

**Attinger, Steve**

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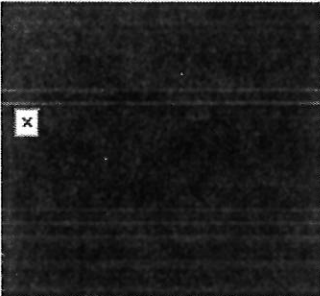
**From:** Cherie Walkowiak  
**Sent:** Wednesday, February 04, 2015 11:06 AM  
**To:** Lenny Siegel; Pat Showalter; Clark, Chris  
**Cc:** Attinger, Steve; Blount, Terry; Carbon Free MV; Safe Mountain View; Greatstreetsmv  
**Subject:** comments for CESC meeting on Thursday

Dear Council Environmental Sustainability Committee members,

First, I want to say how thrilled I am at the make-up of the new CESC. The three of you make for a powerhouse environmental sustainability committee! I look forward to seeing how each of you will steer our beautiful city towards a more sustainable future. I wish I could be at this first CESC meeting, but will be at a meeting at my kids' school, so I'll send my comments here.

I am very excited to see that Mountain View is looking at how it can address climate change with the draft Climate Protection Roadmap (CPR) at this Thursday's meeting. In the document, I am especially happy to see Community Choice Energy at the top of the list of suggestions. I look forward to seeing where we can go with that. Ideally, I'd like to see Mountain View get as close to 100% carbon free electricity as possible.

I feel the CPR is lacking in the area of Transportation strategies and Mechanisms (see table 1.7 on page 15). If we are to take sustainability seriously, we need a climate plan that embraces sustainable streets, such as the city of San Mateo is thinking about (see [New draft San Mateo Sustainable Streets Plan has lessons for other cities](#) for a synopsis).



### New draft San Mateo Sustainable Streets Plan has lessons...

San Mateo City Council last week gave a favorable review to a Sustainable Streets plan that has been in the works for a couple of years. The plan covers a ...

[View on peninsula...](#)

Preview by Yahoo

I would hope that, like San Mateo, our Transportation Strategies would include at the very least the following (some of these pulled directly from the article above):

- multi-modal streets which enable people to get anywhere they need to without the need to get in a car. This would include convenient public transit and a network of low-stress cycle facilities that connect neighborhoods to schools, recreation, commercial areas, and work places. In a word (okay, two): we need Complete Streets.
- incentives for not driving (one example: employers and new developments could offer eco passes instead of parking spaces)
- a Vision Zero goal to eliminate pedestrian and cycling deaths and reduce injuries
- a "green streets" policy promoting the use of street landscaping to reduce water pollution and alleviate flooding

Thank you for all you do.  
Cherie Walkowiak

## Attinger, Steve

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**From:** Bruce England  
**Sent:** Wednesday, February 04, 2015 11:41 AM  
**To:** Safe Mountain View  
**Cc:** Lenny Siegel; Pat Showalter; Clark, Chris; Attinger, Steve; Blount, Terry; Carbon Free MV; Greatstreetsmv  
**Subject:** Re: comments for CESC meeting on Thursday

Greetings all:

I would like to echo what Cherie says in her message. She has covered what will help in Mountain View very well, and I trust you will give what she raises your best attention and consideration.

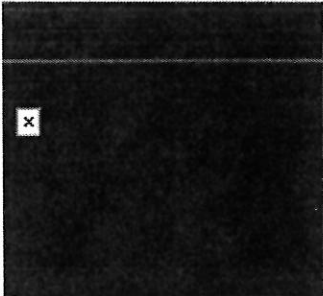
Thank you,  
Bruce England  
328 Whisman Station Drive  
Mountain View, CA 94043

On Wed, Feb 4, 2015 at 11:05 AM, 'Cherie Walkowiak' via safermountainview  
<[safermountainview@googlegroups.com](mailto:safermountainview@googlegroups.com)> wrote:  
Dear Council Environmental Sustainability Committee members,

First, I want to say how thrilled I am at the make-up of the new CESC. The three of you make for a powerhouse environmental sustainability committee! I look forward to seeing how each of you will steer our beautiful city towards a more sustainable future. I wish I could be at this first CESC meeting, but will be at a meeting at my kids' school, so I'll send my comments here.

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Thank you for all you do.  
Cherie Walkowiak

## Attinger, Steve

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**From:** Mike Balma  
**Sent:** Wednesday, February 04, 2015 2:26 PM  
**To:** Clark, Chris; Showalter, Pat; Siegel, Lenny  
**Cc:** Attinger, Steve; Blount, Terry; Carbon Free MV  
**Subject:** Comments for Mountain View CESC Meeting on Climate Protection Roadmap - Feb. 5th  
**Attachments:** Sonoma Clean Power-2013-Electric-Power-Generation-Mix.pdf; MV CPR input 2-2015.pdf

Dear CESC members,

Thank you for your support of the Climate Protection Roadmap (CPR) process. Addressing this long term issue in an organized and persistent manner is important for success. In addition, Mountain View has an opportunity to show leadership on this issue in a year where nations are meeting in Paris to formalize their commitments later this fall. Since Mountain View is located on the Bay, we will be effected directly by the effects of climate change including sea level rise.

Here are suggested inputs for Mountain View's CPR. In general, the report looks very good. By implementing selected actions that are documented, the report shows that it is possible to reach the goal of 80% emissions reduction by 2050. However, there are several areas where the study underestimates the impact of Community Choice Energy (CCE) and the leverage that it has with other actions to speed the process at a lower cost. These include:

1. The CPR study provides a great prioritized list of actions that have the highest impact; however it does not adequately address the synergy that Community Choice Energy (CCE) has with other actions in transportation and buildings such as the move to EVs and heat pumps.

There should be a broader strategy that links actions across the electric grid, transportation and buildings, see attached slide. The strategy should prioritize greening the grid through a CCE and then moving energy use to the grid. This would enable emissions reductions from existing electricity users as well as for those fuel switching to EVs, heat pumps etc. This integrated CPR strategy could reduce emissions 30% more than without a CCE based on the experience in Sonoma. (See item 3 below.) And it would enable heat pumps and EVs to get greener over time unlike a switch to natural gas based solutions.

2. The net costs of a CCE are over estimated. The report indicates that the costs of a CCE would be low and I agree with that. However, since Sonoma's CCE saves customers 4 to 5% on electric rates, the city, residence and business could save millions of dollars. Sonoma Clean Power estimates that its customers could save \$6 million in the first year alone. I would say this is revenue positive after a modest short term investment.

In addition, a CCE offers a revenue stream, that is not tax based, to fund other local CRP activities such as public EV chargers and outreach programs etc.

3. The report overestimates the percent of emission free electricity generated by PG&E without competition from a CCE. On page 32, the CRP states that the grid will be 70% carbon free by 2050 based on the RPS. However, the RPS currently only requires 33% renewable energy by 2020. The remainder of PG&E's carbon free electricity currently comes from large hydro (10%) and nuclear (22%) for a potential total of 65% in 2020. However, PG&E's license for Diablo Canyon Nuclear reactors end in 2024 and 2025. PG&E is considering asking for a 20 year extension. This means optimistically that the nuclear resource might provide emission free electricity through 2045 and more likely a far shorter time frame. This could bring PG&E's carbon free electricity percentage down to 43%.

Sonoma Clean Power delivers 70% of its electricity emissions free today, see attachment (33% renewable, 37% large hydro). A CCE can provide competition to PG&E and generate both lower emissions and lower cost. Since a CCE has a goal to increase renewable and emission free electricity, you would expect the grid to continue to be greener over time. So it could help meet the 80% emission reduction goal much more quickly than a regulated monopoly. And the existence of a local CCE is likely to motivate PG&E to increase the renewable and emission free portion of their electricity generation. Even those who choose to get their electricity from PG&E are likely to generate lower emissions than without the competition that a CCE provides.

#### **Additional CPR Report Input**

1. Transportation fuel switching to natural gas may not be a wise policy, since it will not achieve an 80% reduction that is needed by 2050 for each vehicle. The report acknowledges this point on page 53 indicated that *"while CNG provides important air quality benefits and reduces GHG emissions when compared to traditional diesel engines, cleaner technologies exist. Also, investment in CNG buses may lock in this pollution for the duration of the buses' lifecycle."*

In addition, methane (natural gas) is a very powerful green house gas. And leakage is a very real problem. So the efficiency benefits of natural gas may be cancelled by leakage if strong standards are not enacted and enforced along the entire supply chain from drilling through the pipelines and including vehicle fill up.

2. Mandating solar thermal for new construction may not be a wise policy since there is less flexibility for storing thermal energy. Much of the summer heat energy captured by solar thermal system is dissipated because once your water gets up to maximum temperature, you can't store any more energy. However, solar PV systems can share their excess energy with the grid which helps to reduce summer peak usage. In addition, as the report points out, the cost of solar PV is expected to continue to fall whereas solar thermal does not have a similar track record. Even now, you can install solar PV plus a heat pump system with cost effectiveness of a solar hot water system.

3. I was disappointed that the report did not address the positive impacts that Transit Oriented Development could have on reducing emissions. I know this is difficult to quantify, however it seems that it should be a strategic component to Mountain View's overall development plan even if it's not

specifically included in the CPR.

Regards,

Mike Balma  
Mountain View Resident  
Member of Carbon Free Mountain View

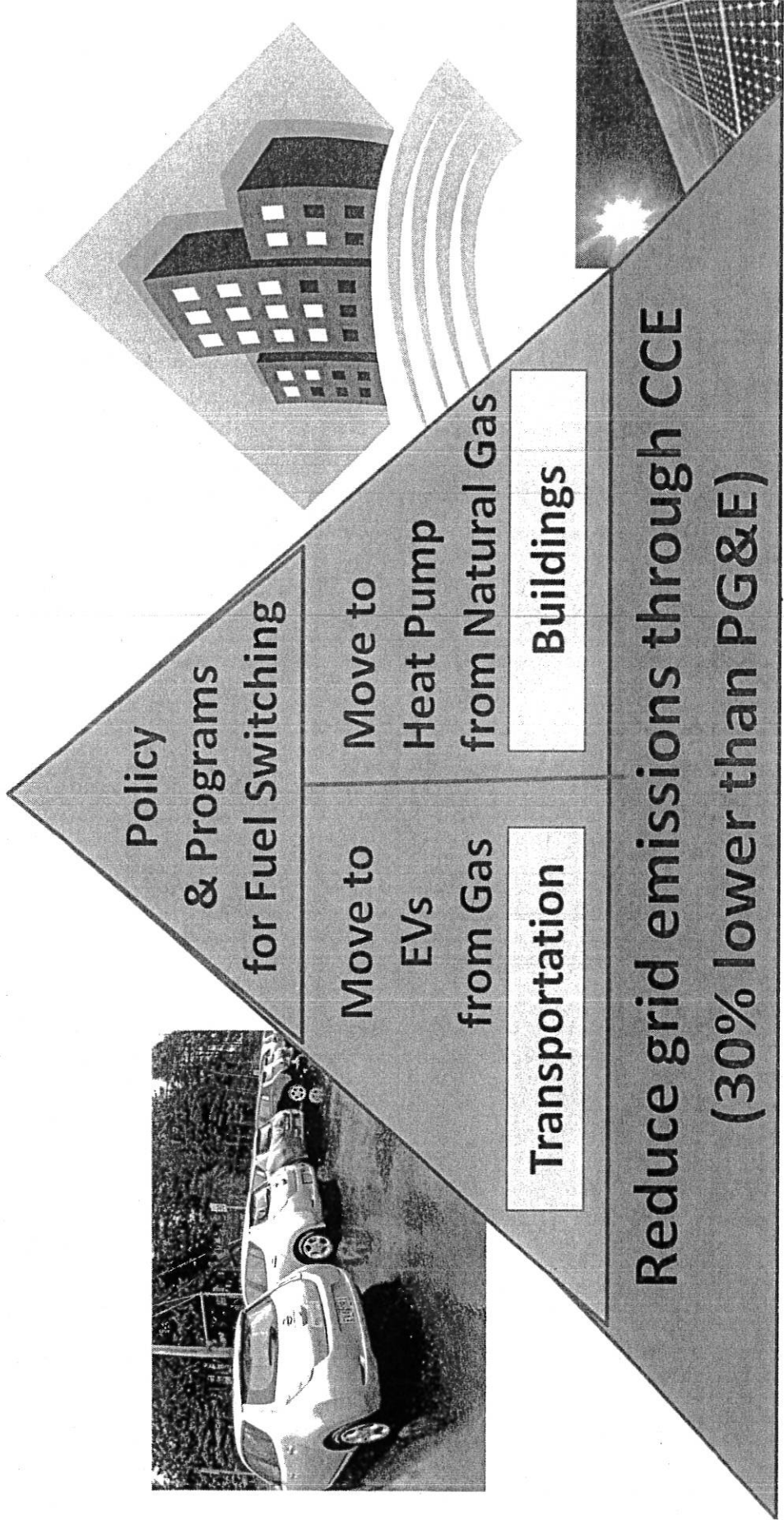


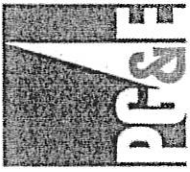
# CPR Strategy

Greening the Grid with CCE

Increases Impact of Fuel Switching

Now & Over Time





## PG&E – SCP Comparison



### Electric Power Generation Mix\*

Specific Purchases	Percent of Total Retail Sales (kWh)		
	PG&E	CleanStart	EverGreen
<b>Renewable</b>	<b>22%</b>	<b>33%</b>	<b>100%</b>
• Biomass & Biowaste	4%	9%	0%
• Geothermal	5%	15%	100%
• Eligible hydroelectric	2%	0%	0%
• Solar electric	5%	0%	0%
• Wind	6%	9%	0%
Coal	0%	0%	0%
Large hydroelectric	10%	37%	0%
Natural gas	28%	0%	0%
Nuclear	22%	0%	0%
Other	0%	0%	0%
Unspecified sources of power	18%	30%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* PG&E's generation data represents 2013 is provided in the "Annual Report to the California Energy Commission: Power Source Disclosure Program." SCP's generation data is forecast for 2014.

### Total CO<sub>2</sub> Emissions from Electricity Sales per Megawatt-Hour\*\*

PG&E	CleanStart	EverGreen
445 pounds	294 pounds	70 pounds

\*\* The CO<sub>2</sub> emission rates reflect the energy generation provided by PG&E in 2012. SCP's CO<sub>2</sub> emission data is forecast for 2014.

FROM MIKE BALMA

## Attinger, Steve

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**From:** John Scarboro  
**Sent:** Thursday, February 05, 2015 12:46 AM  
**To:** Clark, Chris; Showalter, Pat; Siegel, Lenny; Attinger, Steve; Blount, Terry  
**Cc:** Carbon Free MV  
**Subject:** Comments for Mountain View CESC Meeting on Climate Protection Roadmap - Feb. 5th  
**Attachments:** Graphs for CESC on CPR.pdf

Dear CESC members and staff,

I am excited to see three council members committed to sustainability and now 2 with environmental backgrounds on the CESC this year. I look forward to your leadership in doing our part to make Mountain View "carbon free" and resilient to climate change. I am also glad that the Sustainability Manager position is now in the Planning Division. It was good to start in Public Works and get things going. I am confident the Public Works department will continue steadily and reliably reducing municipal greenhouse gas emissions and maintaining and upgrading our infrastructure as needed. To adapt and overcome the challenges we face with climate change while maintaining and improving our community, we will need long term planning, integration and vision. The Planning Division is just the place for that. Thank you for the work you have done and will continue to do to make Mountain View a great place to live.

On the Climate Protection Roadmap, I agree with and would like to build on the emails you have seen from Cherie Walkowiak and Mike Balma.

First, I think that actions to reduce community GHG justify more effort than GHG reductions in Municipal Operations. According to the 2005 emissions estimates, municipal operations produce approximately 2.5% of the GHG of the community (see attached pdf page 1 for a comparison.) Of course we need to do both. Many of the things we implement as a community, such as Community Choice Energy, will work to improve municipal operations too. In addition to using carbon free electricity for all electrical needs, the city fleet can be electrified and the buildings heated and cooled with renewable energy.

On that note, it is great that Community Choice Energy (CCE) is prominent in the CPR. Assuming that the CCE study comes back positive, I hope we are able to move to the next step quickly, and implement the CCE with all deliberate speed, with a mid-year study session and budget adjustment. I fully support this and think it is the best way to take the biggest chunk out of our community GHG emissions. The add on effects for fuel switching with electric vehicles, heat pumps and other electrification, plus the local control of feed in tariffs and other policies to support local solar makes this even more powerful of an option than it would seem at first. This would significantly reduce the 24% of GHG from electricity and electrification can reduce the 16% from natural gas and as electric vehicles become more widespread, the 56% of transportation related GHG.

Planning to use more natural gas is a bad plan. Taking leaks in production and transmission into account, natural gas as a transportation fuel will produce a greater warming effect than current liquid fuels (see this paper for details: <http://www.pnas.org/content/109/17/6435.full>.) The global warming potential for methane (the major component of natural gas) is 72 times that of carbon dioxide on a 20 year time scale and 21 times that of CO2 on a 100 year timescale ([http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch2s2-10-2.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html).) Even if it did not provide greater warming than the fuels it would replace, investment in natural gas infrastructure for transportation lock in this technology for some period of time in the future. Transportation that requires a motor vehicle should be electrified. Please plan to transition directly from liquid petroleum fuels to carbon free electric power.

Conversely, transportation that does not require a motor vehicle should be human powered and the city should be designed in such a way that it is safely and pleasantly walkable and bike able. I understand that fuel switching is the first and easiest thing to do, but we should design our city so that cars are not required for a high quality of life. Even with 100% renewable energy, the more motor vehicles that are required, the more materials and energy will be used to make them and to transport that ton of metal, glass and plastic around. And though riding a bike past a line of EV traffic would be more pleasant, the traffic would still be bothersome. A more walkable and bike able city has benefits for quality of life, meeting your neighbors and having smarter and healthier kids. Please integrate the CPR with the bike master plan and other plans and give this longer term planning a good start toward GHG neutrality. The longer timeframe for infrastructure improvements will benefit from the earlier start.

In many areas of Mountain View we are still dealing with the effects of groundwater contaminated 2 generations ago. Climate change also has a long time horizon. The atmosphere and ocean have a lot of thermal inertia and CO2 and many other global warming gasses have long atmospheric lives- in the hundreds to thousands of years. The changes we have already put in place will be around for

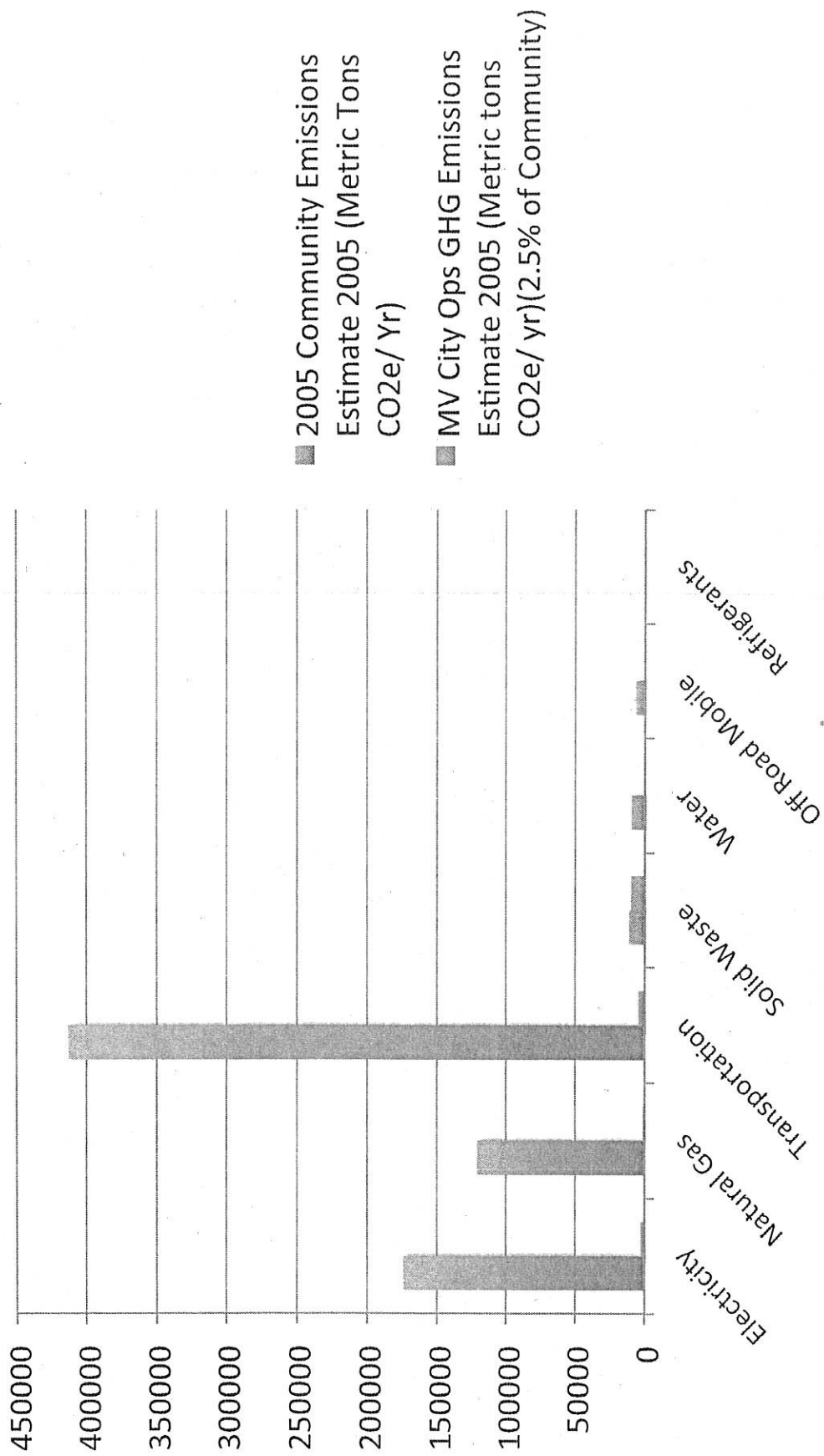


many generations. It is vital that we reduce our GHG emissions as quickly as possible and build a climate-resilient community with care and urgency.

Thank you for your attention to reducing our GHG emissions and building an even better city! I encourage you to act as quickly as you can and with the most positive vision you can gather!

John Scarboro  
Mountain View Resident

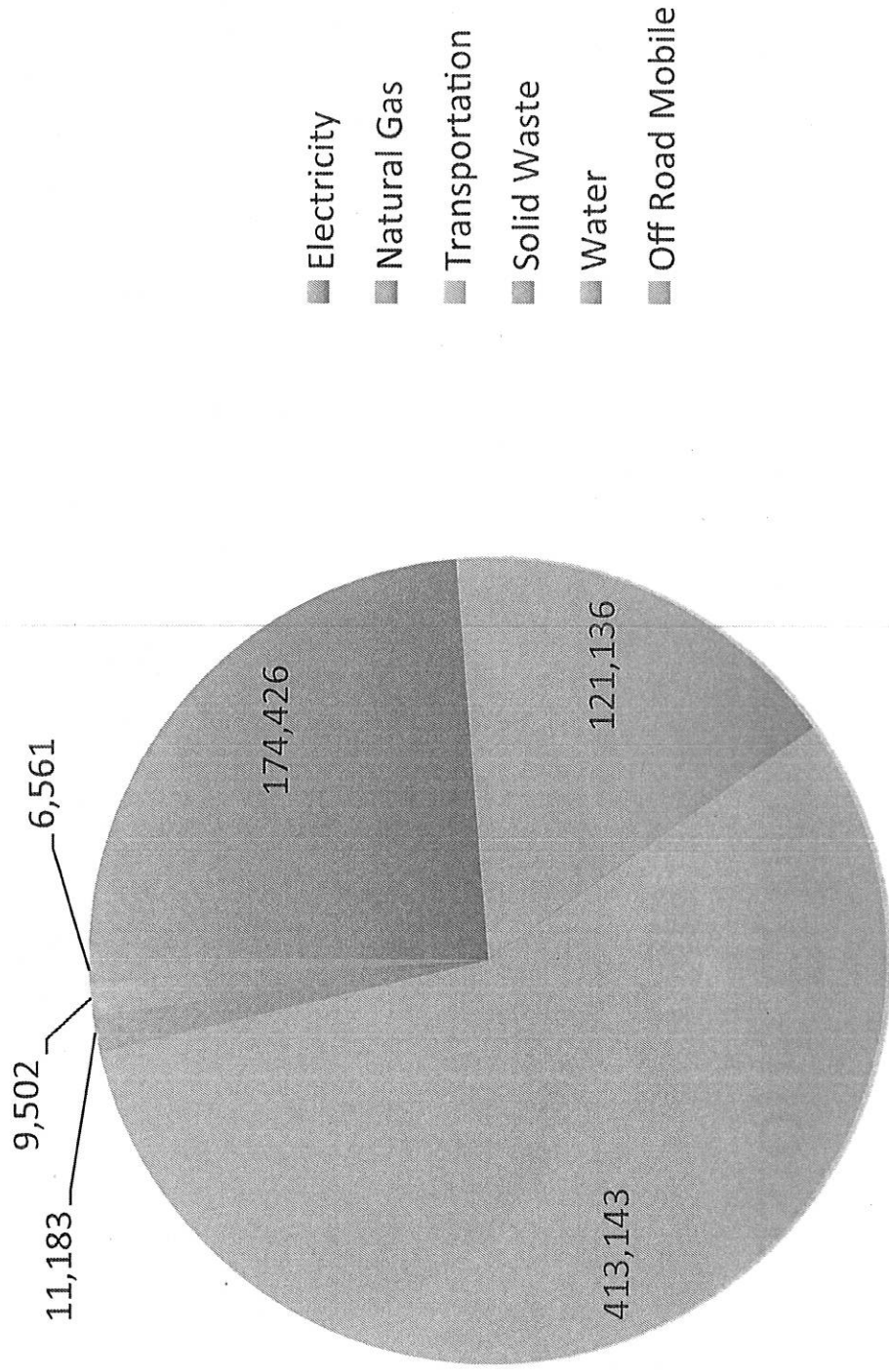
# Mountain View GHG 2005 Estimates- Community & Municipal



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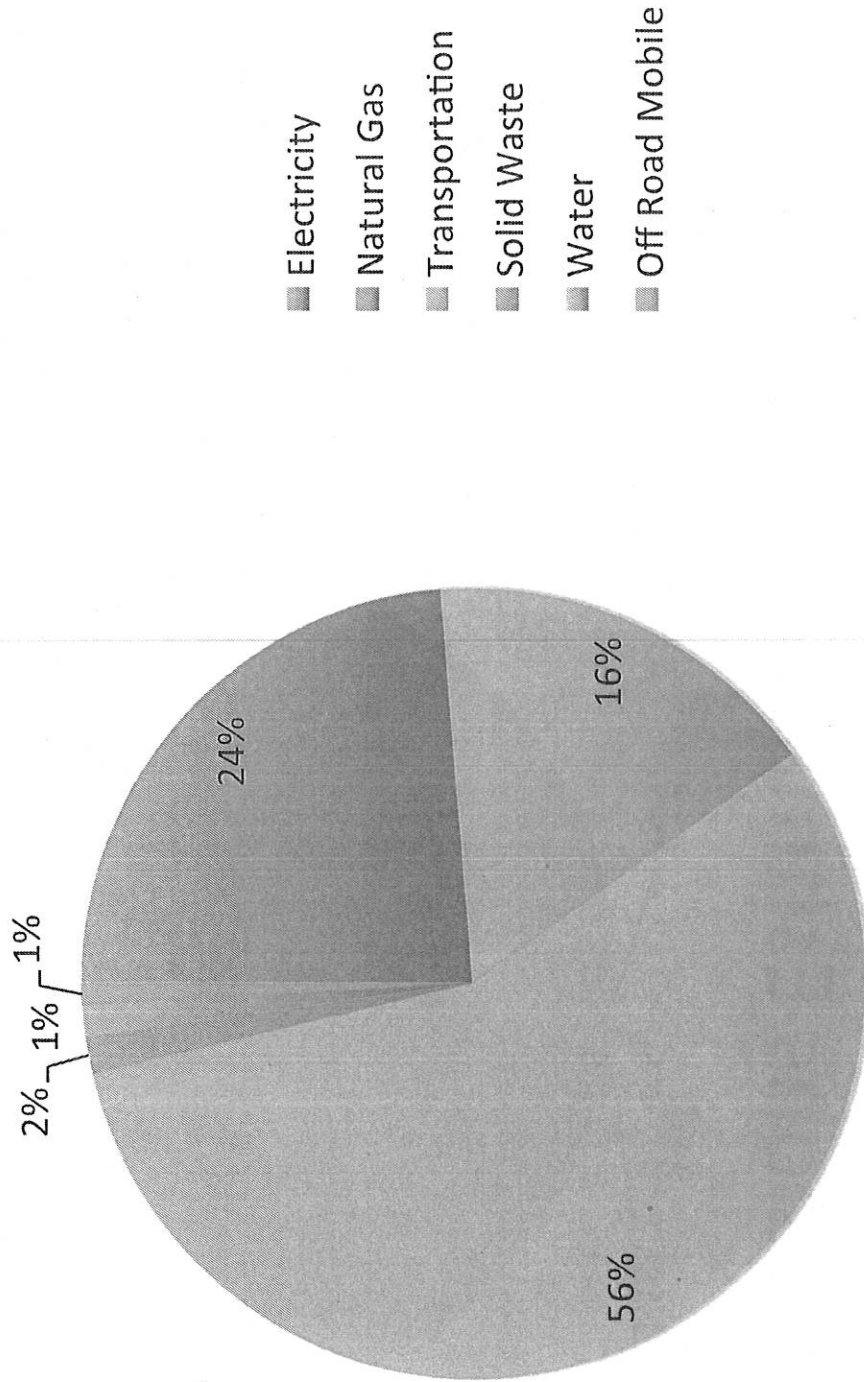
FROM JOHN SCARBORO

# Mountain View Community 2005 GHG Emissions Estimate (MT CO2e)



FROM JOHN SCARBORO

# Mountain View Community 2005 GHG Emissions Estimate (% of Total)



- Electricity
- Natural Gas
- Transportation
- Solid Waste
- Water
- Off Road Mobile

**Attinger, Steve**

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**From:** Sven Thesen  
**Sent:** Thursday, February 05, 2015 2:17 PM  
**To:** Mike; Attinger, Steve; Arthur Keller; Bruce Hodge; Steve Strange; Marc Geller  
**Cc:** Cherie cheriedj@yahoo.com  
**Subject:** Re: Input requested CESC Meeting - 2/5 - Meeting packet attached

These are the comments Project GreenHome is likely to submit tonight in Mview. Pls comment...

best,

Sven

Dear Sirs and Madams

ProjectGreenHome.org, located just north of Mountain View, is one of the nation's first "Beyond Platinum LEED, Zero Net Energy Passive Homes" with a zero carbon footprint and energy / water use roughly 20% of the typical Bay Area single family dwelling. The home has met the 2050 AB 32 goals now. Further, it serves as living example that one can have a beautiful, functional, pleasant home with all of the modern conveniences while also maintaining a zero carbon and extremely low energy footprint.

To date over 1,200 people have toured the home of which a number were Mountain View residents. Our next free public tour is Sunday February 22, 1-4pm and you are welcome to attend.

Given our experience in this area, we are submitting the following comments on the pre-draft Climate Protection Roadmap and the Electric Vehicle Charger Deployment Update.

***Agenda Item 6.1 Climate Protection Roadmap***

Building Energy Strategies



Summary: PGH strongly supports incentivizing, then mandating, energy sources that are zero carbon, combined with low energy use performance- based building standards.

Specific Recommendations, Mountain View should:

1. Adopt performance based goals, for example those specified by Passive House, including mandating well insulated and well sealed new and retrofitted buildings with heat recovery ventilation plus appropriate solar gain positioning;
2. Enact standards requiring all electric buildings with heat pumps for both comfort heating /cooling and potable water heating.

### Transportation Strategies and Mechanisms

Summary: We strongly support the electrification of the transportation sector and are essentially against the use of compressed natural gas and other alternative fuels.

Specific Recommendations, Mountain View should:

1. Focus on 100% on electrification, including light, medium and heavy-duty vehicles. Natural gas, like hydrogen, is not a viable strategy;
2. Immediately implement ordinances addressing B3 through B5 strategies (a simple option is to copy Palo Alto's existing ordinance and simultaneously address retrofits);
3. As possible, focus on installing EV charging equipment at multi-unit dwellings;
4. Require all new/modified fueling infrastructure include Level 3 EV charging equipment;
5. Actively participate in encouraging a broad and strong Zero Emission Vehicle regulation (we need more than just commuter vehicles);
6. Actively participate in EV related grant applications including allocating matching funding as necessary
7. Encourage car-sharing, walking, cycling, and public transit.

## Attinger, Steve

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**From:** Shankari  
**Sent:** Thursday, February 05, 2015 4:55 PM  
**To:** Lenny Siegel; Pat Showalter; Clark, Chris; Attinger, Steve; Blount, Terry  
**Cc:** Safe Mountain View; greatstreetsmv@googlegroups.com; SVBC Mountain View  
**Subject:** comments for CESC meeting today

Dear CESC members,

I am very excited to see that Mountain View is laying out a roadmap to meeting our state's ambitious GHG reduction goals. While I would like to present my comments in person, I am in Berkeley today, and might not get back in time for the meeting, since I use public transportation (BART + Caltrain) for my commute.

My main comment is on the transportation component of the plan. While I agree that fuel switching is an important part of GHG reductions from transportation, I believe that we should have a more balanced strategy that includes a focus on VMT reduction and non-motorized transport as well.

In particular, I argue that our city GHG emission reduction plan would do well to mirror the California wide transportation GHG emission reduction plan, which is a three legged stool.

- Vehicle efficiency: AB 1493 (Pavley)
- Fuel: Low Carbon Fuel Standard (LCFS)
- Demand management: SB 375

The motivation for this argument is a report commissioned by the California Air Resources Board (CARB) on strategies to meet our 2050 goals. The report was prepared by a panel of experts including researchers from LBNL, Stanford, UC Berkeley, UC Davis and EPRI.

I would strongly encourage you to read the introduction, or view the summary slides, both of which make absolutely fascinating reading.

Report main page: <http://www.ccst.us/publications/2011/2011energy.php>

Chair's lecture and slides: [http://www.ccst.us/publications/2011/2011energy\\_ppt/071511long.pdf](http://www.ccst.us/publications/2011/2011energy_ppt/071511long.pdf)

Their conclusion was that a combination of existing technologies (efficiency, CCS, electrification and biofuels) could get us to 60%, but further research, possibly into demand reduction, would be needed to get to 80%. In particular, they identified two main technology limitations in achieving the target:

- Insufficient technology for load balancing without emissions
- Not enough technology "in the pipeline" for de-carbonizing fuel
  - Need advanced biofuels, but likely won't be enough

Again, I want to highlight that I am completely in favor of both electrification and biofuels, but I want to encourage our city to adopt them as part of a balanced strategy that also includes better urban planning and design.

To give an example of how the three legged stool plays out in my own life:

1. we have had solar panels on our roof for at least the past 5 years,

2. our only car is a Nissan Leaf (100% EV, no tailpipe),
3. and we use it very sparingly - the combined VMT for our household of 4 is around 7000 miles, roughly 15% of the US average

I would encourage our city to follow a similarly balanced approach.

Regards,  
K. Shankari

Mountain View CA 94041

## Attinger, Steve

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**From:** Serge Bonte  
**Sent:** Thursday, February 05, 2015 6:05 PM  
**To:** Clark, Chris; Showalter, Pat; Siegel, Lenny; Blount, Terry; Attinger, Steve  
**Subject:** A few quick comments on the 2/5/2015 Sustainability Meeting

Dear CESC Members

I won't be able to attend your meeting (found out about it late and have a conflict) but I briefly scanned through the draft document and wanted to share a few comments:

1. Where is the Wind?

I found Wind mentioned only a few times in an appendix describing what a "clean" portfolio of renewable electricity sources would look like. Notwithstanding the fact that there is strong wind advisory in effect tonight and the world's largest wind turbine is located at Moffet, why aren't we considering wind in Mountain View? I think it's a missed opportunity as there are many situations where wind can complement solar or just be better suited than solar.

2. Community Choice Aggregation

All for that, let's start asap. I do have one concern though, such a program is probably easier to implement with homeowners than with renters (much higher turnaround). When developing your financial models, make sure to consider the fact that in Mountain View renters are the majority.

Sincerely,

Serge Bonte  
LLoyd Way , Mountain View

