



2019-2020 Two-Year Sustainability Program Priorities

CCAP 2030 Goal: 40% reductions in greenhouse gas emissions (GHG's)

2018 Accomplishments

GENERAL

- Completed the Climate Change Action Plan 2030 update
- Participated in the Global Climate Action Summit in San Francisco
- Secured new Beacon Awards for Interim Accomplishments in community greenhouse gas reductions and best practices from the Institute for Local Government
- Completed greenhouse gas inventory for 2016 and Greenhouse Gas Reduction Strategy report

TRANSPORTATION

- Worked with TAM and other stakeholders to develop a county-wide electric vehicle readiness plan
- Secured funding for three electric vehicle chargers at City Hall

WASTE

- Completed a multi-jurisdictional review of our recycling revenue fund, and amendment to our rate-setting methodology and Franchise Agreement with Marin Sanitary Service
- Continued to utilize Zero Waste Grant funds for a Climate Corps Fellow to assist with zero waste outreach, including single-use take-out plastics reduction at restaurants, illegal dumping research and outreach, waste reduction activities in City facilities and augmentation of other community outreach activities

COMMUNITY ENGAGEMENT

- Supported Chamber Green Business Committee and green business events, including Marin Sustainable Enterprise Conference
- Supported Resilient Neighborhoods by hosting and promoting several more classes at our community centers
- Continued active engagement with Marin Climate and Energy Partnership as well as community partners and programs such as Bike to Work Day, MCE Clean Energy vehicle rebate programs
- Reinvigorated the Employee Green Team

ADAPTATION PLANNING

- Supported work with the Resilient by Design Challenge team, and assisted with community outreach and education
- Established new working relationships with Marin Community Foundation and County of Marin for adaptation planning and funding opportunities
- Joined the newly formed Bay Area Climate Adaptation Network and utilized regional professionals to assist with General Plan activities



2019-2020 2-Year Sustainability Program Priorities

CCAP 2030 Goal: 40% reductions in greenhouse gas emissions (GHG's)

2019 & 2020 Priorities

GENERAL

Develop CCAP Engagement Platform

Design and develop web platform, including carbon calculator
Develop engagement plan

TRANSPORTATION

Expand EV Charging Network

Install more EV chargers at City facilities
Promote EV charger incentives & technical assistance to community

Implement EV Policies and Programs

Develop streamlined permitting procedures
Promote EV campaigns, programs & incentives

WASTE

Implement Mandatory Recycling

Develop and implement procedures to enforce State laws
Conduct an analysis of a local mandate to supplement State laws
If appropriate, develop and adopt local regulations and implement

ADAPTATION

Plan for Climate Resilience

Seek and secure funding for adaptation planning projects
Assist with the Adaptation Element of the General Plan

ENERGY EFFICIENCY

Increase Building Energy Efficiency

Support County appliance electrification programs
Develop a set of streamlining, technical assistance, and incentive packages to support energy efficiency in the built environment

RENEWABLE ENERGY

Promote Solar and Renewable Energy

Seek out and support solar projects & pilots community-wide
Promote rooftop solar programs and financing
Promote Deep Green and Solar Choice to residents and businesses

ECONOMY & EQUITY

Convene an economic working group

Convene thought leaders, subject matter experts, and local business leaders to explore opportunities to develop a low-carbon economy



Early Action Item: Online Platform Cost & Benefits Snapshot

Potential GHG Reduction

No direct GHG reduction. However, this is the bedrock platform for our Community Engagement campaign and will underpin all our activities. 99% of our emissions come from the community.

Summary

CE-C2: *Implement a communitywide public outreach and behavior change campaign to engage residents, businesses, and consumers around the impacts of climate change and the ways individuals and organizations can reduce their GHG emissions and create a more sustainable, resilient, and healthier community. Create an overarching theme to articulate a long-term goal, motivate community members, and brand a comprehensive suite of GHG-reduction programs. Prioritize promotion of programs that have the greatest greenhouse gas reduction potential while utilizing the latest social science on behavior change. Emphasize and encourage citizens' involvement in reaching the community's climate goals, including innovative means of tracking milestones and comparing San Rafael's performance with other communities and with state, national and global benchmarks.* The first step in completing this early priority item will be to develop a San Rafael Climate Action website, which would incur minimal costs, and requires no additional staff resources than currently allocated.

Funding

Costs to implement the new web site include securing the domain name, paying for monthly hosting, and occasional design costs should it require specialized design and formatting work. These hosting costs are approximately \$68 per year. Most, if not all, design seems to be able to be done in-house currently so staff is hoping not to have to engage outside designers. However, funding for these activities are included in the proposed 2019-2020 fiscal year budget. The remainder of the actions in the Community Engagement section will focus on analysis and collaborations with community partners for this fiscal year and will not incur additional expenses at this time.

Economy and Social Equity

There should be no additional impacts to the local economy from the new web site. Use of the site will be free. The challenge for social equity is the replication of the site in other languages, which is yet to be determined. An engagement with our local community members is in the works to determine the best way forward. The site will be ADA compliant to ensure that visitors with disabilities can access the full functions of the site. It will also be mobile-friendly for those without computer access.



Co-Benefits

The primary benefit for this activity is to make it easier for citizens to take action and to access our Climate Change Action Plan in a user-friendly manner and experience. There are a variety of co-benefits to all the actions that will be encouraged, but these will ultimately be determined by the visitors and the choices they make.



Early Action Item: Zero Emission Vehicles Cost & Benefits Snapshot

Potential GHG Reduction

30,345 MTCO_{2e}, or about 31% of the City's total 2030 reductions goal.

Summary

Measure LCT-C1: *Develop a Zero Emission Vehicle Plan that will result in 25% of passenger vehicles in San Rafael to be zero emission vehicles (ZEVs), including plug-in electric vehicles (EVs) and hydrogen fuel cell electric vehicles, by 2030.* This item includes 13 actions the City could do to decrease emissions by helping to increase the number of ZEVs in use by residents and businesses in San Rafael. Some actions will require additional analysis. The first step in completing this early priority item will be to develop the ZEV Plan, which would incur no costs other than staff time, and requires no additional staff resources than currently allocated.

Funding

Direct costs to the City will likely include installation of EV chargers and wayfinding and parking signage. Potential costs include trenching, wiring, electrical upgrades, installation, and parking infrastructure changes. Most, if not all, of these costs can be offset by grants and incentives from PG&E, MCE Clean Energy, the Transportation Authority of Marin, the Bay Area Air Quality Management District, the State, and other agencies or programs. This is how the current charger installations have all been funded. The majority of the ZEV Plan's actions, such as the development of policies and ordinances and participation in outreach and behavior change campaigns, will be carried out by staff and community partners and will not incur additional costs to the City at this time.

Economy and Social Equity

Potential opportunities and impacts to the local economy include additional costs to builders, property owners and developers for installing the wiring and infrastructure necessary to meet new mandates. However, there are a variety of rebates and incentives available to help offset those costs in situations where there is multi-family or workplace parking. In addition, the addition of EV chargers may increase property values, especially as ZEVs gain in popularity and demand. Currently, a ZEV costs approximately 30% more than a similar internal combustion engine model, but the annual cost of ownership is lower because electricity is cheaper than gas, and ZEVs do not require oil changes and other types of maintenance.¹

¹ Loren McDonald, "Analyzing US Sales Trends for 24 Shared ICE/EV Models: Yes, Price & Range Do Matter," Clean Technica, May 27, 2018, <https://cleantechnica.com/2018/05/27/analyzing-us-sales-trends-for-24-shared-ice-ev-models-yes-price-range-matter/>.

Currently there is very little opportunity for apartment dwellers to charge vehicles at home. Having more EV charger availability in apartment complexes, public parking lots, and workplace settings will enable renters to acquire EVs and plug-in hybrids. Local sales and tax revenue could go up or down slightly depending on availability of ZEVs at local dealers and rate of adoption. There will also be indirect market benefits to local contractors who will be providing services and supplies for these efforts. Currently there are a number of State programs and incentives directed at lower-income individuals and renters to purchase ZEVs.

Co-Benefits

The primary benefit for this activity is to make it easier for citizens to get charging for electric vehicles and to remove obstacles to citizens' ability to acquire electric vehicles. Co-benefits include health benefits from less particulate matter and airborne pollutants, including volatile organic compounds, nitrogen oxides, carbon monoxide, and sulfur dioxide. In addition, there are opportunities to aid in simplifying permitting and procedures for other construction permits, increased customer satisfaction at the counter, and less time and expense for vehicle maintenance for consumers since EVs do not require oil and filter changes.



Early Action Item: Mandatory Recycling Cost & Benefits Snapshot

Potential GHG Reduction

9,680 MTCO₂e, or about 10% of the City's total 2030 reductions goal.

Summary

WR-C4: *Adopt an ordinance requiring mandatory subscription to and participation in waste diversion activities, including recycling and organics collection provided by Marin Sanitary Service. Consider including phased implementation of the ordinance, penalties, and practical enforcement mechanisms.* It is anticipated that with the passage of SB 1383 last year the State will require local jurisdictions to pass local recycling and organics diversion mandates. The regulations are still being drafted but currently are calling for local mandates should cities not meet diversion goals by 2022. This item would require an analysis of the challenges and opportunities here in San Rafael, including the potential of partnering with the other agencies in our Marin Sanitary Service Franchisors' Group.

Funding

Typically, funding for an analysis that would affect ratepayers is conducted through the rates and has no direct cost to the City. An analysis such as this could cost between \$50-100,000. The potential rate impact of an analysis could be in the .1 to .3% range for consumers. A staff analysis is another option, which would cost nothing to the City other than staff time, which could take longer and would mainly focus on identifying a model ordinance that exists someplace else that could be adapted for San Rafael. Opportunities exist to collaborate with other local jurisdictions to reduce the cost to San Rafael, such as the Marin Franchisors' Group and other agencies with contracts with Marin Sanitary Service.

Economy and Social Equity

Potential opportunities and impacts to the local economy include increased costs of doing business for commercial customers, the potential of increased or decreased rates for customers depending on how much they can reduce their landfill garbage service, and the potential for new lines of business that could serve businesses with large amounts of composting materials. Potentially, extra costs of doing business could be passed along to customers or even to renters in apartment buildings.

Co-Benefits

There could be co-benefits from working together more closely on recycling and diversion activities county-wide by making it easier for the public to understand and comply, and by providing more opportunities for adequate recycling. Increased recycling and composting saves landfill space and lengthens the amount of time we are able to use our local landfill.



Early Action Item: Adaptation Planning Cost & Benefits Snapshot

Summary

SA-C4: *Prepare for and adapt to a rising sea level.* **SA-C5:** *Prepare for and respond to the expected impacts of climate change.* These items and the ten activities included in them are San Rafael's commitment to prepare for the effects of climate change, some of which are already upon us: rising seas and increased flooding, drought, health impacts from extreme heat and poor air quality, and safety risks from the increased likelihood and prevalence of wildfires and landslides. Some are currently being dealt with in the General Plan 2040 process as the Steering Committee weighs land use policies that take into account rising seas and increased flood risk. Many projects and resources are available to San Rafael including the County's BayWAVE sea level rise vulnerability assessment, San Rafael's Sea Level Rise White Paper, and the Resilient by Design Challenge project focused on East San Rafael among others. The first step for this early priority item is to identify funding to continue the work that's already been done toward developing a full-fledged adaptation plan.

Funding

Costs to develop an adaptation plan that prepares for multiple hazards could be in the hundreds of thousands of dollars, which are currently not budgeted. However, there are a number of funding sources available, mostly grants, that could be leveraged from State agencies such as the State Coastal Conservancy, from private foundations such as the Marin Community Foundation, and from a variety of other sources such as Prop 1 funds, Measure AA, and the Funders' Network among others. For example, last year the Town of Corte Madera² received a \$325,000 Caltrans Climate Adaptation Planning Grant to conduct a comprehensive adaptation planning effort. Staff will work with our community partners to identify funding to accomplish this measure.

Economy and Social Equity

The potential negative impacts to the local economy are significant and daunting. Studies show a potential loss to property of [\\$7 billion](#)³ to San Rafael during a significant flood event with a three-foot rise in sea levels. Those most vulnerable are often those with the least means to respond and recover: those with limited income, resources and local support systems, including residents of the Canal Neighborhood, older adults, and people with disabilities. Efforts to plan for adaptation and resilience must engage those most likely to be affected. Fortunately, State guidance and funding mechanisms are most often now placing priority on or mandating that funding recipients have robust social equity components in their projects. San Rafael has already done a lot in this area and is building our capacity to engage and include low income and communities of color in our planning efforts.

² <https://www.townofcortemadera.org/837/Climate-Adaptation-Plan>

³ <https://baykeeper.org/shoreview/economic-loss.html>

Co-Benefits

Increasingly, insurers are looking at climate change in their policies and portfolios. Cities with adequate climate action and adaptation strategies and implementation will be better able to continue to sell bonds for projects and maintain good credit ratings. As planning and projects go forward there is potential for people in hazard zones that are being addressed to escape higher premiums or discontinuance of coverage. All planning efforts should look at co-benefits that also reduce greenhouse gas emissions or provide other short-term needs while planning for long-term impacts. For example, when looking at energy resilience, there are opportunities to not only provide for electricity during a disaster, but also provide it at lower costs and through renewable means, providing benefit to the community outside of a disaster scenario.



Early Action Item: Building Energy Efficiency Cost & Benefits Snapshot

Potential GHG Reduction

18,280 MTCO₂e, or about 19% of the City's total 2030 reductions goal.

Summary

EE-C4: Green Building Reach Code *Investigate adopting a green building ordinance for new and remodeled commercial and residential projects that requires green building methods and energy efficiency savings above the State building and energy codes. Consider utilizing the County's green building ordinance as a model and including the use of photovoltaic systems and all-electric building systems as options to achieve compliance.* **EE-C5: Streamline Permit Process and Provide Technical Assistance** *Analyze current green building permit and inspection process to eliminate barriers and provide technical assistance to ensure successful implementation of green building requirements. Work county-wide to make it easier for contractors and building counter staff to simplify applications and identify incentives.*

Every three years the State of California updates the Green Building codes and local governments have the opportunity to go beyond by adopting stronger reach codes. These two CCAP 2030 measures go hand-in-hand in trying to build a customer experience that removes barriers to adoption of green building practices while meeting or exceeding new State building code requirements. The County of Marin is leading a county-wide effort to understand the new codes and opportunities so that we can achieve our GHG reduction goals while ensuring a positive experience for builders and property owners.

Funding

Currently there are no costs associated with this effort other than staff time commitment from the Building Division and the Sustainability Program. Staff will leverage the work being done and coordinated by the County and the Bay Area Regional Energy Network (BayREN). Should there be activities identified that would incur costs, funding would be identified from department budgets, grant or other external sources, or would be brought to City Council for approval first.



Economy and Social Equity

There are some concerns that increased costs associated with green building codes could add to the costs of an already expensive real estate market. As a percentage, Green Building reach codes are estimated to add 1-2% to construction costs in California.⁴ However, net operating costs are lowered, and when these costs are reduced, the value of a commercial project increases while occupancy costs decrease.⁵ Therefore, reach codes should ideally seek to reduce ongoing costs of ownership to balance out any increased cost in rents. When it comes to the built environment, programs like MCE Clean Energy's [Low Income Families and Tenants program](#) should be supported to assist with getting renters healthier and more efficient homes while reducing energy bills.

Co-Benefits

There are many potential co-benefits to Green Building reach codes beyond the long-term occupancy savings, including having healthier, more efficient homes, better heating, less indoor air pollution, among others. In addition, there are other GHG reduction benefits outside of building energy due to the codes, including less water use, less emissions from waste disposal, and reduction in transportation related GHGs. Finally, many CalGreen mandates have co-benefits relating to other environmental impacts studied in EIRs, such as reducing water demand, criteria air pollutants and waste disposal.⁶ Work on this program in combination with the other permit and process streamlining objectives in other measures and in-process at the City have the added potential of creating a better public user experience and staff satisfaction as well.

⁴ Steve Pellegrin, "Sustainability Is Vital, but Adds To the Cost of Building In California", National Real Estate Investor, October 26, 2015 <https://www.nreionline.com/multifamily/sustainability-vital-adds-cost-building-california>

⁵ Nora Knox, "Green Building Costs and Savings", U.S. Green Building Council, March 25, 2015 <https://www.usgbc.org/articles/green-building-costs-and-savings>

⁶ Louise Mazingo & Ed Arens, "Quantifying the Comprehensive Greenhouse Gas Co-Benefits Of Green Buildings", Center for Environmental Design, UC Berkeley, October 24, 2014. <https://ced.berkeley.edu/research/faculty-projects/water-waste-transportation-benefits-green-buildings>



Early Action Item: Renewable Energy Cost & Benefits Snapshot

Potential GHG Reduction

31,925 MTCO₂e, or about 32% of the City's total 2030 reductions goal.

Summary

RE-C1: Renewable Energy Generation *Accelerate installation of residential and commercial solar and other renewable energy systems.* **RE-C2: GHG-Free Electricity:** *Encourage residents and businesses to switch to 100 percent renewable electricity (MCE Deep Green, MCE Local Sol, and PG&E Solar Choice) through engagement campaigns and partner agency incentives and work with MCE Clean Energy to assure that it reaches its goal to provide electricity that is 100 percent GHG-free by 2025.* These two measures and the five activities associated with them aim to reduce the carbon intensity of electricity being delivered to homes and businesses here in San Rafael. The initial work to be done is to assess current barriers and benefits to the installation of solar energy systems and develop a roadmap for making it easier and more beneficial, especially in light of rate changes that are making it less lucrative. In addition, staff will need to partner with our utilities and agency partners such as the Marin Climate and Energy Partnership (MCEP) to support their engagement platforms and efforts.

Funding

Currently there are no costs associated with this effort other than staff time commitment from the Sustainability Program. Once a roadmap is developed, potential activities that could incur costs will be identified as well as funding opportunities. Any costs to the City that cannot be covered by outside funding or allocated resources in our fiscal year budget will be brought forward in future budget deliberations.

Economy and Social Equity

Renewable energy generally is a net benefit financially to adopters. For example, most solar projects include return on investment that amplifies over time reducing energy costs for the building owners. There are a variety of funding mechanisms that can allow property owners to own, lease, or procure solar through power purchase agreements with no money down. Solar energy systems on affordable housing can be a great benefit to renters, especially if they participate in payment of electricity. However, there is usually a "split incentive" in that property owners do not see the financial benefits of the solar they install if renters are paying the bills. Thus the incentive is minimal and often requires additional encouragement. Nonprofit housing collaboratives currently tend to have more interest and

incentive as exemplified in the Canal Alliance’s property that was a beneficiary of a Grid Alternatives solar project last year.⁷

Purchasing 100% renewable electricity from the utilities does have a cost premium though, over and above the normal electricity costs. Some, like MCE Clean Energy’s Deep Green product is 1c per kilowatt hour more than their standard Light Green product but is still often lower or on par with PG&E’s standard electricity product. Others, like PG&E’s Sol Shares is a little more expensive than their standard product at approximately 2c more per kilowatt hour.

Co-Benefits

Solar rooftop systems and local solar have the potential to increase local energy resilience during a disaster. They also provide a hedge against increases in electricity rates. Purchasing 100% renewable electricity at a premium in some cases can allow utilities to purchase more renewables and could accelerate the move to 100% renewables as the standard product for utilities. Less fossil-fuel based electricity reduces overall pollution and their associated health impacts, which tends to benefit lower-income communities that are often located closer to energy generation plants.⁸

⁷ News Release “Marin Residents and Local Nonprofits Join Together to Bring Solar Energy to Recent Immigrants”
<https://gridalternatives.org/sites/default/files/Solar%20for%20Canal%20Alliance%20Press%20Release.pdf>

⁸ PSE Healthy Energy “Natural Gas Powerplants in California’s Disadvantaged Communities”, April 2017
https://www.psehealthyenergy.org/wp-content/uploads/2017/04/CA.EJ_Gas_Plants.pdf



Early Action Item: Low Carbon Economy Cost & Benefits Snapshot

Summary

CE-C4: Innovation and Economic Development: *Convene an economic development and innovation working group to explore public-private partnerships and develop ways to decarbonize our local economy while spurring sustainable enterprise and equitable employment.* This measure will allow the City to leverage the talents of local business owners and managers, thought leaders, and regional subject matter experts to understand what the opportunities are for San Rafael to create a low-carbon economy. This will involve convening a working group and engaging leaders from the [Chambers for Innovation and Clean Energy](#), the [Business Council on Climate Change](#), and the Marin Economic Forum, among others.

Funding

Costs associated with this effort include hiring a facilitator and providing adequate supplies and food and beverage for gatherings and presentations, estimated at \$3-5,000. This has been included in the proposed Sustainability Program budget for fiscal year 2019-2020.

Economy and Social Equity

The marriage of economy and social equity is nowhere as evident and necessary as with this CCAP 2030 measure, and a successful low-carbon economy will most likely require good, green jobs and training programs. Enhanced economic activity should benefit as many as possible. Marin is home to many potential partners to assist, including the College of Marin, Dominican University, Marin Economic Forum, Canal Alliance, MCE Clean Energy, Marin Community Foundation, the Workforce Alliance of the North Bay, Multicultural Center of Marin, and others, including partners in Sonoma.

Co-Benefits

There are many potential co-benefits to strengthening and diversifying our local economy and prioritizing innovation and emissions reductions. These include benefits to ecosystem resilience, trade, employment, health, energy security, and business competitiveness. In addition, efforts to build collaborations have other benefits to the City and community including new opportunities for public-private partnerships, enhanced community engagement opportunities for other programs and projects, and infusion of expertise and insights into City processes and services.