



Marin Public Works Association

April 24, 2018

Ms. Dianne Steinhauser, P.E.
Executive Director
Transportation Authority of Marin
900 Fifth Avenue, Suite 100
San Rafael, CA 94901

Dear Ms. Steinhauser,

Since 2004, Measure A Transportation Sales Tax funds have made a significant difference in the quality of our local roadway system. On behalf of the Marin Public Works Association (MPWA) I am writing to urge the Transportation Authority of Marin (TAM) to maximize the amount of funding reserved for local streets and roads improvements as part of the local sales tax reauthorization efforts. The MPWA is a group of Marin public works officials who share experiences, resources and collaborate on common public works issues in Marin.

At our regular meeting in April, we discussed the challenge of meeting all the transportation needs with the limited funds proposed in the reauthorization. We understand there are many needs, including electric vehicle infrastructure. The MPWA members unanimously voted to urge TAM to reserve all available funds for local streets and roads, and not to reduce the percentage of funds targeted for improving our roadways. Regarding electric vehicles, we are committed to working with TAM to implement their Measure B Vehicle Registration Fee (VRF) efforts towards low carbon transportation.

The funds used to repair and repave our streets benefit all users; buses, electric vehicles, bicycles, pedestrians, etc. and are absolutely critical to maintaining our streets. Even with our current funding levels, the countywide pavement condition index (PCI), which is a numerical measure of the conditions of our roads, will decline and experience a growing backlog of required improvements. As you are undoubtedly aware there is a significant effort underway to repeal the recently approved Senate Bill 1 (SB1), which provides an estimated \$7.7 million annually for Marin's local roads. Even if SB 1 is upheld, there will still be an approximate \$20 million annual shortfall of in Marin.

As such we urge you to reserve funds for our local roads to continue to improve the quality of life in Marin.

Sincerely,

Via electronic signature

Andrew D. Poster, PE, TE
President

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April 23, 2018

Transportation Authority of Marin Board

Dear Board Members,

I am writing of behalf of Cool the Earth and a coalition of Marin organizations to request that the Transportation Authority of Marin include greenhouse gas reduction as a leading criteria in evaluating transportation projects in Measures A and B. We believe such steps are necessary to protect our children today and tomorrow.

We respectfully request dedicated funding to support the transition to electric vehicles, including public charging infrastructure for the public good.

We respectfully submit the following for your review:

- Statement of Support
- Executive Summary
- FAQ
- Additional information

Cool the Earth (CTE) is a volunteer organization founded in 2006 with a passion and commitment to climate solutions. The CTE board members and I work for the organization pro bono, and we will not accept any remuneration for current or future work. Additionally, we will not accept any paid staff positions related to electrification of transportation in Marin. Instead, we will engage as we have, at advocacy and advisory levels.

We would be happy to provide any additional information or clarify any items in the enclosed packet.

Sincerely,

Carleen Cullen

Carleen Cullen
Founder, Executive Director
Cool the Earth
Drive Clean Marin

ccullen@cooltheearth.org
www.drivecleanmarin.org

REQUEST FOR THE TRANSPORTATION AUTHORITY OF MARIN TO INCLUDE FUNDS FOR A RAPID TRANSITION TO ELECTRIC TRANSPORTATION

We ask the Transportation Authority of Marin (TAM) to support a rapid transition to electric transportation in Marin. We specifically request that TAM provide financial support to this transition through the inclusion of funding in its proposed Measure A expenditure plan (prospective ballot measure-2018) and by reallocation of unexpended Measure B funds (2011-2017).

TAM funding in support of clean, electric transportation would materially reduce greenhouse gas emissions, improve air quality, economically benefit Marin residents and protect the environment for future generations. In concert with other funding sources, including MCE Clean Energy, PG&E and state and local agencies, TAM funding will help advance Marin's electric vehicle adoption from 2% currently to 25% by 2030, reducing Marin's greenhouse gas emissions by at least 20%.

In the face of a rapidly changing climate that risks the health and well-being of the citizens of Marin and the entire world, we urge TAM to consider greenhouse gas emissions in all of its decisions. We ask that you allocate 2% of Measure A funding to expand EV adoption, convert municipal fleets to electric and install public EV infrastructure for the public good. We also request the TAM board to allocate a one-time expenditure of at least \$600,000 of unexpended Measure B funds over the next 3 years for public charging infrastructure, updated planning, and technical assistance.

Measure A is being reauthorized for 30 years – a time period in which greenhouse gases must be drawn down dramatically to avoid catastrophic climate change. The measure must include effective means to mitigate greenhouse gases to reflect our current and future priorities. At the same time, the nature of transportation is changing rapidly, and providing base level EV infrastructure now is essential to ensuring the future is electric.

Marin is extremely vulnerable to the impacts of climate change, especially the economic impacts due to sea level rise. Without additional public spending, Marin will only proceed with limited EV adoption, leave many in our disadvantaged and multi-unit dwelling communities with polluting and costly vehicles, and make our entire county more vulnerable to climate change. With 53% of the County's GHG emissions generated by transportation, we must act now to demonstrate our commitment to the health and safety of Marin County.

Cool the Earth Sierra Club Organizing for Action Strategic Energy Innovations School of Environmental Leadership	Sustainable Marin Sustainable Novato Sustainable San Rafael Drive Clean Marin San Anselmo Sustainability Commission	SolarCraft PacSolar Venture Pad SoEd Benefit Corp
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Protecting Our Children Today and Tomorrow

In the face of a rapidly changing climate that risks the health and well-being of the citizens of Marin and the entire world, it is essential that we rapidly reduce greenhouse gas (GHG) emissions. With 53% of the County's GHG emissions generated by transportation, transitioning to clean, plug-in electric vehicles (PEVs) is one of the most effective means of achieving this goal. The shift will materially reduce GHGs, improve human health, economically benefit Marin residents and protect the environment for future generations. The investment needed to transition to electric will be significant. The cost of inaction will be much greater as sea level rise threatens Marin's roadways.

The transition will be complex and must be rapid. It will require a paradigm shift from past and current transportation planning and investments. To fulfill the goals of Drawdown Marin, municipal climate action plans and Governor Brown's orders for 5 million zero-emission vehicles (ZEV) by 2030 and 250,000 EV charging stations by 2025, leadership, vision and funding are required. A broad coalition of stakeholders, including the County, cities, towns, MCE Clean Energy, PG&E, the Air Resource Board, and critically, TAM, will need to deeply engage to achieve this vision.

We appreciate TAM's current programs that reduce GHG emissions. From Safe Routes to School, yellow school buses and electric buses, TAM has shown a commitment to the environment. We also appreciate the work of the EPAC in evaluating proposed Measure A funding options during this dynamic transportation environment. Since adoption of Drawdown Marin and accelerated state ZEV goals were only announced at the end of the EPAC process, we understand that electric transportation was not a key topic. We appreciate the opportunity to provide input to the ongoing public outreach process now underway.

Marin County's Environmental Leadership

Marin residents take great pride in the county's environmental achievements. From open space to MCE Clean Energy to Drawdown Marin and legal action against oil companies, Marin has demonstrated its vision and leadership. With the transition to clean transportation, Marin has the opportunity to inspire all of California and future generation by the actions we take today.

Market Needs

With only 2% of Marin currently driving electric, significant education, outreach and behavior change work is required to inspire a rapid shift to electric. While driving electric can be as simple as plugging in at home, the availability of public and workplace charging is directly linked with electric vehicle market development and is critical to reduce range anxiety. Many drivers need public infrastructure, including multi-unit dwellers, workers from outside the county, drivers of plug-in hybrid EVs and low range EVs, ride hailing services, delivery services, and tourists, among others.

Transition Goals

There are currently approximately 4,000 electric vehicles registered in Marin, supported by approximately 130 public and workplace charge ports. To work toward state goals for zero emission vehicles and Drawdown Marin's GHG emission reduction goals, approximately 47,000 - 50,000 electric vehicles will be needed in the County. Based on planning reports done by state and

national organizations, an estimated 1,500 public and work charge ports will be required to support this level of electric driving (approximately 1,000 public and 500 workplace).

Investments in three broad categories are required:

1. *EV Purchase and Home Chargers:* Purchase/lease of PEVs and home chargers
2. *Public and Work Chargers:* Design and installation of public workplace charging stations; strategic planning for infrastructure, policies, zoning, permitting, pricing, etc.
3. *Public Outreach and Education:* Outreach to the public to educate about driving electric.

The required overall investment by all stakeholders and the proposed level of support from TAM is shown in Table 1. These estimates are based on best available data for long-term strategic planning purposes. The investment amounts include activities and infrastructure required to facilitate the conversion of passenger vehicles in Marin to PEVs, including municipal fleets. Annual proposed funding allocations from Measure A and Measure B and specific year by year proposed expenditures for each of these activities is provided in the attached Appendix A.

Table 1. Overall Market Transformation Investment and Proposed TAM Support

	Overall Market Transformation Investment by 2030 (\$)	Total TAM Support through FY24-25 (\$)	Average Annual TAM Support (\$/yr)	% of Overall Investment	Estimated Grant Funding (\$/yr)
PEV Purchases and Home Chargers	\$1,319,301,800	\$0	\$0	0%	\$0
Public and Work Chargers	\$28,075,152	\$4,414,600	\$630,657	16%	\$630,657
Public Outreach and Education	\$3,850,000	\$795,000	\$113,571	21%	\$0
Grand Total	\$1,351,226,952	\$5,209,600	\$744,228		\$630,657

We propose that TAM funds are used to fund public charging infrastructure and county-wide planning and administration, and outreach. We assume that significant grant funding of 50% for charging infrastructure can be secured with the available TAM local matching funds. Other agencies, such as MCE Clean Energy and CARB, are assumed to provide incentives for PEV purchase, home and workplace charging stations, and electrification of transit.

Public Investment and Market Forces

Recognizing that public investment is critical in early stages of the electric transportation transition and that market forces will take over in later years, we are proposing seven years of initial funding support from TAM. The need for continued funding support beyond seven years can be reevaluated at that time.

“Winning slowly is the same as losing.”

-- Bill McKibben, climate leader

Protecting our kids today and tomorrow

Funding FAQs

Isn't there already enough support and funding for EVs in Measure B?

Existing Measure B funds and programs are inadequate for the transition to electric transportation. The transition will require large scale infrastructure investments and numerous planning, outreach and implementation activities. For example, in December 2017, the California Energy Commission (CEC) issued a competitive grant for up to \$200,000 for EV planning, with a second phase for EV infrastructure build-out. Unfortunately, current support and funding in Measure B were not sufficient to allow TAM to apply for the grant while others, including the Contra Costa Transportation Authority, qualified to receive grants of \$200,000 with an average matching grant of \$80,000 .

Will grant funding be available for EV transition?

Governor Brown has called for \$2.5 billion for the electrification of transportation and TAM must have adequate resources and matching funds to participate in the funding opportunities. TAM has been particularly successful in leveraging local resources to obtain additional monies for roads and could play this same critical role as Marin shifts to electric transportation. There is no other agency in the county with adequate resources to address public charging for EVs. To receive state and regional grants, human resources and matching funding is required.

Won't MCE Clean Energy and PG&E provide the funding we need?

It will be critical that MCE and PG&E play an important role in facilitating installation of residential and workplace charging. TAM is well-positioned to help build public infrastructure for public good.

Why should Measure A include EVs and GHG in its scope?

When Measure A was passed in 2004, climate change was not in the public consciousness. Today the adverse impacts of climate change are clear and rapid mitigation is essential. It is imperative that TAM include GHG reduction from passenger vehicles as part of its plans and programs. Without public charging infrastructure, the concern of "range anxiety" will limit adoption and most residents in multi-unit dwellings (MUD) will be left driving more costly and more polluting vehicles.

Won't the private market fund installation of EV infrastructure?

In the long term, hopefully this will be the case, but government funding is required to help incubate the market. Currently, consumers are hesitant to purchase an EV because they are not confident that they will be able to find publicly accessible chargers where and when they need them. Private companies are hesitant to install public charging infrastructure because they are not confident that there will be enough EVs on the road to provide a solid return on their investment. Local governments can help to overcome this impasse by funding early investments in EV infrastructure.

What are the benefits to the EV consumer?

EV drivers benefit economically and environmentally. Public health is improved for all as EVs are clean, emitting no GHGs or polluting exhaust fumes. EV operating costs are lower than gas cars as they require very little maintenance. and electricity is cheaper than gasoline, saving the average consumer at least \$800/year.

Appendix A

TAM support is proposed for funding of numerous local planning, outreach and implementation activities. Proposed activities include

- Program Outreach
- Technical Services
- Strategic infrastructure plan
- Strategic planning (policies, zoning, permitting, pricing)
- Driver outreach, education and promotion
- Measurement and evaluation
- County EV Coordinator

Annual Proposed Funding Allocations

	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25	Total	Avg Annual
Measure A	\$270,000	\$540,000	\$540,000	\$540,000	\$540,000	\$468,000	\$381,600	\$3,279,600	\$468,514
Measure B	\$450,000	\$345,000	\$345,000	\$240,000	\$240,000	\$165,000	\$145,000	\$1,930,000	\$275,714
Total	\$720,000	\$885,000	\$885,000	\$780,000	\$780,000	\$633,000	\$526,600	\$5,209,600	\$744,229

Expenditure Proposal Electric Transportation Activities Supported by TAM

ANALYSIS		Annual Cost							Total
	One time cost	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24	FY24-25	
	Year 1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
Measure A									
Public Infrastructure									
Rebates and Grants	\$0	\$65,000	\$280,000	\$300,000	\$300,000	\$300,000	\$240,000	\$168,000	
Program Outreach	\$0	\$25,000	\$30,000	\$30,000	\$30,000	\$30,000	\$24,000	\$16,800	
Technical Services	\$0	\$20,000	\$30,000	\$30,000	\$30,000	\$30,000	\$24,000	\$16,800	
Total	\$0	\$110,000	\$340,000	\$360,000	\$360,000	\$360,000	\$288,000	\$201,600	\$2,019,600
County-wide Planning, Administration and Outreach									
Strategic infrastructure plan	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Strategic planning (policies, zoning, permitting, pricing)	\$0	\$25,000	\$50,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	
Driver outreach, education and promotion	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Measurement and evaluation	\$0	\$0	\$20,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	
EV Coordinator	\$0	\$85,000	\$130,000	\$130,000	\$130,000	\$130,000	\$130,000	\$130,000	
Total	\$50,000	\$110,000	\$200,000	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000	\$1,260,000
Measure B									
Public Infrastructure									
Rebates and Grants (chargers and fleets)	\$0	\$90,000	\$125,000	\$135,000	\$95,000	\$95,000	\$50,000	\$30,000	
Program Outreach	\$0	\$30,000	\$50,000	\$50,000	\$20,000	\$20,000	\$10,000	\$10,000	
Technical Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total	\$0	\$120,000	\$175,000	\$185,000	\$115,000	\$115,000	\$60,000	\$40,000	\$810,000
County-wide Planning, Administration and Outreach									
Strategic infrastructure plan	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Strategic planning (policies, zoning, permitting, pricing)	\$0	\$10,000	\$30,000	\$15,000	\$0	\$0	\$0	\$0	
Driver outreach, education and promotion	\$0	\$125,000	\$125,000	\$125,000	\$110,000	\$110,000	\$100,000	\$100,000	
Measurement and evaluation	\$0	\$0	\$15,000	\$20,000	\$15,000	\$15,000	\$5,000	\$5,000	
EV Coordinator	\$0	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	
Total	\$150,000	\$180,000	\$170,000	\$160,000	\$125,000	\$125,000	\$105,000	\$105,000	\$1,120,000

Resources

1. Accelerating Investment in Electric Vehicle Charging Infrastructure. Ceres, Nov. 2017
2. National Plug-In Electric Vehicle Infrastructure Analysis - National Renewable Energy Lab Sept. 2017
3. [Climate change and health profile report, Marin County 2017](#)
4. [Governor Brown Takes Action to Increase Zero-Emission Vehicles, Fund New Climate Investments](#), Jan. 2018
5. Emerging best practices for electric vehicle charging infrastructure. The International Council on Clean Transportation, Oct. 2017
6. California Public Utilities Commission, Zero Emissions Vehicles, 2017
7. Zero-Emission Vehicles in California: COMMUNITY READINESS GUIDEBOOK, 2013
8. Santa Monica, CA EV Action Plan, 2017
9. Sacramento EV Plan, 2017

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April 24, 2018

Dianne Steinhauser,
Executive Director
Transportation Authority of Marin
900 Fifth Avenue
San Rafael, CA 94901

RE: Transportation Authority of Marin's Proposed Measure A Tax Renewal

Dear Ms. Steinhauser:

The Marin Conservation League (MCL) has been tracking development of TAM's proposed Measure A Tax renewal. MCL supports TAM's mission that identifies creating "an efficient and effective system that promotes mobility and accessibility... to all users". However, we believe that TAM's Measure A expenditure planning must also recognize the critical need to reduce greenhouse gas (GHG) emissions to safeguard environmental health and the future of the planet.

GHG emissions, and associated global warming and pollution, are causing broad damage to human health and communities, to plant and animal resiliency, and to the health of the ocean. We cannot ignore the fact that global warming will foreseeably continue, causing rising sea levels and more frequent and larger storms that will challenge transportation infrastructure and require future adaptation solutions to sea level rise.

It's critical that TAM's proposed Measure A expenditure plan, as well as its strategic vision, emphasize mitigation of GHGs as an overall planning objective equal to that of reducing traffic congestion, given that transportation and traffic account for more than 50% of Marin's total GHG production. TAM's partnership with the County, MCE and others in "owning" responsibility for and achieving GHG reduction is important for the success of the County's Drawdown effort to reduce atmospheric carbon and meet California's SB32 goal of reducing GHG emissions 40% by the year 2030.

Electric vehicles (EVs) offer an extraordinary opportunity to reduce GHG emissions. We request that TAM's Measure A expenditure plan include funds that support rapid transition from combustion engine vehicles to clean EVs, prioritize support of infrastructure that charges EVs in short periods of time, and fund EV municipal fleets and electric buses.

PHONE: 415.485.6257
FAX: 415.485.6259

EMAIL: mcl@marinconservationleague.org
WEB: marinconservationleague.org

ADDRESS: 175 N. Redwood Dr., Ste. 135
San Rafael, CA 94903-1977



MCL appreciates TAM's investment in the Safe Routes to Schools programs, funding for bicycle and pedestrian infrastructure, its planned increase in school transportation service, and incentives for transit and van pool use. All are means that have potential to reduce single occupant auto use, which in turn would reduce congestion, pollution and GHG emissions. Monitoring outcomes for achieving these objectives is also important.

We appreciate the challenges of apportioning limited funds among a wide range of competing transportation needs and that significant effort is being given to finding a good balance. However, TAM is uniquely positioned to help Marin County achieve its significant emission reduction goals for the future. Prioritizing a conversion from combustion engine vehicles to clean electric vehicles will have important impact.

Thank you for considering these requests.

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Novy", with a long, sweeping horizontal line extending to the right.

Linda Novy
President

San Rafael Chamber

April 26, 2018

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Transportation Authority of Marin
Board of Commissioners
900 Fifth Avenue Suite 100
San Rafael, CA 94901

Re: Measure A Sales Tax Renewal Expenditure Plan

Dear Chair Moulton-Peters and Commissioners:

On behalf of the San Rafael Chamber of Commerce, which represents 625 Marin County employers with over 26,000 employees, I write to express our support for placing the renewal of Measure A on the November ballot. The Chamber along with several other organizations representing a varied cross section of interests participated on an expenditure plan advisory committee for several months. After many public presentations, committee meetings and hours of discussion, we unanimously approved a plan. However, it has come to the Chamber's attention that since that time, there have been requests that the plan be modified to accommodate more funds towards implementing Electric Vehicle (EV) charging stations. The Chamber is opposed to modifying the plan to add more EV charging stations in Measure A.

The Chamber understands that electric vehicles are an emerging market but it will take a while for the market to grow and reach all demographics. While we agree that some public charging stations are important, we also believe that those advantaged enough to drive an electric vehicle in Marin can also charge them overnight where they sleep. Our concern is that if we had them to multi-family homes, they will sit vacant. There are also other funding sources at the state and federal level for EV charging stations and so while local funding is scarce; this sales tax measure should be used for local improvements that have been identified as the most important to all tax payers. The survey results were very clear and relieving traffic congestion was the highest priority. The best way to get people out of their cars is to increase public transit and encourage non-motorized transportation. Asking the tax payer to fund public EV charging stations in Measure A is not the best use of funds and not equitable.

Technology is rapidly changing and we will all need to be prepared for what is to come with autonomous vehicles. Investing in a large number of charging stations at this time that only benefit a few may be a futile exercise. We should be investing now in new road technology, more efficient public transit and school transportation to keep Marin on the move.

Please consider adopting the expenditure plan advisory committee's recommendations for the renewal of Measure A.

Sincerely,



Joanne Webster
President and CEO

cc via email: Chamber Board of Directors

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TOM FORSTER
 Former Director of Operations
 Skywalker Properties Ltd LLC

Board Member Emeritus
MARY MCEACHRON

CYNTHIA MURRAY
 President & CEO

KATIE MURRAY
 CAO

April 26, 2018

Stephanie Moulton-Peters, Chair
 Transportation Authority of Marin
 900 Fifth Avenue, Suite 100
 San Rafael, CA 94901

Re: Expenditure Plan

Dear Chair Moulton-Peters and Commissioners:

As CEO of North Bay Leadership Council (NBLC), I am pleased to have served on the Expenditure Committee and to see that you are reviewing the final plan and contemplating placing the renewal of Measure A on the ballot.

The committee deliberated each item in the proposed Expenditure Plan and reached consensus after much consideration. At NBLC, we are very concerned to see that some ill-advised last minute changes are proposed to that finely crafted plan. In particular, we are opposed to the idea of taking money out of parts of the plan that have been delicately balanced to provide public-financing of electric vehicle charging stations.

NBLC opposes the use of tax payer-generated funds from the renewal measure for these charging stations for two important reasons. The first is that over the duration of the expenditure plan, it is predicted that we will be moving to shared, autonomous vehicles that will not be individually-owned. When that switch occurs, the owners of the vehicles who offer this service, will be providing the charging stations at fleet locations. It is a waste of public money to spend it on stations that others will pay for and will not be used. Please see the attachment which outlines the expectations that this big move to shared EVs will occur within approximately a decade.

The other reason for opposition is that there is a strong incentive for the private sector to fund charging stations. The state of California lifted its ban on allowing utilities to own and operate charging infrastructure in 2015. Pacific Gas & Electric has been [approved](#) for a \$130 million hybrid ownership program for 7,500 electric vehicle charging stations in northern and central California over three years. **It will be the nation's single-largest deployment of charging stations for electric vehicles.**

Under this hybrid model, Pacific Gas & Electric will own and maintain charging stations installed by third-party vendors in underserved markets, such as apartment complexes and workplaces located in disadvantaged communities. Outside of disadvantaged communities, Pacific Gas & Electric will not own or maintain charging stations, but will support electrical infrastructure from the power line to the charging station.

Also, The Center for Climate and Energy Solutions recently did [an analysis of EV charging infrastructure financing](#) and identified promising ways to get the private sector to fund more of that infrastructure. Said study author Nick Nigro, "Just selling electricity as a transportation service won't bring in enough revenue to pay for owning and operating the charging equipment." He argues that

this is why charging business models must capture some of the indirect revenue that flows to other businesses, like automakers, retailers, and electric utilities.

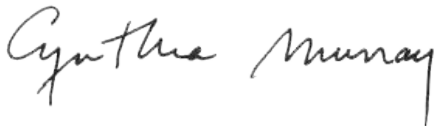
Nigo said that business owners need to take into account how much additional business these charging stations can bring in by attracting new and loyal customers eager to patronize businesses that are supporting the transition to electric mobility. According the EV charging infrastructure company ChargePoint, [the installation of an EV charging stations increases customer "dwell-time" significantly -by an average of 50 minutes per customer according to one business customer](#). This means more time for customers to spend money.

And UC-Berkeley, found that policy makers can take steps to lower costs, primarily through incentives and permit streamlining. Examples include targeted rebates and grants for office and multi-unit dwelling building owners to install charging stations, as well as expedited permitting to allow more curbside charging. Regulators can also reduce fees for adding energy storage to charging sites to decrease electricity costs and simplify the process of connection to the grid. These policy changes should be advocated by TAM, instead of using money needed to fund improvements that are important and necessary.

NBLC hopes that the TAM board will not take vital money away from the proposed expenditure plan to use on funding a need that will rapidly be either funded by the private sector or by shared vehicle fleet owners as private ownership goes the way of owning a horse and buggy.

Thank you for your consideration. NBLC looks forward to having new funding to continue the great work done by TAM in managing the Measure A funds that have made a positive impact on the people who live and work in Marin County.

Sincerely,

A handwritten signature in cursive script that reads "Cynthia Murray". The ink is dark and the signature is fluid, with a long, sweeping tail on the "y" in "Murray".

Cynthia L. Murray
President and CEO

Below are articles that are referred to in NBLC's letter concerning funding of charging stations in the Expenditure Plan:

The End of Car Ownership, by Tim Higgins, Wall Street Journal, June 20, 2017

<https://www.wsj.com/articles/the-end-of-car-ownership-1498011001>

Cars are going to undergo a lot of changes in the coming years. One of the biggest: You probably won't own one.

Thanks to ride sharing and the looming introduction of self-driving vehicles, the entire model of car ownership is being upended—and very soon may not look anything like it has for the past century.

Drivers, for instance, may no longer be drivers, relying instead on hailing a driverless car on demand, and if they do decide to buy, they will likely share the vehicle—by renting it out to other people when it isn't in use.

Car ownership, for a long time, has symbolized freedom and independence. But in the future, it may be akin to owning a horse today—a rare luxury.

Ride sharing as we know it will grow in popularity as people get even more comfortable with the sharing economy, and more people migrate to dense cities where owning a car is a burden. One-quarter of miles driven in the U.S. may be through shared, self-driving vehicles by 2030, according to an estimate by Boston Consulting Group.

And the business of ride sharing may take on some new forms.

Startups such as Los Angeles-based Faraday Future envision selling subscriptions to a vehicle—for instance, allowing people to use it for a certain number of hours a day, on a regular schedule for a fixed price. So, people who need a vehicle for a few hours daily to attend meetings or make deliveries could subscribe and avoid having to summon on-demand rides every day (and potentially paying a lot more).

“By 2022, 2023, the majority of transportation in urban cities with temperate weather will be on demand, shared and likely autonomous,” says Aarjav Trivedi, chief executive of Ridecell, a San Francisco company that provides the back-end software for car sharing.

New report: Due to major transportation disruption, 95% of U.S. car miles will be traveled in self-driving, electric, shared vehicles by 2030, May 4, 2017, RethinkX

<https://www.rethinkx.com/press-release/2017/5/3/new-report-due-to-major-transportation-disruption-95-of-us-car-miles-will-be-traveled-in-self-driving-electric-shared-vehicles-by-2030>

A historic revolution in transportation will end over 100 years of individual vehicle ownership and reshape the world's energy economy in the process. That's according to a groundbreaking new research report, Rethinking Transportation 2020-2030: The Disruption of Transportation and the Collapse of the ICE Vehicle and Oil Industries.

Assuming existing technologies and using well-established cost curves, the report, produced by RethinkX, an independent research group, provides a detailed analysis of data, market, consumer and regulatory dynamics. It finds that within 10 years of the regulatory approval of driverless vehicles:

95 percent of U.S. passenger miles traveled will be served by on-demand Autonomous Electric Vehicles (A-EVs) owned by companies providing Transport as a Service (TaaS).

A-EVs engaged in TaaS will make up 60 percent of U.S vehicle stock.

"We are on the cusp of one of the fastest, deepest, most consequential disruptions of transportation in history," said co-author Tony Seba, RethinkX co-founder, author of "Clean Disruption of Energy and Transportation," and instructor at Stanford Continuing Studies. "But there is nothing magical about it. This is driven by the economics."

Who Should Pay For Electric Vehicle Chargers? Who Should Profit? By [Constance Douris](#), November 8, 2017 <https://www.forbes.com/sites/constancedouris/2017/11/08/who-should-pay-for-electric-vehicle-chargers-who-should-profit/#1c4386964aa5>

California initially feared that allowing utilities to own and operate charging infrastructure would stifle private competition. Furthermore, it would demand electric customers to subsidize infrastructure that would only be used by a minority. This is why the Golden State [banned](#) utilities from investing in such infrastructure.

The ban was lifted in 2015. California has since realized that electric vehicle chargers are necessary to meet its ambitious electric transportation and environmental goals.

Public utilities in California are eager to move forward with electric car chargers. Pacific Gas & Electric has been [approved](#) for a \$130 million hybrid ownership program for 7,500 electric vehicle charging stations in northern and central California over three years. It will be the nation's single-largest deployment of charging stations for electric vehicles.

Under this hybrid model, Pacific Gas & Electric will own and maintain charging stations installed by third-party vendors in underserved markets, such as apartment complexes and workplaces located in disadvantaged communities. Outside of disadvantaged communities, Pacific Gas & Electric will not own or maintain charging stations, but will support electrical infrastructure from the power line to the charging station.

Why Small Businesses Are Installing Electric Vehicle Charging Stations, Sierra Club, <https://content.sierraclub.org/evguide/blog/2015/04/why-small-businesses-are-installing-electric-vehicle-charging-stations>

The Center for Climate and Energy Solutions recently did [an analysis of EV charging infrastructure financing](#) and identified promising ways to get the private sector to fund more of that infrastructure. Said study author Nick Nigro, "Just selling electricity as a transportation service won't bring in enough revenue to pay for owning and operating the charging equipment." He argues that this is why charging business models must capture some of the indirect revenue that flows to other businesses, like automakers, retailers, and electric utilities.

Nigo said that business owners need to take into account how much additional business these charging stations can bring in by attracting new and loyal customers eager to patronize businesses that are supporting the transition to electric mobility. According the EV charging infrastructure company ChargePoint, [the installation of an EV charging stations increases customer "dwell-time" significantly -by an average of 50 minutes per customer according to one business customer](#). This means more time for customers to spend money.

California needs more electric vehicle charging stations to keep pace with demand by Ethan Elkind, director, Climate Program at Berkeley Law, Berkeley Blog, September 25, 2017
<http://blogs.berkeley.edu/2017/09/25/california-needs-more-electric-vehicle-charging-stations-to-keep-pace-with-demand/>

This immense infrastructure deployment is unlikely to occur without policy action, which is the subject of the recent report “[Plugging Away: How To Boost Electric Vehicle Charging Infrastructure](#)” from the Center for Law, Energy & the Environment at Berkeley Law. While private sector investment will address some of the need, many charging stations are simply too expensive to build and operate right now, without dependable near-term revenue to cover costs and produce a profit.

The costs are myriad, from the charger to on-site electrical installation to insurance and maintenance. Some charging station owners also face prohibitively high electricity rates, depending on their location and usage. Meanwhile, revenues to cover these costs are uncertain at best and insufficient at worst, typically coming from customer payments and on-site retail purchases as drivers shop while they wait for their vehicles to charge.

Policy makers can take steps to lower costs, primarily through incentives and permit streamlining. Examples include targeted rebates and grants for office and multi-unit dwelling building owners to install charging stations, as well as expedited permitting to allow more curbside charging. Regulators can also reduce fees for adding energy storage to charging sites to decrease electricity costs and simplify the process of connection to the grid.

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Helene B. Marsh

Tiburon, CA. 94920

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April 25, 2018

Board Chair Stephanie Moulton-Peters
Board of Commissioners
Executive Director Dianne Steinhauser
Transportation Authority of Marin
900 Fifth Avenue, Suite 100
San Rafael, CA 94901

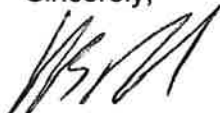
Re: Meeting of April 26, 2018 Agenda items 7 and 8

Dear Chair Moulton-Peters, Board of Commissioners, and Director Steinhauser,

I am writing to request that the Transportation Authority of Marin (TAM) support a rapid transition to electric transportation in Marin. I specifically request that TAM provide financial support to this transition through the inclusion of funding in its proposed Measure A expenditure plan (prospective ballot measure 2018) and by reallocation of unexpended Measure B funds (2011-2017).

In light of the fact that greenhouse gas emissions from transportation represent over 50% of the emissions countywide and the impacts of a rapidly changing climate are being experienced in Marin and globally, we must act rapidly to reduce emissions from the transportation sector. The electrification of transportation is a key component of emissions reduction and should be promoted and supported countywide.

Sincerely,



Helene Marsh