**This is a DRAFT of Marin’s Countywide Electrification Roadmap: Key Components version 3 (**[**version 1 (original) available here**](https://www.marincounty.org/-/media/files/departments/cd/planning/sustainability/electrify-marin/electrification-roadmap/key-component-actions-drafts/key-component-actions_-details-v1_for-feedback.docx?la=en) **and** [**version 2 available here**](https://www.marincounty.org/-/media/files/departments/cd/planning/sustainability/electrify-marin/electrification-roadmap/key-component-actions-drafts/key-component-actions_-details-v2_for-feedback.docx?la=en)**).**

**This version:**

1. **Is for use as a supplement document to feedback workshop participants provided via the** [**Workshop #3 Post-meeting Comment whiteboard**](https://miro.com/app/board/uXjVNCmQJXM=/?share_link_id=259473068133) **and those responding to the** [**Key Actions Survey**](https://forms.office.com/g/GMEYLJ2DLW) **as a reference.**
2. **Does not reflect the final to be adopted by any jurisdiction nor yet commits anyone to implementation.**
3. **Only proposed recommended key component actions to the larger roadmap document that is currently being drafted**
4. **Produced in Microsoft Word Tracked Changes. Changes from v2 to v3 are reflected in ~~RED~~ as a strikethrough (eliminated) or RED as an underline (added).**

PROPOSED Key Component Actions in Phases

v3 published 2/6/2024 ([v1 published 11/15/2023](https://www.marincounty.org/-/media/files/departments/cd/planning/sustainability/electrify-marin/electrification-roadmap/key-component-actions-drafts/key-component-actions_-details-v1_for-feedback.docx?la=en) and [v2 published 12/26/2023](https://www.marincounty.org/-/media/files/departments/cd/planning/sustainability/electrify-marin/electrification-roadmap/key-component-actions-drafts/key-component-actions_-details-v2_for-feedback.docx?la=en))

Building Electrification Roadmap: A plan recommending steps that transitions Marin to an all-electric future

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# 

# Immediate (2024-2025)

* A phase where new and existing policy, programs and incentives are currently being implemented and already have some traction.
* This phase also includes actions that can be acted upon today, with limited resources.
* These additional actions need to be nurtured today (e.g. outreach, education, research and analysis, and identifying more resources) to support implementation of future:
  1. Mandated Regulatory Timelines (e.g. 2027-2031 Bay Area Air Quality Management District’s (BAAQMD) NOx rules, CARB 2030 Zero-emission space and water heaters), and
  2. Actions illustrated in the [near-](#_wfwu003s2i8s) and [long-term](#_nj1kprcn7yld) phases below

| **Action**  **#** | **Action Description**  **(Policy, Program, Incentives)** | **Action Details** | **Equity Consideration(s)** | **Recommended Implementing**  **Organizations and Partners** |
| --- | --- | --- | --- | --- |
| I-1 | **Develop, adopt and implement building reach codes for New Construction** that are all-electric, energy efficient, cost-effective, increase electric vehicle charging infrastructure and creates code consistency across all Marin jurisdictions. | * Ensure codes do not preempt federal standards and are justified through the State’s cost effectiveness studies. * Create code uniformity by continuing to support all 12 Marin Jurisdictions to align with 2022 Marin Model Reach Codes already developed in collaboration with the community * Apply to all building types (residential and commercial) * Prepares building stock to get ahead of California’s ever more stringent Green Building and Energy Codes * Support advocacy and [California Air Resources Board’s effort that encourages a Statewide zero-emissions standard](https://ww2.arb.ca.gov/our-work/programs/building-decarbonization/building-standards-code/zero-emission-buildings-calgreen) for residential new construction within the State building code standards aka CALGreen. * Ensure local code allows for use of low GWP refrigerants (e.g., CO2, propane, and other nature-based) | * Exemptions and hardship and feasibility waivers for   + Low-income households   + Households with special medical and accessibility needs * Ensure development of Low-income multi-unit housing projects are not inhibited. | 1. Local Government: Councils/Electeds and Staff |
| I-2 | **Develop, adopt and implement building reach codes for Existing Single-Family and Multi-unit Renovations** that implement electric appliance measures, are energy efficient, cost-effective increase access to electric vehicle charging infrastructure and creates code consistency across all Marin jurisdictions. | * Create code uniformity by continuing to support all 12 Marin Jurisdictions to align with 2022 Marin Model Reach Codes already developed collaboration with the community * Prepares building stock to get ahead of California’s ever more stringent Green Building and Energy Codes * Apply to all Single-family residential of a certain size or permit valuation * Apply to Multi-unit Developments (MUDs) as long as it complements housing production * Require Electric Readiness requirements especially for buildings built before 1980 * Provide resources on electrical panel optimization vs upsizing * Ensure local code allows for use of low GWP refrigerants (e.g., CO2, propane, and other nature-based) | * Exemptions and hardship and feasibility waivers for   + Low-income households   + Households with special medical and accessibility needs * Encourage use of housing programs that to disincentivize property owners from displacing multi-unit renters during renovations or rehabilitation   + For example, [Multifamily Energy Savings Assistance (ESA) program](https://esamultifamily.com/) implemented by investor-owned utilities (IOUs) * Consider anti-displacement policies (e.g. reference [SAJE](https://www.saje.net/wp-content/uploads/2023/09/Decarbonizing-California-Equitably-Report-1.pdf) or [Build-it Green](https://www.builditgreen.org/blog/reporting-out-renter-protections-in-equitable-building-decarbonization/)) | 1. Local Government: Councils/Electeds and Staff 2. PG&E 3. Market-rate and Affordable Housing Developers 4. Marin Clean Energy |
| I-3 | **Collaborate with and tie-in new and existing programs and existing service providers to pursue a countywide, “central hub”** that provides on and offline resources to residences and businesses pursuing their energy and electrification project(s). | * Create a countywide webpage or “central hub” that connects residences and business to low touch building energy electrification and EV resources services   + Consolidation and links to existing incentives, programs, building code requirements and service providers, available to all 12 Marin jurisdictions   + All 12 Marin jurisdictions and community-based organizations should coordinate to route all building energy and electrification projects through this webpage   + Include collateral such as steps to electrification and EV infrastructure for residences and businesses and links to local, regional, state and federal resources * “Low touch” services include those who don’t mind to DIY and may include platforms that can be used from the convenience of your home such as   + Incentive and rebate information and applications and qualified contractor list (e.g., [Electrify Marin](https://www.marincounty.org/depts/cd/divisions/sustainability/electrify), [BayREN](https://www.bayren.org/find-energy-professional), [SwitchIsOn](https://switchison.org/), [Rewiring America](https://www.rewiringamerica.org/)),   + Virtual home energy assessment tools (e.g., [HomeIntel](https://corp.hea.com/hintel))   + Online energy planning tools (e.g. [Rewiring America](https://www.rewiringamerica.org/), [SwitchIsOn](https://switchison.org/)) * Coordinate more regionally such as across MCE territory and/or across nine-county bay area via BayREN | * Target campaigns and efforts to benefit low-moderate income (LMI) and hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Support regional workforce development programs or initiatives such as [Lime Foundation’s NextGEN Trades Academy](https://www.thelimefoundation.org/nextgen-trades-academy/) that focuses on developing a more diverse and inclusive trades and contractor workforce * Increase awareness of and access to programs, rebates and incentives that first address deferred maintenance * Address Split-Incentives: Structure multi-unit programs that incentivize and make it easy for both renters and property owners to implement energy efficiency and electrification measures | 1. Local Government: Councils/Electeds and Staff 2. Community Based Organizations 3. Marin Clean Energy 4. BayREN 5. Platform and Service Providers/Vendors 6. Transportation Authority of Marin |
| I-4 | **Build upon implementation of the web based “central hub”** by considering a scale up of a countywide concierge and/or technical assist service for residences and businesses. | * Follow-up to Action #I-3 above * Build upon the countywide webpage or “central hub” that connects residences and business to both low and high touch building energy and electrification services * Evaluate feasibility and impact of San Anselmo’s and Fairfax’s Ready-Set-Replace pilot campaign: a high touch concierge and/or technical assist service for single and/or multi-unit homeowners as provided by Carbon Free Homes   + Determine whether funding is available or worthwhile to continue development and implementation   + Note grants and/or a competitive bidding process will be necessary if financed by government * “High touch” services includes those who need technical assistance, full project and concierge turnkey installation services, andin-person help   + Concierge services for homeowners (e.g. [QuitCarbon](https://www.quitcarbon.com/) and [Carbon Free Homes/Ready-Set-Replace) and technical assistance to architects, builders, developers, design engineers, contractors, and/or energy consultants](https://www.carbonfree.homes/)   + [Technical assists programs for multi-units (e.g.](https://www.carbonfree.homes/), [BAMBE program](https://www.bayren.org/rebates-financing/multifamily-property-owners), [MCE Energy Savings program,](https://www.mcecleanenergy.org/multifamily-savings/) [PG&E Energy Savings Assistance program](https://esamultifamily.com/))   + Virtual and/or In-person Home Energy Assessment (e.g., [Home Energy Score](https://www.bayren.org/home-learning-center/home-energy-score-hes))   + All-in-one, customizable platforms (e.g, Petaluma/Sacramento via [XeroHome](https://xerohome.com/app/#/), Sonoma Clean Power via [YellowTin](https://www.yellowtin.com/))     - Platform should have the ability to quickly:       * Analyze and give energy, GHGs and costs of installing efficiency and electrification measures per house within several minutes       * Summarize and connect user to Federal, State, utility, regional, and/or local rebates and incentives available       * View and connect with a list of qualified contractors       * Links to all 12 Marin local building code requirements and checklists       * Track community-scale impact via energy modeling or energy bill analysis * Try to coordinate more regionally such as across MCE territory or across nine-county bay area via BayREN * More funding and staffing resources are needed to provide wrap-around support, resources and outreach campaigns, which may include:   + Promoting and soliciting through social media and websites as well as in newsletters and/or utility-bill inserts   + Working through County Health and Human Services to engage and promote access to hard-to-reach communities through their Community Response Teams   + Segmenting outreach campaigns to target audiences   + Incorporating and keeping up-to-date information such as on regulations, rebates and incentives, programs, contractor lists and other services   + Evaluate the feasibility of standing up a brick-and-mortar location for in-person resources and education | * Target campaigns and efforts to benefit low-moderate income (LMI) and hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Support regional workforce development programs or initiatives such as [Lime Foundation’s NextGEN Trades Academy](https://www.thelimefoundation.org/nextgen-trades-academy/) that focuses on developing a more diverse and inclusive trades and contractor workforce * Increase awareness of and access to programs, rebates and incentives that first address deferred maintenance * Address Split-Incentives: Structure multi-unit programs that incentivize and make it easy for both renters and property owners to implement energy efficiency and electrification measures | 1. Local Government: Councils/Electeds and Staff 2. Community Based Organizations 3. Marin Clean Energy 4. BayREN 5. Platform and Service Providers/Vendors 6. Transportation Authority of Marin |
| I-5 | **Expand upon existing promotion and outreach efforts that increases access** to local, regional, state and federal energy and electrification programs and incentives. | * Finding feasible ways to mass promote and expand outreach * Streamline and consolidate existing information while increasing access to the complex and rapidly evolving federal (IRA), State (TECH, SwitchIsOn) utility (PG&E, MCE), regional (BayREN,BAAQMD), and local (Electrify Marin) rebates and incentives available * Increase disability, health and ESL (language) services and inclusion during community engagements and creation of promotional collateral * Partner with, fund and communicate programs through local community based organizations that have already built capacity, trust and strong community networks * Use existing local government touchpoints with the community to provide information and education (e.g., time of renovation, planning or building permit counter, community events or campaigns, etc.) | * Targeted campaigns and efforts to benefit low-moderate income (LMI) households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Structure rebate and incentive programs to benefit LMI households and renters especially in underserved communities * Increase awareness of and access to programs and incentives that first address deferred maintenance * Address Split-Incentives: Structure multi-unit programs that incent both renters and property owners to implement energy efficiency and electrification measures | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Community Based Organizations 4. Marin Clean Energy 5. Transportation Authority of Marin (TAM) |
| I-6 | **Expand stakeholder engagement to community-based organizations that represent underserved communities** to build a more equitable electrification transition. | * Engagement doesn’t end once the countywide roadmap is finalized * Provide periodic and ad-hoc updates of roadmap to workshop participants and community-based organizations * Work through County Health and Human Services to engage and promote access to hard-to-reach communities through their Community Response Teams * Community-based organizations serving North Marin, Canal, Marin City and parts of West Marin should be empowered to set their own vision, priorities and implementable actions | * Support community led planning especially by organizations such as Marin Climate Justice Collaborative (Canal Alliance and Marin City CRHJ) | 1. Community Based Organizations 2. Local Government: Councils/Electeds and Staff 3. Transportation Authority of Marin |
| I-7 | **Pilot and test programs that incent gas to electric conversions by reducing permit costs and expediting permit timelines** for renovations and appliance upgrades. | * Identify and implement pilots - when feasible - that can be tested immediately such as, but not limited to:   + Permit holidays or discounts   + Same day permitting   + Emergency replacements or loaner programs upon burnout * Evaluate jurisdiction fee structure and feasibility to subsidize such a program * Continue and increase training of examiners and inspectors on how to permit and identify new heat pump, electric appliances and systems via BayREN trainings and support through other forums * Simplify permitting such as pairing plumbing and electrical permits to make the process faster and cheaper * Lays the groundwork to appropriately implement a Time of Sale or Time of Listing policy, if considered | * Offset the impact of the high cost of permitting for electrification   + Restructure and combine mechanical-electrical-plumbing fees   + Increase permit fees for natural gas installations compared to electric | 1. Local Government: Councils/Electeds and Staff 2. BayREN |
| I-8 | **Lay the groundwork to accelerate adoption of electric ready systems for existing buildings** by adopting appropriate codes and standards and accompanied with rebates and incentives. | * Critical to work on in advance of the BAAQMD NOx rules that start in 2027 * Restructure Electrify Marin’s panel upgrade incentives to prefer panel optimization and low amp appliances first, over panel upsizing * Focus electrical contractor trainings and socialization on alternatives to panel upsizing and panel optimization * Focus electrical systems trainings on building/code officials   + Clarify State standards and apply appropriate standards locally   + Work with officials to provide clear code guidance when approving installs of circuit sharing devices such as Automatic Load Management Systems (ALMS) or Intelligent Power Management Technologies (IPMT) such as smart panels, breakers, relays, splitters, or control units * Target outreach and incentives campaigns to known older residential and commercial buildings built before 1980 * Evaluate, develop, and adopt a countywide 2025 model reach building code which includes:   + More aggressive electric readiness requirements Encourages optimizing capacity over upsizing | * Target campaigns and efforts to benefit low-moderate income (LMI) and hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Marin Builders Association 4. Other contractor associations forums across Marin |
| I-9 | **Continue to implement [Marin Countywide EV Acceleration Strategy](https://marinclimate.org/wp-content/uploads/2023/06/Marin-EV-Acceleration-Strategy.pdf)** launched February 2023. | * Take key actions as outlined in the acceleration plan | * Partner with community based organizations to increase access and identify charging infrastructure need * Use building codes to require charging capability for all tenants with parking spaces in multi-unit buildings that are affordable and has cost parity with those charging in single-family homes | 1. Marin Climate & Energy Partnership 2. Transportation Authority of Marin 3. Local Government: Councils/Electeds and Staff 4. Marin Clean Energy |
| I-10 | **Encourage and coordinate with PG&E to improve infrastructure planning** especially electric load capacity planning, resiliency, faster interconnection timelines and neighborhood-scale electrification planning projects. | * Proactive owner/developer planning and communication that helps with PG&Es service and distribution planning and increased reliability * Explore funding to collect PG&E electrical data to analyze and project future countywide capacity needs   + Simultaneously collect and analyze natural gas infrastructure to identify ideal locations for neighborhood-scale electrification and gas infrastructure decommissioning * See action #I-14 for more details on neighborhood-scale electrification | * Segment underserved populations across Marin when collecting data so we can understand where the best opportunities exist to implement target pilots or campaigns | 1. PG&E 2. New Mult-unit affordable and market rate developers 3. Commercial developers 4. Local Government: Councils/Electeds and Staff 5. Marin Climate & Energy Partnership |
| I-11 | **Grow, accelerate and improve the quality of the local and regional building energy and electrification workforce** by supporting and expanding upon existing programs and initiatives that train and develop qualified contractors to meet increased demand. | * Through BayREN, continue to increase existing contractor base, building professionals and local building staff attendance to free trainings on promoting, installing and permitting of heat pumps, other electric appliances, and electrical systems * Evaluate how to best grow Marin’s workforce and support development a of a new contractor base * Improve residential decarbonization and increase high quality jobs by continuing to participate in the High Road Training Partnerships (HRTP) and consider adopting the recommended labor standards that come out of partnership | * Participate in regional workforce development initiatives such as Rising Sun’s [Bay Area Residential Decarbonization High Road Training Partnership](https://docs.google.com/document/d/12goGL8hOm8e69E_4qlRi98pQ_yn_wezd/edit?usp=sharing&ouid=101422140461223943192&rtpof=true&sd=true) that increases job quality and equitable access for all workers in the residential decarbonization market * Support regional workforce development programs such as [Lime Foundation’s NextGEN Trades Academy](https://www.thelimefoundation.org/nextgen-trades-academy/) that focuses on developing skills and professional development for a more diverse and inclusive trades and contractor workforce | 1. Community Based Organizations 2. Local Government: Councils/Electeds and Staff 3. Local businesses 4. Trade associations 5. Marin Clean Energy |
| I-12 | Evaluate feasibility, staff capacity and **map out steps to implement a Time of Listing Energy Assessment policy for residential buildings**. | * Engage with realtors and community-based organizations to evaluate a voluntary or required energy audit disclosure policy   + Compliance check and resolutions   + Home Energy Score/audit   + Flexible energy and electrification compliance scoring * First, conduct a feasibility study and/or survey * The policy should minimize excess costs and timelines disproportionate to the overall cost and closing of the real estate transaction * Learn from and adapt certain elements of City of Berkeley’s Time of Listing ordinance and City of Davis compliance checks * Evaluate the staff capacity of enforcing departments/agencies * Evaluate market conditions, taxes to collect such as a refundable transfer tax, and lead times to implement projects * Discuss acquisition of information with data providers such as Redfin, Zillow, MLS, CoStar, County Tax Assessor’s | * Continue to participate and support trainings and regional workforce development initiatives that builds the home energy assessor/auditor contractor base * Support and encourage the use of local, legacy, minority/Woman-owned and/or BIPOC businesses to conduct Energy Assessments for homeowners | 1. Local Government: Councils/Electeds and Staff 2. Trade associations 3. Marin Realtors 4. Community-based organizations 5. Private sector |
| I-13 | **Evaluate existing programs and the feasibility of** **piloting a Marin specific low-cost financing program** that serves Marin single-family and multifamily residences. | * Discuss feasibility and options with MCE, PG&E, [TECH Clean California](https://techcleanca.com/pilots/tariffed-on-bill-pilot/), local banks, and community-based organizations to increase financing options for building owners such as on-bill tariff financing * Evaluate and promote existing loan programs (e.g., [Go Green Financing](https://www.gogreenfinancing.com/)) * Marin specific financing options may include, but is not limited to tariff on-bill financing (upgrades repaid through a tariff added to the utility bill over time) or refundable transfer tax | * Targeted campaigns and efforts to benefit LMI households * Tariff on-bill financing can benefit LMI and credit-constrained customers who otherwise may not qualify for home equity loans or home equity line of credit (HELOC) for upgrades. | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Marin Clean Energy 4. PG&E 5. TECH Clean CA 6. Local Banks 7. Community Based Organizations |
| I-14 | **Evaluate feasibility and funding resources, then, identify a location to pilot a neighborhood-scale electrification demonstration project**  within Marin County. | * Leverage existing and/or collect new electricity and gas data to analyze ideal candidates * Coordinate with PG&E and learned lessons from other Bay Area jurisdictions to identify criteria to select an ideal location in Marin County for gas infrastructure decommissioning * Find funding to implement a neighborhood-scale electrification pilot project that include both gas infrastructure decommissioning planning and replacement of end-use appliances | * Consider underserved populations such as LMI, hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Need to find funding for deferred maintenance in addition to energy and electrification upgrades | 1. PG&E 2. Community members/neighborhoods 3. Existing Single- or Multi-unit affordable and market rate developers 4. Community-based Organizations 5. Local Government: Councils/Electeds and Staff |

# Near-Term (2026-2027)

* A phase where existing policy, programs and incentives are more mature and ongoing.
* This phase also includes actions that build upon those taken in the immediate phase
* These additional actions should be acted upon to support implementation of
  1. The Mandated BAAQMD Timelines starting the following year in 2027 (water heating), and
  2. Actions illustrated in the [long-term](#_nj1kprcn7yld) phase below
* These actions have less specificity compared to immediate actions because of the relative uncertainty of market and policy landscape

| **Action**  **#** | **Action Description**  **(Policy, Program, Incentives)** | **Action Details** | **Equity Consideration(s)** | **Recommended**  **Implementing Organizations and Partners** |
| --- | --- | --- | --- | --- |
| N-1 | **Continue implementing the “all-in-one energy and electrification hub” countywide** and update the program as necessary. | * Follow-up to Action #I-3 and I-4 * If funding was procured and vendor chosen for concierge and technical assist service, then continue implementing the service for homeowners and/or businesses and updating as needed * Procure more funding and staffing resources as needed to provide wrap-around support and outreach efforts * If feasible, consider standing up a brick-and-mortar location for in-person resources and education * Continue growing qualified contractor list | * Targeted campaigns and efforts to benefit low-moderate income (LMI) households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Structure rebate and incentive programs to benefit LMI households and renters especially in underserved communities * Increase awareness of and access to programs and incentives that first address deferred maintenance * Address Split-Incentives: Structure multi-unit programs that incent both renters and property owners to implement energy efficiency and electrification measures | 1. Local Government: Councils/Electeds and Staff 2. New and Existing Multi-unit and Commercial Developers 3. Community-based organizations 4. Marin Clean Energy 5. BayREN 6. Transportation Authority of Marin |
| N-2 | **Continue to update promotion and outreach efforts and campaigns** as needed | * Continuation of Action #I-5 * Continue finding ways to mass market, expand outreach, and streamline and consolidate existing and new programs and incentives as they arise * Continue partnering with and supporting programs through local community based organizations * Continue to use existing local government touchpoints with the community to provide timely information and relevant education | * Targeted campaigns and efforts to benefit low-moderate income (LMI) households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Structure rebate and incentive programs to benefit LMI households and renters especially in underserved communities * Increase awareness of and access to programs and incentives that first address deferred maintenance * Address Split-Incentives: Structure multi-unit programs that incent both renters and property owners to implement energy efficiency and electrification measures | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Community Based Organizations 4. Marin Clean Energy |
| N-3 | Continue to **integrate equity focused actions developed by community-based organizations** that represent underserved Marin communities | * Continuation of Action #I-6 * Modify the countywide electrification roadmap to incorporate actions that result in equitable outcomes | * Continue to support community led planning especially by organizations such as Marin Climate Justice Collaborative (Canal Alliance and Marin City CRHJ) | 1. Community Based Organizations 2. Local Government: Councils/Electeds and Staff |
| N-4 | **Continue implementing programs** that incent gas to electric conversions by reducing permit costs and expediting permit timelines. | * Continuation of Action #I-7 * Continue implementing pilots proven to be good approaches to streamlining the permitting process * Continue to train examiners and inspectors on how to permit new heat pump, electric appliances and systems via BayREN and support through other forums * Continue to identify ways to simplify permitting (e.g., combine permits) that makes the process faster and less costly to customers | * Offset the impact of the high cost of permitting for electrification   + Restructure and combine mechanical-electrical-plumbing fees   + Increase permit fees for natural gas installations compared to electric | 1. Local Government: Councils/Electeds and Staff 2. BayREN |
| N-5 | **Implement policies and programs that accelerate adoption of electric ready systems for existing buildings** in advance of the BAAQMD NOx rules that start the following year, in 2027 | * Continuation to Action #I-8 * Continue Electrify Marin’s upgrade incentives to prefer panel optimization and low amp appliances first, over panel upsizing * Consider increasing Electrify Marin’s incentive for panel upgrade kicker * Continue electrical contractor trainings and socialization on alternatives to panel upsizing and mitigate the need to perform a service upgrade * Continue targeted outreach campaigns to known older residential and commercial buildings built before 1980 * Implement and enforce adopted 2025 building reach codes that includes more aggressive electric readiness requirements while encouraging optimizing electrical capacity over upsizing, where feasible | * Target campaigns and efforts to benefit LMI, hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City | 1. Local Government: Councils/Electeds and Staff 2. BayREN |
| N-6 | **Continue to implement** [**Marin Countywide EV acceleration Strategy**](https://marinclimate.org/wp-content/uploads/2023/06/Marin-EV-Acceleration-Strategy.pdf) | * Continuation of Action #I-9 * Take key actions as outlined in the acceleration plan | * Partner with community-based organizations to increase access and identify charging infrastructure need * Use building codes to require charging capability for all tenants with parking spaces in multi-unit buildings that are affordable and has cost parity with those charging in single-family homes | 1. Marin Climate & Energy Partnership 2. Transportation Authority of Marin 3. Local Government: Councils/Electeds and Staff 4. Marin Clean Energy |
| N-7 | **Continue to coordinate with PG&E to improve infrastructure planning** especially electric load capacity planning, faster interconnection timelines, and neighborhood-scale electrification planning projects. | * Continuation of Action #I-10 * Continue proactive owner/developer planning and communication that helps with PG&Es service and distribution planning * See action #N-13 for more details on neighborhood-scale electrification | * Segment underserved communities across Marin when collecting data so we can understand where the best opportunities exist to implement target pilots or campaigns | 1. PG&E 2. New Mult-unit affordable and market rate developers 3. Commercial developers 4. Local Government: Councils/Electeds and Staff 5. Marin Climate & Energy Partnership |
| N-8 | **Continue to support the growth of the local and regional building energy and electrification workforce.** | * Continuation of Action #I-11 * Through BayREN, continue to increase contractor, building professionals and local building staff attendance to free trainings on installing and permitting of heat pumps and electrical appliances and systems * Re-evaluate the needs on how to best grow Marin’s workforce and contractor base | * Continue to participate in regional workforce development initiatives that focus on high road jobs and diversity in the contractor base | 1. Community Based Organizations 2. Local Government: Councils/Electeds and Staff 3. Local businesses 4. Trade associations 5. Contractor workforce |
| N-9 | If feasible and staff capacity is in place to enforce, **identify a Marin jurisdiction(s) to pilot a Time of Listing Energy Audit Policy for residential buildings.** | * Continuation to Action #I-12 * Consider starting with voluntary compliance check and resolutions and/or Home Energy Score audits * Consider balancing burdens to the seller and value proposition to the buyer * Consider mechanisms such as a refundable transfer tax | * Exemptions and hardship and feasibility waivers for LMIs and households with special medical and accessibility needs | 1. Local Government: Councils/Electeds and Staff 2. Trade associations 3. Community-based organization 4. Private sector 5. Marin Realtors |
| N-10 | **If viable to create a new program, then** **find partners and funding to pilot a Marin specific low-cost financing program** that serves Marin single-family and multifamily residences. | * Follow-up to Action #I-13 * Identify and work with partners such as MCE, PG&E, TECH Clean California, local banks, and/or community-based organizations to provide appropriate financing products such as tariff on-bill financing | * Targeted campaigns and efforts to benefit LMI households * Tariff on-bill financing can benefit LMI and credit-constrained customers who otherwise may not qualify for home equity loans or home equity line of credit (HELOC) for upgrades. | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Marin Clean Energy 4. PG&E 5. TECH Clean CA 6. Local Banks 7. Community Based Organizations |
| N-11 | If feasible, partners are in place and necessary, **continue to implement a Marin specific low-cost financing program** that serves Marin single-family and multifamily residences. | * Follow-up to Action #I-14 * Continue work with partners such as MCE, PG&E, TECH Clean California, local banks, and/or community-based organizations to provide appropriate financing products | * Targeted campaigns and efforts to benefit LMI households * Tariff on-bill financing can benefit LMI and credit-constrained customers who otherwise may not qualify for a home equity loans or HELOCs for upgrades | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Marin Clean Energy 4. PG&E 5. TECH Clean CA 6. Local Banks 7. Community Based Organizations |
| N-12 | **Develop a disposal plan for end-of-life of gas and heat pump products, appliances, and refrigerant management.** | * Consider codes, campaigns, and educational materials with the goal of capturing refrigerants and other materials for recycling or proper destruction to ensure they are not released into the environment   + This may involve stickers on appliances, contractor trainings, additional fines and enforcement for illegal disposal, etc. * Will likely require regional collaboration, coordination and planning with Zero Waste Marin, local waste haulers, landfill operators and County to ensure appropriate disposal * It may require the need for a regional reuse and salvage market | Unknown | 1. Zero Waste Marin 2. Waste Haulers 3. County of Marin 4. Landfill Operator(s) 5. CalRecycle |
| N-13 | If feasible, partners are in place, and necessary, develop and implement a **pilot neighborhood-scale electrification** **demonstration project**. within Marin County. | * Continuation of Action #I-15 * Continue to coordinate with PG&E and consult with other Bay Area jurisdictions select an ideal location in Marin County for gas infrastructure decommissioning * Continue to find funding to implement as needed | * Consider underserved populations such as LMI, hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City   Need to find funding for deferred maintenance in addition to energy and electrification upgrades | 1. PG&E 2. Existing Single- or Multi-unit affordable and market rate developers 3. Community-based Organizations 4. Local Government: Councils/Electeds and Staff |

# Long-Term (2028-2031)

* A phase where existing policy, programs and incentives are written more broadly
* This phase may also exclude policies, programs and incentives previously taken in the immediate and near-term phase. Actions will depend on whether actions in the previous phases were implemented.
* It is harder to make specific actions for the future because the market, technological and policy landscape will change. Still, actions should be taken to support implementation of
  1. The second and third phase of Mandated BAAQMD NOx requirements in 2029 (space conditioning) and 2031 (large commercial water heating), and
  2. California Air Resources Board (CARB) 2030 Zero-emissions for space and water heaters

| **Action**  **#** | **Action Description**  **(Policy, Program, Incentives)** | **Action Details** | **Equity Consideration(s)** | **Recommended**  **Implementing Organizations and Partners** |
| --- | --- | --- | --- | --- |
| L-1 | **Develop, adopt and implement updated building and EV infrastructure reach codes for New Construction of all building types** duringthe 2028 and 2031 State building code cycles. | * Continuation to Action #I-1 * Ideally develop and adopt during the 2028 and 2031 code cycle | * Exemptions and hardship and feasibility waivers for   + Low-income households   + Households with special medical and accessibility needs | 1. Local Government: Councils/Electeds and Staff |
| L-2 | **Develop, adopt and implement updated building and EV infrastructure reach codes for Renovations of all building types** during the 2028 and 2031 State building code cycles. | * Continuation to Action #I-2 * Ideally develop and adopt during the 2028 and 2031 code cycle | * Exemptions and hardship and feasibility waivers for   + Low-income households   + Households with special medical and accessibility needs * Encourage use of housing programs that to disincentivize property owners from displacing multi-unit renters during renovations or rehabilitation   + For example, [Multifamily Energy Savings Assistance (ESA) program](https://esamultifamily.com/) implemented by investor-owned utilities (IOUs) * Consider anti-displacement policies (e.g. reference [SAJE](https://www.saje.net/wp-content/uploads/2023/09/Decarbonizing-California-Equitably-Report-1.pdf) or [Build-it Green](https://www.builditgreen.org/blog/reporting-out-renter-protections-in-equitable-building-decarbonization/)) | 1. Local Government: Councils/Electeds and Staff |
| L-3 | If successful and necessary, **continue enhancing the “all-in-one energy and electrification hub and update the program as necessary.** | * Continuation to Action #N-1 * Re-evaluate the value and need of the online platform * If necessary, find more permanent funding to continue providing concierge and technical assist services * Procure more funding and staffing resources as needed to provide wrap-around support and outreach efforts * Compliment online platform with traditional outreach engagements such as in-person, webinars, newsletters, media, and promotion through community-based organizations and trade associations * Continue growing qualified contractor list | * Targeted campaigns and efforts to benefit low-moderate income (LMI) households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Structure rebate and incentive programs to benefit LMI households and renters especially in underserved communities * Increase awareness of and access to programs and incentives that first address deferred maintenance * Address Split-Incentives: Structure multi-unit programs that incent both renters and property owners to implement energy efficiency and electrification measures | 1. Local Government: Councils/Electeds and Staff 2. New and Existing Multi-unit and Commercial Developers 3. Community-based organizations 4. Marin Clean Energy 5. BayREN 6. Transportation Authority of Marin |
| L-4 | **Continue to update promotion and outreach efforts** and campaigns as needed. | * Continuation of Action #N-2 * Continue finding ways to mass market, expand outreach, and streamline and consolidate existing and new programs and incentives as they arise * Continue partnering with and supporting programs through local community based organizations * Continue to use existing local government touchpoints with the community to provide timely information and relevant education | * Targeted campaigns and efforts to benefit low-moderate income (LMI) households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Structure rebate and incentive programs to benefit LMI households and renters especially in underserved communities * Increase awareness of and access to programs and incentives that first address deferred maintenance * Address Split-Incentives: Structure multi-unit programs that incent both renters and property owners to implement energy efficiency and electrification measures | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Community Based Organizations 4. Marin Clean Energy 5. Transportation Authority of Marin |
| L-5 | **Continue community engagements to re-evaluate policy and community needs.** | * Continuation to Action #N-3 * Partner with community to re-assess barriers and solutions * Look at new policy, program, financing and revenue generating mechanisms to fund energy and electrification projects * Through BayREN, continue to increase contractor, building professionals and local building staff attendance to free trainings on installing and permitting of heat pumps and electrical appliances and systems | * Ensure community based organizations serving LMIs, hard-to-reach households,renters and energy burdened communities are continually engaged and partnered with to develop actions | 1. Local Government: Councils/Electeds and Staff 2. BayREN 3. Community Based Organizations 4. Marin Clean Energy 5. Local businesses 6. Trade associations 7. Contractor workforce 8. Transportation Authority of Marin |
| L-6 | **Continue implementing and enhancing permit streamlining measures that incent electric over gas installations.** | * Continuation to Action #N-4 * Implement and re-evaluate approaches to continue speeding up the permitting process * Continue to train examiners and inspectors on how to permit new heat pump, electric appliances and systems via BayREN * Continue to identify ways to simplify permitting | * Continue to find ways to offset the impact of the high cost of permitting for electrification | 1. Local Government: Councils/Electeds and Staff 2. BayREN |
| L-7 | **Continue code implementation and rebates and incentives in support of installing electric ready systems for existing buildings** especially during the 2028 and 2031 State building code development cycles. | * Continuation to Action #N-5 * Develop, implement and enforce adopted 2028 and 2031 building reach codes that includes that advance energy and electrification for residential and nonresidential | * Target campaigns and efforts to benefit LMI, and hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City | 1. Local Government: Councils/Electeds and Staff 2. BayREN |
| L-8 | **Continue to implement the Marin Countywide EV Acceleration Strategy**. | * Continuation of Action #N-6 * Take key actions as outlined in the acceleration plan | * Partner with community based organizations to increase access and identify charging infrastructure need * Continue to ensure equitable and affordable access to EV charging | 1. Marin Climate & Energy Partnership 2. Transportation Authority of Marin 3. Local Government: Councils/Electeds and Staff 4. Marin Clean Energy |
| L-9 | **Continue to coordinate with PG&E to improve infrastructure planning**. | * Continuation of Action #N-7 * Continue proactive owner/developer planning and communication that helps with PG&Es service and distribution planning | * Segment underserved communities across Marin when collecting data so we can understand where the best opportunities exist to implement target pilots or campaigns | 1. PG&E 2. New Mult-unit affordable and market rate developers 3. Commercial developers 4. Local Government: Councils/Electeds and Staff 5. Marin Climate & Energy Partnership |
| L-10 | **Continue to support growth of the local and regional building energy and electrification workforce.** | * Continuation of Action #N-8 * Through BayREN, continue to increase contractor, building professionals and local building staff attendance to free trainings on installing and permitting of heat pumps and electrical appliances and systems * Re-evaluate the needs on how to best grow Marin’s workforce and contractor base | * Continue to participate in regional workforce development initiatives that focus on high road jobs and diversity in the contractor base | 1. Community Based Organizations 2. Local Government: Councils/Electeds and Staff 3. Local businesses 4. Trade associations 5. Contractor workforce |
| L-11 | **If pilot is successful, continue implementing a Time of Listing Energy Audit Policy** for residential buildings and expand to other Marin jurisdictions as needed | * Continuation to Action #N-9 * Work with other Cities and Towns to develop and adopt policy locally | * Exemptions and hardship and feasibility waivers for   + Low-income households * Households with special medical and accessibility needs | 1. Local Government: Councils/Electeds and Staff 2. Trade associations 3. Community-based organization 4. Private sector 5. Marin Realtors |
| L-12 | **If successful, continue to implement a targeted neighborhood-scale electrification pilot** | * Continuation to Action #N-13 * Continue coordination with PG&E and consulting with other jurisdictions implementing * Continue to find funding as needed in order to continue implementing | * Consider underserved populations such as LMI, hard-to-reach households, renters and energy burdened communities such as in rural West Marin, North Marin, Canal, and Marin City * Need to find funding for deferred maintenance in addition to energy and electrification upgrades | 1. PG&E 2. Community members/neighborhoods 3. Existing Single- or Multi-unit affordable and market rate developers 4. Community-based Organizations 5. Local Government: Councils/Electeds and Staff |
| L-13 | If feasible, **begin implementation of a disposal plan for end-of-life of gas and heat pump products, appliances, and refrigerant management**. | * Continuation of Action #N-12 * Implement the plan * Continue regional collaboration, coordination and planning with Zero Waste Marin, local waste haulers, landfill operators and County to ensure appropriate disposal * It may require the need for a regional reuse and salvage market | Unknown | 1. Zero Waste Marin 2. Waste Haulers 3. County of Marin 4. Landfill Operator(s) 5. CalRecycle |