
CZ02	PGE	$13,726	0.64	($5,707)	0.67	($5,182)
CZ03	PGE	$13,726	0.60	($6,344)	0.63	($5,853)
CZ04	PGE	$13,726	0.83	($2,725)	0.87	($2,042)
CZ05	PGE	$13,726	0.60	($6,266)	0.63	($5,771)
CZ05	PGE/SCG	$13,726	0.60	($6,266)	0.63	($5,771)
CZ06	SCE/SCG	$13,726	0.71	($4,578)	0.75	($3,852)
CZ07	SDGE	$13,726	0.71	($4,508)	0.71	($4,604)
CZ08	SCE/SCG	$13,726	0.97	($483)	1.03	$510
CZ09	SCE/SCG	$13,726	0.90	($1,530)	0.96	($605)
CZ10	SCE/SCG	$13,726	0.97	($465)	1.03	$530
CZ10	SDGE	$13,726	1.19	$3,032	1.18	$2,872
CZ11	PGE	$13,726	1.07	$1,150	1.13	$2,036
CZ12	PGE	$13,726	0.79	($3,324)	0.83	($2,673)
CZ13	PGE	$13,726	1.23	$3,587	1.29	$4,601
CZ14	SCE/SCG	$13,726	1.17	$2,662	1.25	$3,861
CZ14	SDGE	$13,726	1.28	$4,436	1.27	$4,264
CZ15	SCE/SCG	$13,726	1.57	$8,962	1.67	$10,572
CZ16	PGE	$13,726	0.79	($3,342)	0.83	($2,692)

Table 1616. [1978-1991] 3 kW PV without Solar Tax Credit (CARE)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	On-Bill Savings			
			On-Bill B/C Modest Gas Escalation	On-Bill NPV Modest Gas Escalation	On-Bill B/C High Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$13,726	0.60	($6,343)	0.63	($5,851)
CZ02	PGE	$13,726	0.56	($6,845)	0.59	($6,380)
CZ03	PGE	$13,726	0.57	($6,757)	0.60	($6,287)
CZ04	PGE	$13,726	0.76	($3,715)	0.80	($3,085)
CZ05	PGE	$13,726	0.57	($6,686)	0.60	($6,213)
CZ05	PGE/SCG	$13,726	0.57	($6,686)	0.60	($6,213)
CZ06	SCE/SCG	$13,726	0.61	($6,195)	0.64	($5,575)
CZ07	SDGE	$13,726	0.62	($6,004)	0.61	($6,087)
CZ08	SCE/SCG	$13,726	0.91	($1,483)	0.96	($555)
CZ09	SCE/SCG	$13,726	0.85	($2,368)	0.90	($1,497)
CZ10	SCE/SCG	$13,726	0.90	($1,597)	0.96	($676)
CZ10	SDGE	$13,726	1.10	$1,560	1.09	$1,413
CZ11	PGE	$13,726	0.98	($295)	1.03	$515
CZ12	PGE	$13,726	0.72	($4,320)	0.76	($3,722)
CZ13	PGE	$13,726	1.12	$1,893	1.18	$2,818
CZ14	SCE/SCG	$13,726	1.07	$1,051	1.14	$2,144
CZ14	SDGE	$13,726	1.18	$2,878	1.17	$2,719
CZ15	SCE/SCG	$13,726	1.37	$5,735	1.45	$7,135
CZ16	PGE	$13,726	0.74	($4,126)	0.78	($3,517)

Table 1717. [1992-2010] 3 kW PV without Solar Tax Credit (CARE)

Climate Zone	Electric/ Gas Utility	First Incremental Cost	On-Bill Savings			
			On-Bill B/C Modest Gas Escalation	On-Bill NPV Modest Gas Escalation	On-Bill B/C High Gas Escalation	On-Bill NPV High Gas Escalation
CZ01	PGE	$13,726	0.56	($6,963)	0.59	($6,504)
CZ02	PGE	$13,726	0.26	($11,640)	0.20	($12,611)
CZ03	PGE	$13,726	0.55	($6,997)	0.58	($6,540)
CZ04	PGE	$13,726	0.62	($5,900)	0.66	($5,385)
CZ05	PGE	$13,726	0.56	($6,932)	0.59	($6,471)
CZ05	PGE/SCG	$13,726	0.56	($6,932)	0.59	($6,471)
CZ06	SCE/SCG	$13,726	0.51	($7,652)	0.55	($7,127)
CZ07	SDGE	$13,726	0.48	($8,115)	0.48	($8,180)
CZ08	SCE/SCG	$13,726	0.78	($3,430)	0.83	($2,629)
CZ09	SCE/SCG	$13,726	0.72	($4,462)	0.76	($3,728)
CZ10	SCE/SCG	$13,726	0.76	($3,748)	0.81	($2,968)
CZ10	SDGE	$13,726	0.86	($2,225)	0.85	($2,340)
CZ11	PGE	$13,726	0.79	($3,259)	0.83	($2,605)
CZ12	PGE	$13,726	0.63	($5,876)	0.66	($5,359)
CZ13	PGE	$13,726	0.89	($1,678)	0.94	($941)
CZ14	SCE/SCG	$13,726	0.89	($1,676)	0.95	($761)
CZ14	SDGE	$13,726	0.95	($838)	0.94	($964)
CZ15	SCE/SCG	$13,726	0.99	($142)	1.06	$873
CZ16	PGE	$13,726	0.63	($5,850)	0.66	($5,333)

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2022 Cost-Effectiveness Study: Existing Single Family Building Upgrades

Prepared by:
Ada Shen, Alea German, Rebecca Evans, & Marc Hoeschele, Frontier Energy, Inc
Misti Bruceri, Misti Bruceri & Associates, LLC

Prepared for:
Kelly Cunningham, Codes and Standards Program, Pacific Gas and Electric

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Acronym List

2023 PV$ – Present value costs in 2023

ACH50 – Air Changes per Hour at 50 pascals pressure differential

ACM – Alternative Calculation Method

ADU – Accessory Dwelling Unit

AFUE – Annual Fuel Utilization Efficiency

B/C – Lifecycle Benefit-to-Cost Ratio

BEopt – Building Energy Optimization Tool

BSC – Building Standards Commission

CA IOUs – California Investor-Owned Utilities

CASE – Codes and Standards Enhancement

CBECC-Res – Computer program developed by the California Energy Commission for use in demonstrating compliance with the California Residential Building Energy Efficiency Standards

CEER – Combined Energy Efficiency Rating

CFI – California Flexible Installation

CFM – Cubic Feet per Minute

CO_2 – Carbon Dioxide

CPAU – City of Palo Alto Utilities

CPUC – California Public Utilities Commission

CZ – California Climate Zone

DFHP – Dual Fuel Heat Pump

DHW – Domestic Hot Water

DOE – Department of Energy

DWHR – Drain Water Heat Recovery

EDR – Energy Design Rating

EER – Energy Efficiency Ratio

EF – Energy Factor



GHG – Greenhouse Gas

HERS Rater – Home Energy Rating System Rater

HPA – High Performance Attic

HPSH – Heat Pump Space Heater

HPWH – Heat Pump Water Heater

HSPF – Heating Seasonal Performance Factor

HVAC – Heating, Ventilation, and Air Conditioning

IECC – International Energy Conservation Code

IOU – Investor Owned Utility

kBtu –British thermal unit (x1000)

kWh – Kilowatt Hour

LBNL – *Lawrence Berkeley National Laboratory*

LCC – Life Cycle Cost

LLAHU – Low Leakage Air Handler Unit

VLLDCS – Verified Low Leakage Ducts in Conditioned Space

LSC – Long-term Systemwide Cost

MF – Multifamily

MSHP – Mini-Split Heat Pump

NEEA – Northwest Energy Efficiency Alliance

NEM – Net Energy Metering

NPV – Net Present Value

NREL – *National Renewable Energy Laboratory*

PG&E – Pacific Gas and Electric Company

POU – Publicly-Owned-Utilities

PV – Photovoltaic

SCE – Southern California Edison

SDG&E – San Diego Gas and Electric

SEER – Seasonal Energy Efficiency Ratio

SF – Single Family

SMUD – Sacramento Municipal Utility District

SoCalGas – Southern California Gas Company

TDV – Time Dependent Valuation

Therm – Unit for quantity of heat that equals 100,000 British thermal units

Title 24 – Title 24, Part 6

TOU – Time-Of-Use

UEF – Uniform Energy Factor

VCHP – Variable Capacity Heat Pump, Title 24 compliance credit

ZNE – Zero-net Energy

Summary of Revisions

Date	Description	Reference (page or section)
4/25/2024	Original Release	N/A

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Executive Summary

The California Codes and Standards (C&S) Reach Codes program provides technical support to local governments considering adopting a local ordinance (reach code) intended to support meeting local and/or statewide energy efficiency and greenhouse gas (GHG) reduction goals. The program facilitates adoption and implementation of the code when requested by local jurisdictions by providing resources such as cost-effectiveness studies, model language, sample findings, and other supporting documentation.

This report documents cost-effective measure upgrades in existing single family buildings that exceed the minimum state requirements. It evaluates efficiency measures such as adding insulation, replacing windows, and duct upgrades, fuel substitution measures that upgrade space heating and water heating to heat pumps, and solar photovoltaics (PV) across all 16 California climate zones. A 1,665 square foot single family home prototype with an attached garage was evaluated in this study.

This analysis used two different metrics to assess the cost-effectiveness of the proposed upgrades. Both methodologies require estimating and quantifying the incremental costs and energy savings associated with each energy efficiency measure over a 30-year analysis period. On-Bill cost-effectiveness is a customer-based lifecycle cost (LCC) approach that values energy based upon estimated site energy usage and customer utility bill savings using today's electricity and natural gas utility tariffs. Long-term Systemwide Cost (LSC) is the California Energy Commission's LCC methodology for the 2025 Title 24, Part 6 (Title 24) code cycle (previously referred to as Time Dependent Valuation (TDV)), which is intended to capture the long-term projected cost of energy including costs for providing energy during peak periods of demand, carbon emissions, grid transmission and distribution impacts. This is the methodology used by the Energy Commission in evaluating cost-effectiveness for efficiency measures in Title 24 code development.

The following summarizes key results from the study:

Conclusions and Discussion:

1. Envelope measures. Improving envelope performance is very cost-effective in many older homes. In addition to reducing utility costs, these measures provide many other benefits such as improving occupant comfort and satisfaction and increasing a home's ability to maintain temperatures during extreme weather events and power outages. Below is a discussion of the results of specific measures.
    a. Adding attic insulation is cost-effective based on both LSC and On-Bill in many climate zones in homes with no more than R-19 existing attic insulation levels. Increasing attic insulation from R-30 to R-49 was still found to be cost-effective based on at least one metric in the colder and hotter climates of Climate Zone 10 (SDG&E territory only) through 16.
    b. Insulating existing uninsulated walls is very cost-effective based on both metrics everywhere except Climate Zones 6 and 7 (in Climate Zone 8 it's only cost-effective based on LSC).
    c. Adding R-19 or R-30 floor insulation is cost-effective based on LSC in the older two vintages (Pre-1978 and 1978-1991) in all CZ except CZ 6-10.
    d. Replacing old single pane windows with new high-performance windows has a very high cost and is typically not done for energy savings alone. However, energy savings are substantial and justify cost-effectiveness of this measure based on at least one metric in Climate Zones 4, 8 through 12 (PG&E territory only), and 13 through 16.
    e. At time of roof replacement, a cool roof with an aged solar reflectance of 0.25 was found to be cost-effective in Climate Zones 4, 6 through 12 (PG&E territory only), and 13 through 15. When the roof deck is replaced during a roof replacement, adding a radiant barrier is low cost and provides substantial cooling energy savings, and was found to be cost-effective in almost all climate zones and homes.
2. Duct measures: Many older homes have old, leaky duct systems that should be replaced when they reach the end of life, typically 20-30 years. In this case, installing new ducts was found to be cost-effective based on at least one metric (both in most cases) everywhere except mild Climate Zone 7 and Climate Zones 5 and 6 in

the 1978-1991 vintage. If duct systems still have remaining life they should be sealed and tested to meet 10% leakage or lower; however, duct upgrades alone were only found to be cost-effective for newer homes in Climate Zones 10 (SDG&E territory only), 11, and 13 through 16. Duct upgrades may be able to be coupled with other measures to reduce the cost.

3. Heat pump space heating: HPSHs were found to be LSC cost-effective in many cases. The Dual Fuel Heat Pump (existing furnace) was LSC cost-effective everywhere except Climate Zone 15. The HPSH was LSC cost-effective everywhere except Climate Zones 8 and 15.
    a. Challenges to On-Bill cost-effectiveness include higher first costs and higher first-year utility costs due to higher electricity tariffs relative to gas tariffs. SMUD and CPAU are two exceptions where first year utility costs are lower for heat pumps than for gas equipment. Table 11 shows the impact of utility rates on cost-effectiveness of HPSH where the standard and high efficiency HPSH and the HPSH + PV measures are cost-effective under SMUD but not PG&E. Even with higher first year utility bills, there were some cases that still proved On-Bill cost-effective including the DFHP with an existing furnace in the central valley and northern coastal PG&E territories, the ducted MSHP in the central valley as well as Climate Zone 14 in SDG&E territory, and the HPSH + PV measure in CZ 3-5 (PGE), 7-11, and 12 (SMUD) – 15.
    b. The ductless MSHPs were only found to be cost-effective based on either metric in Climate Zones 1 and 16. Ductless MSHPs have a high incremental cost because it is a more sophisticated system than the base model of a wall furnace with a window AC unit. However, the ductless MSHP would provide greater comfort benefits if properly installed to directly condition all habitable spaces (as is required under the VCHP compliance credit as evaluated in this study) which may be an incentive for a homeowner to upgrade their system.
    c. Higher efficiency equipment lowered utility costs in all cases and improved cost-effectiveness in many cases, particularly with a ducted MSHP.
4. Heat pump water heating: All the HPWH measures were LSC cost-effective in all climate zones. Most measures were not On-Bill cost-effective with the exception of the HPWH + PV which was cost-effective On-Bill in CPAU, SMUD, and SDG&E territories in addition to Climate Zones 11, 13, 14, and 15. The HPWH measures share many of the same challenges as the HPSH measures to achieving cost-effectiveness including high first costs and utility rates and assumptions. Table 13 shows the impact of utility rates on cost-effectiveness where some HPWH measures are cost-effective under SMUD utility rates but are not cost-effective anywhere under PG&E rates in Climate Zone 12.
    a. Various HPWH locations were also explored, however there are some factors outside of cost-effectiveness that should also be considered.
        i. HPWHs in the conditioned space can provide benefits such as free-cooling during the summer, reduced tank losses, and shorter pipe lengths, and in some cases show improved cost-effectiveness over garage located HPWHs. However, there are various design considerations such as noise, comfort concerns, an additional heating load in the winter, and condensate removal. Ducting the inlet and exhaust air resolves comfort concerns but adds costs and complexity. Split heat pump water heaters address these concerns, but currently there are limited products on the market and there is a cost premium relative to the packaged products.
        ii. Since HPWHs extract heat from the air and transfer it to water in the storage tank, they must have adequate ventilation to operate properly. Otherwise, the space cools down over time, impacting the HPWH operating efficiency. This is not a problem with garage installations but needs to be considered for water heaters located in interior or exterior closets. For the 2025 Title 24 code the CEC is proposing that all HPWH installations meet mandatory ventilation requirements (California Energy Commission, 2023).
5. The contractor surveys revealed overall higher heat pump costs than what has been found in previous analyses. This could be due to incentive availability raising demand for heat pumps and thereby increasing the price. This price increase may be temporary and may come down once the market stabilizes. There are also

new initiatives to obtain current costs including the TECH Clean California program[1] that publishes heat pump data and costs; however, at the time of this analysis, the TECH data did not contain incremental costs because it only had the heat pump costs but not the gas base case costs.

6. Table 18 shows how CARE rates and escalation rate assumptions will impact cost-effectiveness.
    a. Applying CARE rates in the IOU territories has the overall impact to increase utility cost savings for an all-electric building compared to a code compliant mixed fuel building, improving On-Bill cost-effectiveness. This is due to the CARE discount on electricity being higher than that on gas. The reverse occurs with efficiency measures where lower utility rates reduce savings and subsequently reduce cost-effectiveness.
    b. If gas tariffs are assumed to increase substantially over time, in-line with the escalation assumption from the 2025 LSC development, cost-effectiveness substantially improves for the heat pump measures over the 30-year analysis period and many cases become cost-effective that were not found to be cost-effective under the CPUC / 2022 TDV escalation scenario. There is much uncertainty surrounding future tariff structures as well as escalation values. While it's clear that gas rates will increase, how much and how quickly is not known. Future electricity tariff structures are expected to evolve over time, and the CPUC has an active proceeding to adopt an income-graduated fixed charge that benefits low-income customers and supports electrification measures for all customers.[2] The CPUC will make a decision in mid-2024 and the new rates are expected to be in place later that year or in 2025. While the anticipated impact of this rate change is lower volumetric electricity rates, the rate design is not finalized. While lower volumetric electricity rates provide many benefits, it also will make building efficiency measures harder to justify as cost-effective due to lower utility bill cost savings.
7. Under NBT, utility cost savings for PV are substantially less than what they were under prior net energy metering rules (NEM 2.0); however, savings are sufficient to be On-Bill cost-effective in all climate zones except Climate Zones 1 through 3, 5, and 6.
    a. Combining a heat pump with PV allows the additional electricity required by the heat pump to be offset by the PV system while also increasing on-site utilization of PV generation rather than exporting the electricity back to the grid at a low rate.
    b. While not evaluated in this study, coupling PV with battery systems can be very advantageous under NBT increasing utility cost savings because of improved on-site utilization of PV generation and fewer exports to the grid.

Recommendations:

1. There are various approaches for jurisdictions who are interested in reach codes for existing buildings. Some potential approaches are listed below along with key considerations.
    a. Prescriptive measures: Non-preempted measures that are found to be cost-effective may be prescriptively required in a reach code. One example of this type or ordinance is a cool roof requirement at time of roof replacement. Another example is requiring specific cost-effective measures for larger remodels, such as high-performance windows when new windows are installed or duct sealing and testing when ducts are in an unconditioned space.
    b. Replacement equipment: This flavor of reach code sets certain requirements at time of equipment replacement. This study evaluated space heating and water heating equipment. Where a heat pump measure was found to be cost-effective based on either LSC or On-Bill, this may serve as the basis of a reach code given the following considerations.
        i. Where reach codes reduce energy usage and are not just fuel switching, cost-effectiveness calculations are required and must be based on equipment that does not exceed the federal minimum efficiency requirements.
        ii. Where reach codes are established using cost-effectiveness based on LSC, utility bill impacts and the owner's first cost should also be reviewed and considered.

[1] TECH Public Reporting Home Page (techcleanca.com)
[2] https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/demand-flexibility-rulemaking

iii. A gas path should also be prescriptively allowed to safely satisfy federal preemption requirements considering the CRA v. Berkeley case.[3] Additional requirements may apply to the gas path, as described in Section 3.3, as long as the paths are reasonably energy or cost equivalent.

c. "Flexible Path", minimum energy savings target: This flexible approach establishes a target for required energy savings based on a measure or a set of measures that were found to be cost-effective based on either LSC or On-Bill. A points menu compares various potential upgrades ranging from efficiency, PV, and fuel substitution measures, based on site or source energy savings. The applicant must select upgrades that individually or in combination meet the minimum energy savings target. The maximum target value shown in the Cost-effectiveness Explorer is based on a combination of cost-effective, non-preempted measures.

2. Equipment replacement ordinances should consider appropriate exceptions for scenarios where it will be challenging to meet the requirements, such as location of the HPWH, total project cost limitations, or the need for service panel upgrades that wouldn't have been required as part of the proposed scope of work in absence of the reach code.
3. Consider extending relevant proposals made by the CEC for the 2025 Title 24 code (California Energy Commission, 2023) in ordinances that apply under the 2022 Title 24 code, such as the following:
    a. Mandatory ventilation requirements for HPWH installations (Section 110.3(c)7). The cost-effectiveness analysis can be found in the Multifamily Domestic Hot Water CASE report (Statewide Team, 2023).
    b. Requirement for HERS verified refrigerant charge verification for heat pumps in all climate zones (Table 150.1-A[4]). The cost-effectiveness analysis can be found in the Residential HVAC Performance CASE report (Statewide Team, 2023).
4. When evaluating reach code strategies, the Reach Codes Team recommends that jurisdictions consider combined benefits of energy efficiency alongside electrification. Efficiency and electrification have symbiotic benefits and are both critical for decarbonization of buildings. As demand on the electric grid is increased through electrification, efficiency can reduce the negative impacts of additional electricity demand on the grid, reducing the need for increased generation and storage capacity, as well as the need to upgrade upstream transmission and distribution equipment.
5. Education and training can play a critical role in ensuring that heat pumps are installed, commissioned, and controlled properly to mitigate grid impacts and maximize occupant satisfaction. Below are select recommended strategies.
    a. The Quality Residential HVAC Services Program[5] is an incentive program to train California contractors in providing quality installation and maintenance while advancing energy-efficient technologies in the residential HVAC industry. Jurisdictions can market this to local contractors to increase the penetration of contractors skilled in heat pump design and installation.
    b. Educate residents and contractors of available incentives, tax credits, and financing opportunities.
    c. Educate contractors on code requirements. Energy Code Ace provides free tools, training, and resources to help Californians comply with the energy code. Contractors can access interactive compliance forms, fact sheets, and live and recorded trainings, among other things, on the website: https://energycodeace.com/. Jurisdictions can reach out to Energy Code Ace directly to discuss offerings.
6. Health and safety
    a. Combustion Appliance Safety and Indoor Air Quality: Implementation of some of the recommended measures will affect the pressure balance of the home which can subsequently impact the safe operation of existing combustion appliances as well as indoor air quality. Buildings with older gas appliances can present serious health and safety problems which may not be addressed in a remodel

[3] https://www.publichealthlawcenter.org/sites/default/files/2024-01/CRA-v-Berkeley-Ninth-Circuit-Opinion-Jan2024.pdf
[4] This requirement does not show up in the Express Terms for alterations in Section 150.2(b)1F, but the Statewide Reach Codes Team expects that it will be added to the next release of the proposed code language in the 45-day language as it aligns with the proposal made by the Codes and Standards Enhancement Team (Statewide CASE Team, 2023).
[5] https://qualityhvac.frontierenergy.com/

if the appliances are not being replaced. It is recommended that the building department require inspection and testing of all combustion appliances located within the pressure boundary of the building after completion of retrofit work that involves air sealing or insulation measures.

b. Jurisdictions may consider requiring mechanical ventilation in homes where air sealing has been conducted. In older buildings, outdoor air is typically introduced through leaks in the building envelope. After air sealing a building, it may be necessary to forcefully bring in fresh outdoor air using supply and/or exhaust fans to minimize potential issues associated with indoor air quality.

Local jurisdictions may also adopt ordinances that amend different Parts of the California Building Standards Code or may elect to amend other state or municipal codes. The decision regarding which code to amend will determine the specific requirements that must be followed for an ordinance to be legally enforceable. For example, reach codes that amend Part 6 of the CA Building Code and require energy performance beyond state code minimums must demonstrate the proposed changes are cost-effective and obtain approval from the Energy Commission as well as the Building Standards Commission (BSC). Amendments to Part 11, such as requirements for increased water efficiency or electric vehicle infrastructure only require BSC approval. Although a cost-effectiveness study is only required to amend Part 6 of the CA Building Code, this study provides valuable context for jurisdictions pursuing other ordinance paths to understand the economic impacts of any policy decision. This study documents the estimated costs, benefits, energy impacts and greenhouse gas emission reductions that may result from implementing an ordinance based on the results to help residents, local leadership, and other stakeholders make informed policy decisions.

This report documents the key results and conclusions from the Reach Codes Team analysis. A full dataset of all results can be downloaded at https://localenergycodes.com/content/resources. Results alongside policy options can also be explored using the Cost-effectiveness Explorer at https://explorer.localenergycodes.com/. Model ordinance language and other resources are posted on the C&S Reach Codes Program website at LocalEnergyCodes.com. Local jurisdictions that are considering adopting an ordinance may contact the program for further technical support at info@localenergycodes.com.

1 Introduction

This report documents cost-effective measure upgrades in existing single family buildings that exceed the minimum state requirements, the 2022 Building Energy Efficiency Standards, effective January 1, 2023. Local jurisdictions in California may consider adopting local energy ordinances to achieve energy savings beyond what will be accomplished by enforcing building efficiency requirements that apply statewide. This report was developed in coordination with the California Statewide Investor-Owned Utilities (IOUs) Codes and Standards Program, key consultants, and engaged cities—collectively known as the Statewide Reach Codes Team.

The focus of this study is on existing single family buildings and does not apply to low or high-rise multifamily buildings. Each jurisdiction must establish the appropriate structure and threshold for triggering the proposed requirements. Some common jurisdictional structures include triggering the requirements at major remodels, additions, or date-certain (upgrades must be completed by a specific date). Some of these measures could be triggered with a permit for another specific measure, such as a re-roofing project. The analysis includes scenarios of individual measures and identifies cost-effective options based on the existing conditions of the building in all 16 California Climate Zones (CZ) (see Cost-Effectiveness Results for a graphical depiction of climate zone locations).

This report documents the key results and conclusions from the Reach Codes Team analysis. A full dataset of all results can be downloaded at https://localenergycodes.com/content/resources. Results alongside policy options can also be explored using the Cost-effectiveness Explorer at https://explorer.localenergycodes.com/.

The California Codes and Standards (C&S) Reach Codes program provides technical support to local governments considering adopting a local ordinance (reach code) intended to support meeting local and/or statewide energy efficiency and greenhouse gas reduction goals. The program facilitates adoption and implementation of the code when requested by local jurisdictions by providing resources such as cost-effectiveness studies, model language, sample findings, and other supporting documentation.

The California Building Energy Efficiency Standards Title 24, Part 6 (Title 24) (CEC, 2019) is maintained and updated every three years by two state agencies: the California Energy Commission (the Energy Commission) and the Building Standards Commission (BSC). In addition to enforcing the code, local jurisdictions have the authority to adopt local energy efficiency ordinances—or reach codes—that exceed the minimum standards defined by Title 24 (as established by Public Resources Code Section 25402.1(h)2 and Section 10-106 of the Building Energy Efficiency Standards). Local jurisdictions must demonstrate that the requirements of the proposed ordinance are cost-effective and do not result in buildings consuming more energy than is permitted by Title 24. In addition, the jurisdiction must obtain approval from the Energy Commission and file the ordinance with the BSC for the ordinance to be legally enforceable.

The Department of Energy (DOE) sets minimum efficiency standards for equipment and appliances that are federally regulated under the National Appliance Energy Conservation Act, including heating, cooling, and water heating equipment (E-CFR, 2020). Since state and local governments are prohibited from adopting higher minimum efficiencies than the federal standards require, the focus of this study is to identify and evaluate cost-effective packages that do not include high efficiency heating, cooling, and water heating equipment. High efficiency appliances are often the easiest and most affordable measure to increase energy performance. While federal preemption limits reach code mandatory requirements for covered appliances, in practice, builders may install any package of compliant measures to achieve the performance requirements.

2 Methodology and Assumptions

2.1 Analysis for Reach Codes

This section describes the approach to calculating cost-effectiveness including benefits, costs, metrics, and utility rate selection.

2.1.1 Modeling

The Reach Codes Team performed energy simulations using the 2025 research version of the Residential California Building Energy Code Compliance software (CBECC). The 2025 version of CBECC was used instead of the 2022 version to take advantage of updated weather files and metrics. Site energy results are similar between CBECC-Res 2022 and 2025; however, the 2025 compliance metrics applies assumptions reflective of an electrified future, such as high escalation for natural gas retail rates, which favors electric buildings. In addition, in 2025 the weather stations were changed in Climate Zones 4 and 6 from San Jose to Paso Robles and Torrance to Los Angeles International Airport, respectively.

Three unique building vintages are considered: pre-1978, 1978-1991, and 1992-2010. The vintages were defined based on review of historic Title 24 code requirements and defining periods with distinguishing features. Prospective energy efficiency measures were identified and modeled to determine the projected site energy (therm and kWh), source energy, GHG emissions, and LSC (long-term systemwide cost) impacts. Annual utility costs were calculated using hourly data output from CBECC, and current (as of 11/01/2023) electricity and natural gas tariffs for each of the investor-owned utilities (IOUs) appropriate for that climate zone.

Equivalent CO_2 emission reductions were calculated based on outputs from the CBECC-Res simulation software. Electricity emissions vary by region and by hour of the year. CBECC-Res applies two distinct hourly profiles, one for Climate Zones 1 through 5 and 11 through 13 and another for Climate Zones 6 through 10 and 14 through 16. Natural gas emissions do not vary hourly. To compare the mixed-fuel and all-electric cases side-by-side, GHG emissions are presented as lbs CO_2-equivalent (CO_2e) emissions.

The Statewide Reach Codes Team designed the analysis approach and selected measures for evaluation based on the 2019 existing building single family reach code analysis (Statewide Reach Codes Team, 2021) and work to support the 2025 Title 24 code development cycle as well as from outreach to architects, builders, and engineers.

2.1.2 Prototype Characteristics

The Energy Commission defines building prototypes which it uses to evaluate the cost-effectiveness of proposed changes to Title 24 requirements. Average home size has steadily increased over time,[6] and the Energy Commission single family new construction prototypes are larger than many existing single family homes across California. For this analysis, a 1,665 square foot prototype was evaluated. Table 1 describes the basic characteristics of the single family prototype. Additions are not evaluated in this analysis as they are already addressed in Section 150.2 of Title 24, Part 6. The CEC has proposed changes to the 2025 Energy Code that would remove the allowance of gas space heating and water heating equipment for additions and instead require additions to follow the same space heating and water heating equipment requirements as new construction (California Energy Commission, 2023). The proposed prescriptive requirements for single family new construction homes are heat pump space heaters and water heaters, with gas equipment only allowed in the performance approach.

[6] https://www.census.gov/const/C25Ann/sftotalmedavgsqft.pdf

Table 1. Prototype Characteristics

	Specification
Existing Conditioned Floor Area	1,665 ft^2
Num. of Stories	1
Num. of Bedrooms	3
Window-to-Floor Area Ratio	13%
Attached Garage	2-car garage

Three building vintages were evaluated to determine sensitivity of existing building performance on cost-effectiveness of upgrades. For example, it is widely recognized that adding attic insulation in an older home with no insulation is cost-effective, however, newer homes will likely have existing attic insulation reducing the cost-effectiveness of an incremental addition of insulation. The building characteristics for each vintage were determined based on either prescriptive requirements from Title 24 that were in effect or standard construction practice during that time period. Homes built under 2001 Title 24 are subject to prescriptive envelope code requirements very similar to homes built under the 2005 code cycle, which was in effect until January 1, 2010.

Table 2 summarizes the assumptions for each of the three vintages. Additionally, the analysis assumed the following features when modeling the prototype buildings. Efficiencies were defined by year of the most recent equipment replacement based on standard equipment lifetimes.

- Individual space conditioning and water heating systems, one per single family building.
- Split-system air conditioner with natural gas furnace.
    - Scenarios with an existing natural gas wall furnace without AC were also evaluated.
- Small storage natural gas water heater.
    - Scenarios with an existing electric resistance storage water heater were also evaluated.
- Gas cooktop, oven, and clothes dryer.

The methodology applied in the analyses begins with a design that matches the specifications as described in Table 2 for each of the three vintages. Prospective energy efficiency measures were modeled to determine the projected energy performance and utility cost impacts relative to the baseline vintage. In some cases, where logical, measures were packaged together.

Table 2. Efficiency Characteristics for Three Vintage Cases

Building Component Efficiency Feature	Vintage Case		
	Pre-1978	1978-1991	1992-2010
Envelope			
Exterior Walls	2x4, 16-inch on center wood frame, R-0[a]	2x4 16 inch on center wood frame, R-11	2x4 16 inch on center wood frame, R-13
Foundation Type & Insulation	Uninsulated slab (CZ 2-15) Raised floor, R-0 (CZ 1 & 16)	Uninsulated slab (CZ 2-15) Raised floor, R-0 (CZ 1 & 16)	Uninsulated slab (CZ 2-15) Raised floor, R-19 (CZ 1 & 16)
Ceiling Insulation & Attic Type	Vented attic, R-5 @ ceiling level for CZ 6 & 7, Vented attic, R-11 @ ceiling level (all other CZs)	Vented attic, R-19 @ ceiling level	Vented attic, R-30 @ ceiling level
Roofing Material & Color	Asphalt shingles, dark (0.10 reflectance, 0.85 emittance)	Asphalt shingles, dark (0.10 reflectance, 0.85 emittance)	Asphalt shingles, dark (0.10 reflectance, 0.85 emittance)
Radiant Barrier	No	No	No
Window Type: U-factor/SHGC[b]	Metal, single pane: 1.16/0.76	Metal, dual pane: 0.79/0.70	Vinyl, dual pane Low-E: 0.55/0.40
House Infiltration at 50 Pascals	15 ACH50	10 ACH50	7 ACH50
HVAC Equipment			
Heating Efficiency	78 AFUE (assumes 2 replacements)	78 AFUE (assumes 1 replacement)	78 AFUE
Cooling Efficiency	10 SEER (assumes 2 replacements)	10 SEER (assumes 1 replacement)	13 SEER, 11 EER
Duct Location & Details	Attic, R-2.1, 30% leakage at 25 Pa	Attic, R-2.1, 25% leakage at 25 Pa	Attic, R-4.2, 15% leakage at 25 Pa
Whole Building Mechanical Ventilation	None	None	None
Water Heating Equipment			
Water Heater Efficiency	0.575 Energy Factor (assumes 2 replacements)	0.575 Energy Factor (assumes 1 replacement)	0.575 Energy Factor
Water Heater Type	40-gallon gas storage	40-gallon gas storage	40-gallon gas storage
Pipe Insulation	None	None	None
Hot Water Fixtures	Standard, non-low flow	Standard, non-low flow	Standard, non-low flow

[a] Pre-1978 wall modeled with R-5 cavity insulation to better align wall system performance with monitored field data and not overestimate energy use.

[b] Window type selections were made based on conversations with window industry expert, Ken Nittler. If a technology was entering the market during the time period (e.g., Low-E during 1992-2010 or dual-pane during 1978-1991) that technology was included in the analysis. This provides a conservative assumption for overall building performance and additional measures may be cost-effective for buildings with lower performing windows, for example buildings with metal single pane windows in the 1978-1991 vintage.

2.1.3 Cost-Effectiveness Approach

2.1.3.1 Benefits

This analysis used two different metrics to assess the cost-effectiveness of the proposed upgrades. Both methodologies require estimating and quantifying the incremental costs and energy savings associated with each energy efficiency measure. The main difference between the methodologies is the way they value energy impacts (the numerator in the benefit cost calculation):

Utility Bill Impacts (On-Bill): This customer-based lifecycle cost (LCC) approach values energy based upon estimated site energy usage and customer utility bill savings using the latest electricity and natural gas utility tariffs available at the time of writing this report. Total savings are estimated over a 30-year duration and include discounting of future utility costs, as well as assumed energy cost inflation over time.

Long-term Systemwide Cost (LSC): Formerly known as Time Dependent Valuation (TDV) energy cost savings, LSC reflects the Energy Commission's current LCC methodology, which is intended to capture the total value or cost of energy use over 30 years. This method accounts for the hourly cost of marginal generation, transmission and distribution, fuel, capacity, losses, and cap-and-trade-based CO2 emissions (California Energy Commission, 2023). This is the methodology used by the Energy Commission in evaluating cost-effectiveness for efficiency measures in the 2025 Energy Code.

2.1.3.2 Costs

The Reach Codes Team assessed the incremental costs of the measures and packages over a 30-year analysis period. Incremental costs represent the equipment, installation, replacement, and maintenance costs of the proposed measure relative to the 2022 Title 24 Standards minimum requirements or standard industry practices. Present value of replacement cost is included only for measures with lifetimes less than the 30-year evaluation period. In cases where at the end of the analysis period the measure has useful life remaining, the value of this remaining life is calculated and credited in the total lifetime cost.

2.1.3.3 Metrics

Cost-effectiveness is presented using net present value (NPV) and benefit-to-cost (B/C) ratio metrics.

NPV: Equation 1 demonstrates how lifetime NPV is calculated. If the NPV of a measure or package is positive, it is considered cost-effective. A negative value represents a net increase in costs over the 30-year lifetime.

B/C Ratio: This is the ratio of the present value of all benefits to the present value of all costs over 30 years (present value benefits divided by present value costs). A value of one indicates the NPV of the savings over the life of the measure is equivalent to the NPV of the lifetime incremental cost of that measure. A value greater than one represents a positive return on investment. The B/C ratio is calculated according to Equation 2.

Equation 1

$$NPV = present\ value\ of\ lifetime\ benefit - present\ value\ of\ lifetime\ cost$$

Equation 2

$$Benefit - to - Cost\ Ratio = \frac{present\ value\ of\ lifetime\ benefit}{present\ value\ of\ lifetime\ cost}$$

Improving the efficiency of a project often requires an initial incremental investment. In most cases the benefit is represented by annual On-Bill utility or LSC savings, and the cost is represented by incremental first cost and future replacement costs. Some packages result in initial construction cost savings relative to the assumed base case scenario, and either energy cost savings (positive benefits), or increased energy costs (negative benefits). In cases where both construction costs and energy-related savings are negative, the construction cost savings are treated as the 'benefit' while the increased energy costs are the 'cost.' In cases where a measure or package is cost-effective immediately (i.e., upfront construction cost savings and lifetime energy cost savings), B/C ratio cost-effectiveness is represented by ">1".

The lifetime costs or benefits are calculated according to Equation 3.

Equation 3

$$Present\ value\ of\ lifetime\ cost\ or\ benefit = \sum_{t=0}^{n} \frac{(Annual\ cost\ or\ benefit)_t}{(1+r)^t}$$

Where:

1. n = analysis term in years
2. r = discount rate

The following summarizes the assumptions applied in this analysis to both methodologies.

3. Analysis term of 30 years
4. Real discount rate of three percent

Both base case measures and alternative energy efficiency measures may have different lifetime assumptions which impact life cycle economics. Future costing of many of the evaluated electrification measures are only based on current cost assumption, which may be overly conservative as the expected growth in heat pump-based technologies is growing rapidly and will likely lead to future cost reductions (at least relative to current fossil fueled equipment) as production volumes increase.

2.1.4 Utility Rates

In coordination with the CA IOU rate team (comprised of representatives from Pacific Gas and Electric (PG&E), Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E)) and two Publicly-Owned-Utilities (POUs) (Sacramento Municipal Utility District (SMUD) and City of Palo Alto Utilities (CPAU)), the Reach Codes Team determined appropriate utility rates for each climate zone to calculate utility costs and determine On-Bill cost-effectiveness for the proposed measures and packages. The utility tariffs, summarized in Chapter 6.2, were determined based on the appropriate rate for each case in each territory. Utility rates were applied to each climate zone based on the predominant IOU serving the population of each zone, with a few climate zones evaluated multiple times under different utility scenarios. Climate Zones 10 and 14 were evaluated with both SCE for electricity and Southern California Gas Company (SoCalGas) for gas and SDG&E tariffs for both electricity and gas since each utility has customers within these climate zones. Climate Zone 5 is evaluated under both PG&E and SoCalGas natural gas rates. Two POU or municipal utility rates were also evaluated: SMUD in Climate Zone 12 and CPAU in Climate Zone 4.

For cases with onsite generation (i.e. solar photovoltaics (PV)), the approved NBT tariffs were applied along with monthly service fees and hourly export compensation rates for 2024.[7] In December 2022, the California Public Utilities Commission (CPUC) issued a decision adopting NBT as a successor to NEM 2.0 that went into effect April of 2023[8].

Utility rates are assumed to escalate over time according to the assumptions from the CPUC 2021 En Banc hearings on utility costs through 2030 (California Public Utilities Commission, 2021a). Escalation rates through the remainder of the 30-year evaluation period are based on the escalation rate assumptions within the 2022 TDV factors. The Statewide Natural Gas Residential Average Rate for 2023 through 2030 is projected to be 4.6%. The Electric Residential Average Rate for PG&E, SCE and SDG&E for 2023 through 2030 is projected to be 1.8%,1.6% and 2.8% respectively. A second set of escalation rates were also evaluated to demonstrate the impact that utility cost changes have on cost-effectiveness over time. This utility rate escalation sensitivity analysis, presented in Section 3.2.4, was based on those used within the 2025 LSC factors (LSC replaces TDV in the 2025 code cycle) which assumed steep

[7] Hourly export compensation rates were based on the NBT spreadsheet model created by E3 for the CPUC. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/net-energy-metering-nem/nemrevisit/nbt-model--12142022.xlsb

[8] https://www.cpuc.ca.gov/nemrevisit

increases in gas rates in the latter half of the analysis period. See Appendix 6.2.7 Fuel Escalation Assumptions for details.

Future electricity tariff structures are expected to evolve over time, and the CPUC has an active proceeding to adopt an income-graduated fixed charge that benefits low-income customers and supports electrification measures.[10] These were not included in this analysis but may be evaluated later in 2024 once the rates are finalized.

2.1.5 Measure Cost Data Collection Approach

To support this effort, a detailed cost study was completed in the summer of 2023 to gather data from a range of contractors to inform actual installed costs in the areas they provide services. These areas include HVAC, plumbing, envelope and air-sealing, and PV installation. Home performance contractors were also approached to collect this data. Collecting this type of data is challenging, both due to contractor reticence to share cost information and due to the timing of the survey which unfortunately coincided with the summer busy season for most contractors, especially HVAC installers. With these known challenges, the outreach effort focused on leveraging existing relationships between the analysis team and contractors to both gain access and provide assurance that all cost data would remain confidential and aggregated. Contractors that provided feedback were nominally compensated for their time.

The collected cost data was intended to represent recent costs for a “typical” retrofit installation. Each home in which a contractor does work has different site-specific issues that will likely affect costs. In addition, different jurisdictions have different levels of building department installation oversight and permit fees. Finally, each contractor typically has a different manufacturer product line they prefer to install. All these factors will influence installed costs[11].

The most detailed and broad cost request was for the HVAC contractors, as there are a wide range of equipment replacement scenarios available for an existing ducted gas furnace with central split-system air conditioning. Options range from a base case scenario (like for like swap out), split-system heat pump replacement, dual fuel heat pumps (DFHP), ducted mini-split heat pumps, non-ducted mini-splits, etc. For plumbing contractors, a range of scenarios existed for water heater replacements including like-for-like replacement, HPWHs (in different locations- garage, indoor), need for electrical upgrade for HPWH installation, need for HPWH ducting, etc. Envelope measures focused on attic and wall insulation, window replacement, re-roofing (with Cool Roof materials or not), and attic ceiling plane air-sealing. PV costing included different system sizes, panel upgrades costs, and battery costs. Home performance contractors were asked to provide as much data as they could on the different measure options. All costing information requested was intended to represent most recent installations, in an effort to capture current pricing as best as possible.

The contractors that responded with their cost estimates work in different regions of the state, operate in different markets with (potentially) different local efficiency incentives, do varying amounts of work based on the size of their company, target different market demographic sectors, and install different brands of equipment. All these factors will contribute to price variability. The Team considered applying climate zone specific cost adjustments to reflect some of these differences, but ultimately decided not to since a climate zone is not a monolithic entity with uniform customer pricing throughout. The Team recognizes that “zip code” pricing is a reality, but for simplicity, as well as consistency with Title 24, Part 6 code development costing approaches, applied uniform statewide costs to all measures.

2.2 Measure Details and Cost

This section describes the details of the measures and documents incremental costs. All measure costs were obtained from the contractor survey unless otherwise noted. All contractor provided costs reflect the cost to the customer and

[10] https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/demand-flexibility-rulemaking

[11] One HVAC contractor mentioned that equipment brand alone may contribute to a +/-%5 variation in the total bid cost.

include equipment, labor, permit fees, and required HERS testing. Additional details of the measures can be found in Appendix Section **Error! Reference source not found.**.

All measures are evaluated assuming they are not otherwise required by Title 24. For example, duct sealing is required by code whenever HVAC equipment is altered. For this analysis duct sealing was evaluated for those projects where it is not already triggered by code (i.e., no changes to the heating or cooling equipment). Where appropriate, measure requirements align with those defined in Title 24. In some cases, cost-effective measures were identified that exceed Title 24 requirements, such as attic insulation, cool roofs, and duct sealing.

2.2.1 Building Envelope & Duct Measures

The following are descriptions of each of the efficiency upgrade measures applied in this analysis.

Attic Insulation: Add attic insulation in buildings with vented attic spaces to meet either R-38 or R-49. The pre-1978 vintage assumes an existing condition of R-11, the 1978-1991 vintage assumes an existing condition of R-19, and the 1992-2010 vintage assumes R-30 as the existing insulation level. For pre-1978 vintage homes this measure was also evaluated to include air sealing of the attic. A 14% leakage reduction was modeled such that 15 ACH50 was reduced to 12.9 ACH50 in this measure. The costs for this measure include removing existing insulation.

Air Sealing and Weather-stripping: Apply air sealing practices throughout all accessible areas of the building. For this study, it was assumed that older vintage homes would be leakier than newer buildings and that approximately 30 percent improvement in air leakage is achievable through air sealing of all accessible areas. For modeling purposes, it was assumed that air sealing can reduce infiltration levels from 15 to ten air changes per hour at 50 Pascals pressure difference (ACH50) in the oldest vintages (pre-1978), to ten to seven ACH50 for the 1978-1991 vintage, and seven to five ACH50 in the 1992-2010 vintage.

Cool Roof: For steep slope roofs, install a roofing product rated by the Cool Roof Rating Council (CRRC) with an aged solar reflectance of 0.20 or 0.25 and thermal emittance of 0.75 or higher. This measure only applies to buildings that are installing a new roof as part of the scope of the remodel; the cost and energy savings associated with this upgrade reflects the incremental step between a standard roofing product with one that is CRRC rated with an aged solar reflectance of 0.20 or 0.25. This is similar to cool roof requirements in 2022 Title 24 Section 150.2(b)1Ii but assumes a higher solar reflectance.

Radiant Barrier: Add radiant barrier to any existing home vintage. This measure only applies to buildings that are installing a new roof as part of the scope of the remodel; the cost and energy savings associated with this upgrade reflects the incremental step between a standard roofing product with one that includes a laminated radiant barrier.

Raised Floor Insulation: In existing homes with raised floors and no insulation (pre-1978 and 1978-1991 vintages), add R-19 insulation. An upgraded R-30 floor insulation, assuming no current insulation, was evaluated in the pre-1978 and 1978-1991 vintages.

Wall Insulation: Blow-in R-13 wall insulation in existing homes without wall insulation (pre-1978 vintages).

Window Replacement: Replace existing windows with a non-metal dual-pane product, which has a U-factor equal to 0.28 Btu/hour-ft^2-°F or lower and a Solar Heat Gain Coefficient (SHGC) equal to 0.23 or lower, except in heating dominated climates (Climate Zones 1, 3, 5, and 16) where an SHGC of 0.35 was evaluated.

Duct Sealing, New Ducts, and Duct Insulation: Air seal all ductwork to meet the requirements of the 2022 Title 24, Part 6 Section 150.2(b)1E. For this analysis, final duct leakage values of ten percent (proposed revised leakage rate for 2022 Title 24) was evaluated. The pre-1978 and 1978-1992 vintages assume leaky existing ducts (25-30% leakage). The 1992-2010 vintage assumes moderately leaky existing ducts (15-20% leakage).

Replacing existing ductwork with entirely new ductwork to meet Sections 150.2(b)1Di and 150.2(b)1Diia of the 2022 Title 24 was also evaluated. This assumed new ducts meet 5% duct leakage and the option of R-6 and R-8 duct insulation in all climate zones.

Table 3 summarizes the cost assumptions for the building envelope and HVAC duct improvement measures evaluated. All the measures in Table 3 assume a 30-year effective useful life.

Table 3. Measure Cost Assumptions – Efficiency & Duct Measures

Measure	Performance Level	Incremental Cost – Single Family Building		
		Pre 1978	1978 – 1991	1992 - 2010
Wall Insulation	R-13	$2,950	N/A	N/A
Raised Floor Insulation	R-19	$3,633	$3,633	N/A
	R-30	$4,113	$4,113	$4,113
Attic Insulation	R-38	$6,762	$2,555	$1,781
	R-49	$7,446	$3,612	$1,827
Air Sealing	10 ACH50	$4,684	N/A	N/A
	7 ACH50	N/A	$4,684	N/A
	5 ACH50	N/A	N/A	$4,684
Cool Roof	0.25 Aged Solar Reflectance CZs 1-3,5-7,16	$2,407	$2,407	$2,407
	0.25 Aged Solar Reflectance CZs 4, 8-15	$1,203	$1,203	$1,203
Window U-factor/SHGC	0.28 U-factor. 0.23 SHGC in CZs 2,4,6-15.	$11,463	$11,463	$11,463
	0.28 U-factor. 0.35 SHGC in CZs 1,3,5,26	$11,871	$11,871	$11,871
Radiant Barrier	Add Radiant Barrier	$893	$893	$893
Duct Sealing	10% nominal airflow	$2,590	$2,590	$1,400
All New Duct System	R-6 ducts; 5% duct leakage	$4,808	$4,808	$4,808
	R-8 ducts; 5% duct leakage	$6,311	$6,311	$6,311

2.2.2 PV Measures

Installation of on-site PV is required in the 2022 Title 24 code for new construction homes, but there are no PV requirements for additions or alterations to existing buildings. PV was evaluated in CBECC-Res according to the California Flexible Installation (CFI) 1 assumptions and 98% solar access. To meet CFI eligibility, the requirements of 2022 Reference Appendices JA11.2.2 (California Energy Commission, 2021b) must be met. A 3 kW PV system was modeled both as a standalone measure as well as coupled with heat pump installations.

The costs for installing PV are summarized in Table 4. They include the first cost to purchase and install the system, future inverter replacement costs, and annual maintenance costs. Upfront solar PV system costs are estimated from the contractor surveys to be $4.58/$W_{DC}$ and are reduced by 30 percent to account for the federal income Residential Clean Energy Credit. The solar panels are estimated to have an effective useful life of 30 years and the inverter 25 years. The inverter replacement cost of $7,000 (future value) is also from the contractor surveys. System maintenance costs are taken from the 2019 PV CASE Report (California Energy Commission, 2017) and are assumed to be

$0.31/W$_{DC}$ present value. These costs do not include costs associated with electrical panel upgrades, which will be necessary in some instances.

Table 4. Measure Descriptions & Cost Assumptions – PV

Measure	Performance Level	Incremental Cost		
		Pre 1978	1978 – 1991	1992 - 2010
PV	3 kW	$9,608		

2.2.3 Equipment Fuel Substitution Measures – Heat Pump Equipment

The fuel substitution measures are evaluated as replacements at the end of the life of the existing equipment. This means the baseline compared against is usually a like-for-like change-out of the natural gas equipment, and the upgrade is a heat pump.

For most of the space heating and water heating cases, costs for electrical service panel upgrades are not included as it is assumed many existing homes have the service capacity to support converting one appliance from gas to electric. For homes with existing air conditioners, any incremental electric capacity necessary to support a heat pump space heater is marginal. The same applies for homes with existing electric resistance equipment. Section 3.2.4 presents the impacts for select cases where an upgrade to the electric panel is required.

Heat Pump Space Heating

All the heat pump space heater (HPSH) measures are described below. All were evaluated with HERS verified refrigerant charge aligned with the proposed code requirements for the 2025 Title 24 code. Dual fuel heat pumps (DFHPs) were controlled to lockout furnace operation above 35°F.

DFHP (Existing Furnace): Replace existing ducted air conditioner (AC) with an electric heat pump and install controls to operate the heat pump to use the existing gas furnace for backup heat. A minimum federal efficiency (14.3 SEER2, 11.7 EER2, 7.5 HSPF2) heat pump was evaluated. Savings are compared to a new AC (14.3 SEER2, 11.7 EER2) alongside the existing furnace (78 AFUE).

DFHP (New Furnace): Replace existing ducted AC and natural gas furnace with an electric heat pump and new gas furnace plus controls to operate the heat pump and use the new gas furnace for backup heat. A minimum federal efficiency (14.3 SEER2, 11.7 EER2, 7.5 HSPF2) heat pump and furnace (80 AFUE) were evaluated to replace existing equipment. Savings are compared to a new ducted AC and natural gas furnace (14.3 SEER2, 11.7 EER2, 80 AFUE).

Heat Pump Space Heater: Replace existing ducted AC and natural gas furnace with an electric heat pump. Minimum federal efficiency (14.3 SEER2, 11.7 EER2, 7.5 HSPF2) and higher efficiency (17 SEER2, 12.48 EER2, 9.5 HSPF2) heat pumps were evaluated. Savings are compared to a new ducted natural gas furnace and AC (14.3 SEER2, 11.7 EER2, 80 AFUE).

Ducted Mini-Split Heat Pump (MSHP): Replace existing ducted AC and natural gas furnace with a ducted high efficiency MSHP (16.5 SEER2, 12.48 EER2, 9.5 HSPF2). Savings are compared to a new ducted AC and natural gas furnace (14.3 SEER2, 11.7 EER2, 80 AFUE).

Ductless MSHP: In a home without AC, replace existing wall furnace with a ductless MSHP. A standard efficiency unit meeting minimum federal efficiency standards (14.3 SEER2, 11.7 EER2, 7.5 HSPF2) was evaluated by modeling the variable capacity heat pump (VCHP) compliance credit in CBECC-Res. A premium, higher efficiency upgrade was also

evaluated using CBECC-Res' detailed VCHP model[12] by simulating the performance of a representative high efficiency product (14.3 SEER2, 11.7 EER2, 7.5 HSPF2). Savings are compared to a new natural gas wall furnace with fan distribution (75% AFUE) and window AC (9 CEER).

Over the 30-year analysis period, certain changes are assumed when the equipment is replaced that impact both lifetime costs and energy use. Table 5 presents the lifetime scenario for the DFHP (existing furnace) measure. The analysis assumed a 20-year effective useful lifetime (EUL) for a furnace, a 15-year EUL for an air conditioner and a 15-year EUL for a heat pump. Lifetimes are based on the Database for Energy Efficient Resources (DEER) (California Public Utilities Commission, 2021b). The existing furnace is assumed to be halfway through its EUL at the beginning of the analysis period. After 10 years when the furnace reaches the end of its life and needs to be replaced, it will be subject to new federal efficiency standards for residential gas furnaces that go into effect in 2028 requiring 95 AFUE[13]. 5 years later the air conditioner reaches the end of its life and is replaced with a new air conditioner.

For the DFHP upgrade case, after 10 years when the furnace fails it's expected that the furnace will be abandoned in place since the heat pump serves primary heating and was sized to provide the full design heating load. In this case it is assumed that the fan motor would be replaced with a new aftermarket unit and would operate another 5 years until the heat pump fails and is replaced with a new heat pump and air handler.

The other ducted heat pump cases similarly apply a 95 AFUE furnace in the baseline when the furnace reaches its EUL after 20 years.

Table 5. Lifetime Analysis Replacement Assumptions for DFHP (Existing Furnace) Scenario

Year	Baseline	Upgrade
0	AC fails, install new AC, keep existing furnace	AC fails, install new HP, keep existing furnace
10	Furnace fails, install new 95AFUE furnace	Furnace fails, replace fan motor
15	AC fails, install new AC	HP fails, install new HP and air handler

Costs were applied based on the system capacity from heating and cooling load calculations in CBECC-Res as presented in Table 6. Air conditioner nominal capacity was calculated as the CBECC-Res cooling load, rounded up to the nearest half ton. Heat pump nominal capacity was calculated as the maximum of either the CBECC-Res heating or cooling load, rounded up to the nearest half ton. In both cases a minimum capacity of 1.5-ton was applied as this represents the typical smallest available split system heat pump equipment. Load calculations demonstrated that Climate Zones 2 - 15 were cooling-dominated while Climate Zones 1 and 16 were heating-dominated. In the heating dominated climate zones the heat pump needed to be upsized relative to an air conditioner that only provides cooling.

[12] The detailed VCHP option allows for the user to input detailed specifications based on the published National Energy Efficiency Partnership (NEEP) manufacturer specific performance data. It is not currently available for compliance analysis.

[13] https://www.energy.gov/articles/doe-finalizes-energy-efficiency-standards-residential-furnaces-save-americans-15-billion#:~:text=These%20furnace%20efficiency%20standards%20were,heat%20for%20the%20living%20space.

Table 6. System Sizing by Climate Zone

Climate Zone	Air Conditioner Capacity (tons)	Heat Pump Capacity (tons)
1	1.5	3.0
2	3.5	3.5
3	2.5	2.5
4	3.5	3.5
5	3.0	3.0
6	3.0	3.0
7	3.0	3.0
8	4.0	4.0
9	4.0	4.0
10	4.0	4.0
11	4.5	4.5
12	4.0	4.0
13	4.5	4.5
14	4.0	4.0
15	5.0	5.0
16	3.5	4.0

Table 7 presents estimated first and lifetime costs for the various ducted baseline and heat pump scenarios for 4-ton equipment. Costs include all material and installation labor including providing new 240 V electrical service to the air handler location for all new air handler installations and decommissioning of the furnace for the cases where the furnace is removed. DFHP costs incorporate controls installation and commissioning to ensure the heat pump and the furnace communicate properly and don't operate at the same time. Future replacement costs do not include any initial costs associated with 240V electrical service or furnace decommissioning.

Table 8 presents estimated first and lifetime costs for the ductless baseline and 2 heat pump scenarios, also for 4-ton heat pump equipment. EULs are based on 20 years for the gas wall furnace, 10 years for the window AC, and 15 years for the heat pump.[14]

[14] The gas wall furnace and heat pump EULs were based on DEER (California Public Utilities Commission, 2021b). Gas wall furnace lifetime was assumed to be the same as for central gas furnace equipment. Room air conditioner EUL was based on the DOE's latest rulemaking for room air conditioned (Department of Energy, 2023). DOE determined an average lifetime of 9.3 years, which was rounded up to 10 years for this analysis.

Table 7. Ducted HVAC Measure Cost Assumptions – 4-Ton Electric Replacements

Case	AC + Coil	Gas Furnace /AC	DFHP (Existing Furnace)	DFHP (New Furnace)	Min. Eff. Heat Pump	High Eff. Heat Pump	Ducted MSHP
Base Case	-	-	AC + Coil	Gas Furnace /AC	Gas Furnace /AC	Gas Furnace /AC	Gas Furnace /AC
First Cost	$10,402	$16,653	$12,362	$20,676	$17,825	$20,802	$18,075
Replacement Cost (Future Value)	$19,365	$19,365	$19,025	$19,025	$16,825	$19,802	$18,075
Replacement Cost (Present Value)	$13,346	$11,639	$12,334	$12,897	$10,800	$12,710	$11,601
Remaining Value at Year 30	$0	($1,846)	$0	($1,846)	$0	$0	$0
Total Lifecycle Cost	$23,748	$26,446	$24,696	$31,727	$28,625	$33,512	$29,676
Incremental Cost	-	-	**$948**	**$5,281**	**$2,179**	**$7,066**	**$3,230**

Table 8. Non-Ducted HVAC Measure Cost Assumptions – 4-Ton Electric Replacements

	Wall Furnace + Window AC	Min. Eff. Ductless MSHP	High Eff. Ductless MSHP
First Cost	$4,075	$17,412	$21,342
Replacement Cost (Future Value)	$4,075	$17,412	$21,342
Replacement Cost (Present Value)	$3,365	$11,176	$13,698
Remaining Value at Year 30	($532)	$0	$0
Total Lifecycle Cost	$6,908	$28,588	$35,040
Incremental Cost	-	**$21,680**	**$28,132**

Heat Pump Water Heating:

The heat pump water heater (HPWH) measures are described below, and costs are presented in Table 9 and Table 10. The most typical scenario in California is a home with existing natural gas storage tank water heaters. However, there are also many existing homes with existing electric resistance storage tank water heaters and this work considers both baselines. This analysis evaluates the following 65-gallon replacement HPWHs:

1. HPWH that meets the federal minimum efficiency requirements of UEF 2.0
2. HPWH that meets the Northwest Energy Efficiency Alliance (NEEA)[15] Tier 3 rating (3.45 UEF)
3. HPWH that meets the NEEA Tier 4 rating and that has demand response (DR) or load shifting control capability (4.02 UEF)
4. 120V HPWH that meets the NEEA Tier 3 rating (3.3 UEF).

[15] Based on operational challenges experienced in the past, NEEA established rating test criteria to ensure newly installed HPWHs perform adequately, especially in colder climates. The NEEA rating requires an Energy Factor equal to the ENERGY STAR® performance level and includes requirements regarding noise and prioritizing heat pump use over supplemental electric resistance heating.

The four cases above were evaluated with the HPWH located within an attached garage. Additionally, three separate cases for the federal minimum efficiency HPWH were analyzed to consider the impacts of location on performance and cost-effectiveness. These locations included the following:

1. Exterior closet.
2. Interior closet, no ducting.
3. Interior closet, ducted to the outside.

Additional costs for providing electrical wiring to these locations and for providing ductwork were included. Savings are compared to a new 50-gallon natural gas storage water heater (UEF 0.63) or a new 50-gallon electric water heater (UEF 0.92).

For this analysis, a HPWH that just meets the federal minimum efficiency standards of close to 2.0 Uniform Energy Factor (UEF) was evaluated in order to satisfy preemption requirements. However, the Reach Codes Team is not aware of any 2.0 UEF products that are available on the market. The lowest UEF reported for certified products in the Northwest Energy Efficiency Alliance (NEEA)[16] database is 2.73. In fact, of the four certification tiers offered by NEEA for high efficiency HPWHs, those meeting Tier 3 or Tier 4 are the dominant products on the market today. According to NEEA all major HPWH manufacturers are represented in NEEA's qualified product list[17] and there are fewer than 10 integrated products certified as Tier 1 or Tier 2, all of which have UEFs greater than 3.0.[18] Therefore, in this analysis, we refer to the NEEA rated HPWH as the "market standard" HPWH.

The HPWH costs for the 120V and NEEA certified units are based on a larger (60 or 65 gallon) HPWH, as most contractors are upsizing the HPWH tank size relative to an equal volume, but higher capacity gas storage water heater. Costs include all material and installation labor including providing a new 240 V electrical service to the water heater location (not needed for the 120V product). Water heating equipment lifetimes are based on DOE's recent water heater rulemaking (Department of Energy, 2022) and assume 15-year EULs for both the baseline water heaters and the HPWHs.[19] Future replacement costs for 240V HPWHs do not include any initial costs associated with 240V electrical service, condensate disposal, etc.

Table 9. Water Heating Measure Cost Assumptions – Existing Gas

	Gas Storage Water Heater	240V Fed. Min. HPWH	240V Market Std. NEEA HPWH	240V Market Std. NEEA HPWH + DR	120V Market Std. NEEA HPWH	240V Fed. Min. HPWH, Exterior Closet	240V Fed. Min. HPWH, Interior Closet, Not Ducted	240V Fed. Min. HPWH, Interior Closet, Ducted
First Cost	$2,951	$7,283	$8,144	$8,144	$5,844	$7,702	$7,363	$8,442
Replacement Cost (Future Value)	$2,951	$6,413	$7,274	$7,274	$5,101	$6,413	$6,413	$6,413
Replacement Cost (Present Value)	$1,894	$4,116	$4,669	$4,669	$3,274	$4,116	$4,116	$4,116
Total Lifecycle Cost	$4,845	$11,399	$12,813	$12,813	$9,118	$11,818	$11,479	$12,558
Incremental Cost	**-**	**$6,554**	**$7,968**	**$7,968**	**$4,273**	**$6,973**	**$6,634**	**$7,713**

[16] Based on operational challenges experienced in the past, NEEA established rating test criteria to ensure newly installed HPWHs perform adequately, especially in colder climates. The NEEA rating requires products comply with ENERGY STAR and includes requirements regarding noise and prioritizing heat pump use over supplemental electric resistance heating.
[17] https://neea.org/success-stories/heat-pump-water-heaters
[18] As of 12/21/23: https://neea.org/img/documents/residential-unitary-HPWH-qualified-products-list.pdf
[19] The recent DOE rulemaking references a lifetime of 14 years for gas storage water heaters and 14.8 years for electric storage water heaters. 15 years for each was used in this analysis for both types for simplification.

Table 10 presents similar costs to Table 9, except that the costs assume replacement of an existing 50-gallon electric storage water heater and does not include the 240 V electrical service cost.

Table 10. Water Heating Measure Cost Assumptions – Existing Electric Resistance

	Electric Storage Water Heater	240V Fed. Min. HPWH	240V Market Std. NEEA HPWH	240V Market Std. NEEA HPWH + DR	120V Market Std. NEEA HPWH	240V Fed. Min. HPWH, Exterior Closet	240V Fed. Min. HPWH, Interior Closet, Not Ducted	240V Fed. Min. HPWH, Interior Closet, Ducted
First Cost	$2,583	$6,413	$7,274	$7,274	$5,101	$6,413	$6,413	$7,492
Replacement Cost (Future Value)	$2,583	$6,413	$7,274	$7,274	$5,101	$6,413	$6,413	$6,413
Replacement Cost (Present Value)	$1,658	$4,116	$4,669	$4,669	$3,274	$4,116	$4,116	$4,116
Total Lifecycle Cost	$4,241	$10,529	$11,943	$11,943	$8,375	$10,529	$10,529	$11,608
Incremental Cost	-	**$6,288**	**$7,702**	**$7,702**	**$4,134**	**$6,288**	**$6,288**	**$7,367**

3 Results

The primary objective of the evaluation is to identify cost-effective energy upgrade measures and packages for existing single family buildings, to support the design of local ordinances requiring upgrades, which may be triggered by different events, such as at the time of a significant remodel or at burnout of mechanical equipment. In this report, the 1992-2010 vintage is shown for the equipment measures because it is the most conservative case (lowest loads), while the pre-1978 vintage is shown for the envelope and duct measures because some of those measures only apply to the pre-1978 vintage. A full dataset of all results can be downloaded at https://localenergycodes.com/content/resources. Results alongside policy options can also be explored using the Cost-effectiveness Explorer at https://explorer.localenergycodes.com/.

3.1 Cost-Effectiveness Results

The extensive analysis for this type of report leads to an overwhelming number of scenarios including different base cases, house vintages, replacement options, and climate zones. To simplify the reporting, the Statewide Reach Codes Team has relied on graphical representation of select key cases indicating high level measure cost effectiveness from either an On-Bill perspective, an LSC perspective, both metrics, or neither. Figure 1 through Figure 13 present this reduced set of results of the LSC and On-Bill cost-effectiveness conclusions across the 16 climate zones. In the cases where there are multiple utilities serving a single climate zone, an asterisk "*" label is added to separately show the alternate utility cases. These graphs provide a general sense of the findings. A full dataset of all results can be downloaded at https://localenergycodes.com/content/resources. Results alongside policy options can also be explored using the Cost-effectiveness Explorer at https://explorer.localenergycodes.com/.

3.1.1 HPSH Measures

Figure 1 through Figure 5 show the cost-effectiveness of space heating equipment replacement measures for the 1992-2010 vintage including the following cases. The 1992-2010 vintage results are presented here as this is the most conservative scenario for HPSH measures. In general, where a HPSH measure is cost-effective for a new home it was also found to be cost-effective for older homes.

- Dual fuel heat pump with existing furnace as backup.
- Standard efficiency ducted central heat pump replacement.
- High efficiency ducted central heat pump replacement.
- Ducted mini-split heat pump replacement.
- Standard efficiency ducted central heat pump replacement with 3kW PV system.

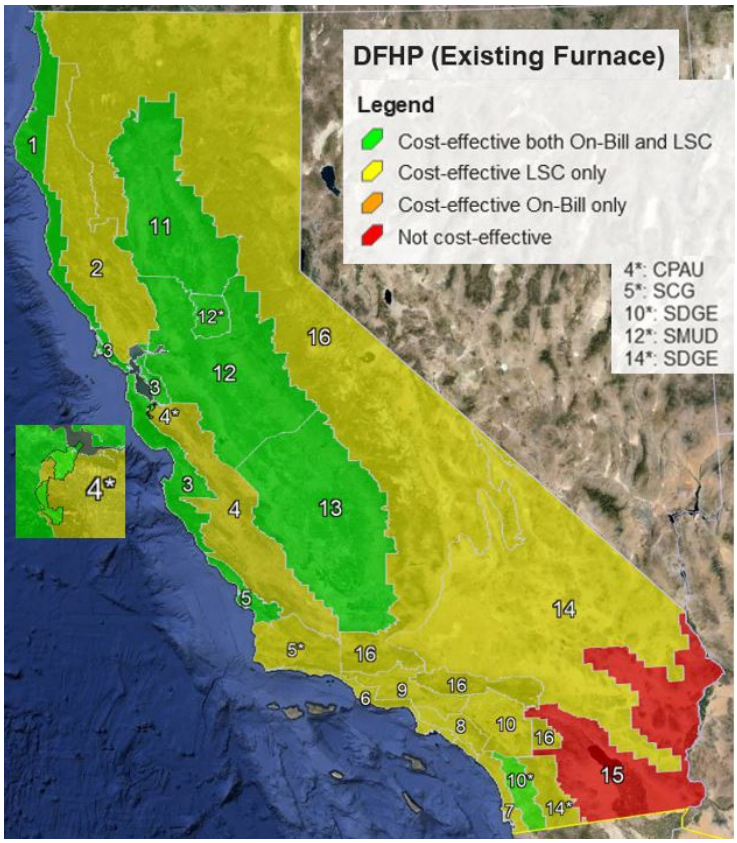


Figure 1: DFHP with Existing Furnace

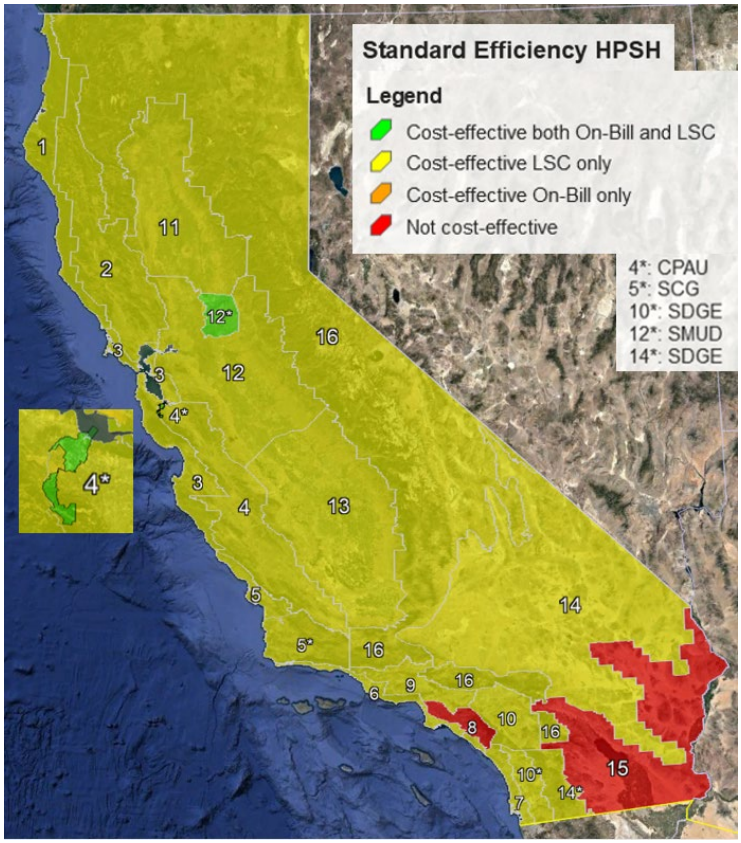


Figure 2: Standard Efficiency HPSH

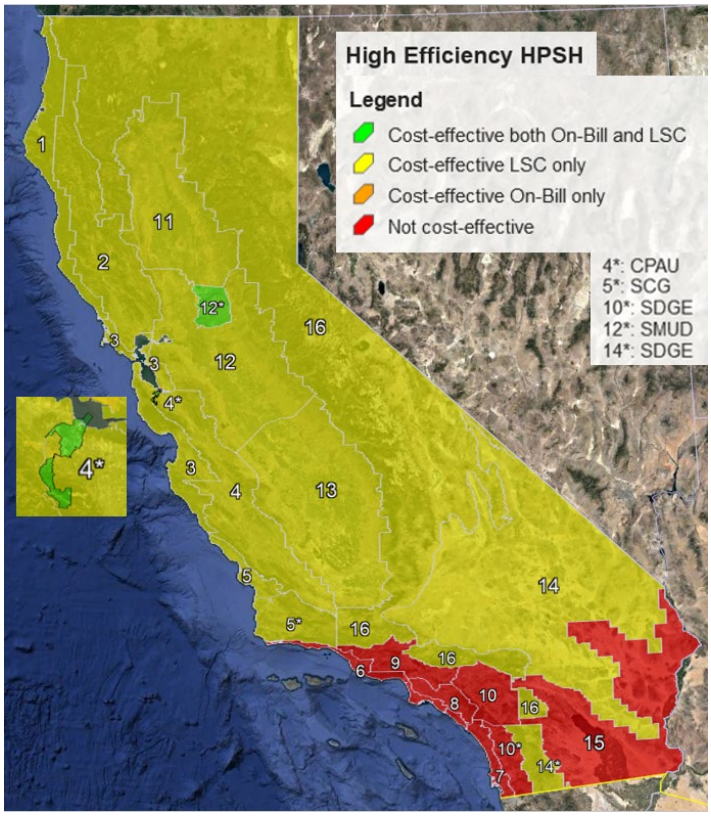


Figure 3: High Efficiency HPSH

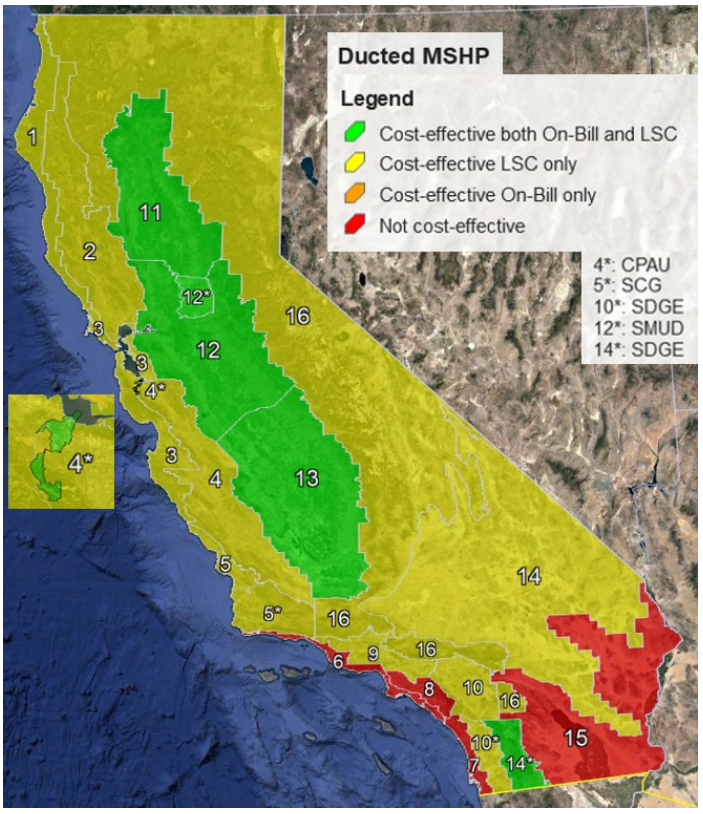


Figure 4: Ducted MSHP

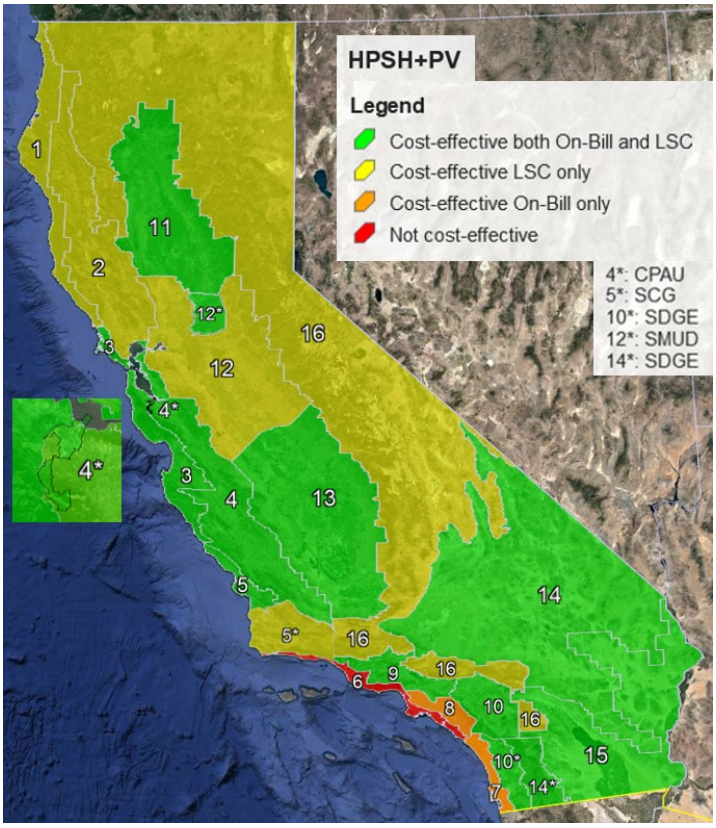


Figure 5: HPSH + PV

3.1.2 HPWH Measures

Figure 6 through Table 11 show the cost-effectiveness of water heater measures for the 1992-2010 vintage including the following cases. HPWH energy savings and LSC cost-effectiveness is not sensitive to home vintage but rather depends on the magnitude of hot water loads, which are typically driven by the number of occupants. On-Bill cost-effectiveness does vary slightly by vintage due to the impact of the electrification tariff relative to the load profile of the existing home. The impact is largest for the HPWH + PV case where On-Bill cost-effectiveness improves for older homes or homes with overall higher energy use resulting in less exports to the grid for a fixed size PV system.

- 240V federal minimum HPWH
- 240V market standard NEEA HPWH
- 120V market standard NEEA HPWH
- 240V federal minimum HPWH with 3kW PV

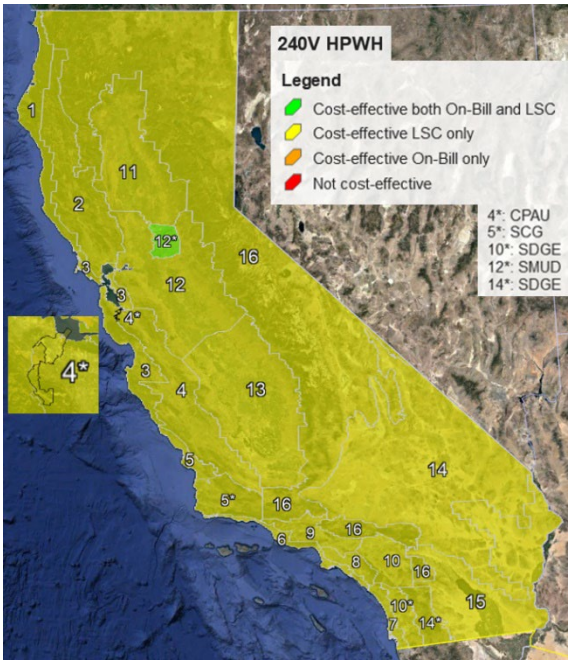


Figure 6: 240V Federal Minimum HPWH

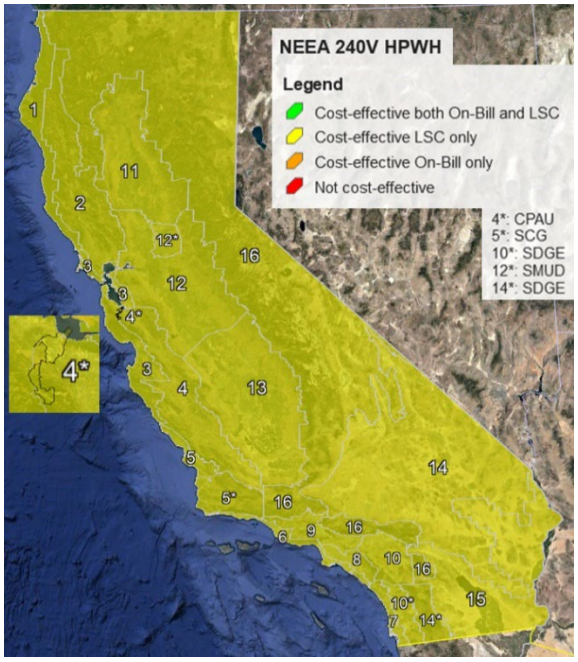


Figure 7: 240V Market Standard NEEA HPWH

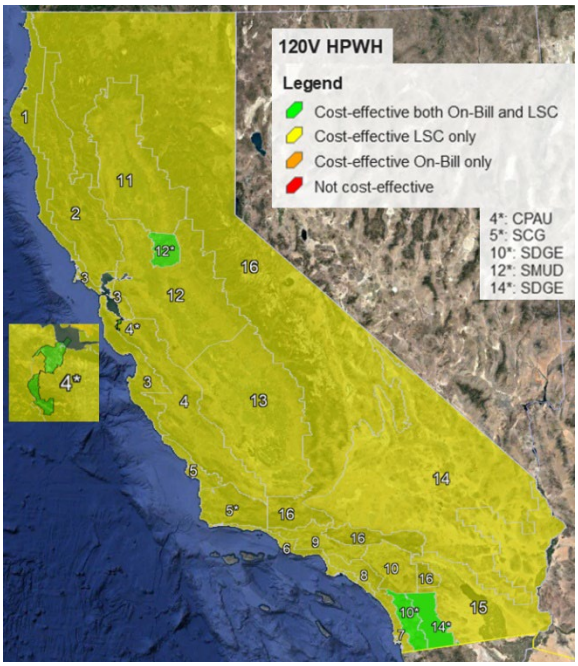


Figure 8: 120V Market Standard NEEA HPWH

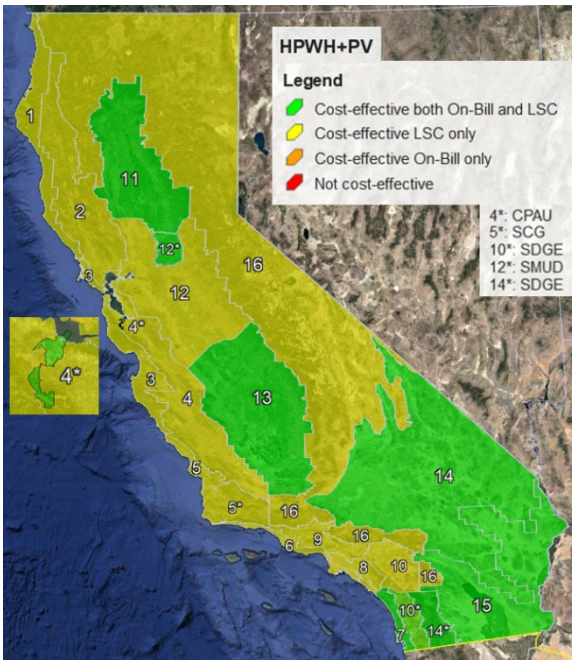


Figure 9: 240V Federal Minimum HPWH + PV

- Envelope and Duct Measures

Figure 10 through Figure 13 show the cost-effectiveness results of envelope and duct measures for the pre-1978 vintage including the following measures. The pre-1978 vintage is presented as representing the most favorable existing conditions for cost-effective upgrades. Newer homes with higher performing envelope may still benefit from these types of upgrade measures, but cost-effectiveness is reduced. Some measures, like R-13 wall insulation, aren't applicable to newer homes which would have been constructed originally with insulated walls.

- New R-6 ducts
- 10% duct leakage
- R-13 wall insulation
- R-49 attic insulation

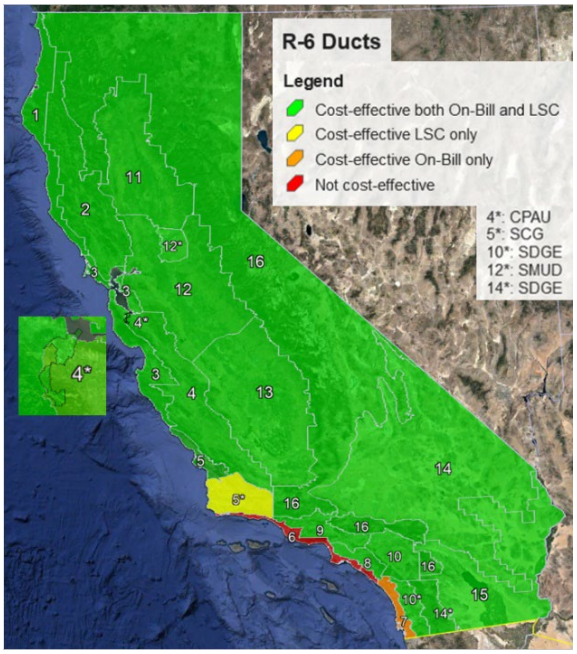


Figure 10: R-6 Ducts

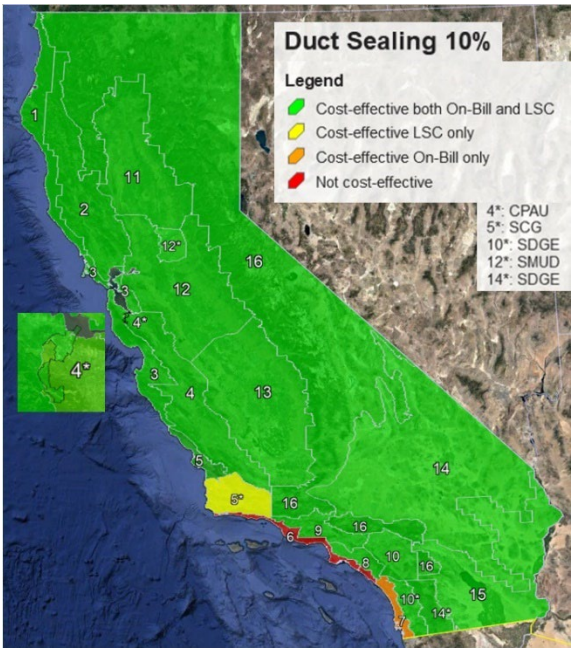


Figure 11: 10% Duct Leakage

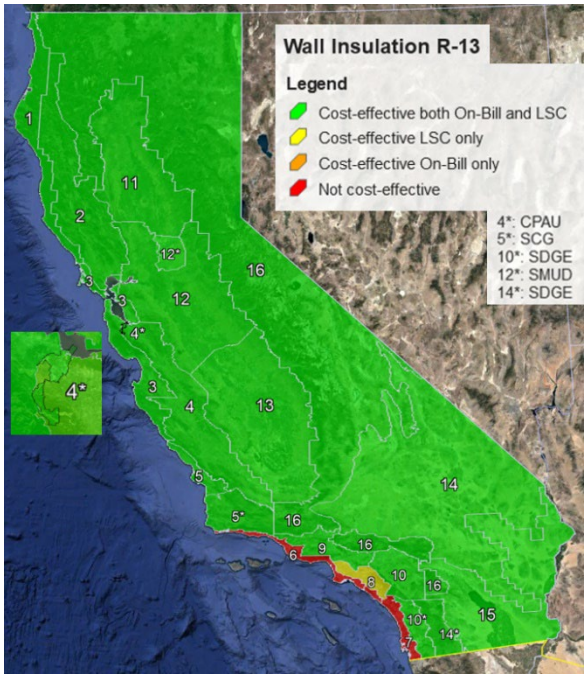


Figure 12: R-13 Wall Insulation

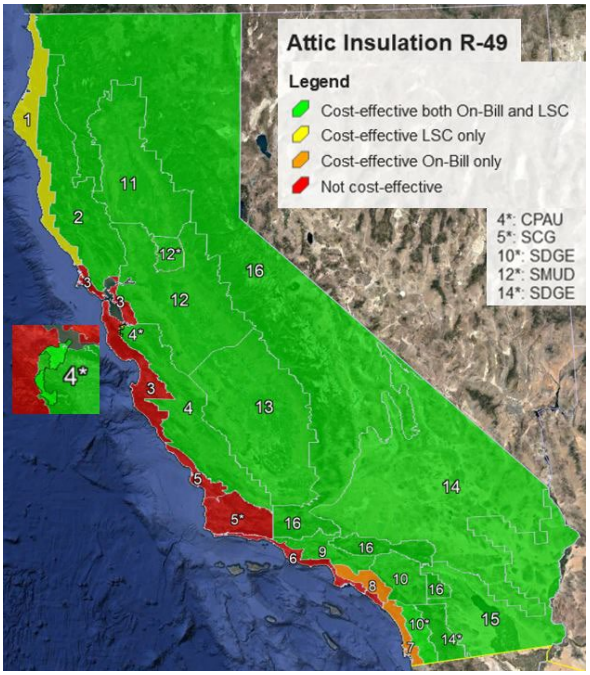


Figure 13: R-49 Attic Insulation

3.2 Climate Zone Case Studies

To better understand the details of the results, a few climate zones were selected to provide a more detailed presentation of cost-effectiveness results. Section 3.2.1 through 3.2.3 show the first-year incremental cost, first-year utility savings, and NPV for a variety of cases. Section 3.2.4 shows the sensitivity of the cost effectiveness results due to varying utility escalation rates, the impact of CARE rates, future equipment cost assumptions, and the need for electrical panel upgrades. The climate zones were selected to be representative of areas of significant reach code activity. Please refer to the Cost-Effectiveness Explorer (Statewide Reach Codes, 2023) or the source dataset for the full analysis.

3.2.1 HPSH Cost-Effectiveness

Cost-effectiveness of heat pump space heating measures for Climate Zones 12 and 16 is summarized in Table 11 and Table 12 below. In Climate Zone 12, HPSH measures are cost-effective based on LSC in all cases except the ductless MSHP cases and are cost-effective On-Bill with SMUD rates in all cases except the DFHP case with a new furnace and the ductless MSHP cases. These measures are cost-effective On-Bill with PGE for the DFHP with an existing furnace and ducted MSHP measures. Climate Zone 16 provides an example of HPSH cost-effectiveness in a cold climate where almost all HPSH measures are cost effective based on LSC but not cost-effective On-Bill.

Table 11. HPSH CZ 12 [1992-2010]

Measure	First Incremental Cost	2025 LSC NPV	PGE		SMUD	
			First-year Utility Savings	On-Bill NPV	First-year Utility Savings	On-Bill NPV
DFHP Existing Furnace	$1,960	$7,093	($19)	$1,633	$247	$7,693
DFHP New Furnace	$4,023	$3,915	($34)	($3,134)	$234	$2,979
HPSH (Std Efficiency)	$1,172	$6,990	($147)	($2,151)	$246	$6,812
HPSH (High Efficiency)	$4,149	$5,366	$13	($3,368)	$300	$3,160
Ducted MSHP	$1,421	$9,136	$10	$378	$298	$6,951
Ductless MSHP (Std Efficiency)	$13,336	($9,175)	$30	($18,039)	$276	($12,428)
Ductless MSHP (High Efficiency)	$17,266	($6,753)	$409	($15,853)	$423	($15,532)
HPSH + PV	$10,780	$5,289	$452	($59)	$885	$9,821

Table 12. HPSH CZ 16 [1992-2010]

Measure	First Incremental Cost	2025 LSC NPV	PGE	
			First-year Utility Savings	On-Bill NPV
DFHP Existing Furnace	$2,397	$7,289	($116)	($1,891)
DFHP New Furnace	$4,757	$2,457	($133)	($6,322)
HPSH (Std Efficiency)	$2,725	$11,142	($480)	($8,532)
HPSH (High Efficiency)	$5,701	$12,099	($204)	($7,125)
Ducted MSHP	$2,155	$16,554	($221)	($2,853)
Ductless MSHP (Std Efficiency)	$13,336	($134)	($170)	($19,742)
Ductless MSHP (High Efficiency)	$17,266	$9,397	$539	($10,031)
HPSH + PV	$12,333	$10,640	$316	($1,949)

3.2.2 HPWH Cost-Effectiveness

Cost-effectiveness of heat pump water heating measures for Climate Zones 12 and 16 is summarized in Table 13 and Table 14 below. This sensitivity study looks at a wider range of HPWH tank locations and whether or not the unit has ducting for supply and exhaust air. All the HPWH measures in Climate Zones 12 and 16 are cost effective based on LSC.

Table 13. HPWH CZ 12 [1992-2010]

Measure	First Incremental Cost	2025 LSC NPV	PGE		SMUD	
			First-Year Utility Savings	On-Bill NPV	First-Year Utility Savings	On-Bill NPV
240V Fed. Min. HPWH	$4,332	$3,536	($213)	($8,738)	$191	$477
240V Market Std. NEEA HPWH	$5,193	$4,304	($82)	($7,164)	$230	($56)
240V Market Std. NEEA HPWH + DR	$5,193	$5,536	($21)	($5,773)	$248	$362
120V Market Std. NEEA HPWH	$2,893	$9,730	($2)	($1,651)	$254	$4,203
240V Fed. Min. HPWH (Exterior Closet)	$4,751	$2,834	($224)	($9,431)	$186	($78)
240V Fed. Min. HPWH (Interior Closet)	$4,413	$3,123	($71)	($6,138)	$188	($235)
240V Fed. Min. HPWH (Interior Closet, ducted)	$5,492	$3,359	($202)	($9,505)	$205	($231)
240V Fed. Min. HPWH + PV	$13,940	$3,567	$577	($2,300)	$831	$3,486

Table 14. HPWH CZ 16 [1992-2010]

Measure	First Incremental Cost	2025 LSC NPV	PGE	
			First-Year Utility Savings	On-Bill NPV
240V Fed. Min. HPWH	$4,332	$4,186	($250)	($9,307)
240V Market Std. NEEA HPWH	$5,193	$4,088	($160)	($8,652)
240V Market Std. NEEA HPWH + DR	$5,193	$5,653	($79)	($6,804
120V Market Std. NEEA HPWH	$2,893	$10,646	($13)	($1,602)
240V Fed. Min. HPWH (Exterior Closet)	$4,751	$3,317	($268)	($10,154)
240V Fed. Min. HPWH (Interior Closet)	$4,413	$5,004	($18)	($4,690)
240V Fed. Min. HPWH (Interior Closet, ducted)	$5,492	$4,857	($202)	($9,174)
240V Fed. Min. HPWH + PV	$13,940	$5,049	$620	($1,043)

3.2.3 Envelope & Duct Improvement Cost-Effectiveness

Cost-effectiveness of envelope and duct measures for Climate Zones 3, 10, and 12 is summarized in Table 15 through Table 17.

Table 15. Envelope and Duct Measures CZ 3 [Pre-1978]

Measure	First Incremental Cost	2025 LSC NPV	PG&E	
			First-year Utility Savings	On-Bill NPV
R-6 Ducts	$4,808	$2,851	$188	$463
R-8 Ducts	$6,311	$1,747	$198	($776)
10% Duct Sealing	$2,590	$1,956	$104	$397
R-13 Wall Insulation	$2,950	$3,476	$144	$1,221
R-38 Attic Insulation	$6,762	($1,567)	$127	($3,178)
R-49 Attic Insulation	$7,446	($1,768)	$139	($3,520)
R-30 Raised Floor Insulation	$4,113	$9,008	$224	$2,975
Cool Roof (0.20 Ref)	$893	($2,419)	($18)	($1,811)

Table 16. Envelope and Duct Measures CZ 10 [Pre-1978]

Measure	First Incremental Cost	2025 LSC NPV	SCE/SCG		SDGE	
			First-year Utility Savings	On-Bill NPV	First-year Utility Savings	On-Bill NPV
R-6 Ducts	$4,808	$7,463	$783	$13,168	$1,100	$22,155
R-8 Ducts	$6,311	$6,326	$800	$12,076	$1,125	$21,268
10% Duct Sealing	$2,590	$3,438	$370	$5,969	$518	$10,166
R-13 Wall Insulation	$2,950	$1,795	$179	$1,476	$250	$3,494
R-38 Attic Insulation	$6,762	$664	$416	$2,951	$582	$7,654
R-49 Attic Insulation	$7,446	$796	$467	$3,435	$655	$8.756
R-30 Raised Floor Insulation	$4,113	($999)	($29)	($4,235)	($46)	($4,687)
Cool Roof (0.20 Ref)	$893	$428	$174	$2,647	$246	$4,656

Table 17. Envelope and Duct Measures CZ 12 [Pre-1978]

Measure	First Incremental Cost	2025 LSC NPV	PG&E		SMUD	
			First-year Utility Savings	On-Bill NPV	First-year Utility Savings	On-Bill NPV
R-6 Ducts	$4,808	$11,609	$804	$14,727	$413	$5,816
R-8 Ducts	$6,311	$10,722	$828	$13,849	$427	$4,711
10% Duct Sealing	$2,590	$6,418	$397	$7,280	$222	$3,281
R-13 Wall Insulation	$2,950	$5,774	$262	$4,054	$187	$2,342
R-38 Attic Insulation	$6,762	$3,727	$499	$5,461	$261	$19
R-49 Attic Insulation	$7,446	$4,092	$552	$6,063	$288	$33
R-30 Raised Floor Insulation	$4,113	$5,245	$27	($1,176)	$156	$1,175
Cool Roof (0.20 Ref)	$893	($354)	$154	$2,123	$44	($386)

3.2.4 Sensitivities

Table 18 shows the On-Bill NPV results of Climate Zone 12 with PG&E utility rates and the impacts of escalation rates, and CARE rates. The "Standard Results" in Table 18 assumes the escalation rates used in the analysis presented elsewhere in this report. Table 19 shows the impact of electrical panel upgrades. The "Standard Results" in Table 19 does not assume a panel upgrade is required.

Table 18. Sensitivity Analysis Results for On-Bill NPV Cost-Effectiveness in Climate Zone 12, PG&E

Measure	Vintage	Standard Results	2025 LSC Escalation	CARE
DFHP Existing Furnace	1992-2010	$1,063	$8,443	$1,884
DFHP New Furnace	1992-2010	($6,770)	$383	($5,846)
HPSH (Std Efficiency)	1992-2010	($2,151)	$6,011	($220)
HPSH (High Efficiency)	1992-2010	($3,368)	$4,987	($2,721)
Ducted MSHP	1992-2010	$378	$8,729	$1,057
Ductless MSHP (Std Efficiency)	1992-2010	($18,039)	($10,732)	($17,623)
Ductless MSHP (High Efficiency)	1992-2010	($15,853)	($8,091)	($18,460)
HPSH + PV	1992-2010	($59)	$8,822	($1,255)
240V Fed. Min. HPWH	1992-2010	($8,738)	($2,433)	($6,448)
240V Market Std. NEEA HPWH	1992-2010	($7,164)	($694)	($5,918)
240V Market Std. NEEA HPWH + DR	1992-2010	($5,773)	$770	(5,014)
120V Market Std. NEEA HPWH	1992-2010	($1,651)	$4,930	(1,038)
240V Fed. Min. HPWH (Exterior Closet)	1992-2010	($9,431)	($3,184)	($7,055)
240V Fed. Min. HPWH (Interior Closet)	1992-2010	($6,138)	($1,000)	($5,098)
240V Fed. Min. HPWH (Interior Closet, ducted)	1992-2010	($9,505)	($2,836)	($7,271)
240V Fed. Min. HPWH + PV	1992-2010	($2,300)	$4,952	($4,858)
R-6 Ducts	Pre-1978	$14,727	$18,685	$8,592
R-8 Ducts	Pre-1978	$13,849	$17,990	$7,532
10% Duct Sealing	Pre-1978	$7,280	$9,752	$4,294
R-13 Wall Insulation	Pre-1978	$4,054	$6,898	$2,196
R-38 Attic Insulation	Pre-1978	$5,461	$8,126	$1,668
R-49 Attic Insulation	Pre-1978	$6,063	$8,978	$1,864
R-30 Raised Floor Insulation	Pre-1978	($1,776)	$2,468	($1,602)
Cool Roof (0.20 Ref)	Pre-1978	$2,123	$1,848	$851

Table 19. Electric Panel Upgrade Sensitivity for CZ 12 [1992-2010]

Measure	Standard Results		Electric Panel Upgrade	
	On-Bill NPV	LSC NPV	On-Bill NPV	LSC NPV
HPSH (Std Efficiency)	($2,151)	$6,990	($4,931)	$4,210
240V Fed. Min. HPWH	($8,738)	$3,536	($11,624)	$756

3.3 Gas Pathways for Heat Pump Replacements

Many jurisdictions are exploring policy options to accelerate the decarbonization of existing homes. A recent Ninth Circuit Court ruling in *California Rest. Ass'n v. City of Berkeley*[20] invalidated Berkeley's ordinance banning the installation of gas infrastructure in new construction. The ruling stated that the ordinance effectively banned covered products and was preempted by the Energy Policy and Conservation Act ("EPCA"), 42 U.S.C. § 6297(c). Given the possible impacts of that ruling, the Reach Codes Team analyzed policy options targeting equipment replacements that allow for the installation of either electric or gas-fueled equipment. These packages include gas equipment combined with additional efficiency measures resulting in options that are reasonably energy or LSC cost equivalent, to the extent feasible.

For space heating, the heat pump path is a DFHP (existing furnace).. The gas pathway is a new air conditioner with the following list of efficiency upgrades:

- 400 cfm/ton system airflow (HERS verified).
- 0.35 W/cfm fan efficacy (HERS verified).
- Refrigerant charge verification (HERS verified).
- R-8 ducts, 5% leakage (HERS verified).
- R-49 (from R-30) attic insulation.
- Air sealing of the ceiling from 7 to 6.5 ACH50.

The two pathways are presented in Figure 14 comparing total LSC energy use relative to the existing home for the 1992-2010 vintage. In most climate zones, the DFHP (existing furnace) path results in higher energy savings, in the milder climates the air conditioner path saves marginally more energy. A reach code that establishes requirements when an air conditioner is replaced or installed new, could allow for either a heat pump to be installed or an air conditioner as long as the performance measures listed above are met. Note that in this analysis a DFHP (existing furnace) was used; however, a reach code could require a different heat pump measure for the heat pump path. This approach aligns with the CEC's proposal for the 2025 Title 24 code cycle for heat pump alterations in single family homes (California Energy Commission, 2023).

[20] *California Rest. Ass'n v. City of Berkeley*, 65 F.4th 1045 (9th Cir. 2023) amended by 89 F.4th 1094 (9th Cir. 2024).

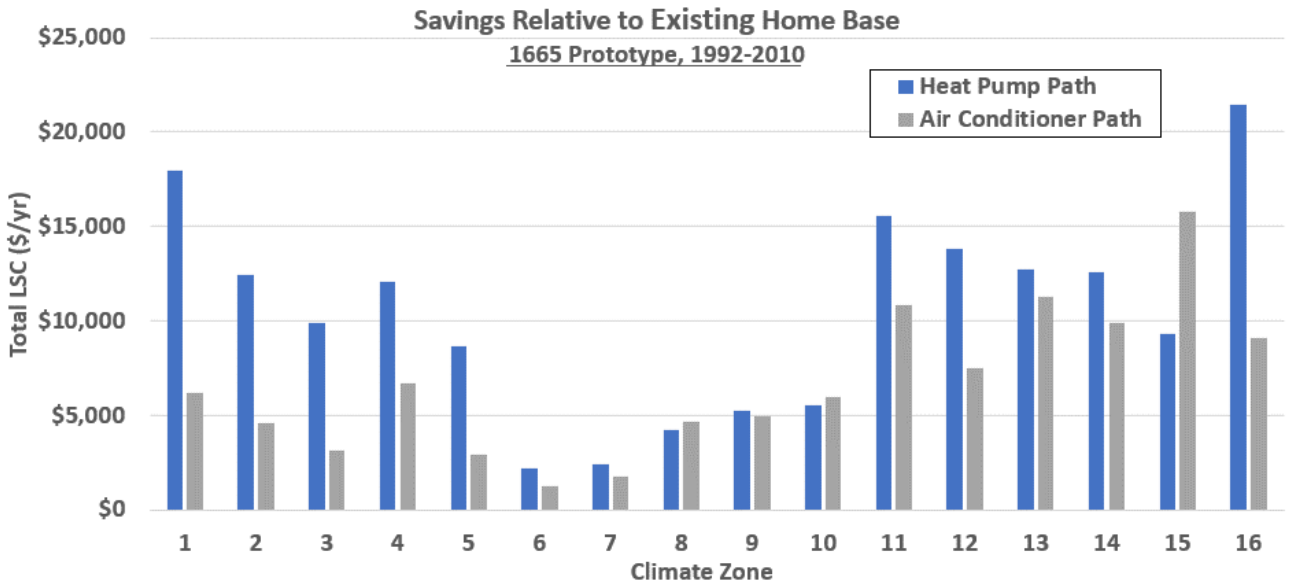


Figure 14. Heat pump space heater path compared to the air conditioner path.

For water heating, the federal minimum HPWH case was used to develop the package. The HPWH was compared to a new gas storage water heater with a 50% solar thermal backup system.

The two pathways are presented in Figure 15 comparing total LSC energy use relative to the existing home for the 1992-2010 vintage. In all climate zones, the heat pump path results in higher energy savings than the gas path. A reach code that establishes requirements when a water heater is replaced could allow for either a HPWH to be installed or a gas water heater in combination with a solar thermal system that meets the solar fraction requirements listed above.

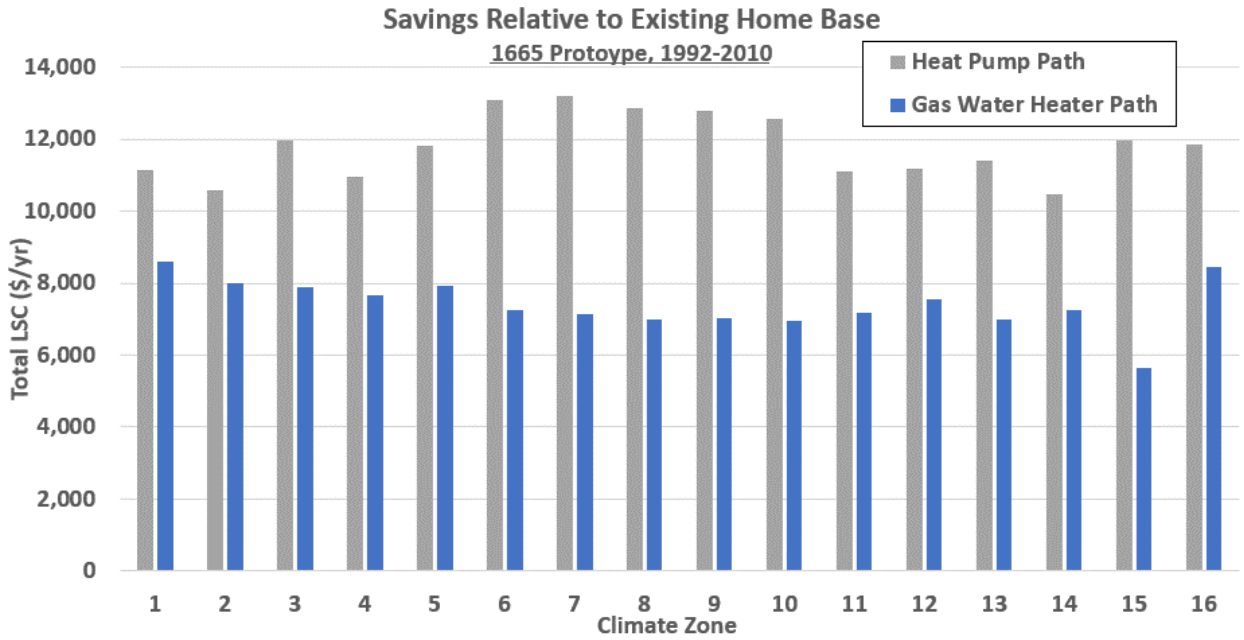


Figure 15. Heat pump water path compared to gas with solar thermal.

4 Recommendations and Discussion

This analysis evaluated the feasibility and cost-effectiveness of retrofit measures in California existing homes built before 2010. The Statewide Reach Codes Team used both On-Bill and LSC-based LCC approaches to evaluate cost-effectiveness and quantify the energy cost savings associated with energy efficiency measures compared to the incremental costs associated with the measures.

Conclusions and Discussion:

1. Envelope measures. Improving envelope performance is very cost-effective in many older homes. In addition to reducing utility costs these measures provide many other benefits such as improving occupant comfort and satisfaction and increasing a home's ability to maintain temperatures during extreme weather events and power outages. Below is a discussion of the results of specific measures.
    a. Adding attic insulation is cost effective based on both LSC and On-Bill in many climate zones in homes with no more than R-19 existing attic insulation levels. Increasing attic insulation from R-30 to R-49 was still found to be cost-effective based on at least one metric in the colder and hotter climates of Climate Zone 10 (SDG&E territory only) through 16.
    b. Insulating existing uninsulated walls is very cost-effective based on both metrics everywhere except Climate Zones 6 and 7 (in Climate Zone 8 it's only cost-effective based on LSC).
    c. Adding R-19 or R-30 floor insulation is cost-effective based on LSC in the older two vintages (Pre-1978 and 1978-1991) in all climate zones except Climate Zones 6-10.
    d. Replacing old single pane windows with new high-performance windows has a very high cost and is typically not done for energy savings alone. However, energy savings are substantial and justify cost-effectiveness of this measure based on at least one metric in Climate Zones 4, 8 through 12 (PG&E territory only), and 13 through 16.
    e. At time of roof replacement, a cool roof with an aged solar reflectance of 0.25 was found to be cost-effective in Climate Zones 4, 6 through 12 (PG&E territory only), and 13 through 15. When the roof deck is replaced during a roof replacement, adding a radiant barrier is low cost and provides substantial cooling energy savings to be cost-effective in almost all climate zones and homes.
2. Duct measures: Many older homes have old, leaky duct systems that should be replaced when they reach the end of life, typically 20-30 years. In this case, installing new ducts was found to be cost-effective based on at least one metric (both in most cases) everywhere except mild Climate Zone 7 and Climate Zones 5 and 6 in the 1978-1991 vintage. If duct systems still have remaining life they should be sealed and tested to meet 10% leakage or lower; however, duct upgrades alone were only found to be cost-effective for newer homes in Climate Zones 10 (SDG&E territory only), 11, and 13 through 16. Duct upgrades may be able to be coupled with other measures to reduce the cost.
3. Heat pump space heating: HPSHs were found to be LSC cost-effective in many cases. The DFHP (existing furnace) was LSC cost-effective everywhere except Climate Zone 15. The HPSH was LSC cost-effective everywhere except Climate Zones 8 and 15.
    a. Challenges to On-Bill cost-effectiveness include higher first costs and higher first-year utility costs due to higher electricity tariffs relative to gas tariffs. SMUD and CPAU are two exceptions where first year utility costs are lower for heat pumps than for gas equipment. Table 11 shows the impact of utility rates on cost-effectiveness of HPSH where the standard and high efficiency HPSH and the HPSH + PV measures are cost-effective under SMUD but not PG&E. Even with higher first year utility bills, there were some cases that still proved On-Bill cost-effective including the DFHP with an existing furnace in the central valley and northern coastal PG&E territories, the ducted MSHP in the central valley as well as Climate Zone 14 in SDG&E territory, and the HPSH + PV measure in CZ 3-5 (PGE), 7-11, and 12 (SMUD) – 15.
    b. The ductless MSHPs, evaluated for homes with existing ductless systems, were only found to be cost-effective based on either metric in Climate Zones 1 and 16. Ductless MSHPs have a high incremental cost because it is a more sophisticated system than the base model of a wall furnace with a window AC unit. However, the ductless MSHP would provide greater comfort benefits if properly installed to

directly condition all habitable spaces (as is required under the VCHP compliance credit as evaluated in this study) which may be an incentive for a homeowner to upgrade their system.

c. Higher efficiency equipment lowered utility costs in all cases and improved cost-effectiveness in many cases, particularly with a ducted MSHP.

4. Heat pump water heating: All the HPWH measures were LSC cost-effective in all climate zones. Most measures were not On-Bill cost-effective with the exception of the HPWH + PV which was cost-effective On-Bill in CPAU, SMUD, and SDG&E territories in addition to Climate Zones 11, 13, 14, and 15. The HPWH measures share many of the same challenges as the HPSH measures to achieving cost-effectiveness including high first costs and utility rates and assumptions. Table 13 shows the impact of utility rates on cost-effectiveness where some HPWH measures are cost-effective under SMUD utility rates but are not cost-effective anywhere under PG&E rates in Climate Zone 12.
    a. Various HPWH locations were also explored, however there are some factors outside of cost-effectiveness that should also be considered.
        i. HPWHs in the conditioned space can provide benefits such as free cooling during the summer, reduced tank losses, and shorter pipe lengths, and in some cases show improved cost-effectiveness over garage located HPWHs. However, there are various design considerations such as noise, comfort concerns, and condensate removal. Ducting the inlet and exhaust air resolves comfort concerns but adds costs and complexity. Split heat pump water heaters address these concerns, but currently there are limited products on the market and there is a cost premium relative to the packaged products.
        ii. Since HPWHs extract heat from the air and transfer it to water in the storage tank, they must have adequate ventilation to operate properly. Otherwise, the space cools down over time, impacting the HPWH operating efficiency. This is not a problem with garage installations but needs to be considered for water heaters located in interior or exterior closets. For the 2025 Title 24 code the CEC is proposing that all HPWH installations meet mandatory ventilation requirements (California Energy Commission, 2023).
5. The contractor surveys revealed overall higher heat pump costs than what has been found in previous analyses. This could be due to incentive availability raising demand for heat pumps and thereby increasing the price. This price increase may be temporary and may come down once the market stabilizes. There are also new initiatives to obtain current costs including the TECH Clean California program[21] that publishes heat pump data and costs; however, at the time of this analysis, the TECH data did not contain incremental costs because it only had the heat pump costs but not the gas base case costs.
6. Table 18 shows how CARE rates and escalation rate assumptions will impact cost-effectiveness.
    a. Applying CARE rates in the IOU territories has the overall impact to increase utility cost savings for an all-electric building compared to a code compliant mixed fuel building, improving On-Bill cost-effectiveness. This is due to the CARE discount on electricity being higher than that on gas. The reverse occurs with efficiency measures where lower utility rates reduce savings and subsequently reduce cost-effectiveness.
    b. If gas tariffs are assumed to increase substantially over time, in-line with the escalation assumption from the 2025 LSC development, cost-effectiveness substantially improves for the heat pump measures over the 30-year analysis period and many cases become cost-effective that were not found to be cost-effective under the CPUC / 2022 TDV escalation scenario. There is much uncertainty surrounding future tariff structures as well as escalation values. While it's clear that gas rates will increase, how much and how quickly is not known. Future electricity tariff structures are expected to evolve over time, and the CPUC has an active proceeding to adopt an income-graduated fixed charge that benefits low-income customers and supports electrification measures for all customers.[22] The CPUC will decide in mid-2024 and the new rates are expected to be in place later that year or in 2025.

[21] TECH Public Reporting Home Page (techcleanca.com)
[22] https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/demand-flexibility-rulemaking

While the anticipated impact of this rate change is lower volumetric electricity rates, the rate design is not finalized. While lower volumetric electricity rates provide many benefits, it also will make building efficiency measures harder to justify as cost-effective due to lower utility bill cost savings.

7. Under NBT, utility cost savings for PV are substantially less than what they were under prior net energy metering rules (NEM 2.0); however, savings are sufficient to be On-Bill cost-effective in all climate zones except Climate Zones 1 through 3 and 5 through 6.
    a. Combining a heat pump with PV allows the additional electricity required by the heat pump to be offset by the PV system while also increasing on-site utilization of PV generation rather than exporting the electricity back to the grid at a low rate.
    b. While not evaluated in this study, coupling PV with battery systems can be very advantageous under NBT increasing utility cost savings because of improved on-site utilization of PV generation and fewer exports to the grid.

Recommendations:

1. There are various approaches for jurisdictions who are interested in reach codes for existing buildings. Some potential approaches are listed below along with key considerations.
    a. Prescriptive measures: Non-preempted measures that are found to be cost-effective may be prescriptively required in a reach code. One example of this type or ordinance is a cool roof requirement at time of roof replacement. Another example is requiring specific cost-effective measures for larger remodels, such as high-performance windows when new windows are installed or duct sealing and testing where ducts are in unconditioned space.
    b. Replacement equipment: This flavor of reach code sets certain requirements at time of equipment replacement. This study evaluated space heating and water heating equipment. Where a heat pump measure was found to be cost-effective based on either LSC or On-Bill, this may serve as the basis of a reach code given the following considerations.
        i. Where reach codes reduce energy usage and are not just fuel switching, cost-effectiveness calculations are required and must be based on equipment that does not exceed the federal minimum efficiency requirements.
        ii. Where reach codes are established using cost-effectiveness based on LSC, utility bill impacts and the owner's first cost should also be reviewed and considered.
        iii. A gas path should also be prescriptively allowed to safely satisfy federal preemption requirements considering the CRA v. Berkeley case.[23] Additional requirements may apply to the gas path, as described in Section 3.3, as long as the paths are reasonably energy or cost equivalent.
    c. "Flexible Path", minimum energy savings target: This flexible approach establishes a target for required energy savings based on a measure or a set of measures that were found to be cost-effective based on either LSC or On-Bill. A points menu compares various potential upgrades ranging from efficiency, PV, and fuel substitution measures, based on site or source energy savings. The applicant must select upgrades that individually or in combination meet the minimum energy savings target. The measures used to set the target should be non-preempted measures.
2. Equipment replacement ordinances should consider appropriate exceptions for scenarios where it will be challenging to meet the requirements, such as location of the HPWH, total project cost limitations, or the need for service panel upgrades that wouldn't have been required as part of the proposed scope of work in absence of the reach code.
3. Consider extending relevant proposals made by the CEC for the 2025 Title 24 code (California Energy Commission, 2023) in ordinances that apply under the 2022 Title 24 code, such as the following:
    a. Mandatory ventilation requirements for HPWH installations (Section 110.3(c)7).

[23] https://www.publichealthlawcenter.org/sites/default/files/2024-01/CRA-v-Berkeley-Ninth-Circuit-Opinion-Jan2024.pdf

   b. Requirement for HERS verified refrigerant charge verification for heat pumps in all climate zones (Table 150.1-A[24]).
4. When evaluating reach code strategies, the Reach Codes Team recommends that jurisdictions consider combined benefits of energy efficiency alongside electrification. Efficiency and electrification have symbiotic benefits and are both critical for decarbonization of buildings. As demand on the electric grid is increased through electrification, efficiency can reduce the negative impacts of additional electricity demand on the grid, reducing the need for increased generation and storage capacity, as well as the need to upgrade upstream transmission and distribution equipment.
5. Education and training can play a critical role in ensuring that heat pumps are installed, commissioned, and controlled properly to mitigate grid impacts and maximize occupant satisfaction. Below are select recommended strategies.
   a. The Quality Residential HVAC Services Program[25] is an incentive program to train California contractors in providing quality installation and maintenance while advancing energy-efficient technologies in the residential HVAC industry. Jurisdictions can market this to local contractors to increase the penetration of contractors skilled in heat pump design and installation.
   b. Educate residents and contractors of available incentives, tax credits, and financing opportunities.
   c. Educate contractors on code requirements. Energy Code Ace provides free tools, trainings, and resource to help Californians comply with the energy code. Contractors can access interactive compliance forms, fact sheets, and live and recorded trainings, among other things, on the website: https://energycodeace.com/. Jurisdictions can reach out to Energy Code Ace directly to discuss offerings.
6. Health and safety
   a. Combustion Appliance Safety and Indoor Air Quality: Implementation of some of the recommended measures will affect the pressure balance of the home which can subsequently impact the safe operation of existing combustion appliances as well as indoor air quality. Buildings with older gas appliances can present serious health and safety problems which may not be addressed in a remodel if the appliances are not being replaced. It is recommended that the building department require inspection and testing of all combustion appliances located within the pressure boundary of the building after completion of retrofit work that involves air sealing or insulation measures.
   b. Jurisdictions may consider requiring mechanical ventilation in homes where air sealing has been conducted. In older buildings, outdoor air is typically introduced through leaks in the building envelope. After air sealing a building, it may be necessary to forcefully bring in fresh outdoor air using supply and/or exhaust fans to minimize potential issues associated with indoor air quality.

[24] This requirement does not show up in the Express Terms for alterations in Section 150.2(b)1F, but the Statewide Reach Codes Team expects that it will be added to the next release of the proposed code language in the 45-day language as it aligns with the proposal made by the Codes and Standards Enhancement Team (Statewide CASE Team, 2023).
[25] https://qualityhvac.frontierenergy.com/

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6 Appendices

6.1 Map of California Climate Zones

Climate zone geographical boundaries are depicted in Figure 16. The map in Figure 16 along with a zip-code search directory is available at: https://ww2.energy.ca.gov/maps/renewable/building_climate_zones.html

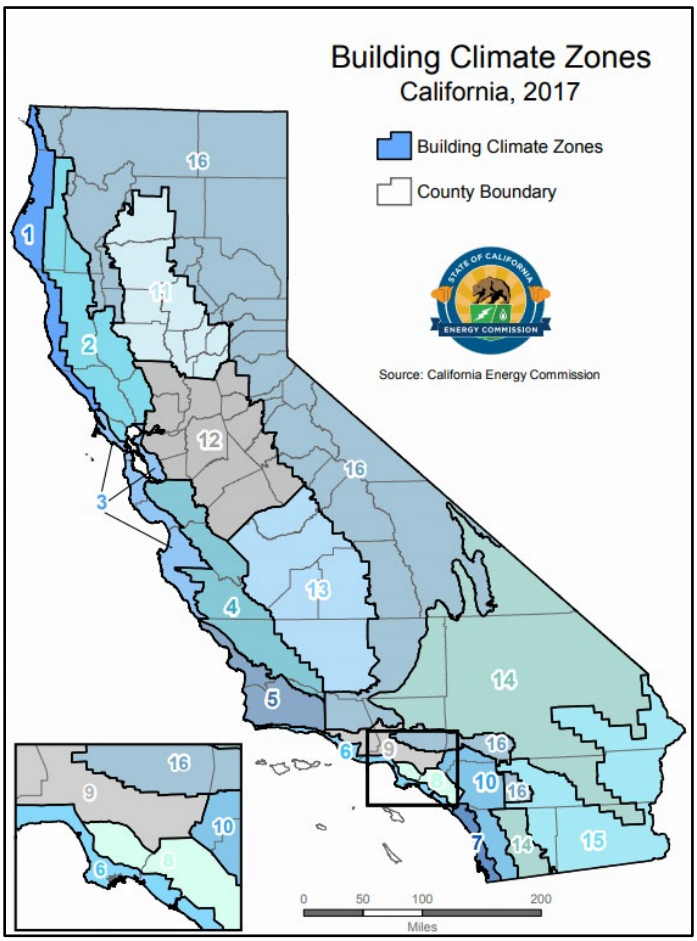


Figure 16. Map of California climate zones.

6.2 Utility Rate Schedules

The Reach Codes Team used the CA IOU and POU rate tariffs detailed below to determine the On-Bill savings for each package. The California Climate Credit was applied for both electricity and natural gas service for the IOUs using the 2023 credits shows below.[26] The credits were applied to reduce the total calculated annual bill, including any fixed fees or minimum bill amounts.

2023 Electric California Climate Credit Schedule

	February or March	April	May	June	July	Aug	Sept	Oct
PG&E	$38.39							$38.39
SCE	$71.00							$71.00
SDG&E	$60.70							$60.70

Residential Natural Gas California Climate Credit

In 2023, the 2023 Natural Gas California Climate Credit will be distributed in February or March instead of April.

	2018‡	2019	2020	2021	2022	2023	Total Value Received Per Household 2018-2023
PG&E	$30	$25	$27	$25	$48	$52.78	**$208**
SDG&E	*	$34	$21	$18	$43	$43.40	**$162**
Southwest Gas	$22	$25	$27	$28	$49	$56.35	**$207**
SoCalGas	*	$50	$26	$22	$44	$50.77	**$194**

Electricity rates reflect the most recently approved tariffs. Monthly gas rates were estimated based on recent gas rates (November 2023) and a curve to reflect how natural gas prices fluctuate with seasonal supply and demand. The seasonal curve was estimated from monthly residential tariffs between 2014 and 2023 (between 2017 and 2023 for CPAU). 12-month curves were created from monthly gas rates for each of the ten years (Seven years for CPAU). These annual curves were then averaged to arrive at an average normalized annual curve. This was conducted separately for baseline and excess energy rates. Costs used in this analysis were then derived by establishing the most recent baseline and excess rate from the latest tariff as a reference point (November 2023), and then using the normalized curve to estimate the cost for the remaining months relative to the reference point rate.

[26] https://www.cpuc.ca.gov/industries-and-topics/natural-gas/greenhouse-gas-cap-and-trade-program/california-climate-credit

6.2.1 Pacific Gas & Electric

The following pages provide details on the PG&E electricity and natural gas tariffs applied in this study. Table 20 describes the baseline territories that were assumed for each climate zone. A net surplus compensation rate of $0.07051/ kWh was applied to any net annual electricity generation based on a one-year average of the rates between December 2022 and November 2023.

Table 20. PG&E Baseline Territory by Climate Zone

Climate Zone	Baseline Territory
CZ01	V
CZ02	X
CZ03	T
CZ04	X
CZ05	T
CZ11	R
CZ12	S
CZ13	R
CZ16	Y

The PG&E monthly gas rate in $/therm was applied on a monthly basis according to the rates shown in Table 21. These rates are based on applying a normalization curve to the November 2023 tariff based on ten years of historical gas data. Corresponding CARE rates reflect the 20 percent discount per the GL-1 tariff.

Table 21. PG&E Monthly Gas Rate ($/therm)

Month	Total Charge	
	Baseline	Excess
January	$2.05	$2.43
February	$2.08	$2.46
March	$1.92	$2.31
April	$1.80	$2.20
May	$1.77	$2.18
June	$1.78	$2.18
July	$1.80	$2.20
August	$1.85	$2.26
September	$1.92	$2.33
October	$1.99	$2.40
November	$2.06	$2.46
December	$2.05	$2.44

Residential
GAS
Baseline Territories and Quantities [1/]

Effective April 1, 2022 - Present

BASELINE QUANTITIES (Therms **Per Day** Per Dwelling Unit)

Individually Metered			
Baseline Territories	**Summer (April-October) Effective Apr. 1, 2022**	**Winter Off-Peak (Nov, Feb, Mar) Effective Nov. 1, 2022**	**Winter On-Peak (Dec, Jan) Effective Dec. 1, 2022**
P	0.39	1.88	2.19
Q	0.56	1.48	2.00
R	0.36	1.24	1.81
S	0.39	1.38	1.94
T	0.56	1.31	1.68
V	0.59	1.51	1.71
W	0.39	1.14	1.68
X	0.49	1.48	2.00
Y	0.72	2.22	2.58

Master Metered			
Baseline Territories	**Summer (April-October) Effective Apr. 1, 2022**	**Winter Off-Peak (Nov, Feb, Mar) Effective Nov. 1, 2022**	**Winter On-Peak (Dec, Jan) Effective Dec. 1, 2022**
P	0.29	1.01	1.13
Q	0.56	0.67	0.77
R	0.33	0.87	1.16
S	0.29	0.61	0.65
T	0.56	1.01	1.10
V	0.59	1.28	1.32
W	0.26	0.71	0.87
X	0.33	0.67	0.77
Y	0.52	1.01	1.13

Summer Season: Apr-Oct
Winter Off-Peak: Nov, Feb, Mar
Winter On-Peak: Dec, Jan

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Pacific Gas and Electric Company
U 39 Oakland, California

Revised Cal. P.U.C. Sheet No. 56550-E
Cancelling Revised Cal. P.U.C. Sheet No. 56229-E

ELECTRIC SCHEDULE E-TOU-C Sheet 2
RESIDENTIAL TIME-OF-USE (PEAK PRICING 4 - 9 p.m. EVERY DAY)

RATES: (Cont'd.)

E-TOU-C TOTAL BUNDLED RATES

Total Energy Rates ($ per kWh)	PEAK		OFF-PEAK	
Summer				
Total Usage	$0.53933	(I)	$0.45589	(I)
Baseline Credit (Applied to Baseline Usage Only)	($0.08851)	(R)	($0.08851)	(R)
Winter				
Total Usage	$0.43662	(I)	$0.40827	(I)
Baseline Credit (Applied to Baseline Usage Only)	($0.08851)	(R)	($0.08851)	(R)
Delivery Minimum Bill Amount ($ per meter per day)	$0.37612			
California Climate Credit (per household, per semi-annual payment occurring in the March* and October bill cycles)	($38.39)			

Total bundled service charges shown on customer's bills are unbundled according to the component rates shown below. Where the delivery minimum bill amount applies, the customer's bill will equal the sum of (1) the delivery minimum bill amount plus (2) for bundled service, the generation rate times the number of kWh used. For revenue accounting purposes, the revenues from the delivery minimum bill amount will be assigned to the Transmission, Transmission Rate Adjustments, Reliability Services, Public Purpose Programs, Nuclear Decommissioning, Competition Transition Charges, Energy Cost Recovery Amount, Wildfire Fund Charge, and New System Generation Charges based on kWh usage times the corresponding unbundled rate component per kWh, with any residual revenue assigned to Distribution.

* Pursuant to D.23-02-014, disbursement of the April 2023 residential Climate Credit shall begin by March 1, 2023.

(Continued)

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ELECTRIC SCHEDULE E-TOU-C Sheet 3
RESIDENTIAL TIME-OF-USE (PEAK PRICING 4 - 9 p.m. EVERY DAY)

RATES: (Cont'd.)

UNBUNDLING OF E-TOU-C TOTAL RATES

Energy Rates by Component ($ per kWh)	PEAK		OFF-PEAK	
Generation:				
Summer (all usage)	$0.19776		$0.13432	
Winter (all usage)	$0.14916		$0.12413	
Distribution:**				
Summer (all usage)	$0.17029	(I)	$0.15029	(I)
Winter (all usage)	$0.11618	(I)	$0.11286	(I)

Conservation Incentive Adjustment (Baseline Usage)	($0.02216)	(I)
Conservation Incentive Adjustment (Over Baseline Usage)	$0.06635	(I)
Transmission* (all usage)	$0.05254	
Transmission Rate Adjustments* (all usage)	$0.00059	
Reliability Services* (all usage)	$0.00069	
Public Purpose Programs (all usage)	$0.02578	
Nuclear Decommissioning (all usage)	$0.00135	
Competition Transition Charges (all usage)	$0.00030	
Energy Cost Recovery Amount (all usage)	($0.00071)	
Wildfire Fund Charge (all usage)	$0.00530	
New System Generation Charge (all usage)**	$0.00346	
Wildfire Hardening Charge (all usage)	$0.00254	
Recovery Bond Charge (all usage)	$0.00528	(R)
Recovery Bond Credit (all usage)	($0.00528)	(I)
Bundled Power Charge Indifference Adjustment (all usage)***	$0.01309	

* Transmission, Transmission Rate Adjustments and Reliability Service charges are combined for presentation on customer bills.
** Distribution and New System Generation Charges are combined for presentation on customer bills.
*** Direct Access, Community Choice Aggregation and Transitional Bundled Service Customers pay the applicable Vintaged Power Charge Indifference Adjustment. Generation and Bundled PCIA are combined for presentation on bundled customer bills.

(Continued)

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ELECTRIC SCHEDULE E-ELEC Sheet 2
RESIDENTIAL TIME-OF-USE (ELECTRIC HOME)
SERVICE FOR CUSTOMERS WITH QUALIFYING ELECTRIC TECHNOLOGIES

RATES:(Cont'd.)

TOTAL BUNDLED RATES

Base Services Charge ($ per meter per day)	$0.49281

Total Energy Rates ($ per kWh)	PEAK		PART-PEAK		OFF-PEAK	
Summer Usage	$0.56589	(I)	$0.40401	(I)	$0.34733	(I)
Winter Usage	$0.33438	(I)	$0.31229	(I)	$0.29843	(I)

California Climate Credit (per household, per semi-annual payment occurring in the March† and October bill cycles)	($38.39)

Total bundled service charges shown on a customer's bills are unbundled according to the component rates shown below.

UNBUNDLING OF TOTAL RATES

Energy Rates by Component ($ per kWh)	PEAK		PART-PEAK		OFF-PEAK	
Generation:						
Summer Usage	$0.28164		$0.18253		$0.13743	
Winter Usage	$0.11951		$0.09954		$0.08619	
Distribution:**						
Summer Usage	$0.17932	(I)	$0.11655	(I)	$0.10497	(I)
Winter Usage	$0.10994	(I)	$0.10782	(I)	$0.10731	(I)
Transmission* (all usage)	$0.05254		$0.05254		$0.05254	
Transmission Rate Adjustments* (all usage)	$0.00059		$0.00059		$0.00059	
Reliability Services* (all usage)	$0.00069		$0.00069		$0.00069	
Public Purpose Programs (all usage)	$0.02578		$0.02578		$0.02578	
Nuclear Decommissioning (all usage)	$0.00135		$0.00135		$0.00135	
Competition Transition Charges (all usage)	$0.00030		$0.00030		$0.00030	
Energy Cost Recovery Amount (all usage)	($0.00071)		($0.00071)		($0.00071)	
Wildfire Fund Charge (all usage)	$0.00530		$0.00530		$0.00530	
New System Generation Charge (all usage)**	$0.00346		$0.00346		$0.00346	
Wildfire Hardening Charge (all usage)	$0.00254		$0.00254		$0.00254	
Recovery Bond Charge (all usage)	$0.00528	(R)	$0.00528	(R)	$0.00528	(R)
Recovery Bond Credit (all usage)	($0.00528)	(I)	($0.00528)	(I)	($0.00528)	(I)
Bundled Power Charge Indifference Adjustment (all usage)***	$0.01309		$0.01309		$0.01309	

* Transmission, Transmission Rate Adjustments and Reliability Service charges are combined for presentation on customer bills.
** Distribution and New System Generation Charges are combined for presentation on customer bills.
*** Direct Access, Community Choice Aggregation and Transitional Bundled Service Customers pay the applicable Vintaged Power Charge Indifference Adjustment. Generation and Bundled PCIA are combined for presentation on bundled customer bills.
† Pursuant to D.23-02-014, disbursement of the April 2023 residential Climate Credit shall begin by March 1, 2023.

(Continued)

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ELECTRIC SCHEDULE E-ELEC Sheet 3 (N)
RESIDENTIAL TIME-OF-USE (ELECTRIC HOME) (N)
SERVICE FOR CUSTOMERS WITH QUALIFYING ELECTRIC TECHNOLOGIES

SPECIAL CONDITIONS:

1. TIME PERIODS: Times of the year and times of the day are defined as follows: (N)

   All Year:

   Peak: 4:00 p.m. to 9:00 p.m. every day including weekends and holidays.

   Partial-Peak: 3:00 p.m. to 4:00 p.m. and 9:00 p.m. to 12:00 a.m. every day including weekends and holidays.

   Off-Peak: All other hours.

2. SEASONAL CHANGES: The summer season is June 1 through September 30 and the winter season is October 1 through May 31. When billing includes use in both the summer and winter periods, charges will be prorated based upon the number of days in each period.

3. ADDITIONAL METERS: If a residential dwelling unit is served by more than one electric meter, the customer must designate which meter is the primary meter and which is (are) the additional meter(s).

4. BILLING: A customer's bill is calculated based on the option applicable to the customer.

   Bundled Service Customers receive generation and delivery services solely from PG&E. The customer's bill is based on the Unbundling of Total Rates set forth above.

   Transitional Bundled Service (TBS) Customers take TBS as prescribed in Rules 22.1 and 23.1, or take PG&E bundled service prior to the end of the six (6) month advance notice period required to elect PG&E bundled service as prescribed in Rules 22.1 and 23.1. TBS customers shall pay all charges shown in the Unbundling of Total Rates except for the Bundled Power Charge Indifference Adjustment and the generation charge. TBS customers shall also pay for their applicable Vintaged Power Charge Indifference Adjustment provided in the table below, and the short-term commodity prices as set forth in Schedule TBCC. (N)

(Continued)

Advice	6768-E	*Issued by*	*Submitted*	November 18, 2022
Decision	D.21-11-016	***Meredith Allen***	*Effective*	December 1, 2022
		Vice President, Regulatory Affairs	*Resolution*	

Pacific Gas and Electric Company
U 39 San Francisco, California

Revised Cal. P.U.C. Sheet No. 54734-E
Cancelling Revised Cal. P.U.C. Sheet No. 53424-E

ELECTRIC SCHEDULE D-CARE Sheet 1
LINE-ITEM DISCOUNT FOR CALIFORNIA ALTERNATE RATES FOR ENERGY (CARE) CUSTOMERS

APPLICABILITY: This schedule is applicable to single-phase and polyphase residential service in single-family dwellings and in flats and apartments separately metered by PG&E and domestic submetered tenants residing in multifamily accommodations, mobilehome parks and to qualifying recreational vehicle parks and marinas and to farm service on the premises operated by the person whose residence is supplied through the same meter, where the applicant qualifies for California Alternate Rates for Energy (CARE) under the eligibility and certification criteria set forth in Electric Rule 19.1. CARE service is available on Schedules E-1, E-6, E-TOU-B, E-TOU-C, E-TOU-D, EV2, E-ELEC, EM, ES, ESR, ET and EM-TOU. (T)

TERRITORY: This rate schedule applies everywhere PG&E provides electric service.

RATES: Customers taking service on this rate schedule whose otherwise applicable rate schedule has no Delivery Minimum Bill Amount (Schedule E-ELEC) will receive a CARE percentage discount of 35.000% on their total bundled charges (except for the California Climate Credit, which will not be discounted). Customers taking service on this rate schedule whose otherwise applicable rate schedule has a Delivery Minimum Bill Amount (all other schedules) will receive a CARE percentage discount ("A" or "C" below) on their total bundled charges on their otherwise applicable rate schedule (except for the California Climate Credit, which will not be discounted) and also will receive a percentage discount ("B" or "D" below) on the delivery minimum bill amount, if applicable. The CARE discount will be calculated for direct access and community choice aggregation customers based on the total charges as if they were subject to bundled service rates. Discounts will be applied as a residual reduction to distribution charges, after D-CARE customers are exempted from the Wildfire Fund Charge, Recovery Bond Charge, Recovery Bond Credit, and the CARE surcharge portion of the public purpose program charge used to fund the CARE discount. These conditions also apply to master-metered customers and to qualified sub-metered tenants where the master-meter customer is jointly served under PG&E's Rate Schedule D-CARE and either Schedule EM, ES, ESR, ET, or EM-TOU. (N) | | (N) (T) | (T) (T)

For master-metered customers where one or more of the submetered tenants qualifies for CARE rates under the eligibility and certification criteria set forth in Rule 19.1, 19.2, or 19.3, the CARE discount is equal to a percentage ("C" below) of the total bundled charges, multiplied by the number of CARE units divided by the total number of units. In addition, master-metered customers eligible for D-CARE will receive a percentage discount ("D" below) on the delivery minimum bill amount, if applicable.

It is the responsibility of the master-metered customer to advise PG&E within 15 days following any change in the number of dwelling units and/or any decrease in the number of qualifying CARE applicants that results when such applicants move out of their submetered or non-submetered dwelling unit, or submetered permanent-residence RV or permanent-residence boat. (L) | (L)

(Continued)

Pacific Gas and Electric Company
U 39 San Francisco, California

Revised Cal. P.U.C. Sheet No. 56208-E
Cancelling Revised Cal. P.U.C. Sheet No. 56020-E

ELECTRIC SCHEDULE D-CARE Sheet 2
LINE-ITEM DISCOUNT FOR CALIFORNIA ALTERNATE RATES FOR ENERGY (CARE) CUSTOMERS

RATES: (Cont'd)

A.	D-CARE Discount:	34.965	% (Percent)	(I)
B.	Delivery Minimum Bill Discount:	50.000	% (Percent)	
C.	Master-Meter D-CARE Discount:	34.965	% (Percent)	(I)
D.	Master-Meter Delivery Minimum Bill Discount:	50.000	% (Percent)	

SPECIAL CONDITIONS:

1. OTHERWISE APPLICABLE SCHEDULE: The Special Conditions of the Customer's otherwise applicable rate schedule will apply to this schedule.

2. ELIGIBILITY: To be eligible to receive D-CARE the applicant must qualify under the criteria set forth in PG&E's Electric Rules 19.1, 19.2, and 19.3 and meet the certification requirements thereof to the satisfaction of PG&E. Qualifying Direct Access, Community Choice Aggregation Service, and Transitional Bundled Service customers are also eligible to take service on Schedule D-CARE. Applicants may qualify for D-CARE at their primary residence only. Customers or sub-metered tenants participating in the Family Electric Rate Assistance (FERA) program cannot concurrently participate in the CARE program.

Advice 6968-E
Decision

Issued by
Meredith Allen
Vice President, Regulatory Affairs

Submitted June 23, 2023
Effective July 1, 2023
Resolution

6.2.2 Southern California Edison

The following pages provide details on the SCE electricity tariffs applied in this study. Table 22 describes the baseline territories that were assumed for each climate zone. A net surplus compensation rate of $ 0.06030/ kWh was applied to any net annual electricity generation based on a one-year average of the rates between December 2022 and November 2023

Table 22: SCE Baseline Territory by Climate Zone

Climate Zone	Baseline Territory
CZ06	6
CZ08	8
CZ09	9
CZ10	10
CZ14	14
CZ15	15

Summer Daily Allocations (June through September)

Baseline Region Number	Daily kWh Allocation	All-Electric Allocation
5	17.2	17.9
6	11.4	8.8
8	12.6	9.8
9	16.5	12.4
10	18.9	15.8
13	22.0	24.6
14	18.7	18.3
15	46.4	24.1
16	14.4	13.5

Winter Daily Allocations (October through May)

Baseline Region Number	Daily kWh Allocation	All-Electric Allocation
5	18.7	29.1
6	11.3	13.0
8	10.6	12.7
9	12.3	14.3
10	12.5	17.0
13	12.6	24.3
14	12.0	21.3
15	9.9	18.2
16	12.6	23.1

Schedule TOU-D
TIME-OF-USE
DOMESTIC
(Continued)

Sheet 12 (T)

SPECIAL CONDITIONS

1. Applicable rate time periods are defined as follows:

Option 4-9 PM, Option 4-9 PM-CPP, Option PRIME, Option PRIME-CPP : (T)

TOU Period	Weekdays		Weekends and Holidays	
	Summer	Winter	Summer	Winter
On-Peak	4 p.m. - 9 p.m.	N/A	N/A	N/A
Mid-Peak	N/A	4 p.m. - 9 p.m.	4 p.m. - 9 p.m.	4 p.m. - 9 p.m.
Off-Peak	All other hours	9 p.m. - 8 a.m.	All other hours	9 p.m. - 8 a.m.
Super-Off-Peak	N/A	8 a.m. - 4 p.m.	N/A	8 a.m. - 4 p.m.
CPP Event Period	4 p.m. - 9 p.m.	4 p.m. - 9 p.m.	N/A	N/A

Southern California Edison
Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 85111-E
Cancelling Revised Cal. PUC Sheet No. 74502-E

Schedule TOU-D
TIME-OF-USE
DOMESTIC
(Continued)

Sheet 2

RATES

Customers receiving service under this Schedule will be charged the applicable rates under Option 4-9 PM, Option 4-9 PM-CPP, Option 5-8 PM, Option 5-8 PM-CPP, Option PRIME, Option PRIME-CPP Option A, Option A-CPP, Option B, or Option B-CPP, as listed below. CPP Event Charges will apply to all energy usage during CPP Event Energy Charge periods and CPP Non-Event Energy Credits will apply as a reduction on CPP Non-Event Energy Credit Periods during Summer Season days, 4:00 p.m. to 9:00 p.m., as described in Special Conditions 1 and 3, below:

	Delivery Service Total[1]	Generation[2] UG***	Generation[2] DWREC[3]
Option 4-9 PM / Option 4-9 PM-CPP			
Energy Charge - $/kWh			
Summer Season - On-Peak	0.28829 (R)	0.28543 (I)	0.00000
Mid-Peak	0.28829 (R)	0.17707 (I)	0.00000
Off-Peak	0.24482 (R)	0.11382 (I)	0.00000
Winter Season - Mid-Peak	0.28829 (R)	0.21752 (I)	0.00000
Off-Peak	0.24482 (R)	0.13851 (I)	0.00000
Super-Off-Peak	0.22919 (R)	0.11890 (I)	0.00000
Baseline Credit**** - $/kWh	(0.09759) (I)	0.00000	
Fixed Recovery Charge - $/kWh	0.00090 (R)		
Basic Charge - $/day			
Single-Family Residence	0.031		
Multi-Family Residence	0.024		
Minimum Charge** - $/day			
Single Family Residence	0.346		
Multi-Family Residence	0.346		
Minimum Charge (Medical Baseline)** - $/day			
Single Family Residence	0.173		
Multi-Family Residence	0.173		
California Climate Credit[10]	(71.00) (I)		
California Alternate Rates for Energy Discount - %	100.00*		
Family Electric Rate Assistance Discou	100.00		
Option 4-9 PM-CPP			
CPP Event Energy Charge - $/kWh		0.80000	
Summer CPP Non-Event Credit On-Peak Energy Credit - $/kWh		(0.15170)	
Maximum Available Credit - $/kWh***** Summer Season		(0.67183) (R)	

* Represents 100% of the discount percentage as shown in the applicable Special Condition of this Schedule.
** The Minimum Charge is applicable when the Delivery Service Energy Charge, plus the applicable Basic Charge is less than the Minimum Charge.
*** The ongoing Competition Transition Charge CTC of ($0.00003) per kWh is recovered in the UG component of Generation. (I)
**** The Baseline Credit applies up to 100% of the Baseline Allocation, regardless of Time-of-Use time period. Additional Baseline Allocations apply for Customers with Heat Pump Water Heaters served under this Option. The Baseline Allocations are set forth in Preliminary Statement, Part H.
***** The Maximum Available Credit is the capped credit amount for CPP Customers dual participating in other demand response programs.
1 Total = Total Delivery Service rates are applicable to Bundled Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRBC rate component of this Schedule but instead pay the DWRBC as provided by Schedule DA-CRS or Schedule CCA-CRS.
2 Generation = The Gen rates are applicable only to Bundled Service Customers. See Special Condition below for PCIA recovery.
3 DWREC = Department of Water Resources (DWR) Energy Credit – For more information on the DWR Energy Credit, see the Billing Calculation Special Condition of this Schedule.
4 Applied on an equal basis, per household, semi-annually. See the Special Conditions of this Schedule for more information.

(Continued)

(To be inserted by utility)
Advice 4929-E
Decision
2H13

Issued by
Michael Backstrom
Vice President

(To be inserted by Cal. PUC)
Date Submitted Dec 28, 2022
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Resolution E-5217

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Southern California Edison — Revised Cal. PUC Sheet No. 86132-E
Rosemead, California (U 338-E) — Cancelling Revised Cal. PUC Sheet No. 85624-E

Schedule TOU-D
TIME-OF-USE
DOMESTIC
(Continued)

Sheet 6

RATES (Continued)

Option PRIME / Option PRIME-CPP	Delivery Service Total[1]	Generation[2] UG**	Generation[2] DWREC[3]
Energy Charge - $/kWh/Meter/Day			
Summer Season			
On-Peak	0.22789 (I)	0.42769 (I)	0.00000
Mid-Peak	0.22789 (I)	0.15221 (I)	0.00000
Off-Peak	0.15191 (I)	0.10162 (I)	0.00000
Winter Season			
Mid-Peak	0.23353 (I)	0.36028 (I)	0.00000
Off-Peak	0.14530 (I)	0.08630 (I)	0.00000
Super-Off-Peak	0.14530 (I)	0.08630 (I)	0.00000
Fixed Recovery Charge - $/kWh	0.00260 (I)		
Basic Charge - $/Meter/Day	0.427 (I)		
EV Meter Credit (Separately Metered E	(0.323) (N)		
EV Submeter Credit - $/Meter/Day	(0.111) (R)		
California Climate Credit[10]	(71.00)		
California Alternate Rates for Energy Discount - %	100.00*		
Family Electric Rate Assistance Discou	100.00		
Medical Line Item Discount - %	100.000		
Option PRIME-CPP			
CPP Event Energy Charge - $/kWh		0.80000	
Summer CPP Non-Event Credit On-Peak Energy Credit - $/kWh		(0.15170)	
Maximum Available Credit - $/kWh**** Summer Season		(0.71812) (R)	

* Represents 100% of the discount percentage as shown in the applicable Special Condition of this Schedule.
** The ongoing Competition Transition Charge (CTC) of ($0.00003) per kWh is recovered in the UG component of Generation.
**** The Maximum Available Credit is the capped credit amount for CPP Customers dual participating in other demand response programs.
1 Total = Total Delivery Service rates are applicable to Bundled Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRBC rate component of this Schedule but instead pay the DWRBC as provided by Schedule DA-CRS or Schedule CCA-CRS.
2 Generation = The Gen rates are applicable only to Bundled Service Customers. See Special Condition below for PCIA recovery.
3 DWREC = Department of Water Resources (DWR) Energy Credit – For more information on the DWR Energy Credit, see the Billing Calculation Special Condition of this Schedule.
4 Applied on an equal basis, per household, semi-annually. See the Special Conditions of this Schedule for more information.

(Continued)

(To be inserted by utility)
Advice 5041-E
Decision

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Vice President

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Date Submitted May 30, 2023
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Resolution

6H9

Southern California Edison
Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 85618-E
Cancelling Revised Cal. PUC Sheet No. 85109-E

Schedule D-CARE Sheet 1
CALIFORNIA ALTERNATE RATES FOR ENERGY
DOMESTIC SERVICE

APPLICABILITY

Applicable to domestic service to CARE households residing in a permanent Single-Family Accommodation or Multifamily Accommodation where the customer meets all the Special Conditions of this Schedule. Customers enrolled in the CARE program are not eligible for the Family Electric Rate Assistance (FERA) program.

Pursuant to Special Condition 12 herein, customers receiving service under this Schedule are eligible to receive the California Climate Credit as shown in the Rates section below.

TERRITORY

Within the entire territory served.

RATES

The applicable charges set forth in Schedule D shall apply to Customers served under this Schedule.

CARE Discount:

A 29.8 percent discount is applied to a CARE Customer's bill prior to the application of the Public Utilities Commission Reimbursement Fee (PUCRF) and any applicable user fees, taxes, and late payment charges. CARE Customers are required to pay the PUCRF and any applicable user fees, taxes, and late payment charges in full. In addition, CARE Customers are exempt from paying the CARE Surcharge of $0.00888 per kWh and the Wildfire Fund Non-Bypassable Charge of $0.00530 per kWh. (R)
The 29.8 percent discount, in addition to these exemptions result in an average effective CARE Discount of 32.5 percent.

(Continued)

(To be inserted by utility)
Advice 4977-E
Decision 23-01-002
TH12 22-12-031

Issued by
Michael Backstrom
Vice President

(To be inserted by Cal. PUC)
Date Submitted Feb 27, 2023
Effective Mar 1, 2023
Resolution

6.2.3 Southern California Gas

Following are the SoCalGas natural gas tariffs applied in this study. Table 23 describes the baseline territories that were assumed for each climate zone.

Table 23. SoCalGas Baseline Territory by Climate Zone

Climate Zone	Baseline Territory
CZ05	2
CZ06	1
CZ08	1
CZ09	1
CZ10	1
CZ14	2
CZ15	1

The SoCalGas monthly gas rate in $/therm was applied on a monthly basis according to the rates shown in Table 24. These rates are based on applying a normalization curve to the November 2023 tariff based on ten years of historical gas data. Long-term historical natural gas rate data was only available for SoCalGas' procurement charges.[27] The baseline and excess transmission charges were found to be consistent over the course of a year and applied for the entire year based on 2023 rates. CARE rates reflect the 20 percent discount per the GR tariff.

Table 24. SoCalGas Monthly Gas Rate ($/therm)

Month	Procurement Charge	Transportation Charge		Total Charge	
		Baseline	Excess	Baseline	Excess
January	$0.72	$0.86	$1.31	$1.92	$2.36
February	$0.50	$0.86	$1.31	$1.57	$2.02
March	$0.44	$0.86	$1.31	$1.48	$1.93
April	$0.39	$0.86	$1.31	$1.39	$1.84
May	$0.41	$0.86	$1.31	$1.43	$1.87
June	$0.46	$0.86	$1.31	$1.49	$1.93
July	$0.47	$0.86	$1.31	$1.51	$1.96
August	$0.51	$0.86	$1.31	$1.58	$2.03
September	$0.46	$0.86	$1.31	$1.52	$1.96
October	$0.45	$0.86	$1.31	$1.48	$1.92
November	$0.48	$0.86	$1.31	$1.54	$1.99
December	$0.57	$0.86	$1.31	$1.63	$2.08

Southern California Gas Company
Residential Rates
Nov-23

Customer Type / Rate Schedule	Commodity Charge	Rate Type	Procurement Charge ¢/therm	Transportation Charge ¢/therm	New Rate Effective 11/1/2023	New Rate Effective 10/1/2023	Absolute Rate Change	% Change
Residential Individually Metered								
Schedule No. GR	GR	Baseline	67.806	86.490	154.296	125.096	29.200	23.3%
Res. Service	GR	Non Baseline	67.806	131.037	198.843	169.726	29.117	17.2%
	GT-R	Baseline	00.000	86.490	86.490	87.038	-00.548	-0.6%
	GT-R	Non Baseline	00.000	131.037	131.037	131.668	-00.631	-0.5%

[27] The SoCalGas procurement and transmission charges were obtained from the following site: https://www.socalgas.com/for-your-business/energy-market-services/gas-prices RES2023.xlsx (live.com)

6.2.4 San Diego Gas & Electric

Following are the SDG&E electricity and natural gas tariffs applied in this study. Table 25 describes the baseline territories that were assumed for each climate zone. A net surplus compensation rate of $0.04542/ kWh was applied to any net annual electricity generation based on a one-year average of the rates between December 2022 and November 2023.

Table 25. SDG&E Baseline Territory by Climate Zone

Climate Zone	Baseline Territory
CZ07	Coastal
CZ10	Inland
CZ14	Mountain

The SDG&E monthly gas rate in $/therm was applied on a monthly basis according to the rates shown in Table 26. These rates are based on applying a normalization curve to the November 2023 tariff based on ten years of historical gas data. CARE rates reflect the 20 percent discount per the G-CARE tariff.

Table 26. SDG&E Monthly Gas Rate ($/therm)

Month	Total Charge	
	Baseline	Excess
January	$2.34	$2.63
February	$2.28	$2.57
March	$2.21	$2.51
April	$2.14	$2.45
May	$2.18	$2.48
June	$2.23	$2.55
July	$2.26	$2.57
August	$2.32	$2.62
September	$2.26	$2.59
October	$2.21	$2.55
November	$2.24	$2.57
December	$2.38	$2.70

Baseline Usage: The following quantities of gas used in individually metered residences are to be billed at the baseline rates:

All Customers:	Daily Therm Allowance
Summer (May to Oct)	0.359
Winter On-Peak (Dec, Jan & Feb)	1.233
Winter Off-Peak (Nov, Mar, & Apr)	0.692

SDGE
San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 37022-E
Canceling Revised Cal. P.U.C. Sheet No. 36337-E

SCHEDULE TOU-DR1

Sheet 2

RESIDENTIAL TIME-OF-USE

RATES

Total Rates:

Description – TOU DR1	UDC Total Rate		DWR BC + WF-NBC		EECC Rate + DWR Credit		Total Rate	
Summer:								
On-Peak	0.25752	R	0.00530	I	0.57043	I	0.83325	I
Off-Peak	0.25752	R	0.00530	I	0.25697	I	0.51979	I
Super Off-Peak	0.25752	R	0.00530	I	0.09233	I	0.35515	I
Winter:								
On-Peak	0.43809	I	0.00530	I	0.19307	I	0.63646	I
Off-Peak	0.43809	I	0.00530	I	0.10855	I	0.55194	I
Super Off-Peak	0.43809	I	0.00530	I	0.08402	I	0.52741	I
Summer Baseline Adjustment Credit up to 130% of Baseline	(0.11724)	R					(0.11724)	R
Winter Baseline Adjustment Credit up to 130% of Baseline	(0.11724)	R					(0.11724)	R
Minimum Bill ($/day)	0.380	I					0.380	I

Description – TOU DR1-CARE	UDC Total Rate		DWR BC + WF-NBC		EECC Rate + DWR Credit		Total Rate		Total Effective Care Rate	
Summer – CARE Rates:										
On-Peak	0.25682	R	0.00000		0.57043	I	0.82725	I	0.55366	I
Off-Peak	0.25682	R	0.00000		0.25697	I	0.51379	I	0.33965	I
Super Off-Peak	0.25682	R	0.00000		0.09233	I	0.34915	I	0.22725	I
Winter – CARE Rates:										
On-Peak	0.43739	I	0.00000		0.19307	I	0.63046	I	0.41930	I
Off-Peak	0.43739	I	0.00000		0.10855	I	0.54594	I	0.36160	I
Super Off-Peak	0.43739	I	0.00000		0.08402	I	0.52141	I	0.34485	I
Summer Baseline Adjustment Credit up to 130% of Baseline	(0.11724)	R					(0.11724)	R	(0.08004)	R
Winter Baseline Adjustment Credit up to 130% of Baseline	(0.11724)	R					(0.11724)	R	(0.08004)	R
Minimum Bill ($/day)	0.190	I					0.190	I	0.190	I

Note:
(1) Total Rates consist of UDC, Schedule DWR-BC (Department of Water Resources Bond Charge), Schedule WF-NBC (CA Wildfire Fund charge) and Schedule EECC (Electric Energy Commodity Cost) rates, with the EECC rates reflecting a DWR Credit. EECC rates are applicable to bundled customers only. See Special Condition 16 for PCIA (Power Charge Indifference Adjustment) recovery.
(2) Total Rates presented are for customers that receive commodity supply and delivery service from Utility.
(3) DWR-BC and WF-NBC charges do not apply to CARE customers.
(4) As identified in the rates tables, customer bills will also include line-item summer and winter credits for usage up to 130% of baseline to provide the rate capping benefits adopted by Assembly Bill 1X and Senate Bill 695.
(5) WF-NBC rate is 0.00530 + DWR-BC Bond Charge is 0.00000 .

R, I

(Continued)

2C8
Advice Ltr. No. 4129-E
Decision No.

Issued by
Dan Skopec
Senior Vice President
Regulatory Affairs

Submitted Dec 30, 2022
Effective Jan 1, 2023
Resolution No. E-5217

Time Periods

All time periods listed are applicable to local time. The definition of time will be based upon the date service is rendered.

TOU Periods – Weekdays	Summer	Winter
On-Peak	4:00 p.m. – 9:00 p.m.	4:00 p.m. – 9:00 p.m.
Off-Peak	6:00 a.m. – 4:00 p.m.; 9:00 p.m. - midnight	6:00 a.m. – 4:00 p.m. Excluding 10:00 a.m. – 2:00 p.m. in March and April; 9:00 p.m. - midnight
Super Off-Peak	Midnight – 6:00 a.m.	Midnight – 6:00 a.m. 10:00 a.m. – 2:00 p.m. in March and April
TOU Period – Weekends and Holidays	Summer	Winter
On-Peak	4:00 p.m. – 9:00 p.m.	4:00 p.m. – 9:00 p.m.
Off-Peak	2:00 p.m. – 4:00 p.m.; 9:00 p.m. - midnight	2:00 p.m. – 4:00 p.m.; 9:00 p.m. - midnight
Super Off-Peak	Midnight – 2:00 p.m.	Midnight – 2:00 p.m.

Seasons: Summer June 1 – October 31
Winter November 1 – May 31

15. Baseline Usage: The following quantities of electricity are used to calculate the baseline adjustment credit.

	Baseline Allowance For Climatic Zones*			
	Coastal	Inland	Mountain	Desert
Basic Allowance				
Summer (June 1 to October 31)	9.0	10.4	13.6	15.9
Winter (November 1 to May 31)	9.2	9.6	12.9	10.9
All Electric**				
Summer (June 1 to October 31)	6.0	8.7	15,2	17.0
Winter (November 1 to May 31)	8.8	12.2	22.1	17.1

* Climatic Zones are shown on the Territory Served, Map No. 1.
** All Electric allowances are available upon application to those customers who have permanently installed space heating or who have electric water heating and receive no energy from another source.

San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 37217-E
Canceling Revised Cal. P.U.C. Sheet No. 37016-E

SCHEDULE EV-TOU-5

Sheet 1

COST-BASED DOMESTIC TIME-OF-USE FOR HOUSEHOLDS WITH ELECTRIC VEHICLES

APPLICABILITY

Service under this schedule is specifically limited to customers who require service for charging of a currently registered Motor Vehicle, as defined by the California Motor Vehicle Code, which is: 1) a battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV) recharged via a recharging outlet at the customer's premises; or 2) a natural gas vehicle (NGV) refueled via a home refueling appliance (HRA) at the customer's premises. This schedule is not available to customers with a conventional charge sustaining (battery recharged solely from the vehicle's on-board generator) hybrid electric vehicle (HEV).

Residential customers taking service on Schedule NBT, who are required to utilize EV-TOU-5 as their otherwise applicable schedule (OAS) for electric service, do not require a qualifying motor vehicle, as described above to participate on Schedule EV-TOU-5. N N N

Customers on this schedule may also qualify for a semi-annual California Climate Credit $(60.70) per Schedule GHG-ARR.

TERRITORY

Within the entire territory served by the utility.

RATES

Total Rates:

Description – EV-TOU-5 Rates	UDC Total Rate	DWR BC + WF-NBC	EECC Rate + DWR Credit	Total Rate
Basic Service Fee	16.00			16.00
Summer				
On-Peak	0.28032 I	0.00530 I	0.53067 I	0.81629 I
Off-Peak	0.28032 I	0.00530 I	0.19567 I	0.48129 I
Super Off-Peak	0.05588 I	0.00530 I	0.09233 I	0.15351 I
Winter				
On-Peak	0.28032 I	0.00530 I	0.22587 I	0.51149 I
Off-Peak	0.28032 I	0.00530 I	0.16213 I	0.44775 I
Super Off-Peak	0.05588 I	0.00530 I	0.08402 I	0.14520 I

(Continued)

1C5 Issued by Submitted Jan 30, 2023
Advice Ltr. No. 4154-E Effective Mar 1, 2023
Decision No. D.22-12-056 Resolution No.

San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 37019-E
Canceling Revised Cal. P.U.C. Sheet No. 35912-E

SCHEDULE EV-TOU-5

Sheet 4

COST-BASED DOMESTIC TIME-OF-USE FOR HOUSEHOLDS WITH ELECTRIC VEHICLES

Notes: Transmission Energy charges include the Transmission Revenue Balancing Account Adjustment (TRBAA) of $(0.00242) per kWh and the Transmission Access Charge Balancing Account Adjustment (TACBAA) of $(0.01631) per kWh. PPP Energy charges includes Low Income PPP rate (LI-PPP) $0.01669/kWh, Non-low Income PPP rate (Non-LI-PPP) $0.00333/kWh (pursuant to PU Code Section 399.8, the Non-LI-PPP rate may not exceed January 1, 2000 levels), Procurement Energy Efficiency Surcharge Rate of $0.00422 /kWh, California Solar Initiative rate (CSI) of $0.00000/kWh and Self-Generation Incentive Program rate (SGIP) $0.00122/kWh. The basic service fee of $16 per month is applied to a customer's bill and a 50% discount is applied for CARE, Medical Baseline, or Family Electric Rate Assistance Program (FERA) customers resulting in their basic service fees to be $8 per month. R, R I R I I

Rate Components
The Utility Distribution Company Total Rates (UDC Total) shown above are comprised of the following components (if applicable): (1) Transmission (Trans) Charges, (2) Distribution (Distr) Charges, (3) Public Purpose Program (PPP) Charges, (4) Nuclear Decommissioning (ND) Charge, (5) Ongoing Competition Transition Charges (CTC), (6) Local Generation Charge (LGC), (7) Reliability Services (RS), and (8) the Total Rate Adjustment Component (TRAC).

Certain Direct Access customers are exempt from the TRAC, as defined in Rule 1 – Definitions.

Franchise Fee Differential
A Franchise Fee Differential of 5.78% will be applied to the monthly billings calculated under this schedule for all customers within the corporate limits of the City of San Diego. Such Franchise Fee Differential shall be so indicated and added as a separate item to bills rendered to such customers.

Time Periods:

All time periods listed are applicable to actual "clock" time)

TOU Period – Weekdays	Summer	Winter
On-Peak	4:00 p.m. – 9:00 p.m.	4:00 p.m. – 9:00 p.m.
Off-Peak	6:00 a.m. – 4:00 p.m.; 9:00 p.m. – midnight	6:00 a.m. – 4:00 p.m. Excluding 10:00 a.m.–2:00 p.m.in March and April; 9:00 p.m. - midnight
Super-Off-Peak	Midnight – 6:00 a.m.	Midnight – 6:00 a.m. 10:00 a.m. – 2:00 p.m. in March and April

TOU Period – Weekends and Holidays	Summer	Winter
On-Peak	4:00 p.m. – 9:00 p.m.	4:00 p.m. – 9:00 p.m.
Off-Peak	2:00 p.m. – 4:00 p.m.; 9:00 p.m. – midnight	2:00 p.m. – 4:00 p.m. 9:00 p.m. - midnight
Super-Off-Peak	Midnight – 2:00 p.m.	Midnight – 2:00 p.m.

Seasons:

Summer June 1 – October 31
Winter November 1 – May 31

(Continued)

4C8
Advice Ltr. No. 4129-E
Decision No.

Issued by
Dan Skopec
Senior Vice President
Regulatory Affairs

Submitted Dec 30, 2022
Effective Jan 1, 2023
Resolution No. E-5217

SDGE
San Diego Gas & Electric Company
San Diego, California

Original Cal. P.U.C. Sheet No. 37195-E
Canceling _____ Cal. P.U.C. Sheet No. _____

SCHEDULE TOU-ELEC

Sheet 1

N
N

DOMESTIC TIME-OF-USE FOR HOUSEHOLDS WITH ELECTRIC VEHICLES, ENERGY STORAGE, OR ELECTRIC HEAT PUMPS

APPLICABILITY N

Service under this schedule is available on a voluntary basis for all residential customers who meet one or more of the following criteria: 1) require service for charging of a currently registered Motor Vehicle, as defined by the California Motor Vehicle Code, which is: a) a battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV) recharged via a recharging outlet at the customer's premises; or b) a natural gas vehicle (NGV) refueled via a home refueling appliance (HRA) at the customer's premises; 2) have a behind-the-meter energy storage device that is interconnected through Electric Rule 21; or 3) have an electric heat pump for water heating or climate control. This schedule is not available to customers with a conventional charge sustaining (battery recharged solely from the vehicle's on-board generator) hybrid electric vehicle (HEV).

This schedule is also available to customers who meet the above criteria as well as qualify for the California Alternate Rates for Energy (CARE) Program as outlined in Schedule E-CARE, and/or Medical Baseline as outlined in Special Condition (SC) 5. The rates for CARE customers and/or Medical Baseline are identified in the rate tables below as TOU-ELEC-CARE and TOU-ELEC-MB rates, respectively.

There is a cap of 10,000 customers who may take service on this rate, as defined in SC 10.

Pursuant to D.22-11-022, customers that opt-in to schedule TOU-ELEC within its first year of being offered have the option to return to their previous rate schedule prior to the 12-month requirement. See SC4 Terms of Service for all requirements.

Customers on this schedule may also qualify for a semi-annual California Climate Credit $(60.70) per Schedule GHG-ARR.

TERRITORY

Within the entire territory served by the utility.

RATES

Total Rates:

Description – TOU-ELEC Rates	UDC Total Rate	DWR BC + WF-NBC	EECC Rate	Total Rate
Monthly Service Fee	16.00			16.00
Summer				
On-Peak	0.22228	0.00530	0.51568	0.74326
Off-Peak	0.22228	0.00530	0.14644	0.37402
Super Off-Peak	0.22228	0.00530	0.09785	0.32543
Winter				
On-Peak	0.22228	0.00530	0.27460	0.50218
Off-Peak	0.22228	0.00530	0.13323	0.36081
Super Off-Peak	0.22228	0.00530	0.08905	0.31663

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(Continued)

1H6 Issued by Submitted Jan 31, 2023
Advice Ltr. No. 4152-E Effective Jan 31, 2023
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SDGE
San Diego Gas & Electric Company
San Diego, California

Original Cal. P.U.C. Sheet No. 37196-E
Canceling _____ Cal. P.U.C. Sheet No. _____

SCHEDULE TOU-ELEC

Sheet 2

DOMESTIC TIME-OF-USE FOR HOUSEHOLDS WITH ELECTRIC VEHICLES, ENERGY STORAGE, OR ELECTRIC HEAT PUMPS

RATES (Continued)

Description – TOU-ELEC CARE Rates	UDC Total Rate	DWR BC + WF-NBC	EECC Rate	Total Rate	Total Effective CARE Rate
Monthly Service Fee	16.00			16.00	16.00
Summer – CARE Rates:					
On-Peak	0.22158	0.00000	0.51568	0.73726	0.49222
Off-Peak	0.22158	0.00000	0.14644	0.36802	0.24013
Super Off-Peak	0.22158	0.00000	0.09785	0.31943	0.20696
Winter – CARE Rates:					
On-Peak	0.22158	0.00000	0.27460	0.49618	0.32763
Off-Peak	0.22158	0.00000	0.13323	0.35481	0.23111
Super Off-Peak	0.22158	0.00000	0.08905	0.31063	0.20095

Description – TOU-ELEC MB Rates	UDC Total Rate	DWR BC + WF-NBC	EECC Rate	Total Rate	Total Effective MB Rate
Monthly Service Fee	16.00			16.00	16.00
Summer – MB Rates:					
On-Peak	0.22228	0.00000	0.51568	0.73796	0.59037
Off-Peak	0.22228	0.00000	0.14644	0.36872	0.29498
Super Off-Peak	0.22228	0.00000	0.09785	0.32013	0.25610
Winter – MB Rates:					
On-Peak	0.22228	0.00000	0.27460	0.49688	0.39750
Off-Peak	0.22228	0.00000	0.13323	0.35551	0.28441
Super Off-Peak	0.22228	0.00000	0.08905	0.31133	0.24906

Note:
(1) Total Rates consist of UDC, Schedule DWR-BC (Department of Water Resources Bond Charge), Schedule WF-NBC (CA Wildfire Fund charge) and Schedule EECC (Electric Energy Commodity Cost) rates. EECC rates are applicable to bundled customers only. See Special Condition 9 for PCIA (Power Charge Indifference Adjustment) recovery.
(2) Total Rates presented are for customers that receive commodity supply and delivery service from Utility. Differences in total rates paid by Direct Access (DA) and Community Choice Aggregation (CCA) customers are identified in Schedule DA-CRS and CCA-CRS, respectively.
(3) DWR-BC and WF-NBC charges do not apply to CARE or Medical Baseline customers.
(4) WF-NBC rate is 0.00530 + DWR-BC Bond Charge is 0.00000

2H5 Issued by Submitted Jan 31, 2023
Advice Ltr. No. 4152-E Effective Jan 31, 2023
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SDGE
San Diego Gas & Electric Company
San Diego, California

Original Cal. P.U.C. Sheet No. 37197-E
Canceling ____ Cal. P.U.C. Sheet No. ____

SCHEDULE TOU-ELEC

Sheet 3 N

N

DOMESTIC TIME-OF-USE FOR HOUSEHOLDS WITH ELECTRIC VEHICLES, ENERGY STORAGE, OR ELECTRIC HEAT PUMPS

RATES (CONTINUED) N

UDC Rates

Description – TOU-ELEC	Transm	Distr	PPP	ND	CTC	LGC	RS	TRAC	UDC Total
Monthly Service Fee ($/Mo)		16.00							16.00
Summer:									
On-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Super Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Winter:									
On-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Super Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228

Description – TOU-ELEC – CARE Rates	**Transm**	**Distr**	**PPP**	**ND**	**CTC**	**LGC**	**RS**	**TRAC**	**UDC Total**
Monthly Service Fee ($/Mo		16.00							16.00
Summer CARE Rates:									
On-Peak	0.07340	0.10726	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22158
Off-Peak	0.07340	0.10726	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22158
Super Off-Peak	0.07340	0.10726	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22158
Winter CARE Rates:									
On-Peak	0.07340	0.10726	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22158
Off-Peak	0.07340	0.10726	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22158
Super Off-Peak	0.07340	0.10726	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22158

Description – TOU-ELEC – MB Rates	**Transm**	**Distr**	**PPP**	**ND**	**CTC**	**LGC**	**RS**	**TRAC**	**UDC Total**
Monthly Service Fee ($/Mo))		16.00							16.00
Summer – MB Rates									
On-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Super Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Winter – MB Rates									
On-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228
Super Off-Peak	0.07340	0.10796	0.02546	0.00007	0.00153	0.01383	0.00003	0.00000	0.22228

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3H11 Issued by Submitted Jan 31, 2023
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San Diego Gas & Electric Company
San Diego, California

Original Cal. P.U.C. Sheet No. 37198-E
Canceling _____ Cal. P.U.C. Sheet No. _____

SCHEDULE TOU-ELEC

Sheet 4

N

DOMESTIC TIME-OF-USE FOR HOUSEHOLDS WITH ELECTRIC VEHICLES, ENERGY STORAGE, OR ELECTRIC HEAT PUMPS

N

Notes: Transmission Energy charges include the Transmission Revenue Balancing Account Adjustment (TRBAA) of $(0.00242) per kWh and the Transmission Access Charge Balancing Account Adjustment (TACBAA) of $(0.01631) per kWh. PPP Energy charges includes Low Income PPP rate (LI-PPP) $0.01669/kWh, Non-low Income PPP rate (Non-LI-PPP) $0.00333/kWh (pursuant to PU Code Section 399.8, the Non-LI-PPP rate may not exceed January 1, 2000 levels), Procurement Energy Efficiency Surcharge Rate of $0.00422 /kWh, California Solar Initiative rate (CSI) of $0.00000/kWh and Self-Generation Incentive Program rate (SGIP) $0.00122/kWh.

N

Rate Components
The Utility Distribution Company Total Rates (UDC Total) shown above are comprised of the following components (if applicable): (1) Transmission (Trans) Charges, (2) Distribution (Distr) Charges, (3) Public Purpose Program (PPP) Charges, (4) Nuclear Decommissioning (ND) Charge, (5) Ongoing Competition Transition Charges (CTC), (6) Local Generation Charge (LGC), (7) Reliability Services (RS), and (8) the Total Rate Adjustment Component (TRAC).

Certain Direct Access customers are exempt from the TRAC, as defined in Rule 1 – Definitions.

Franchise Fee Differential
A Franchise Fee Differential of 5.78% will be applied to the monthly billings calculated under this schedule for all customers within the corporate limits of the City of San Diego. Such Franchise Fee Differential shall be so indicated and added as a separate item to bills rendered to such customers.

Time Periods:

All time periods listed are applicable to actual "clock" time)

TOU Period – Weekdays	Summer	Winter
On-Peak	4:00 p.m. – 9:00 p.m.	4:00 p.m. – 9:00 p.m.
Off-Peak	6:00 a.m. – 4:00 p.m.; 9:00 p.m. – midnight	6:00 a.m. – 4:00 p.m. Excluding 10:00 a.m.–2:00 p.m.in March and April; 9:00 p.m. - midnight
Super-Off-Peak	Midnight – 6:00 a.m.	Midnight – 6:00 a.m. 10:00 a.m. – 2:00 p.m. in March and April

TOU Period – Weekends and Holidays	Summer	Winter
On-Peak	4:00 p.m. – 9:00 p.m.	4:00 p.m. – 9:00 p.m.
Off-Peak	2:00 p.m. – 4:00 p.m.; 9:00 p.m. – midnight	2:00 p.m. – 4:00 p.m. 9:00 p.m. - midnight
Super-Off-Peak	Midnight – 2:00 p.m.	Midnight – 2:00 p.m.

Seasons:

Summer June 1 – October 31
Winter November 1 – May 31

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(Continued)

4H7 Issued by Submitted Jan 31, 2023
Advice Ltr. No. 4152-E Effective Jan 31, 2023
Decision No. D.22-11-022 Resolution No. _____

San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 35718-E
Canceling Revised Cal. P.U.C. Sheet No. 32576-E

SCHEDULE E-CARE

Sheet 1

CALIFORNIA ALTERNATE RATES FOR ENERGY

APPLICABILITY

This schedule provides a California Alternate Rates for Energy (CARE) discount to each of the following types of customers listed below that meet the requirements for CARE eligibility as defined in Rule 1, Definitions, and herein, and is taken in conjunction with the customer's otherwise applicable service schedule.

1) Customers residing in a permanent single-family accommodation, separately metered by the Utility.

2) Multi-family dwelling units and mobile home parks supplied through one meter on a single premises where the individual unit is submetered.

3) Non-profit group living facilities.

4) Agricultural employee housing facilities.

TERRITORY

Within the entire territory served by the Utility.

DISCOUNT

1) Residential CARE: Qualified residential CARE customers will receive a total effective discount according to the following:

	2015	2016	2017	2018	2019	2020 and beyond
Effective Discount	**40%**	**39%**	**38%**	**38%**	**36% R**	**35%**

Pursuant to Commission Decision (D.) 15-07-001, the average effective CARE discount for residential customers will decrease 1% each year until an average effective discount of 35% is reached in 2020.

The average effective CARE discount consists of: (a) exemptions from paying the CARE Surcharge, Department of Water Resources Bond Charge (DWR-BC), Vehicle-Grid Integration (VGI) costs, and California Solar Initiative (CSI); (b) a 50% minimum bill relative to Non-CARE; (c) the California Wildfire Fund Charge (WF-NBC) and (d) a separate line-item bill discount for all qualified residential CARE customers with the exclusion of CARE Medical Baseline customers taking service on tiered rates schedules. D.15-07-001 retained the rate subsidies in Non-CARE Medical Baseline tiered rates and thereby a separate line-item discount is provided for these CARE Medical Baseline customers T

(Continued)

1C5
Advice Ltr. No. 3928-E

Issued by
Dan Skopec
Vice President

Submitted Dec 30, 2021
Effective Jan 1, 2022

6.2.5 City of Palo Alto Utilities

Following are the CPAU electricity and natural gas tariffs applied in this study. The CPAU monthly gas rate in $/therm was applied on a monthly basis according to the rates shown in Table 27. These rates are based on applying a normalization curve to the October 2023 tariff based on seven years of historical gas data. The monthly service charge applied was $14.01 per month per the November 2023 G-1 tariff.

Table 27. CPAU Monthly Gas Rate ($/therm)

Month	G1 Volumetric Total Baseline	G1 Volumetric Total Excess
January	$1.83532	$3.35639
February	$1.38055	$2.59947
March	$1.32506	$2.47695
April	$1.29680	$2.44038
May	$1.29511	$2.43804
June	$1.32034	$2.45406
July	$1.35688	$2.61519
August	$1.40696	$2.67944
September	$1.42130	$2.70301
October	$1.42310	$2.48300
November	$1.46286	$2.45547
December	$1.62415	$2.62128

RESIDENTIAL ELECTRIC SERVICE

UTILITY RATE SCHEDULE E-1

A. APPLICABILITY:

This Rate Schedule applies to separately metered single-family residential dwellings receiving Electric Service from the City of Palo Alto Utilities.

B. TERRITORY:

This rate schedule applies everywhere the City of Palo Alto provides Electric Service.

C. UNBUNDLED RATES:

Per kilowatt-hour (kWh)	Commodity	Distribution	Public Benefits	Total
Tier 1 usage	$ 0.09999	$ 0.06954	$ 0.00568	$ 0.17521
Tier 2 usage Any usage over Tier 1	0.13873	0.10225	0.00568	0.24666
Minimum Bill ($/day)				0.4181

D. SPECIAL NOTES:

1. Calculation of Cost Components

The actual bill amount is calculated based on the applicable rates in Section C above and adjusted for any applicable discounts, surcharges and/or taxes. On a Customer's bill statement, the bill amount may be broken down into appropriate components as calculated under Section C.

2. Calculation of Usage Tiers

Tier 1 Electricity usage shall be calculated and billed based upon a level of 11 kWh per day, prorated by Meter reading days of Service. As an example, for a 30-day bill, the Tier 1 level would be 330 kWh. For further discussion of bill calculation and proration, refer to Rule and Regulation 11.

{End}

CITY OF PALO ALTO UTILITIES
Issued by the City Council

CITY OF PALO ALTO UTILITIES

Supersedes Sheet No E-1-1 dated 7-1-2022

Sheet No **E-1-1**
Effective 7-1-2023

6.2.6 Sacramento Municipal Utilities District (Electric Only)

Following are the SMUD electricity tariffs applied in this study. The rates effective January 2023 were used.

Residential Time-of-Day Service
Rate Schedule R-TOD

II. Firm Service Rates

A. Time-of-Day (5-8 p.m.) Rate

	Effective as of January 1, 2023	Effective as of January 1, 2024	Effective as of May 1, 2024	Effective as of January 1, 2025	Effective as of May 1, 2025
Time-of-Day (5-8 p.m.) Rate (RT02)					
Non-Summer Season (October - May)					
System Infrastructure Fixed Charge *per month per meter*	$23.50	$24.15	$24.80	$25.50	$26.20
Electricity Usage Charge					
Peak *$/kWh*	$0.1547	$0.1590	$0.1633	$0.1678	$0.1724
Off-Peak *$/kWh*	$0.1120	$0.1151	$0.1183	$0.1215	$0.1248
Summer Season (June - September)					
System Infrastructure Fixed Charge *per month per meter*	$23.50	$24.15	$24.80	$25.50	$26.20
Electricity Usage Charge					
Peak *$/kWh*	$0.3279	$0.3369	$0.3462	$0.3557	$0.3655
Mid-Peak *$/kWh*	$0.1864	$0.1914	$0.1967	$0.2021	$0.2077
Off-Peak *$/kWh*	$0.1350	$0.1387	$0.1425	$0.1464	$0.1505

B. Optional Critical Peak Pricing Rate

1. The CPP Rate base prices per time-of-day period are the same as the prices per time-of-day period for TOD (5-8 p.m.).
2. The CPP Rate provides a discount per kWh on the Mid-Peak and Off-Peak prices during summer months.
3. During CPP Events, customers will be charged for energy used at the applicable time-of-day period rate plus the CPP Rate Event Price per kWh as shown on www.smud.org.
4. During CPP Events, energy exported to the grid will be compensated at the CPP Rate Event Price per kWh as shown on www.smud.org.
5. The CPP Rate Event Price and discount will be updated annually at SMUD's discretion and posted on www.smud.org.

C. Plug-In Electric Vehicle Credit (rate categories RT02 and RTC1)

This credit is for residential customers who have a licensed passenger battery electric plug-in or plug-in hybrid electric vehicle.
Credit applies to all electricity usage charges from midnight to 6:00 a.m. daily.
Electric Vehicle Credit..... -$0.0150/kWh

III. Electricity Usage Surcharges

Refer to the following rate schedules for details on these surcharges.

A. Hydro Generation Adjustment (HGA). Refer to Rate Schedule HGA.

IV. Rate Option Menu

A. Energy Assistance Program Rate. Refer to Rate Schedule EAPR.
B. Medical Equipment Discount Program. Refer to Rate Schedule MED.
C. Joint Participation in Medical Equipment Discount and Energy Assistance Program Rate. Refer to Rate Schedule MED.

SACRAMENTO MUNICIPAL UTILITY DISTRICT Sheet No. **R-TOD-2**
Resolution No. 23-09-09 adopted September 21, 2023 Effective: **September 22, 2023**

A. Time-of-Day (5-8 p.m.) Rate (rate category RT02)

1. The TOD (5-8 p.m.) Rate is the standard rate for SMUD's residential customers. Eligible customers can elect the Fixed Rate under Rate Schedule R as an alternative rate.

2. The TOD (5-8 p.m.) Rate is an optional rate for customers who have an eligible renewable electrical generation facility under Rate Schedule NEM1 that was approved for installation by SMUD prior to January 1, 2018.

3. This rate has five kilowatt-hour (kWh) prices, depending on the time-of-day and season as shown below. Holidays are detailed in Section V. Conditions of Service.

Summer (Jun 1 - Sept 30)	**Peak**	Weekdays between 5:00 p.m. and 8:00 p.m.
	Mid-Peak	Weekdays between noon and midnight except during the Peak hours.
	Off-Peak	All other hours, including weekends and holidays[1].
Non-Summer (Oct 1 - May 31)	**Peak**	Weekdays between 5:00 p.m. and 8:00 p.m.
	Off-Peak	All other hours, including weekends and holidays[1].

[1] See Section V. Conditions of Service

6.2.7 Fuel Escalation Assumptions

The average annual escalation rates in Table 28 were used in this study. These are based on assumptions from the CPUC 2021 En Banc hearings on utility costs through 2030 (California Public Utilities Commission, 2021a). Escalation rates through the remainder of the 30-year evaluation period are based on the escalation rate assumptions within the 2022 TDV factors. No data was available to estimate electricity escalation rates for CPAU and SMUD, therefore electricity escalation rates for PG&E and statewide natural gas escalation rates were applied. Table 29 presents the average annual escalation rates used in the utility rate escalation sensitivity analysis shown in Section 3.2.4. Rates were applied for the same 30-year period and are based on the escalation rate assumptions within the 2025 LSC factors from 2027 through 2053.[28] These rates were developed for electricity use statewide (not utility-specific) and assume steep increases in gas rates in the latter half of the analysis period. Data was not available for the years 2024, 2025, and 2026 and so the CPUC En Banc assumptions were applied for those years using the average rate across the three IOUs for statewide electricity escalation.

Table 28: Real Utility Rate Escalation Rate Assumptions, CPUC En Banc and 2022 TDV Basis

	Statewide Natural Gas Residential Average Rate (%/year, real)	Electric Residential Average Rate (%/year, real)		
		PG&E	SCE	SDG&E
2024	4.6%	1.8%	1.6%	2.8%
2025	4.6%	1.8%	1.6%	2.8%
2026	4.6%	1.8%	1.6%	2.8%
2027	4.6%	1.8%	1.6%	2.8%
2028	4.6%	1.8%	1.6%	2.8%
2029	4.6%	1.8%	1.6%	2.8%
2030	4.6%	1.8%	1.6%	2.8%
2031	2.0%	0.6%	0.6%	0.6%
2032	2.4%	0.6%	0.6%	0.6%
2033	2.1%	0.6%	0.6%	0.6%
2034	1.9%	0.6%	0.6%	0.6%
2035	1.9%	0.6%	0.6%	0.6%
2036	1.8%	0.6%	0.6%	0.6%
2037	1.7%	0.6%	0.6%	0.6%
2038	1.6%	0.6%	0.6%	0.6%
2039	2.1%	0.6%	0.6%	0.6%
2040	1.6%	0.6%	0.6%	0.6%
2041	2.2%	0.6%	0.6%	0.6%
2042	2.2%	0.6%	0.6%	0.6%
2043	2.3%	0.6%	0.6%	0.6%
2044	2.4%	0.6%	0.6%	0.6%
2045	2.5%	0.6%	0.6%	0.6%
2046	1.5%	0.6%	0.6%	0.6%
2047	1.3%	0.6%	0.6%	0.6%
2048	1.6%	0.6%	0.6%	0.6%
2049	1.3%	0.6%	0.6%	0.6%
2050	1.5%	0.6%	0.6%	0.6%
2051	1.8%	0.6%	0.6%	0.6%
2052	1.8%	0.6%	0.6%	0.6%
2053	1.8%	0.6%	0.6%	0.6%

[28] https://www.energy.ca.gov/files/2025-energy-code-hourly-factors. Actual escalation factors were provided by consultants E3.

Table 29: Real Utility Rate Escalation Rate Assumptions, 2025 LSC Basis

Year	Statewide Natural Gas Residential Average Rate (%/year, real)	Statewide Electricity Residential Average Rate (%/year, real)
2024	4.6%	2.1%
2025	4.6%	2.1%
2026	4.6%	2.1%
2027	4.2%	0.6%
2028	3.2%	1.9%
2029	3.6%	1.6%
2030	6.6%	1.3%
2031	6.7%	1.0%
2032	7.7%	1.2%
2033	8.2%	1.1%
2034	8.2%	1.1%
2035	8.2%	0.9%
2036	8.2%	1.1%
2037	8.2%	1.1%
2038	8.2%	1.0%
2039	8.2%	1.1%
2040	8.2%	1.1%
2041	8.2%	1.1%
2042	8.2%	1.1%
2043	8.2%	1.1%
2044	8.2%	1.1%
2045	8.2%	1.1%
2046	8.2%	1.1%
2047	3.1%	1.1%
2048	-0.5%	1.1%
2049	-0.6%	1.1%
2050	-0.5%	1.1%
2051	-0.6%	1.1%
2052	-0.6%	1.1%
2053	-0.6%	1.1%

Get In Touch

The adoption of reach codes can differentiate jurisdictions as efficiency leaders and help accelerate the adoption of new equipment, technologies, code compliance, and energy savings strategies.

As part of the Statewide Codes & Standards Program, the Reach Codes Subprogram is a resource available to any local jurisdiction located throughout the state of California.

Our experts develop robust toolkits as well as provide specific technical assistance to local jurisdictions (cities and counties) considering adopting energy reach codes. These include Cost-effectiveness research and analysis, model ordinance language and other code development and implementation tools, and specific technical assistance throughout the code adoption process.

If you are interested in finding out more about local energy reach codes, the Reach Codes Team stands ready to assist jurisdictions at any stage of a reach code project.



Visit LocalEnergyCodes.com to access our resources and sign up for newsletters.



Contact info@localenergycodes.com for no-charge assistance from expert Reach Code advisors



Follow us on LinkedIn

Outlook

Comment on Item 2.1 Green Building Requirements.

From McKitterick, Nate <Nate.McKitterick@us.dlapiper.com>
Date Tue 9/9/2025 1:54 PM
To Town Council <towncouncil@sananselmo.gov>

CAUTION: External Sender

Hello. I am Nate McKitterick, a Town resident. I was a Planning Commissioner for 12 years. I currently serve as a member of the Sierra Club Executive Committee, though I am not commenting in that role. I am sorry I can't come tonight as I have a class.

First, I appreciate that the Town is being proactive on considering this change before the deadline, but also cautious about increasing effective costs of residential construction, particularly additions, ADUs, and new multifamily properties. The shortage of housing in Marin, necessitating commutes from North Marin and other counties in the Bay Area, is the #1 cause of greenhouse gas emissions in Marin, by far. Building costs are already so high that no new multifamily housing projects have broken ground in some time.

At least some of the Potential Cost Impacts are likely inaccurate for San Anselmo. Even a modest solar project, with no batteries, well-exceeds $20,000, not the $12,000-$20,000 range provided. I am about to get a quote on a air-water heat pump, but with retail plumbers going for $200+ an hour, I am pretty sure $4,000-$8,000 will prove light as well. **That said, the 2025 Code, in the context of new single family home construction, may make sense, as these improvements will likely be done by most homeowners anyway either because they are required by other codes, or are popular.** Those items include EV-ready wiring and heat pumps. So, the 2025 Code may not materially add to cost of new single-family home construction.

Regarding multifamily projects, I really can't say whether 2025 vs 2022 will mean some projects do not go forward. I can say from one large multifamily project the Sierra Club reviewed in Corte Madera that a certain level of bike parking was difficult to make work, but we were supportive anyway. Would that, on top of other things the 2025 Code requires, made the project unprofitable? I have my doubts, but don't know; I am concerned whether any of these projects will actually break ground unless interest rates drop or labor/materials costs moderate.

Regarding remodels of existing homes, I recommend you consider defining "substantial improvements to an existing single-family building" to a bright line of modifications to over 50% of the habitable square footage. It's unclear to me what this standard means, otherwise. Cost-based standards are often draconian due to current construction costs.

I do expressly counsel rejection of expansion of projects to which the Code will apply. So, consistent with Staff's recommendations, I recommend:

- You do not adopt a reduction of "Covered Projects" from 750 to 500 square feet.
- You continue a broad exception for ADUs.

Thank you for your service!
-Nate

100 Alder Ave.
San Anselmo, CA 94960
650-787-7478

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STAFF REPORT

TOWN OF SAN ANSELMO Item #: 3.1

MEETING DATE: September 9, 2025

AGENDA TITLE: Consider Appointing Four Members to the Planning Commission

FROM: Serge Avila, Town Clerk

RECOMMENDATION: For the Town Council to consider appointing four members to the Planning Commission for a four year term.

BACKGROUND & DISCUSSION

The Planning Commission is an active committee established in 1938. Its primary role is to consider how land use decisions affect the Town. In this role, the Commission has review and approval authority for design review, use permits, variances, zoning changes and planned developments. The Commission makes recommendations to the Town Council regarding plan and ordinance updates.

The Planning Commission has a membership of seven seats appointed by the Town Council to serve four-year terms.

Currently there are two expired terms and two vacancies. The Committee is composed of the following members with their respective expiring terms:

Name	***Term***	***Term Expiration***
Gary Smith	Current	August 27, 2028
Jennifer Asselstine	**Expired**	August 18, 2025
Tim Heiman	**Expired**	August 18, 2025
Peter Thomas Strauss	Current	August 18, 2026
Kim Pipkin	Current	August 18, 2026
Vacant		
Vacant		

There are four (4) seats available.

The Council may consider making (4) appointments to the Planning Commission from the following list of applicants:

List of applicants:

Tara Ticknor- interviewed earlier today
Jacob “Jake” Shemano- interviewed earlier today
Elizabeth Thomas- interviewed earlier today
Paul Corning- interviewed earlier today
Jennifer Asselstine- incumbent- interviewed earlier today
Tim Heiman- incumbent- interviewed earlier today

FISCAL IMPACT

There would be no direct fiscal impact on the Town to approve this item.

CEQA AND CLIMATE ACTION PLAN CONSISTENCY

The proposed appointment is not a “project” under the California Environmental Quality Act, because it does not involve an activity which has the potential to cause a direct or reasonably foreseeable indirect physical change in the environment. (Cal. Pub. Res. Code § 21065).

ATTACHMENTS

Attachment 1- Tara Ticknor- Application no Resume
Attachment 2- Jacob “Jake” Shemano- Application w/Resume
Attachment 3- Elizabeth Thomas- Application w/Resume
Attachment 4- Paul Corning- Application w/Resume
Attachment 5- Jennifer Asselstine- Application no Resume
Attachment 6- Tim Heiman- Application w/Personal Statement

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Tara
First Name

M
Middle Initial

Ticknor
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Structural Engineer

Employer's Address

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

18

Number of years as a resident in Marin?

20

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

John Merten 415-721-0905 Scott Henderson (415) 521-0564 Kirsten Barre (415) 794-9001

Education Level Achieved *

- [x] College/University Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

N/a

Reasons for this appointment:

Extensive and valuable experience in the construction industry

What are your qualifications for this appointment?

I have worked in the field of structural engineering for 25 years. I have worked on residential, commercial, and public projects. I am very familiar with the construction industry and how building and design impact communities. I have worked on projects in seismic and flood and WUI zones and am familiar with requirements of these projects.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

Housing quantity and affordability and flooding of our downtown areas

LinkedIn Profile

https://www.linkedin.com/in/taraticknor?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=ios_app

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Tara Ticknor

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Jacob "jake" — First Name
R — Middle Initial
Shemano — Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Commercial Real Estate Development

Employer's Address

UNITED GROWTH 1000 FOURTH ST, STE 290 SAN RAFAEL, CA 94901

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

4

Number of years as a resident in Marin?

23

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Victor Mora (415) 542-6550 Nick Christianson (415) 699-9531 Peter Strauss (720) 308-7651

Education Level Achieved *

☑ College/University Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

I have not had the opportunity to serve my community in the past, however, I have had the opportunity to present various projects to public commissions and boards.

Reasons for this appointment:

I'm seeking an appointment to the Planning Commission as I would like to have the opportunity to participate in the project review process and apply my experience in support of project sponsors actively engaged in improving the community. I also believe that my experience can serve as a helpful filter to refine changes to regulation and process.

What are your qualifications for this appointment?

I've spent the last 10 years of my professional life preparing projects to go in front of planning staff and project review boards in a variety of jurisdictions. I have familiarity with the public process, staff review, environmental studies, density bonus law, and California's streamlined residential development legislation.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

1) Ensuring the timely and fair review of all projects without undue delay. 2) Reviewing all staff recommended changes to policy and code through a lens of public impact, enforceability, and practicality.

LinkedIn Profile

https://www.linkedin.com/in/jake-shemano/

J_Shemano_Resume_2025.pdf
Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Jake Shemano

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Jacob “Jake” Shemano

| LinkedIn

EDUCATION

University of Southern California, Los Angeles, CA
B.S., Policy, Planning & Development – Urban Planning & Development, 2005

Cornell University, Ithaca, NY
Commercial Real Estate Certificate, 2020

LICENSES

California Department of Real Estate – Broker License (No. 01848976)

CORE COMPETENCIES

- **Real Estate Development:** 10+ years overseeing residential, mixed-use, and commercial developments nationwide. Deep expertise in entitlements, zoning, environmental review, directing consultants, budgeting, scheduling, and community engagement.
- **Sales, Acquisitions & Leasing:** Proven track record in negotiating purchase agreements, leases, termination agreements, completing due diligence investigations, title review, and managing escrow.
- **Property & Asset Management:** Managed large, diverse portfolios of apartments with expertise in rent control, fair housing laws, refining operating budgets, and vendor/staff oversight.
- **Project Management:** Experienced owners representative responsible for negotiating GC contracts, project oversight, budget management, schedule management, pay application review, and punch listing.
- **Construction:** Practical carpentry skills; proficient in reading blueprints, framing, finish carpentry, and painting.
- **Technology:** Microsoft Office Suite, Google Suite, Dropbox, DocuSign, Adobe Acrobat, tenant tracking databases.

Jacob "Jake" Shemano
181 Tunstead Avenue, San Anselmo, California
(415) 845-5768 | jshemano@gmail.com | LinkedIn

PROFESSIONAL EXPERIENCE

United Growth – San Rafael, CA | *Commercial Real Estate Development*
Development Manager | Sep 2023 – Present

- Oversee full lifecycle of commercial development projects from due diligence through tenant delivery.
- Manage entitlement processes, tenant selection, and landlord deliverables.

Abode Communities – Remote | *Affordable Housing Development*
Senior Acquisitions Manager | Jan 2022 – Sep 2023

- Sourced and modeled new investment opportunities.
- Negotiated purchase, relocation, and termination agreements; led community outreach and entitlements.

Realtex, Inc. – San Francisco, CA | *Multifamily Real Estate Development*
Development / Project Manager | Nov 2014 – Jan 2022

- Directed $55M in land acquisitions and secured entitlements for multiple high-profile developments.
- Led tenant buyouts, consultant coordination, and city agency engagement.

Canyon Pacific Management – San Francisco, CA | *Property Management*
Association Manager | Aug 2013 – Apr 2014

- Managed operations for nine condominium associations and a commercial property (286 units).

Chandler Properties – San Francisco, CA | *Property Management, Sales & Leasing*
Property Manager / Investment Sales & Leasing Associate | Oct 2009 – Jan 2013

- Managed 15 multifamily properties (324 units) across San Francisco.
- Successfully leased 250+ apartments.

AGI Capital – San Francisco, CA | *Residential & Commercial Development*
Development Intern | May 2009 – Sep 2009

- Evaluated foreclosure investment opportunities.
- Assisted in the delivery of a self-storage facility.

Early Career – Carpentry & Construction Roles | 2001 – 2008

- Worked on residential renovations, houseboat construction, and luxury home builds in the San Francisco Bay Area.

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Elizabeth (First Name) | F (Middle Initial) | Thomas (Last Name)

Email Address

Home Address | Suite or Apt

City | State | Postal Code

Primary Phone | Alternate Phone

Occupation

Real Estate Attorney

Employer's Address

DoorDash, Inc. 303 2nd Street San Francisco, CA 94107

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

1

Number of years as a resident in Marin?

16

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Rebecca Fisk - 408-666-0002 Katherine Keon - 415-505-5433 Jimmy Simpson - 203-912-6874

Education Level Achieved *

☑ Master's Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

2016-2017 - Served on the Marin County Women's Commission, appointed by Kate Sears. Although I ended my term early due to conflicting family responsibilities, I now have more time to dedicate to civic engagement as my children are older now. I am also currently a member of SF CREW (Commercial Real Estate Women) and serve on their Programming Committee.

Reasons for this appointment:

I am a relatively new resident of San Anselmo, having moved here last year with my two older children (ages 15 and 20) in order to be closer to my son's school, San Domenico. I am eager to contribute in a positive way to this Town's vibrancy, friendliness, openness and community-mindedness.

What are your qualifications for this appointment?

I am a seasoned real estate attorney with almost 25 years of broad-based experience, including transactions, zoning and land use, construction, development, and financing. I am also a homeowner and a parent, with a vested interest in helping to maintain the warmth and stability of San Anselmo.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

Smart implementation of the new General Plan, specifically as it relates to pressure on housing and sustainably managing resources. Multiple buildings downtown are vacant. This is both an opportunity and a risk for the Town.

LinkedIn Profile

www.linkedin.com/in/elizabeth-thomas-ab737221

Elizabeth_Thomas_Resume.pdf
Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Elizabeth Thomas

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Elizabeth Thomas
San Anselmo, CA 94960

RELATED WORK EXPERIENCE:

DoorDash, Inc. **San Francisco, CA**
Director, Real Estate Legal *2020 - present*

- Established and built in-house real estate legal function to support rapid national expansion of multiple business units. Manage transactions in North America for all business units including parcel delivery, quick convenience, personal delivery devices, drones and corporate. Asset classes include office, R&D, retail, warehouse, and land.
- Manage and train teams of outside counsel at multiple law firms, and internal attorneys and paralegals.
- Built infrastructure to streamline cohesive legal transaction management. Established portfolio-wide transaction standards and negotiating positions.
- Seconded to internal business unit to accelerate growth of real estate portfolio.

Uber Technologies, Inc. **San Francisco, CA**
Director, Real Estate Legal *2015 - 2020*

- In-house commercial real estate attorney. Managed transactions in the United States for rideshare, autonomous vehicles, air mobility, food delivery, bikes and scooters, freight, and special projects.
- Collaborated with internal finance, insurance, facilities, procurement, business development and corporate groups to set guidelines and policies for leasing and transaction management.

Coblentz Patch Duffy & Bass LLP **San Francisco, CA**
Associate Attorney, Real Estate Group *2011 - 2014*

- Commercial real estate attorney with San Francisco-based law firm ranked top tier real estate firm by Chambers USA.
- Drafted and negotiated office, industrial, retail, and ground leases, purchase and sale agreements, option agreements, listing agreements, easement agreements, and related documents.
- Notable Transactions: leasing office, warehouse and industrial properties for PG&E; leasing multiple new restaurant locations for Boudin Bakery as tenant; leasing portfolio of South Bay properties to technology companies for Equity Office Properties as landlord; leasing portfolio of industrial properties for Morgan Stanley as landlord.

Goulston & Storrs, PC **Boston, MA**
Associate Attorney, Real Estate Group *2006 - 2009*

- Commercial real estate attorney with Boston-based law firm recognized by American Lawyer's AmLaw 200 list.
- Practice included leasing, purchase and sales, development, land use, financing, and affordable housing.
- Notable Transactions: portfolio acquisition of forty-five commercial properties by Beacon Capital Partners from Equity Office Properties; local permitting matters for Blackstone Properties; leasing, acquisition, and permitting of Shire Pharmaceuticals corporate campus; leasing of build-to-suit headquarters for National Grid, certified LEED Platinum.

Simpson Asset Management Company **Boston, MA**
Vice President *2006 - 2011*

- Managed property management company and leasing team for two office buildings in downtown Boston.
- Directed the sale of an office building and adjacent hotel in downtown Washington, D.C. to investment group led by national commercial real estate developer.

Shearman & Sterling LLP **Menlo Park, CA**
Corporate Paralegal – Capital Markets and Mergers & Acquisitions *1998 – 1999*

- Corporate paralegal for public offerings of equity and debt, mergers and acquisitions, and corporate advisory services.
- Notable Transactions: $325 million high-yield debt offering for Amazon.com, secondary public offering for E-Bay, Inc.

Vrolyk & Company LLC **San Francisco, CA**
Corporate Finance Analyst *1996 – 1998*

- Member of six-person team providing merger and acquisition advisory and private equity and debt placement services. Prepared financial analysis and valuations, client presentations, industry reports, and private placement memoranda.

EDUCATION:

Boston College Law School **Newton, MA**
Juris Doctor *May 2006*

Middlebury College **Middlebury, VT**
Bachelor of Arts in International Politics and Economics / French *May 1996*

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Paul
First Name

Middle Initial

Corning
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Retired

Employer's Address

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

3.5

Number of years as a resident in Marin?

7

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Bon Pipkin - (415) 246-6528 Ben Burtt - (415) 456-0591 Kathryn Acevedo - (415) 450-1204

Education Level Achieved *

☑ Master's Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

I served on the board of the Pacific Heights Residents Association in San Francisco, which included mediation disputes between neighbors over permit applications.

Reasons for this appointment:

I am looking for a way to serve the Town, and have always been interested in real estate, construction projects and planning decisions.

What are your qualifications for this appointment?

I listen and analyze well, and communicate clearly. I can read architectural plans, zoning and planning documents, and building codes. I have mediated disputes between neighbors over proposed construction projects. I have experience with rules and conduct requirements of public meetings. And I have made a commitment to live in San Anselmo.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

The main challenges seem to be supporting development of housing for income-diverse residents, and achieving Housing Element-related objectives, while conforming to the General Plan. and preserving both San Anselmo's essential character and its economic vitality.

LinkedIn Profile

Resume_Paul_Corning_2025.pdf

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Paul Corning

Thank you for your interest in serving the Town of San Anselmo and its citizens. For further information, please contact the Town Clerk, townclerk@townofsananselmo.org or 415-258-4660.

Paul Corning

Clear Academy LLC – Cheyenne, WY (2013-2017)

Principal, Founder – Co-founded startup to develop mobile applications

- Developed Clear English app to help English language learners improve their pronunciation.

BMP Holdings LLC – San Francisco, CA (2007-2010)

CEO, Co-Founder – Co-founded startup to develop social editing technology.

- Developed Daily Paws, a consumer web site to support research in novel collaborative filtering techniques.

Springcreek Advisors LLC – Corte Madera, CA (2003 – 2009)

Director – Joined to help transform a small investment advisory firm.

- Served as acting co-CEO, hired investment advisory and legal teams, recruited permanent CEO.

OpenDesign, Inc. – South San Francisco, CA (2000 – 2001)

Director of Product Management – Experimental peer-to-peer networking startup.

NetSanity, Inc. – Redwood City, CA (1999 – 2000)

Director of Mobile Products – Internet applications for mobile phones.

Diamond Multimedia Systems, Inc. – San Jose, CA (1995 – 1999)

Country Manager (1997 – 1999) – Managed Australia and New Zealand business for a leading manufacturer of personal computer peripheral hardware.

- Incorporated company in Australia, ran sales, marketing and advertising.

Product Line Manager (1997 – 1997)

- Defined and launched consumer hardware/software products..

Fakespace, Inc. – Menlo Park, CA (1993-1994)

Sales and Marketing Manager – Managed sales, wrote business plan for a VR display manufacturer.

SRI International – Menlo Park, CA (1988 – 1993)

Consultant to SRI – Worked for Sciences Division of a non-profit research institute.

- Worked with 3 research teams to win development projects, wrote org plan for $90 million business unit.

Education: **University of California at Berkeley** – Berkeley, CA (*M.B.A.*)
Wesleyan University – Middletown, CT (*B.A.* – *Philosophy*)

Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Jennifer
First Name

M
Middle Initial

Asselstine
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Architect and Educator (retired)

Employer's Address

San Anselmo Ave

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

26

Number of years as a resident in Marin?

26

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Deborah Cichocki 415 203-0589 Susan Cronk 415 377-1462 Sue Sherer 415 847-7409

Education Level Achieved *

☑ College/University Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

Member of the Planning Commission since 2021, Chair of the Planning Commission in 2024
Member of the General Plan Advisory Board

Reasons for this appointment:

Interested in promoting housing growth in San Anselmo while maintaining the town's natural environment and architectural attraction.

What are your qualifications for this appointment?

almost 40 years as an architect and architectural educator. I was the Undergraduate Director at the Academy of Art University In San Francisco.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

As mentioned above. - expanding our housing stock - protecting the natural environment and built environment from the forces of climate change

LinkedIn Profile

https://www.linkedin.com/in/jennifer-asselstine-aia-noma-4803b92a?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=ios_app

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Jennifer M Asselstine

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Jennifer Miner Asselstine

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Application for Appointment to a San Anselmo Board/Commission/Committee

Profile

Tim
First Name

L
Middle Initial

Heiman
Last Name

Email Address

Home Address

Suite or Apt

City

State

Postal Code

Primary Phone

Alternate Phone

Occupation

Structural Engineer

Employer's Address

Retired

Which Boards would you like to apply for?

Planning Commission: Submitted

Number of years as resident of San Anselmo?

22

Number of years as a resident in Marin?

22

Name and phone numbers of three San Anselmo residents who can be contacted for referral information about me:

Alan Cascio 415-246-1783 Matt Brazler 415-271-5294 Nancy Grover 415-453-3549

Education Level Achieved *

- [x] Master's Degree

Interests & Experiences

I would be able to regularly attend the meetings of this Board/Commission/Committee.

◉ Yes ○ No

I would be available to attend additional meetings when they are necessary.

◉ Yes ○ No

I am familiar with the responsibilities and functions of this Board/Commission/Committee.

◉ Yes ○ No

I have attended meetings of the Board/Commission/Committee as a member of the public.

◉ Yes ○ No

List briefly, previous experience serving the public office, and/or civic commissions, boards, or committees:

Fund raising committees for our son's elementary and hight schools. Member of SA Planning commisison for almost 8 years in which I have served as Vice-Chair and Chair. I am the current Vice-Chair of the commisson.

Reasons for this appointment:

Since I am retired I have the time and wish to continue being involved in our community. I feel that the planning commission matches ny interests and professional experience.

What are your qualifications for this appointment?

My professional experience working with and undestanding complex code provisions. Also my experience working with other design professionals on residential and commerical projects.

Briefly, what do you consider to be the most important, one or two current issues facing this Board/Commission/Committee?

The development of additional housing in our town by encouraging ADU's and multi-family housing and/or mixed use projects which are in conformance with SA's housing element and blend in with the surrounding neighborhood. As a planning commissioner I have suggested several changes to SA's developemnt code allowing smaller lot sizes and lot line adjustments to non-conforming lots to encourage housing. A second important issue is maintaining a vibrant downtown commercial district by assisting the developemnt of new businesses.

LinkedIn Profile

https://www.linkedin.com/in/tim-heiman-45563511

SA_Planning_Personal_Statement_-6-23-25.pdf

Upload a Resume

You may attach other documentation which you believe would be helpful to the Council in its selection process.

Please Agree with the Following Statement

I understand that I and all other applicants will be personally interviewed by the Town Council (or the entity overseeing the Steering and Short Term Committees) as part of the selection process for this appointment. I also understand that my application material will be a public document and available on the Town's website. Sensitive materials that you don't wish to be posted on the website should not be included with the application.

☑ I Agree

E-Signature:

Tim L. Heiman

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TIM L. HEIMAN, SE

Personal Statement

I have been a practicing Structural Engineer for over 40 years in the SF Bay Area. During that time I have consulted with Architects and Contractors on a wide variety of residential and commercial projects ranging from senior living facilities and affordable housing projects to hospitals and higher education projects. Thru my work I have gained an understanding of codes and planning issues such as setbacks, height limits, density bonuses and parking requirements. I also understand how development can impact the local community, both positively and negatively.

While not a licensed Architect, my undergraduate Architectural Engineering degree program included three years of pre-architecture and design classes. In addition, I have been exposed to many different types of building design over the years and have a sense when a proposed design fits in with the adjacent surroundings. As a LEED accredited professional, I also understand how the design and construction of the built environment can be done with minimal impact on the environment.

As a practicing Structural Engineer, I feel I can bring a unique perspective to the Planning Commission. While the impact to adjacent buildings due to structural issues are minimal on flatland development that is not necessarily the case on hillside development. Hillside excavations can create slope stability problems and alter drainage patterns both of which can affect neighbors. As a structural engineer, I understand these issues and have worked with Geotechnical and Civil engineers to mitigate these them.

Local Project Experience

During my career I have been the structural engineer many projects throughout the Bay Area including Marin and Sonoma Counties. I also designed my own home in San Anselmo. A partial list of my local projects include:

- Marin Health – Oak Pavilion Hospital Addition & West Wing Renovation
- Kaiser Santa San Rafael - Various Renovation Projects
- Kaiser San Santa Rosa - North Wing Addition & Medical Office Building
- Villa Marin Retirement Residences, San Rafael
- Spring Lake Village Retirement Residences, Santa Rosa