

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Agriculture and Services Workforce exemption
Date: Sunday, March 6, 2022 8:42:14 AM

I must voice for the many people who contribute thru Services both residential and Commercial. It is imperative that this fabricated committee realize that these essential services be exempt from the rest of the population to remain intact. Agriculture in our great county who contribute to our way of life from fruit and vegetables, Nursery stock, and livestock should be exempt as well.

When this committee has completed and tuned the restrictions to the rest of the population, then only we may examine how the aforementioned may slowly become included into a separate system of compliance to any negotiated carbon reduction.

Thank you for your attention and considerations.

Michael Smith. 3rd Generation San Diego County.

Michael Smith
Owner

[REDACTED]

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Comment on Virtual Meeting on Buildings
Date: Thursday, April 28, 2022 4:58:22 PM

Hi, today's meeting was good and informative at a fairly high level. There are so many interrelated facets to this issue and I am glad they are being considered. My comment today was about "ground sourced heat pumps" and that they are favorably considered in the RDF but a key controlling document, the "Title 24" does not mention them in the current version. The new update is in the final comment stage now and will be released this summer and as I understand it, still only refers to "air sourced heat pumps." Ground sourced are much more efficient and should also be allowed where there is physical room. Who is reviewing and coordinating with the State on how compatible the revised Title 24 is with the RDF and pushing for changes that make it match?

My specific interest is; we have a ranch in Campo, we will be remodeling a house and want to use a "ground sourced heat pump" for both interior heating, cooling and hot water. I want to use several hundred feet of buried horizontal pipe, not drilled vertical wells, to be the source for the heat pump. How can I get my system approved by San Diego County if Title 24 is "silent" on that type or only approves "air sourced" systems?

Thanks for any comment,

Larry Johnson,

Leach-Johnson Ranches

""

From: [REDACTED]
To: [Baxamusa, Murtaza](#); [Lueg, Zerocarbon](#); [Lueg, Zerocarbon](#)
Subject: [External] Comments on Attachment A: Technical report to the RDF
Date: Tuesday, May 31, 2022 7:45:26 PM

Hello Murtaza,

Please acknowledge receipt of my comments on the RDF Technical report by UC San Diego that follow below.

May 31, 2022

From: Cherry Diefenbach [REDACTED]

To: Regional Decarbonization Framework Project Team; Murtaza Baxamusa, Project Manager for Regional Sustainability via Murtaza.Baxamusa@sdcounty.ca.gov

Comments on Attachment A: Technical Report to the Regional Decarbonization Framework (RDF) led by UC San Diego

I actually read through the 530-page Attachment A to the Regional Decarbonization Framework (RDF) and I have some strong reservations and concerns about the proposed directions (pathways) that have been proposed at an eye-watering cost to taxpayers and residents. This document identifies the San Diego region as contributing just 0.08 of global carbon emissions and this number is probably on the high side because it is based on SANDAG's 2018 pre-pandemic figures. In reality, our post-pandemic carbon footprint is likely reduced as many of the region's workers continue to work remotely on at least a part-time basis. Any plan to decarbonization should use more current emission figures for its models.

The State of California already has some of the most burdensome environmental regulations for businesses and residences, many of which disproportionally impact low-income residents and small business owners still attempting to recover from the financial uncertainties presented by two years of COVID restrictions. Our energy costs (residential heating/cooling/cooking and transportation) in the San Diego Region are already some of the highest in the nation and they continue to increase without any new restrictions. **All of the proposed RDF pathways whether it is electrification of new and existing homes/commercial buildings or mandating the purchase of electric vehicles (EVs) will further drive up the cost of living for the region's residents.** The document states that "reaching net zero in California by 2045 is both possible and can be done at a manageable cost" (pg.10). However, there are many low-income residents in the region who would disagree with the additional financial burdens that will be imposed by RDF pathways). The RDF's optimistic assumptions found on pg. 12, that folks will replace their appliances over every 10 years, AC & furnaces every 15 years, and vehicles every 15 years does not accurately reflect that thrifty and low income families will not voluntarily choose to replace their working/serviceable vehicles and

appliances, etc. when their budgets are so tight. (For example, my stove, refrigerator, and furnace are 20 years old and they are working just fine.)

The discussion of renewable energy production in Chapter 2 is problematic, in that it fails to state the most important requirement for any energy grid is that it will provide reliable, affordable energy for its customers when they need to use it, regardless of the time of day, or adverse weather conditions. Even in California, there are days when the sun doesn't shine and the winds do not blow. The 100 percent switchover to renewables without sufficient electrical grid redundancy is guaranteed to produce future brownout or blackout issues which our Governor artfully attempted to explain away as the "episodic nature of our power grid." Brownouts are a safety issue for rural residents who require reliable power to pump their drinking water, or operate medical equipment. They are the conditions that one would expect to find in a developing country, and not, in the "Nation State of California."

Rural residents who have reviewed the RDF have previously voiced their objections to RDF maps such as Figures 2.3 and 2.4 which "conveniently" omit community labels while proposing to blanket rural communities like Boulevard and Jacumba with industrial-scale energy facilities and additional transmission lines. Without labels, urbanites unfamiliar with the backcountry, will continue to ignorantly voice their support of those maps which will consume lands better suited to carbon storage. The technical report states, "given the necessary expansion of electrical supply to meet 2050's electrical demand will require six new and costly transmission lines and that two new operational 100MW clean power plants be built every year between now and 2050." **The RDF's ambitious plan to build lots more clean power plants is not realistic as communities like Jacumba and Boulevard where utility-scale solar and wind facilities have been proposed continue to seek legal avenues to deter their placement, and to minimize their negative impacts on the quality of life for local residents.** Low-income rural residents are also concerned with the RDF's criteria for considering candidate project areas which only applies social equity or environmental justice considerations to low-income urban residents in the so-called "Communities of Concern."

Robust battery storage near urban areas where the power is to be used must be an integral part of the RDF. **Robust battery storage cannot be restricted to the four-hour battery storage map shown on pg. 30.** Likewise, the RDF's assumption that geothermal energy generated in Imperial County will be supplied to San Diego in an amount equivalent to the ratio of their combined populations is not a given. Imperial County may decide to sell it to LA County. Urban infill (including utility micro-grids) in areas like Otay Mesa should also be a foundation of any environmentally-sound regional decarbonization plan regardless of the cost of land.

The Technical Report for RDF provides no substantive information on the availability of offshore wind for the region's renewable portfolio. (On pg. 16, para. 2, there is a sentence about offshore wind that doesn't make any sense.)

Most people would agree that electrical vehicles (EVs) are very important to any decarbonization plan for the region. However, today's EVs are significantly more

expensive than their gasoline counterparts and the availability of new EVs for purchase does not meet existing demand. Also, as someone who lives in an older home in the backcountry, I am concerned about how I would be able to change an EV during unexpected power outages and when the utility company turns off my electrical power during red flag warnings. (These are situations that do not routinely impact urban residents.)

Regarding the proposed decarbonization of buildings, as of January 1, 2023, State requirements for new construction building codes will reflect decarbonization and electrification standards. The new building standards will likely cost the home builder more to build and those costs will be passed on the purchaser of the home. I disagree with the RDF's technical report because it promotes opportunities for jurisdictions to go beyond state requirements which of course, will make living in the San Diego region even more unaffordable. Some ideas include the requirement that older buildings be audited to determine their energy efficiency and then owners are liable to pay for energy efficiency improvements. In my opinion, this would be the best way to empty out the state, as California residents would flee for less restrictive and expensive states like Arizona and Idaho. Besides, such small reductions in carbon emissions does not warrant the increased costs to the building's owners. (Government-owned buildings should be the first on the list for any retrofit since elected leaders will demand it and they are generous with taxpayers' money.)

Community Choice Aggregates (CCAs) are not the solution to the region's renewable energy needs. CCAs were originally envisioned to reduce the cost for electrical service for local consumers over the area's traditional power provider, SDG&E, while promoting a renewable energy portfolio. Now it appears that CCAs will not provide any monetary saving to their customers, and instead of offering "choice" to residents in municipalities that have chosen to get their power from a CCA, those residents will have to "opt out" instead of "opting in." Since CCAs do not own their own power distribution system, they will utilize SDG&E equipment. In reality, they will likely become a more expensive "feel good" option for well-to-do consumers who can afford to pay more for "clean energy" before it is actually required by the State.

Instead of accelerating the destruction of our natural environment which stores carbon by building more industrial-sized renewable energy facilities in the backcountry, the RDF should be promoting policies that would encourage the use of rooftop solar systems on residences and commercial buildings. This is really an underutilized renewable resource because of the extremely low buy back rate for excess energy produced by private solar systems, homeowners and businesses are only purchasing the minimum solar system that will provide their individual energy needs. Additional homeowners and businesses might consider the financial value of adding a solar system or a larger one if it would produce income. Figure 8.47 on pg. 413 provides an unrealistic breakdown of electrical rates—Whose electric bill is only \$65.79 anyway?

One of my biggest concerns regarding future RDF implementation is the document's repeated threats of coercing residents to conform to unprovable

pathways that may or may not lead to zero carbon emissions within our region.

There is an entire section in this document that describes local governmental “policing power” that could be used to accelerate the achievement of state statutory emission targets and adopt ordinances that exceed state requirements. What is the benefit to local residents and businesses to mandate onerous regulations and policies to achieve zero carbon emissions in 2035 when the state’s goal is 2045. The RDF even states that it is necessary to consider federal and state regulations to move forward in a manner that is cohesive.

That does not mean our region should not continue to seek “reasonable pathways” that would support future GHG reductions. It also should be remembered that County leaders will not be able to control the carbon emissions from vehicles driven by out-of-state visitors or even the emission policies of our closest international neighbor, Mexico or the tons of carbon that are released by area wildfires.

The possible pathways proposed by the RDF must be closely evaluated by San Diego County Supervisors and city leaders for their feasibility as well as their unintended negative consequences on the quality of life for the region’s low-income residents. It is not in the best interests of the region to turn San Diego into a ghost town where average people can no longer afford to drive a car or own their own home or business. Will the “fear” of carbon emissions prohibit CALFIRE’s future use of prescribed burns to reduce forest fuels by thinning forest undergrowth and removing dead brush?

The implementation of unproven policies or pathways in the RDF should not be driven by unbridled environmental zeal to proclaim San Diego’s “greenness” before another county does so. Even climate experts agree that net-zero carbon emissions are not a “silver bullet” that will guarantee global temperatures will not continue to increase.

Respectfully,

Cherry Diefenbach

A concerned backcountry resident

From: [Garn, John C](#)
To: [Lueg, Zerocarbon](#)
Cc: [Wynn, Susan](#); [Brown, Sally](#)
Subject: [External] Comments on the San Diego Regional Decarbonization Framework, San Diego County, California
Date: Wednesday, June 1, 2022 3:19:15 PM
Attachments: [20220601_2022-0047842_GEN-TA-001-SD Regional Decarbonization Framework Comments.pdf](#)

Good afternoon,

I hope this finds you healthy.

Please see attached.

Please note - some Firewall or email security settings will strip the digital signature from the letter. Please review the attachment and if the digital signature is not intact, contact me for an alternate method of transmittal through the secure FWS fileshare program.

A hard copy letter will not follow.

Sincerely,
John

John Garn
(He, Him, His)
Administrative Assistant
US Fish and Wildlife Service
Regions 8 and 10
Carlsbad Fish and Wildlife Office
Palm Springs Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008
760.431.9440 x200 or x277

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Decarbonization input
Date: Monday, May 16, 2022 1:53:25 PM

Input to help reduce carbon emissions:

- Reduce or streamline the numerous trash/recycling companies currently operating every day in Lakeside. This step would significantly reduce carbon emissions and noise pollution. Most communities have ONE company operating in their neighborhoods one day per week.
- Restricting aircraft flying low over communities and late at night would also reduce carbon emissions from aircraft fuel.

Thank you for allowing residents to have input on this important issue.

Debra Kappler

[REDACTED]

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Freeway/transportation idea.
Date: Wednesday, April 13, 2022 8:39:35 PM

Perhaps this has already been suggested. We have HOV lanes for multiple passengers, so why not encourage EV and Hybrid owners with an EV/Hybrid lane? Or just add them to lightly used HOV lanes. It would encourage more use in a positive way and those lanes seem mostly empty on the I-15

Les Ferguson [REDACTED]
[REDACTED]

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Cc: [Smith, Rebecca \(BOS\)](#); [Lawson-Remer, Terra](#)
Subject: [External] FW: Short Term "Relief for Energy Prices" = Climate Harm, Cash to Putin, and Prolonged Dependence on Oil; Needed Solutions
Date: Saturday, March 19, 2022 5:28:51 PM
Attachments: [image002.png](#)

Murtaza H. Baxamusa, PhD, AICP
Program Manager for Regional Sustainability
Land Use and Environment Group
County of San Diego



Dear Murtaza,

See the message below. Forgive the tone. I was very disappointed in that vote.

Does anyone below, or at the County, know the significance of Keith Jones, CEO of ACE Parking, learning about DAP? (I can document my assertion.) He would like to help us solve our problems. He understands DAP and would probably submit a proposal to a DAP Requirements Document.

We are running out of time. (Climate cliff.) We need enforceable mitigation measures. The County needs to do an RFP for DAP, for its employees. This can be done concurrent with the CAP and the RDF. An aggressive third-party vendor is the key.

Mike
[REDACTED]

From: [REDACTED]
Sent: Thursday, March 17, 2022 6:39 PM
To: 'nathan.fletcher@sdcounty.ca.gov' <nathan.fletcher@sdcounty.ca.gov>; 'District1community@sdcounty.ca.gov' <District1community@sdcounty.ca.gov>; 'Supervisor Jim Desmond' <Jim.Desmond@sdcounty.ca.gov>; 'Terra.Lawson-Remer@sdcounty.ca.gov' <Terra.Lawson-Remer@sdcounty.ca.gov>; 'joel.anderson@sdcounty.ca.gov' <joel.anderson@sdcounty.ca.gov>
Subject: Short Term "Relief for Energy Prices" = Climate Harm, Cash to Putin, and Prolonged Dependence on Oil; Needed Solutions

Subject: Regarding:
https://enewspaper.sandiegouniontribune.com/infinity/article_share.aspx?guid=81b70c0a-40b8-40ce-b92b-9c4634cb265d

Honorable Chair and Honorable Members of the Board,

Our society makes driving a car, parking a car, and owning a car artificially cheap, doing serious harm to all, especially to members of low-income communities. I disagree with your idea that California should subsidize driving even further, by reducing the cost of gasoline 51.1 cents per gallon. Reducing the cost of gasoline **for all California drivers, even billionaire drivers**, will increase driving. Cars are the category of GHG emission that emits the most GHG, by far. California is the 6th largest economy in the world. California has a higher per-capita driving than any country in the world. Therefore, if California were to go along with your idea, it would significantly increase driving and GHG emissions. It would help to push up the cost of oil. That would increase the money that Russia earns from selling oil. These are bad outcomes. We are in an economic war with Russia. And more. We are shipping large amounts of weapons to Ukraine. We are at war with Putin, who is a climate criminal and a war criminal. We should not take actions that give Putin more money.

We should all try to drive less, for the sake of Ukraine. We should do that anyway, because of our climate emergency. Therefore, how can citizens not feel betrayed by your letter? Rev. Shane Harris thinks he is helping low-income drivers. Instead, he is making the demise, of all members of the low-income community, more likely. If humanity fails to achieve its 2030 climate-stabilization requirement, the poor will be hurt first. Climate destabilization will end most life forms on Earth, including our own species. The poor will starve first. Billionaires will starve last.

Please focus on the tasks before you.

After nearly 10 years, the County still does not have a CAP that is even legal, which is a low bar. Every Climate Action Plan should be a Climate ***Stabilization*** Plan. Given humanity's 2030 deadline, meaningful and enforceable mitigation measures are needed ASAP. Instead, you focus on a "Framework", which I fear is not even a plan. "Decarbonization" means nothing if its magnitude is not enough, by 2030. Your "RDF" does not even recognize the importance of the 2030 climate-stabilization requirement.

Here is why we have a climate emergency: Climate scientists tell us that **the industrialized world must reduce its emissions to be no higher than 80% below what we emitted in 1990, by 2030!** We have less than 9 years to reduce our emissions to 80% below our 1990 level. It can't be done if we don't get interested in the details of what must be done and how that could be done.

Your letter, if California agrees, will make everything more difficult.

Again, please focus on the tasks before you.

Please pass a resolution opposing all highway expansions, including carpool lanes. Why? Because the well-understood and documented fact of ***Induce Traffic Demand*** tells us that highway expansions, and this includes adding HOV lanes, will ***not***

decrease congestion, after steady-state conditions are reached. We will have the same congestion, but with more driving, more frustrated drivers, more gasoline used (pushing up the cost of oil), and more GHG emissions. More emissions means that we will have more CO2 in our atmosphere. CO2 in the Earth's atmosphere is our primary, climate-change problem.

I have written a peer-reviewed Plan showing the measures needed to ensure that cars will achieve the 2030 climate-stabilization requirement. I would love to show it to you so you can get started acting as needed by our Climate Emergency.

Please ask me for my peer-reviewed plan so you can help implement its set of needed mitigation measures. The Plan is exactly what is called for in the California Democratic Party Platform, where it says:

Demand a state plan specifying how cars and light-duty trucks can meet climate-stabilizing targets by defining enforceable measures to achieve necessary fleet efficiency and per-capita driving limits

One of the key enforceable mitigation measures that is needed was proposed to the County 9 years ago by the plaintiff, in the 100% successful legal challenge to your CAP. It is to implement Dividend Account Parking (DAP), for your employees, by using an RFP (Request for Proposal) process to select a third-party vendor, to do the work. I have presented and discussed DAP with Keith Jones, who is the CEO of ACE parking. He emailed to me that he would be interested in submitting a proposal to design, implement, and operate DAP for your employees. He encouraged me to publicize his interest. (I think Keith understands our climate emergency and society's need to change, when it comes to driving.) A well-written and well-noticed Requirements Document defining DAP and the guarantees that would be needed will result in a good set of responses. I would be happy to help write the DAP Requirements Document. Many in government and in the environmental advocacy groups think DAP is too complicated. It is not too complicated. It is peer reviewed . There are many private sector companies that will understand that DAP is not too complicated. If the County used a third-party vendor to implement and operate a DAP system for its employees, other companies would want DAP for their employees. DAP works for all kinds of parking. For example, it would work

- for on-street parking
- to replace pay-station parking, or be concurrent, to give drivers a choice
- at parking garages
- at mixed use developments
- at transit centers that have parking
- at shopping centers and
- at strip malls.

Please ask me if you would like more information on the DAP system. Once there is a third-party vendor doing DAP, the system will spread to many types of uses. This is exactly what we need. DAP increases economic fairness (especially for low-income

community members) and economic choice, while it reduces the choice to drive alone.

Please take actions to result in disallowing methane (CH₄) hook-ups at all new developments. Then develop a plan to phase out all methane (AKA, "Natural Gas") use. Methane systems always leak, and methane is a powerful GHG gas. Burning methane produces CO₂ and our atmospheric CO₂ is way too high already. Methane is unhealthy. It is a fire hazard.

Please issue a new letter, rescinding the points in your letter to the Governor, regarding stopping the state gas tax for one year. It is a bad idea as explained above.

I would love to help in any way.

Regards,



Mike Bullock



Former California Democratic Party Delegate, 76th Assembly District (author of 2 adopted resolutions and 5 Platform changes)

Former Elected (now Associate) Member of the San Diego County Democratic Party Central Committee (author of 5 adopted resolutions)

Satellite Systems Engineer, 36 years (Now Retired)

Air and Waste Management Association published and presented papers:

Author, ***The Development of California Light-Duty Vehicle (LDV) Requirements to Support Climate Stabilization: Fleet-Emission Rates & Per-Capita Driving***

Author, ***A Climate-Killing Regional Transportation Plan Winds Up in Court: Background and Remedies***

Co-author, ***A Plan to Efficiently and Conveniently Unbundle Car Parking Cost***

Supervisor

From: [Redacted]

Sent: Thursday, March 3, 2022 5:43 PM

To: 'Supervisor Jim Desmond' <Jim.Desmond@sdcounty.ca.gov>

Cc: [Redacted]

Subject: RE: Relief for Energy Prices

If we use state funds to make it cheaper to use energy, we will use more energy. This will drive up the value of NG and a barrel of oil. This would provide more money to President Putin. Whose side

are you on?

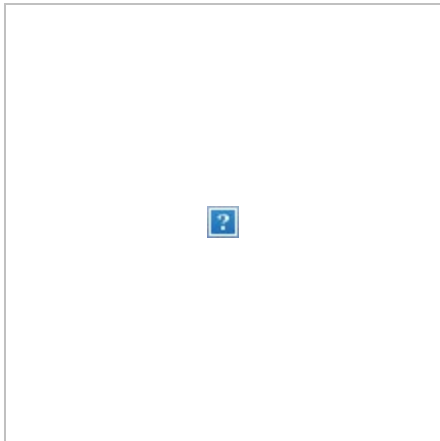
From: Supervisor Jim Desmond <Jim.Desmond@sdcounty.ca.gov>

Sent: Monday, February 28, 2022 1:00 PM

To: [REDACTED]

Subject: Relief for Energy Prices

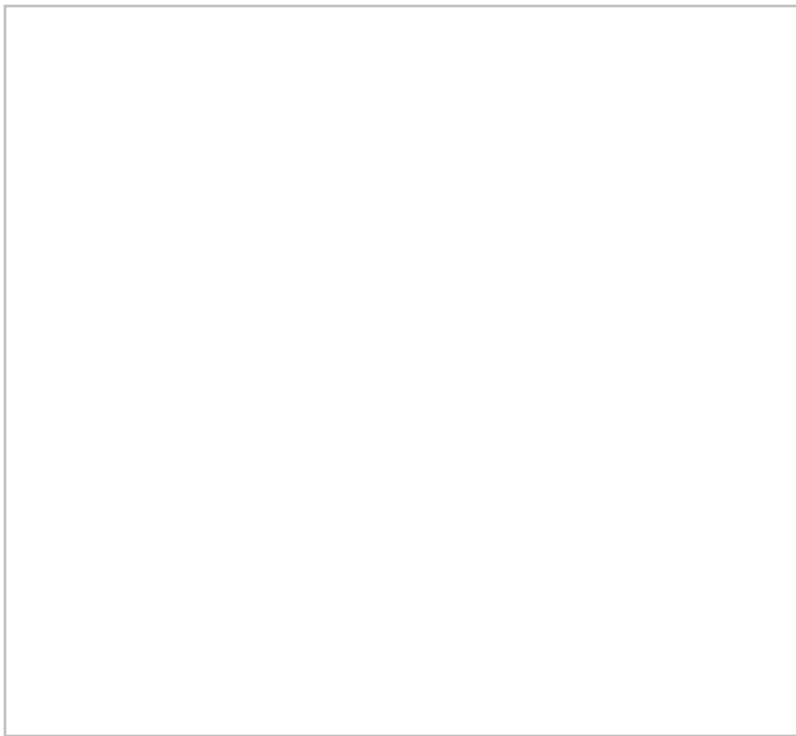
I've sent a letter to Governor Newsom and the California Public Utilities Commission to immediately implement measures to alleviate rising energy costs.



Michael --

Last week, [I sent a letter to Governor Newsom and the California Public Utilities Commission](#) to immediately implement measures to alleviate rising energy costs.

The State of California is expected to have at least a \$45.7 billion budget surplus in 2022. These are taxpayer dollars that should be used to lower the energy bills for all San Diegans. You can read the letter below and I will keep you updated on the progress.



Dear Governor Newsom,

As Supervisor of the Fifth District representing North San Diego County, I am writing to request that the State of California immediately implement measures to alleviate rising energy costs, providing relief to the ratepayers of San Diego.

My office has been contacted by residents concerned with the sudden rise in energy costs and increases in utility rates. My constituents are concerned with their ability to pay for recent increased energy bills, especially seniors who are on fixed incomes. With already out of control housing costs, gasoline prices, and the cost of goods due to inflation, many San Diegans struggle now more than ever to survive under the weight of these rising costs.

Considering the recent rise in rates, the State of California should review costly energy regulations under the State's control and provide temporary relief to ratepayers. Drivers of the recent rate increases include the exorbitant cost of natural gas, renewable energy infrastructure to meet State mandated targets, the growth of public benefit programs which are offset by other rate payers, and the cost of wildfire mitigation measures. California is expected to have a \$45.7 billion budget surplus in 2022. Part of that surplus should be used for wildfire mitigation measures and renewable infrastructure to meet state goals, relieving ratepayers from the cost burden, and lowering energy bills.

With wildfires now a year-round threat in California, it is imperative that the region continue to invest in infrastructure that reduces the risk of wildfires. On the backs of local ratepayers, SDG&E has spent \$3 billion in the last 10 years to strengthen community resiliency, harden electric grids, and underground powerlines. Investment in infrastructure to reduce the risk of wildfires are on-going. However, these costs are funded by local ratepayers, included in monthly energy bills. The State of California should relieve ratepayers by offsetting these projects with state budget-surplus dollars. The State should also look to offset costs of utility-constructed clean power projects. Again, these also fall on the backs of San Diegans in every SDG&E bill.

With more people working from home and increased adoption of personal electric vehicles, reliance on energy will grow. To many working San Diegans, and those such as seniors on fixed incomes, the recent 24.6% jump in gas rates and 7.8% increase in electricity rates are more than they can afford...in an already expensive California. The State's budget surplus comes from taxpayers, many of whom have suffered mightily from a pandemic, losing their job and seeing gas prices rise dramatically. Let's give it back to the taxpayers by lowering their energy bills.

I urge you to act now to lower energy bills for San Diegans.

[Learn More](#)

San Diego County District 5 Supervisor Jim Desmond



You can also keep up with San Diego County District 5 Supervisor Jim Desmond on [Twitter](#) or [Facebook](#).

Created with [NationBuilder](#), software for leaders.

From: [REDACTED]
To: [Lueg, Zerocarbon](#); [Desmond, Jim](#); [Anderson, Joel](#); lora.cicalo@sduniontribune.com; andrew.kleske@sduniontribune.com; news@kusi.com; jeff.light@sduniontribune.com; news@timesofsandiego.com
Subject: [External] Global and County temperature reduction by its climate plans?
Date: Tuesday, February 1, 2022 6:30:57 PM

CEQA Guideline 15064(b) requires factual and scientific proof of significant environmental impact to require mitigation. Before proceeding with implementation of the County climate plans it needs to inform the public how much these plans will reduce global and County temperatures to establish that mitigation is in fact necessary as well as the costs.

If the amount is very, very small as expected the public may not want to proceed with major investment and court cases ignoring this issue should be reheard.

John Suhr
[REDACTED]

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Opportunity Analysis for the Regional Decarbonization Framework comments
Date: Tuesday, February 8, 2022 11:57:30 PM

Hi,

- I don't know whether the state or federal governments allow for this, but turning the express lanes into ZEV only lanes would be a huge lever to speed up the urgently needed transition to ZEVs. This would make many more people consider EVs sooner. The transition to EVs and a renewable grid will occur eventually, but not soon enough without bolder actions. This would have extra impact by reducing the speeds of the gas guzzlers currently using those lanes. Maybe there could be different speed limits for EVs on those lanes to add to the encouragement.
- The report makes clear that what is currently being contemplated is too little too late.
- Some have invested in EVs, etc. years ago. In other words, some have put more into this transition than others, so they should not be ignored in environmental justice.
- The local IOU is trying to put a halt to distributed solar via the CPUC again. They need to be reigned in from such activities. Maybe local laws to prevent such taxation on solar installations?
- Another idea would be to promote local vacations instead of flying (until that becomes much more sustainable).

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] please consider land owners registering for Zero Carbon credits for keeping land undeveloped
Date: Monday, March 7, 2022 12:47:44 PM

Hello,

Does the county have a system for helping landowners maintain undeveloped land by:

1. giving property tax credit for keeping their land raw, undeveloped; similar to 'cap and trade', but focus on reduction of property tax on raw land because raw land is helping to sink carbon with native vegetation
2. work with the PACE [Purchase of Agricultural Conservation Easement] program by defining raw land as a carbon sink oxygen producer, therefore we are farming oxygen

Do you know of any county programs that help land owners keep land raw?

Paula Curtiss

[REDACTED]

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Re: Comment on Regional Decarbonization Framework draft document
Date: Tuesday, February 8, 2022 8:49:16 PM

Furthermore, the list of natural climate solutions in the RDF is absolutely pathetic.

Everyone involved should read this [IPCC special report on climate change and land](#). Inexpensive, low-tech, easy to implement solutions are right at our fingerprints but nearly everyone involved is looking in the wrong direction and can't see the forest for the trees.

Photo



Cody Harrison

Beyond Sustainability Specialist, [Corona Enterprises](#)



On Tue, Feb 8, 2022 at 8:42 PM Cody Harrison [REDACTED] wrote:

This whole thing is insane. In the key findings section the authors talk about how even if the most stringent local CAP measures were applied across the County we still fall short of GHG reductions goals by many million metric tons. What the report seems to leave out is that whether we reach net zero or completely fail to reduce emissions, the amount of GHG caused climate change San Diego will experience will be essentially *exactly* the same due to the globally distributed nature of GHGs...

Meanwhile, the human health impacts of air pollution (much of which is tied to GHG producing fossil fuels) are largely ignored in the calculus being suggested here, despite the costs of this pollution being many times higher than the social cost of the GHGs released from those same sources. Researchers at Duke and Columbia model version six of the Coupled Model Intercomparison Projects (CMIP), which was accompanied by new emissions scenarios. These scenarios include everything from emissions growing at their pre-pandemic pace through to near the end of the century, down to a net-zero-by-2050 scenario. The ones that are considered most often are two high-end scenarios (growth to 2080 and a slower pace of growth to the end of the century), and two that are consistent with limiting warming to either 1.5° or 2.0° C. It's worth looking at the general principles that dominate the results. The first is that the impact of changing carbon emissions is relatively slow. The Earth takes a while to adjust its temperature to match the energy added by additional carbon dioxide. **As a result, we have a fair amount of upcoming warming already baked into the system due to our past emissions, which even aggressive fossil fuel cuts can't avoid.** The result is that the climate impacts of changes we make don't typically become significant until late in the century.

So does it make sense to focus entirely on GHGs?? Yes and no. Yes because they are tied to other things. If we clean up our energy and transportation we will save thousands of lives and improve millions of lives, particularly through the avoidance of local toxic pollution. This pollution is giving our children breathing problems, causing cancer, and shaving good years off the lives of our loved ones. We have EVERY reason to get off fossil fuels even without the greenhouse effect of CO2. So from this perspective, a CAP that accomplishes

this even if the main goal is GHG mitigation is a worthwhile policy to implement. But if we don't factor in health impacts of fossil fuels then we are significantly reducing the firepower behind getting rid of fossil fuels completely.

And no it doesn't make sense to focus entirely on GHGs because it will not make an iota of difference with regard to global climate change, and it misses MASSIVE opportunities to mitigate and adapt to the effects of global and regional climate change due to the focus on GHGs. This CAP, passed by itself without something many times bigger following in rapid succession is not quite as bad as rearranging the deck chairs on the titanic but it is close. More like turning the deck chairs into a few rickety life boats. You save a few more rich people but the overall result is the same, which in our case is the end of San Diego as we know it (as a fairly lush paradise with some of the best weather and lifestyle in the world).

By contrast to GHGs, things like ozone and particulate pollution change almost instantly when changes to the energy mix are made. As a result, going on the path to 2° C warming produces statistically significant changes by 2030 in many cases. And, critically, those differences are largely local—**we'd see well over half the benefits even if the entire rest of the planet continues using fossil fuels at current levels. So why are we not factoring these health benefits into the policy calculus, clearly if we did the urgency to act would be far greater!**

Meanwhile, why does the IPCC 2019 special report on climate change and land state that wetter soil decreases the severity of heat waves (with high scientific confidence) and that increased vegetation reduces regional warming (with medium scientific confidence) yet these potential pressure points for stabilizing regional climate don't seem to be making it into local climate action plans in any significant way? And these are just two of the non-GHG mitigation measures mentioned in the IPCC report to keep the question somewhat digestible, but there are several others. Thank you very much for your time and public service. Source: https://www.ipcc.ch/site/assets/uploads/2019/08/Edited-SPM_Approved_Microsite_FINAL.pdf

If you accept this document without plans to add human health impacts and regional climate change mitigation/adaptation factors into the calculus you are doing a massive disservice to the people who live in San Diego and the world at large.

Photo



Cody Harrison

Beyond Sustainability Specialist, [Corona Enterprises](#)



From: [Howard Lee](#)
To: [Baxamusa, Murtaza](#); [Lueg, Zerocarbon](#)
Cc: [De La Rosa, Michael](#); [Hanson, Elise A](#)
Subject: [External] RE: Reminder - Regional Decarbonization Framework Workshops start April 7 - (Energy, Land & Agriculture, Transportation, Buildings, Jobs)
Date: Tuesday, April 26, 2022 2:55:59 PM
Attachments: [image002.png](#)

Hi Regional Decarbonization Framework (RDF) staff,

Thanks for the invite to the recent RDF Workshop. I did a cursory review of the draft RDF that states that the City of Coronado CAP is pending, so I added a comment that it was approved on March 15, 2022.

Please keep me and other City staff posted on future meetings.

Offhand, ideas for our region to collaborate could involve:

- Identify regional cross sectoral partnerships and key strategies and steps to reduce GHG emissions - identify key partners and strategies where partnerships could lead to innovative solutions and GHG emission reductions
- Fund/launch a regional San Diego based small business incubator for firms that focus on decarbonization and innovation
- Regional energy efficiency reach code program for existing buildings (optional, but offer incentives/subsidies/tax credits)
- Regional green energy/net zero energy recognition program for residential and non-residential buildings
- Economic study analyzing financial implications of transition to EV, impacts on gas tax revenues, and identify new funding sources to offset potential losses
- Business plan to study a regional commuter zero emissions ferry service program

Have a great week. Thanks.

Sincerely,

Howard Lee, AICP | Associate Planner - Active Transportation
Community Development Department | City of Coronado
1825 Strand Way | Coronado, CA 92118
619.522.2423 | hlee@coronado.ca.us

From: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>
Sent: Monday, April 4, 2022 7:19 AM
To: Lueg, Zerocarbon <Zerocarbon.Lueg@sdcounty.ca.gov>
Cc: De La Rosa, Michael <Michael.DeLaRosa@sdcounty.ca.gov>; Hanson, Elise A <EliseA.Hanson@sdcounty.ca.gov>
Subject: Reminder - Regional Decarbonization Framework Workshops start April 7 - (Energy, Land & Agriculture, Transportation, Buildings, Jobs)

CAUTION: This email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or attachments.

Happy Monday!

I wanted to send out a quick reminder that the Regional Decarbonization Framework (RDF) Workshops start this Thursday, April 7. The first sector to be discussed will be Energy. It will be an opportunity for cities, agencies and stakeholders to dive deep into policy, programs and projects in decarbonizing these key sectors. Workshop registration information is stated below. Thank you for your interest in the RDF and we appreciate you sharing the workshop information with your colleagues.

For more information on the Regional Decarbonization Framework, please visit the [project website](#) or project [engagement portal](#). Questions about the forum can be emailed to zerocarbon@sdcounty.ca.gov or please feel free to reach out to me, Michael or Elise from the County's LUEG Executive Office.

Regards,
Murtaza

Murtaza H. Baxamusa, PhD, AICP
Program Manager for Regional Sustainability
Land Use and Environment Group (LUEG)
County of San Diego



From: County of San Diego <sdcounty@service.govdelivery.com>
Sent: Thursday, March 31, 2022 6:50 PM
To: De La Rosa, Michael <Michael.DeLaRosa@sdcounty.ca.gov>
Subject: [External] Workshops on Decarbonizing Energy, Land Use and Agriculture, Transportation, Buildings, Jobs

San Diego County



Join Us for These Upcoming Workshops

The Regional Decarbonization Framework project team is hosting a series of workshops on the four sectors analyzed in the Framework's Technical Report, as well as related workforce implications.

These workshops will allow stakeholders to discuss data, findings, technical details, and policies with the County project team and subject-matter experts.

Workshop Details:

Registration links are provided below. You must be registered to receive the event Zoom link.

- Energy: Thursday, April 7, 2 to 4 p.m.

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Land Use and Agriculture: Thursday, April 14, 2 to 4 p.m.

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Transportation: Thursday, April 21, 2 to 4 p.m.

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Buildings: Thursday, April 28, 2 to 4 p.m.

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Jobs: Thursday, May 5, 2 to 4 p.m.

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Live translation will be provided. You may request translation services on your zoom registration form for a specific workshop by 5 p.m. The Monday before the scheduled meeting. We look forward to your participation.

For more information on the Regional Decarbonization Framework, please visit the [project website](#) or project [engagement portal](#). Questions about the forum can be emailed to zerocarbon@sdcounty.ca.gov.

انضم إلينا هذه الورشات القادمة

يستضيف فريق مشروع إطار العمل الإقليمي لخفض انبعاثات الكربون سلسلة من ورشات عمل حول القطاعات الأربعة التي خضعت للتحليل في التقرير الفني للإطار، بالإضافة إلى انعكاسات القوى العاملة ذات الصلة.

ستتيح ورشات العمل هذه لأصحاب الشأن مناقشة البيانات والنتائج والتفاصيل الفنية والسياسات مع فريق مشروع المقاطعة والخبراء في الموضوع.

تفاصيل ورشات العمل:

(Zoom) تم توفير روابط التسجيل أدناه. يجب أن تكون مسجلاً حتى تتلقى رابط الفعالية في زووم.

- الطاقة: الخميس، 7 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- استخدام الأراضي والزراعة: الخميس، 14 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- وسائل النقل: الخميس، 21 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- المباني: الخميس، 28 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا
<https://bit.ly/RDF-Buildings-Sector-Workshop>

- الوظائف: الخميس، 5 مايو، من الساعة 2 عصرًا وحتى 4 عصرًا
<https://bit.ly/RDF-Jobs-Sector-Workshop>

الخاص بك (Zoom) سيتم توفير ترجمة مباشرة. يمكنك طلب خدمات الترجمة لورشة عمل محددة باستخدام نموذج التسجيل في زووم بحلول الساعة 5 مساءً من يوم الاثنين الموافق قبل الاجتماع المقرر. نحن نتطلع إلى مشاركتك معنا

للحصول على المزيد من المعلومات حول إطار العمل الإقليمي لخفض انبعاثات الكربون، يرجى زيارة [الموقع الإلكتروني لمشروع أو بوابة zerocarbon@sdcounty.ca.gov المشاركة](mailto:zerocarbon@sdcounty.ca.gov) في المشروع يمكن إرسال استفساراتك حول المنتدى عبر البريد الإلكتروني.

敬請參加這些即將舉行的研討會

区域脱碳框架项目团队正在就框架技术报告中分析的四个部门以及相关的劳动力影响举办一系列研讨会。

这些研讨会将允许利益相关者与本县项目团队和主题专家讨论数据、调查结果、技术细节和政策。

研讨会详情：

下面提供了注册链接。必须注册才能收到活动 Zoom 链接。

- 能源：4 月 7 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- 土地使用和农业：4 月 14 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- 交通：4 月 21 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- 建筑物：4 月 28 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- 就业：5 月 5 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Jobs-Sector-Workshop>

会提供现场翻译。您可以在预定会议前周一下午 5 点之前在 Zoom 注册表中为特定研讨会请求翻译服务。期盼您的参与。

有关区域脱碳框架的更多信息，请访问[项目网站](#)或项目[参与门户网站](#)。论坛相关问题可电邮至 zerocarbon@sdcounty.ca.gov。

Acompáñenos en estos próximos talleres

El equipo del proyecto del Marco de Descarbonización Regional está organizando una serie de talleres sobre los cuatro sectores analizados en el Informe Técnico del Marco, así como sobre las implicaciones relacionadas con la mano de obra.

Estos talleres permitirán a las partes interesadas debatir sobre los datos, las conclusiones, los detalles técnicos y las políticas con el equipo del proyecto del Condado y los expertos en la materia.

Detalles del taller:

A continuación se ofrecen los enlaces de inscripción. Debe estar registrado para recibir el enlace del Zoom del evento.

- Energía: Jueves 7 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Uso de la tierra y agricultura: Jueves 14 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Transporte: Jueves 21 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Edificios: Jueves 28 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Trabajos: Jueves 5 de mayo, de 2 a 4 p. m.

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Se proporcionará traducción en directo. Puede solicitar los servicios de traducción en su formulario de inscripción de Zoom para un taller específico antes de las 5 p. m. del lunes anterior a la reunión programada. Esperamos su participación.

Para obtener más información sobre el Marco Regional de Descarbonización, visite la [página web del proyecto](#) o el [portal de compromiso](#) del proyecto. Las preguntas sobre el foro pueden enviarse por correo electrónico a zerocarbon@sdcounty.ca.gov.

Sumali sa Amin Para sa mga Paparating na mga Workshop Na Ito

Ang lupon ng proyekto sa Balangkas ng Rehiyonal na Dekarbonisasyon ay magsasagawa ng isang serye ng mga workshops sa apat na mga sektor na pinag-aralan sa Teknikal na Ulat ng Balangkas, pati na rin ang mga kaugnay na implikasyon sa manggagawa.

Ang mga workshop na ito ay magpapahintulot sa mga stakeholder na talakayin ang mga datos, mga natuklasan, teknikal na detalye, at mga patakaran sa lupon ng proyekto ng County at mga eksperto sa paksa.

Mga Detalye ng Workshop:

Ang mga link sa pagpaparehistro ay ibinigay sa ibaba. Dapat kang magparehistro upang matanggap ang link sa Zoom para sa kaganapan.

- Enerhiya: Huwebes, Abril 7, alas 2:00 hanggang alas 4:00 ng hapon.

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Paggamit ng Lupa at Agrikultura: Huwebes, Abril 14, alas 2:00 hanggang alas 4:00 ng hapon

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Transportasyon: Huwebes, Abril 21, alas 2:00 hanggang alas 4:00 ng hapon.

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Mga Gusali: Huwebes, Abril 28, alas 2:00 hanggang alas 4:00 ng hapon

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Mga Trabaho: Huwebes, Mayo 5, alas 2:00 hanggang alas 4:00 ng hapon

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Ipagkakaloob ang pagsasalin sa panahon ng workshop. Maaari kang humiling ng mga serbisyo sa pagsasalin sa iyong form ng pagpaparehistro sa Zoom para sa isang partikular na workshop sa hindi lalampas sa alas 5:00 ng hapon ng Lunes bago ang nakatakdang pulong. Inaasahan namin ang iyong pakikilahok.

Para sa karagdagang impormasyon sa Balangkas ng Rehiyonal na Dekarbonisasyon, mangyaring bisitahin ang [website ng proyekto](#) o [portal ng pakikipag-ugnayan sa proyekto](#). Ang mga tanong tungkol sa forum ay maaaring i-email sa zerocarbon@sdcounty.ca.gov.

Hãy Tham Gia Các Hội Thảo Sắp Tới Đây cùng Chúng Tôi

Nhóm dự án Khung Không Carbon Khu Vực đang tổ chức một loạt hội thảo về bốn lĩnh vực được phân tích trong Báo Cáo Kỹ Thuật của Khung, cũng như các tác động liên quan đến lực lượng lao động.

Các hội thảo này sẽ cho phép các bên liên quan thảo luận về dữ liệu, phát hiện, chi tiết kỹ thuật và chính sách với nhóm dự án của Quận và các chuyên gia về chủ đề.

Chi Tiết Hội Thảo:

Liên kết đăng ký có ở bên dưới. Quý vị phải đăng ký để nhận được liên kết Zoom của sự kiện.

- Năng Lượng: Thứ Năm, ngày 7 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Sử Dụng Đất và Nông Nghiệp: Thứ Năm, ngày 14 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Giao Thông Vận Tải: Thứ Năm, ngày 21 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Tòa Nhà: Thứ Năm, ngày 28 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Việc Làm: Thứ Năm, ngày 5 tháng Năm, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Bản dịch trực tiếp sẽ được cung cấp. Trước cuộc họp đã lên lịch, quý vị có thể yêu cầu dịch vụ dịch thuật trên biểu mẫu đăng ký Zoom của mình cho một hội thảo cụ thể trước 5:00 chiều Thứ Hai. Chúng tôi mong có được sự tham gia của quý vị.

Để biết thêm thông tin về Khung Không Carbon Khu Vực, vui lòng truy cập [trang web của dự án](#) hoặc [công thông tin tham gia](#) của dự án. Các câu hỏi về diễn đàn có thể được gửi email tới zerocarbon@sdcounty.ca.gov.

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Ang serbisyo ng ito ay ibinigay sa iyo nang walang bayad sa pamamagitan ng County ng San Diego.

اشترك للحصول على إشعارات أو حدث اشتراكك أو عدّل كلمة المرور أو عنوان البريد الإلكتروني الخاص بك أو أوقف الاشتراكات في أي وقت على [صفحة تفضيلات المشترك الخاصة بك](#). سوف تحتاج إلى استخدام عنوان البريد الإلكتروني الخاص بك لتسجيل الدخول. إذا كانت لديك أسئلة أو مشاكل مع خدمة الاشتراك، يرجى زيارة subscriberhelp.govdelivery.com. تقدم مقاطعة سان دييغو هذه الخدمة لك مجانًا.

Đăng ký nhận thông báo, cập nhật bản đăng ký, sửa đổi mật khẩu hoặc địa chỉ e-mail, hoặc ngừng đăng ký tại mọi thời điểm trên [Trang tham khảo dành cho người đăng ký](#). Quý vị sẽ cần sử dụng địa chỉ e-mail để đăng nhập. Nếu quý vị có thắc mắc hoặc có vấn đề với dịch vụ đăng ký, vui lòng truy cập subscriberhelp.govdelivery.com.

Dịch vụ này được cung cấp miễn phí cho quý vị bởi Quận San Diego

This email was sent to michael.delarosa@sdcounty.ca.gov using GovDelivery Communications Cloud on behalf of: County of San Diego · 1600 Pacific Highway · San Diego, CA · 858-694-3900



From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Cc: [Petterson, Cody](#); [Demorest, Erin](#); [Lawson-Remer, Terra](#)
Subject: [External] RE: Response to your question regarding RDF goal
Date: Sunday, May 29, 2022 7:26:59 PM
Attachments: [image001.png](#)

The only thing that matters here is the climate-stabilization requirements provided by the climate scientists. Not state mandates. The climate scientists are trying to give humanity a path to survival. (Do we care? Are we capable of understanding?) The industrialized world must reduce its emissions to be at least as low as 80% below our 1990 emission level by 2030. (You may recognize that as the 2050 level in S-3-05, which made sense, back in 2005.) Therefore, 2030 should be our focus, unless we don't understand what the climate scientists are saying, or we don't care about human survival.

The COP 26 newspaper articles talked about 2030. That's because many of the COP 26 leaders would like to see humanity survive. When they adjourned, the agreed to return in 1 year with new commitments, for 2030. The article about the leadership change in Australia stated that the new administration would provide COP 26 with a 2030 commitment. Many leaders understand why that is important.

This is not 2005. Things have changed for the worse.

From: Lueg, Zerocarbon <Zerocarbon.Lueg@sdcounty.ca.gov>
Sent: Friday, May 27, 2022 8:42 AM
To: [REDACTED]
Cc: Petterson, Cody <Cody.Petterson@sdcounty.ca.gov>; Demorest, Erin <Erin.Demorest@sdcounty.ca.gov>
Subject: Response to your question regarding RDF goal

Dear Mike,
Thank you for your question regarding the goal in the Regional Decarbonization Framework to get to zero-carbon emissions at the May 23rd community budget meeting.

The technical analysis of the Regional Decarbonization Framework is based on the premise that regional and local policies should be informed by detailed analysis of the energy system consistent with a system-wide path to decarbonization at regional, state, and national scales. The RDF focuses

on the energy system, defined as the total production and consumption of energy in the electric power, transportation, and buildings sectors. The intent was to produce pathways for the San Diego region that are consistent with national-level and state-level pathways (in particular Governor's Executive Order B-55-18) to reach net zero carbon dioxide emissions from the energy system by 2045. There are several benchmarks and timelines throughout the technical analysis, including a 2035 greenhouse gas analysis of Climate Action Plans. The 2045 target is therefore the recommendation of the UCSanDiego team, and is not a goal proposed by County staff.

Please feel free to reach any member of our RDF team, and thank you for your continued participation and interest in our RDF workshops.

Murtaza

Murtaza H. Baxamusa, PhD, AICP
Program Manager for Regional Sustainability
Land Use and Environment Group
County of San Diego



From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Sustainability and Climate Change
Date: Wednesday, June 1, 2022 3:39:07 PM

I am writing you today as a member of the Board of Directors of Safe Healthy Playing Field, Inc., a 501-c-3 with international membership. You may find our letter regarding synthetic turf playing fields [HERE](#).

In addition, I would ask that you carefully weigh the following with a particular eye toward your fiduciary responsibilities to youth, environmental and social justice communities and the county.

Sustainability:

Defined, [sustainable development](#) is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The [UCLA Sustainability Committee](#) notes: “In simplest terms, sustainability is about our children and our grandchildren, and the world we will leave them”.

How, then, does one consider a single use consumer product (so designated by the CA Commission on Recycling Markets and Curbside Pickup) that:

- Requires 685 gallons of petroleum based oil to manufacture 2k pounds of plastic
- Is not recyclable
- Produces 40k pounds of toxic and carcinogenic plastic waste per 80k square foot field (blades and backing alone)
- Creates massive heat islands far greater than their actual footprint
- Releases ever increasing amounts of methane and ethylene for the 450+ years it takes to decompose
- Contains chemicals that cause significant human and environmental health risks, that are bioaccumulative and create negative health and environmental impacts for generations

...a sustainable product?

Sustainability would be [transitioning](#) (pg 77) to natural grass playing fields. Sustainability would be the creation of a natural turf management program where students can learn to sustainably grow and manage a truly sustainable product while also transitioning into a sustainable career (many in the field have PhDs). Natural grass is sustainable- plastic turf is a linear product and does not fit the definition of sustainable.

Climate change is a game changer:

Synthetic turf is made from polyethylene or a polyethylene/polyurethane blend. Polyethylene is the most highly produced plastic globally and the most frequently discarded material. [Methane and ethylene](#) are emitted at 2x and 76x more readily from polyethylene, respectively, in air than when in water. [Methane](#) traps 90% more heat than carbon dioxide. Fields readily Plastic turf readily reaches [170-180oF](#) and have reached over 220F.

Climate change has resulted in increased [night time temperatures](#), impacting sleep quantity and quality. [Sleep deprivation](#) due to “...*high ambient temperatures may predispose susceptible segments of society to worsened affect, anger and aggression, hypertension and adverse cardiovascular out- comes, diminished cognitive performance, elevated risk of accidents and injuries, and compromised immune system functioning.*” These effects are more likely to impact low income communities where air conditioning is unaffordable, or where electricity is generated by fossil fuels, worsening climate impacts.

Within San Diego County, there are currently [14,138,363 square feet](#) of plastic grass carpet in schools, parks and youth centers. This does not include rubber running tracks, used tire crumb pour-in-place (PIP) playground surfaces, tennis courts, residential or commercial applications. Over a [ten year span](#), **>87,833 tons of CO2 is released** from the existing plastic turf. For an 80K square foot field with rubber infill, the 10 year emissions are 1653.5 tons. These amounts continue to increase over time as the blades and backing continue to degrade, increasing the surface area. In order to offset the CO2 release from current plastic fields, **616,666 trees** would need to be planted.

A major microplastic contributor:

Made from the same pellets as household and commercial carpets (by the same manufacturers) with additional toxic and carcinogenic chemicals, including flame retardants (CA Prop. 65). Each **regulation** sized plastic soccer field (approximately 80k square feet) = 40k pounds of blades and backing, and loses [551-661 pounds](#) of carcinogenic chemical laden degrading microplastic blades, per year- lost to air, water and soil. That is **7,069,182 pounds of plastic waste** every 10 years on average (not including plastic infill or plastic shock pad); **97,378 to >116,818 pounds of microplastic blade fragments...per year.**

Microplastics have been found in human [lung](#) tissue, [placentas](#), [meconium](#) in newborns, the heart, nervous system (including the [brain](#)), [liver](#), [kidney](#), [spleen](#) and [blood](#).

A petrochemical product:

Using information from [Waste Management](#), the current fields contain **2,421,195 gallons of petrochemically derived oil**; the equivalent of **565,534,520 plastic bags** or **8,129,558,725 plastic straws**;

For those plastic fields that still have crumb rubber, 40K used tires are required for a regulation 80K square foot field. Each car tire requires [7 gallons](#) of petrochemically derived oil for manufacturing; truck tires 22 gallons.

[Shock pads](#) are also petrochemically derived plastics

Pre- and polyfluoroalkyl substances (PFAS):

PFAS are a class of over 12,039 chemicals. These chemicals are intentionally added in the manufacturing of synthetic turf in order to prevent the plastic yarn from sticking to the machinery as it is extruded. They have been found in [100%](#) of all synthetic turf materials tested. The most up to

date testing methods are [Total Organic Fluorine \(TOF\) and Total Organic Precursor Assay \(TOPS\)](#). While the synthetic turf industry uses an older method (US EPA 537M) that only tests for 29 or 30 PFAS, they have admitted to use of PFAS in manufacturing.

Many cities and Boards of Education have been duped by affidavits signed by manufacturers, or their suppliers, stating there is no PFAS in their products. Such greenwashing is no longer defensible, given the documented admissions of PFAS use and test results. They are also reportable under greenwashing laws to both the State Attorney General and the Federal Trade Commission.

The plastic grass carpet contains PFAS; [shock pads](#) used with plant based infills have tested positive for PFAS. Pine based infill has tested positive for PFAS ([BrockFill](#)). Other plant based infills are generally sourced from countries that have abysmal pesticide use and regulations. They have not been evaluated for chemicals or safety. They have also been implicated in the growing frequency of toxic algae blooms due to excess nutrient deposition.

Harm to human health:

PFAS are known as “forever” chemicals because they bioaccumulate in humans, domesticated animals, wild and aquatic life. They are endocrine disruptors and can cause reproductive, developmental, liver, kidney, thyroid and immunological effects. They can increase in serum cholesterol levels, increase obesity and diabetes and affect infant birth weights, breast tissue development and are highly implicated irritable bowel and [Chron’s disease](#), [breast](#), [testicular](#), [kidney](#), prostate and [liver](#) cancers, and a [47 percent decrease in infertility](#) over the last few decades. It can pass through breast milk, cross the placenta and the blood brain barrier. PFAS [persists across generations](#).

[Plastics](#) contain endocrine disrupting chemicals, such as PFAS, and chemicals used as plasticizers, flame retardants, colorants, UV stabilizers, biocides, heat stabilizers, antioxidants, lubricants, and foaming agents, catalysts, Phthalates and more. Such chemicals can cause [ADHD](#), neurological and behavioral disorders, obesity, metabolic dysfunction, reproductive disorders and cancer .

Babies are being born “[pre-polluted](#)” with these chemicals. Over 90% of [cancers are environmentally derived](#). [Childhood cancers](#) have increased by greater than 57% since 1975. Even at low doses, chemicals can act [synergistically](#) to cause disease and cancer.

Harm to wild and aquatic life; loss of biodiversity:

Synthetic turf and microplastics have caused a decrease in [bird](#) populations, accumulation of microplastics on [bees](#), negatively impacts [ocean habitats](#) and [kills soil biome](#).

Respectfully submitted,

Dianne Woelke MSN, Board Member
Safe Healthy Playing Fields, Inc.

<https://www.safehealthyplayingfields.org>

SHPFI is an all-volunteer nonprofit 501-c-3

Consider supporting our work with a tax-deductible contribution! EIN: 83-424-3172

From: [REDACTED]
To: clerkoftheboard@sandag.org; [Lawson-Remer, Terra](#); [Santiago, Joana](#); [Lueg, Zerocarbon](#)
Cc: [Lawson-Remer, Terra](#)
Subject: [External] Wed Feb 9 , 2022 - Board of Supervisors Meeting - Agenda item 6 and 7
Date: Tuesday, February 8, 2022 1:50:29 PM

Hello Terra !

I am a constituent who lives in **District 3 92130** who volunteers for **SanDiego350** and wish to submit my earnest comment regarding **Agenda item 6** (Regional decarbonization) and **item 7(Sprawl)**.

Agenda item 6 comments:

Let's be honest to God and ask ourselves if the policies result in de-carbonization and emissions reductions at the source vs negative emissions techniques like tree planting. **The goal of any policy should result in emission reduction at source.** That is THE highest priority to reduce climate instability keep toxic, planet warming gases in check. Policy priorities should be

- **Building electrification:** Incentives and outreach to retrofit old and new houses and apartments to switch to electricity for heating, cooling, cooking and laundry.
- **Energy consumption reduction:** Retailers and Residences must be incentivized and penalized for wasting energy. Help residents with heat/cooling insulation.
- **Public transportation and active transportation:** Replacing gas cars with electric cars does nothing to address congestion and the cost of road maintenance and infrastructure burden it places on the City and County for maintenance and upkeep of roads. Please focus on increasing investment in public transportation and active transportation. Please don't let San Diego turn into LA or Bay Area. You will find lot of Prius and EV cards in the Bay Area. But has the congestion been resolved? Nope ! Have people's frustration with traffic congestion and commute time resolved? Nope! My friends in the tech industry strongly regret relocating to Bay Area from San Diego because their quality of life sucks!
- **Right to repair:** Americans import goods made in China because it's cheaply available in Amazon but trash it in landfill because it's expensive to repair. The country must make it less expensive and easy for small businesses and independent technicians to repair goods. This will reduce landfill and reduce emissions from the consumption economy and value chain through the entire product life cycle.
- **Strong 2nd hand market for used products:** The county needs to support a strong local market for trading used goods and reduce or have zero sales tax for used goods. This will encourage a sprawling market for used, high quality, functional goods instead of landing in landfill. One person's trash is another person's treasure.
- **Urban planning encourages more trees:** 40-50% of residential intersections in urban/sub-urban areas must be converted to round-about instead of signals. Use the space in the center of the round-about for trees. Incentivize residences and communities to move away from wasteful lawns to climate friendly native plants and trees.
- **Building architecture for climate friendly design:** New residential and commercial construction needs to be green certified so that they harness nature for lighting and heating and consume less resources in terms of energy and water. Invite builders from out of state and out of Country to showcase and spread their knowhow to local artisans and workers. Let the West meet the East to construct places that are more green. Provide tax incentives and reduce the barrier to entry for novel and environmentally friendly

design

Agenda item 7 comment:

County must comply with SB743 to reduce and stop emissions from vehicles due to sprawl.

- County must NOT find loopholes to fool the public who are counting on the Board and Terra to walk the walk on Climate Action.
- The County MUST NOT find loopholes to meet Developer interests.
- The state of CA is already witnessing the devastating effects of climate change play out in real time. CA is witnessing an unusually dry and hot period in the month of Jan and Feb which is typically the wettest period. Snow packs have depleted. The past 7 years have been the hottest 7 years on record since 1880
- **Zoning laws and local ordinances** MUST be changed to allow tall and lean developments vs flat and broad developments. Broad developments increases sprawl.
- **Increased densification:** The goal of densification is to increase densification as much as New York or Singapore. Cities and Communities must evolve towards that ideal goal. You have an opportunity to re-define new developments to increase densification.
- **Land pricing and Tax incentives:** The cost of land and incentives for developing highly dense housing and commercial activities must be several magnitudes less than the cost of developing flat/broad. Only then can you nudge developers in the right direction without halting development
- **Land and Wilderness:** Development should not occur near wild land and wild fire prone areas period. That should be a lesson learnt from the Colorado, Boulder fires in Dec 2021 that destroyed 1000 homes in under 24 hours ! Please don't make revenues at the expense of people's lives.
- **Mixed use affordable developments:** Commercial and residential spaces must coexist in the same building to increase densification and make communities more lively. Its a win-win for climate and equality. When workers can live right by the places they work it saves them time and money in commute and vehicle ownership.
- **Sprawl and Infrastructure:** Sprawl further stresses the Counties infrastructure and budget for building/maintaining roads, water and electric lines. On the other hand lean and dense developments is the fiscally more responsible thing to pursue.

I have many more ideas up my sleeve for de-carbonization and would be happy to talk to you one-one if you can lend me your ear and translate the talk to action.

Best Regards
Prasad

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Why not have transit options to VISIT backcountry
Date: Thursday, April 21, 2022 1:59:43 PM

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Cc: [Anderson, Joel](#)
Subject: Re: [External] Global warming
Date: Sunday, March 27, 2022 12:56:38 PM

Murtaza:

From an educational perspective, you cite "measurable impact on global emissions" etc. and "impacts global climate change are felt in our local communities regularly".

From my 82 years in San Diego, your "higher and more frequency" issue is difficult for me to see as I have witnessed weather for those 82 years and seen little change.

Who and where did world climate change data come from that equals .08%

How many thousands of years did this evaluation generate?

As a child I saw it rain 2 consecutive weeks, and witnessed concrete sidewalks bending, rolling and not fracturing.

I saw in 1980 "all" dams/reservoirs in the City and County overflow their spillways.

I believe "measurable impact" of any kind is proportionally equal to the huge overpopulation of this area.

Globally, I see all this as a propaganda ploy that has been pushed and promoted by the UN, money & power, for whatever reasons they see - "money & power".

How many years have you been here?

I believe you have been drinking cool aid.

Barry.

On Sunday, March 27, 2022, 12:31:59 PM PDT, Lueg, Zerocarbon
<zerocarbon.lueg@sdcounty.ca.gov> wrote:

Dear Barry,

Thank you for your comments and questions regarding the Regional Decarbonization Framework. In particular, your drawing attention to contemporary matters like short, medium and long term planning.

To determine whether or not the planet is in a natural balance was beyond the scope of the framework study. However, the study authors did provide a global context. Attached is a *Summary for Policy Makers* that was prepared by the UCSanDiego team. Here is an excerpt:

"Although the San Diego region only accounts for 0.08% of global emissions, the decarbonization efforts undertaken by the region can have a measurable impact on global emissions by generating

followership among others and sharing durable innovations that can be expanded and replicated.”

The impacts of global climate change are felt in our local communities regularly. This includes a higher frequency and intensity of extreme heat events, droughts, wildfires, storms and sea-level rise. Furthermore, a changing climate is causing immediate and long-term damage to our ecosystem, food production, health, safety, jobs, businesses, and our overall quality of life in the San Diego region. That is why we need a coordinated response in our region to climate change.

We would love to hear your ideas on how we can manage contemporary matters within the framework. We have setup a public engagement website where you can review documents, join a conversation, suggest an idea, post a question for the team, etc: [Regional Decarbonization Framework | Engage San Diego County](#)

We have several community events coming up that you can register here: [Regional Decarbonization Framework \(sandiegocounty.gov\)](#)

Once again, please stay engaged and we appreciate you writing to us,

Murtaza

Murtaza H. Baxamusa, PhD, AICP
Program Manager for Regional Sustainability
Land Use and Environment Group
County of San Diego



-----Original Message-----

From: Yahoo Mail [REDACTED]
Sent: Saturday, March 26, 2022 7:17 AM
To: Lueg, Zerocarbon <Zerocarbon.Lueg@sdcounty.ca.gov>
Cc: Anderson, Joel <Joel.Anderson@sdcounty.ca.gov>; Senator Jones <senator.jones@sen.c.gov>
Subject: [External] Global warming

I object to the broad claim that we have "Global Warming" by our Government.

Focus on this pipe dream is a take away from the intent to manage and govern in a contemporary manner.

It is also a take away from focus on contemporary matters like short, medium and long term planning which seems to have disappeared.

Currently we have too many claims where focus is obscured by long term influences that we cannot prove nor disprove.

Measure the age of this planet and how long you or I live, and there is no scientific measure of history that can confirm or deny this hoax.

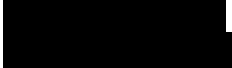
There is no doubt that air quality is damaged locally in isolated cases, however there also is no scientific basis to deny the planet maintains a balance that is a natural recycle process.

Global Warming? Temperature rise? How much this year? How much the last 1,000,000?

Modern man does not live long enough to make this ridiculous issue a real threat and has no historical long data term to confirm it.

Get real and move on!

Barry A. Treahy



From: [Baxamusa, Murtaza](#)
To: [Demorest, Erin](#); [Hanson, Elise A](#)
Subject: FW: Powers Engineering comments on the renewable energy assumptions in the County's March 2022 Draft RDF
Date: Friday, May 20, 2022 2:27:54 PM
Attachments: [20-may-22_Powers Engineering comment letter on RDF renewable energy assumptions.pdf](#)

From: Bill Powers [REDACTED]
Sent: Friday, May 20, 2022 8:53 AM
To: Petterson, Cody <Cody.Petterson@sdcounty.ca.gov>
Cc: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>
Subject: [External] Powers Engineering comments on the renewable energy assumptions in the County's March 2022 Draft RDF

Hello Cody,

Please find attached my detailed comments on the renewable energy assumptions in the County's March 2022 Draft San Diego Regional Decarbonization Framework (RDF). I participated in the County's April 7, 2022 RDF Energy Workshop and provided the attached comments in abbreviated form both verbally and in the chat during that workshop. I would appreciate it if you would share these comments with Supervisor Lawson-Remer.

Best regards,

Bill Powers, P.E.
Powers Engineering
4452 Park Blvd., Suite 209
San Diego, CA 92116

[REDACTED]
[REDACTED]

Powers Engineering

May 20, 2022

San Diego County Board of Supervisors Chair Nathan Fletcher
San Diego County Board of Supervisors Vice-Chair Nora Vargas
San Diego County Supervisor Terra Lawson-Remer
San Diego County Supervisor Jim Desmond
San Diego County Supervisor Joel Anderson

Subject: Powers Engineering Comments on the Renewable Energy Assumptions in the March 2022 Draft San Diego Regional Decarbonization Framework

Dear Members of the Board of Supervisors:

Please find attached my comments on the renewable energy assumptions in the County's March 2022 *Draft San Diego Regional Decarbonization Framework* (RDF). I participated in the County's April 7, 2022 RDF Energy Workshop and provided the attached comments in abbreviated form both verbally and in the chat during that workshop.

The renewable energy assumptions in the RDF contain three principal deficiencies that are addressed in the attached Powers Engineering comment letter and are summarized below.

Comment 1	The very low cost of transmission upgrades assumed in the RDF to calculate the Levelized-Cost-of-Energy (LCOE) of remote, utility-scale renewable energy options is in error.
Comment 2	The solar rooftop and parking lot potential estimates for San Diego County in the RDF are very low, poorly documented, and inconsistent with other available solar potential estimates for San Diego County.
Comment 3	The assumed commercial rooftop solar cost in the RDF is high and obsolete.

Correcting these three deficiencies in the RDF would result in commercial rooftop solar and/or parking lot solar with battery storage, connected to the distribution grid, being the most cost-effective renewable energy alternative for San Diego County residents.

Please call me at [REDACTED] if you have any questions about the attached comments on the draft RDF.

Best regards,



Bill Powers, P.E.

Board Member – Protect Our Communities Foundation

cc: Murtaza Baxamusa, Murtaza.Baxamusa@sdcounty.ca.gov

Powers Engineering Comments on the Renewable Energy Assumptions in the March 2022 Draft San Diego Regional Decarbonization Framework (RDF)

Bill Powers, P.E., May 20, 2022

Comment 1 – The very low cost of transmission upgrades assumed in the RDF to calculate the Levelized-Cost-of-Energy (LCOE) of remote, utility-scale renewable energy options is in error

The RDF calculates the LCOE for remote solar and wind resources by summing (1) the capital cost of the renewable resource and (2) the cost to interconnect that resource to the nearest transmission substation, and then amortizes the resulting total cost over a cost recovery period.¹ This cost calculation procedure does not include the cost of upgrading the transmission system to move large amounts of new remote renewable energy generation to coastal demand centers.

The RDF alludes to a very low cost for transmission upgrades, \$89 million, to transport new wind and solar power from eastern San Diego County and Imperial County.² This transmission cost is not integrated into the solar and wind LCOE cost calculations. The implication is that the transmission upgrade costs are essentially de minimis, and therefore the lack of inclusion of the transmission upgrade cost into the remote renewable energy LCOE calculation has no significant impact on the accuracy of the calculated LCOE values.

The presumption in the RDF that the only \$89 million in transmission upgrade costs will be necessary to make remote solar and wind projects deliverable to coastal San Diego load centers is in error. The \$89 million transmission cost upgrade assumption is for an internal reinforcement (reconductoring) in the greater San Diego area, primarily to enable full deliverability of San Diego-area battery storage and pumped storage (1,377 MW).³ This internal reconductoring project is likely to occur. However, it is not intended to substantially increase transmission capacity to move remote renewable power generated in eastern San Diego County and Imperial County to San Diego-area load centers.

¹ Draft RDF, March 2022, p. 21.

² Ibid, p. 28.

³ CPUC Staff Report, *Modeling Assumptions for the 2022-2023 Transmission Planning Process*, December 2021, p. 57. “San Diego & Imperial – San Diego Internal Constraint: Resources mapped in this area resulted in a 614 MW FCDS exceedance in the San Diego Internal Constraint. This exceedance is caused by the mapping of 600 MW of FCDS wind, 100 MW of FCDS solar, and 1,377 MW of batteries and pumped storage to substations within the constraint. The RESOLVE model partially triggered this upgrade to accommodate resources it selected in this area. This transmission upgrade, as noted in the updated CAISO’s 2021 White Paper, would increase the FCDS constraint limit by 2,067 MW, easily alleviating the mapped exceedance, cost an estimated \$89 million, and take an estimated 18 months to complete.”

This \$89 million reconductoring project is not a Competitive Renewable Energy Zone (CREZ) transmission project. The \$89 million reconductoring project is specifically identified as a “non-CREZ” project by the California Independent System Operator (CAISO), as documented in the RDF. A CREZ is an area targeted for transmission development to support renewable energy generation. Extreme eastern San Diego County and Imperial County are identified as one CREZ by the California Independent System Operator (CAISO).⁴ The \$89 million reconductoring project is not a transmission upgrade intended to substantially increase the import capacity of utility-scale solar and wind power from extreme eastern San Diego County, Imperial County, and out-of-state points to the east of these areas.

There is only one CREZ transmission project on the list of six potential SDG&E transmission upgrade projects being evaluated by CAISO and included in the draft RDF.⁵ That CREZ transmission project is the \$3.7 billion Imperial-to-Serrano 500 kilovolt transmission line. This project would enable 1,412 MW of new remote renewable power to be deliverable to San Diego County demand centers on or near the coast.⁶

CAISO is projecting that California’s investor-owned utilities (IOUs) will spend over \$30 billion on new transmission to facilitate increased utility-scale renewable power transfer from CREZ areas like Imperial County and out-of-state Arizona and New Mexico projects to achieve.⁷ SDG&E represents about 10 percent of the total IOU demand in California.⁸ On a simple proportional basis it can be assumed that SDG&E would add \$3 billion or more in new renewable energy transmission capacity. In this context, the LCOEs for different renewable energy resources analyzed in the RDF should be calculated with a new CREZ transmission cost “add-on” included, that assumes a \$3.7 billion transmission line will be necessary to make remote renewable energy deliverable to San Diego-area customers.

The proposed \$3.7 billion SDG&E transmission line will enable delivery of 1,412 MW of new remote renewable energy. On a unit basis, this equates to a new renewable energy transmission cost of \$2.6 million per MW of renewable power.⁹ This transmission cost should be added to the cost of the remote utility-scale solar or wind projects to determine the total cost to the customer of the resource. The National Renewable Energy Laboratory (NREL)

⁴ CAISO, *Draft 20-Year Transmission Outlook*, February 7, 2022, p. 17: <http://www.caiso.com/InitiativeDocuments/Presentation-Draft20-YearTransmissionOutlook-Feb072022.pdf>. The California CREZ map prepared by CAISO (CREZ are represented by colored ovals) is provided in **Attachment A**.

⁵ Draft RDF, March 2022, Appendix 2.G Transmission Upgrade Options and Costs, p. 61. This table is included as **Attachment B**.

⁶ Ibid.

⁷ CAISO, *Draft 20-Year Transmission Outlook*, February 7, 2022, p. 17.

⁸ California Energy Commission, *California Load Serving Entity (LSE) Peak Load and Energy Requirements* (xls spreadsheet), Column F, 2018 Energy Need (GWh), PG&E, SCE, SDG&E: <https://www.energy.ca.gov/media/3954>.

⁹ \$3.7 billion ÷ 1,412 MW = \$2.6 million/MW.

identifies the cost of new utility-scale solar (without battery storage) at \$0.9 million per MW.¹⁰ The total capital investment, including generation and transmission, to produce and deliver new remote utility-scale solar in SDG&E territory would be \$3.5 million/MW.¹¹

In contrast, the cost of 1 MWdc of commercial/industrial building solar, with 2.4 MWh of battery storage capacity, is about \$2.2 million per MWac.¹² Projects of this type are interconnected at the distribution grid level and reduce congestion on the existing transmission system. These projects do not require new transmission capacity to make them deliverable. It would be substantially less costly for the San Diego County customer if the RDF prioritized commercial/industrial solar with battery storage over new transmission-dependent remote solar and wind projects.

This conclusory statement in the RDF at p. 36 is in error because it ignores the high cost of new renewable energy transmission necessary to make remote utility-scale solar and wind power deliverable:

The results of the primary, least-cost site selection scenarios are shown in Figures 2.10 & 2.11 below. In the San Diego-only Scenario (Figure 2.10) the 2030 sites selected based on LCOE cluster largely around Jacumba Hot Springs in the southeast and Borrego Springs in the northeast parts of unincorporated San Diego County.

If accurate cost assumptions are used for the cost of (1) commercial/industrial solar and (2) new transmission to transport large quantities of renewable power from Jacumba Hot Springs, Borrego Springs, and Imperial County in the “San Diego and Imperial Scenario” included in the RDF, then commercial/industrial solar would be the most cost-effective solution identified.

Comment 2 – The solar rooftop and parking lot potential estimates for San Diego County in the RDF are very low, poorly documented, and inconsistent with other available solar potential estimates for San Diego County

The draft RDF estimates a region-wide rooftop solar potential of 3,360 MWac.¹³ This is substantially less than the 4,461 MWac rooftop solar potential estimate for San Diego County

¹⁰ NREL press release, *New Reports From NREL Document Continuing PV and PV-Plus-Storage Cost Declines*, November 12, 2021: <https://www.nrel.gov/news/program/2021/new-reports-from-nrel-document-continuing-pv-and-pv-plus-storage-cost-declines.html>. Cost of 100 MW single-axis tracking solar = \$0.89/Wdc (\$890,000/MWdc).

¹¹ \$2.6 million/MW (transmission) + 0.9 million/MW (solar generation) = \$3.5 million/MW.

¹² NREL, *U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks: Q1 2021*, Figure 20, p. 32. See also **Attachment C**. The solar dc-to-ac conversion efficiency is assumed to be 90 percent (to convert dc capacity to ac capacity).

¹³ Draft RDF, March 2022, p. 32. The citation for the 3,360 MWac value is a link to a generic webpage titled “Microsoft Building Footprints – Features”. No specific data is provided that can be reviewed for accuracy.

residential and commercial rooftops calculated by SDG&E and the Energy Policy Initiatives Center (EPIC) in 2005.¹⁴ These two rooftop solar potential estimates are very conservative. In contrast, Google Project Sunroof estimates that San Diego County has a rooftop solar potential of approximately 12,400 MWac.¹⁵ This is approximately four times greater than the rooftop solar potential estimate in the RDF.

Actual rooftop solar potential is much closer to the Google Project Sunroof estimate for San Diego County, based on residential net-energy-metered (NEM) rooftop solar installations in SDG&E territory. SDG&E has 1,341,338 residential meters.¹⁶ To date, there is 1,300 MWac of residential rooftop solar capacity installed on 226,000 residential rooftops.¹⁷ About 17 percent of the residential meters in SDG&E territory have NEM solar systems.¹⁸ These NEM systems average about 6 kWac in nameplate capacity and are generally sized to meet the customer's existing annual electricity demand. They are not sized to fully utilize the solar potential of the rooftop. Assuming 100 percent of SDG&E residential meters averaged 6 kWac of rooftop solar, for sake of argument, the SDG&E residential rooftop solar potential would be about 7,700 MWac.^{19,20}

Neither the RDF rooftop solar potential estimate nor the 2005 SDG&E/EPIC estimate include ground-level commercial parking areas. The 2019 Clean Coalition *San Diego Solar Siting Survey*, a reference cited in the RDF,²¹ states that 75 percent of the solar capacity identified by Clean Coalition for large (1 MW) sites is parking area capacity.²² Clean Coalition advocates in the *Solar Siting Survey* for large-scale development of solar on ground-level parking areas, yet San Diego County parking area solar potential is not considered in the RDF.

¹⁴ San Diego Regional Renewable Energy Study Group, *Potential for Renewable Energy in the San Diego Region - Chapter 2: Solar Photovoltaic Electric*, Table 2.1: Technical Potential of PV Systems in San Diego County, p. 2, August 2005.

¹⁵ Google Project Sunroof, San Diego County, 14,600 MWdc: https://sunroof.withgoogle.com/data-explorer/place/ChIJHWD_IzDr24ARKAeA6yv9DTU/. Assuming a dc-to-ac conversion factor of 85 percent, 14,600 MWdc = 14,600 MWdc x 0.85 ac/dc = 12,410 MWac.

¹⁶ California Public Utilities Commission (CPUC), Rulemaking A.22-05-XXX (SDG&E 2024 General Rate Case), SDG&E Exhibit 40 - *Prepared Direct Testimony of Kenneth E. Schiermeyer (Electric Customer Forecast)*, May 2022, Table 1, p. 1. 2022 SDG&E residential accounts = 1,341,338; 2022 SDG&E small commercial accounts = 134,297; 2022 SDG&E medium & large commercial/industrial = 17,248.

¹⁷ California Distributed Generation Statistics, "Charts," April 30, 2022:

<https://www.californiadgstats.ca.gov/charts/>.

¹⁸ 226,000 meters w/NEM ÷ 1,341,338 meters = 0.1685 (16.85 percent)

¹⁹ 1,300 MWac ÷ 0.1685 = 7,715 MWac.

²⁰ SDG&E territory also includes a small portion of southern Orange County in addition to San Diego County.

²¹ Draft RDF, March 2022, p. 50 (footnote 39).

²² Clean Coalition, *San Diego Solar Siting Survey, Task 2.2, Final Summary Report: Solar Photovoltaic (PV) Commercial-Scale Sites for 1,000 kWac and Larger*, September 2019, p. 10. "... parking lots and parking structures represent approximately 75% of the potential found in this survey ..."

San Diego County ground-level commercial parking area solar potential is conservatively estimated at 3,300 MWac by Powers Engineering.²³ The combined San Diego County rooftop and parking lot solar, assuming the 12,400 MWac Google Project Sunroof estimate for residential and commercial rooftops and the 3,300 MWac Powers Engineering estimate for commercial parking areas, is 15,700 MWac. This is nearly five times greater than the RDF estimate of 3,360 MWac.

The RDF projects that 3,360 MWac of rooftop solar can only provide about 12 percent of the County's 2050 electricity demand.²⁴ Without analyzing the validity of the RDF's 2050 electricity demand projection here, a five-fold increase in rooftop and parking lot solar potential would enable rooftop and parking lot solar to potentially meet 60 percent of the 2050 electricity demand estimated in the RDF.

Comment 3 – The assumed commercial rooftop solar cost in the RDF is high and obsolete

The commercial rooftop solar cost assumption should be \$44/MWh, not the \$92/MWh commercial rooftop solar cost assumed in the RDF.²⁵ NREL estimated a commercial rooftop solar LCOE, for a single 200 kW array in a good solar area such as San Diego and including tax incentives, of \$49/MWh for the first quarter (Q1) of 2020.²⁶ NREL subsequently identified a 10 percent year-over-year reduction in the cost of commercial solar between Q1 2020 and Q1 2021.²⁷ This reduces the LCOE of commercial rooftop solar from \$49/MWh in 2020 to \$44/MWh in 2021. \$44/MWh should be the base case commercial rooftop solar assumption used in the RDF, not \$92/MWh.

The most economically-competitive remote utility-scale solar sites shown in the RDF, with LCOEs of \$32/MWh to \$40/MWh, are in parts of the Jacumba Hots Springs area of San Diego County and in Imperial County.²⁸ Most of the remote utility-scale solar candidate project areas in eastern San Diego County (including Borrego Springs) and Imperial County have a projected

²³ Powers Engineering, *Roadmap to 100 Percent Local Solar Build-Out by 2030 in the City of San Diego*, May 2020, p. 22. "The 2008 San Diego Smart Energy 2020 report (by Powers Engineering) estimated a commercial parking unit potential in San Diego County of 1 MWac per 1,000 people, or about 1.1 MWdc per 1,000 people. This relationship conservatively assumes that solar panels cover only 25 percent of the City's commercial parking lot area. Actual practice demonstrates that parking lot solar installations can achieve more than 50 percent coverage." The San Diego County population in 2020 was 3.3 million. Therefore, a conservative estimate of San Diego County commercial parking lot solar potential is: 3.3 million people x 1 MWac/1,000 people = 3,300 MWac.

²⁴ Draft RDF, March 2022, p. 32.

²⁵ Ibid.

²⁶ NREL, *U.S. Solar Photovoltaic System and Energy Storage Cost Benchmark: Q1 2020*, January 2021, p. 102, Attachment B [Commercial Rooftop (200 kW), High resource (CF 20.4%), ITC].

²⁷ NREL press release, *New Reports From NREL Document Continuing PV and PV-Plus-Storage Cost Declines*, November 12, 2021: <https://www.nrel.gov/news/program/2021/new-reports-from-nrel-document-continuing-pv-and-pv-plus-storage-cost-declines.html>.

²⁸ Draft RDF, March 2022, Figure 2.5 (yellow areas), p. 26.

LCOEs of \$40/MWh to \$42/MWh.²⁹ There is little difference between an accurate and current LCOE for a single 200 kW rooftop solar array, \$44/MWh, and the LCOE identified in the RDF for most of the candidate solar project areas evaluated in eastern San Diego County and Imperial County.

However, when an accurate cost for the new transmission that will be necessary to move large amounts of renewable power from these areas to coastal demand centers is incorporated into the LCOE cost calculations, commercial rooftop/parking lot solar – combined with battery storage – is a substantially more cost-effective alternative.

Commercial solar with adequate battery storage qualifies for local resource adequacy (RA) payments that further reduce the net cost of solar production. Load serving entities, like SDG&E and San Diego Community Power, are required by the CPUC to have sufficient reliable resources under contract to withstand peak demand conditions with some major infrastructure, such as one or more transmission lines, out-of-service. Reliable resources receive RA payments to assure they are available when needed. The current average value of RA in SDG&E territory is about \$60,000 per MWac per year.³⁰

The LCOE for a 1 MWdc solar/2.4 MWh battery storage commercial parking area project would be approximately \$33/MWh with the RA payment credited to the project.³¹

Commercial rooftop/parking lot solar with battery storage, at a net production cost of \$33/MWh, would compete effectively against the \$32/MWh to \$40/MWh “best case” remote utility-scale solar in San Diego and Imperial Counties identified in the RDF.

Additionally, commercial rooftop/parking lot solar also avoids the high cost of new transmission. A new CREZ transmission line adds a cost premium of \$90/MWh or more onto the \$/MWh production cost of remote utility-scale solar and wind generation cost based on the actual cost of SDG&E’s 500 kilovolt Sunrise Powerlink transmission line.³² This new transmission cost must be accounted for when assessing the complete cost of remote utility-scale renewable resources.

²⁹ Ibid, Figure 2.5 (light green areas), p. 26.

³⁰ CPUC, *2020 Resource Adequacy Report*, December 2021, Table 10. Local RA Capacity Prices by Month, 2020, p. 29. SDG&E-IV weighted average, approximately \$5/kW-month (\$60/kW-yr).

³¹ See cost calculations in **Attachment D**.

³² B. Powers, P.E., *Local clean energy or remote – who wins the battle?*, presented as Clean Coalition webinar, June 23, 2021, p. 10: <https://clean-coalition.org/news/webinar-remote-or-local-clean-energy-generation-who-wins-the-battle-wednesday-23-jun-2021/>. See cost calculations in **Attachment E**.

Integration of the resources in SB100 Starting Point



Appendix 2.G Transmission Upgrade Options and Costs

Table 2.G.4 Transmission upgrades and costs in SDG&E Territory

Transmission Constraint	Affected Zones	Estimated Full Capacity Deliverability Status Based on On-Peak Study Resource Output		Area Delivery Network Upgrades (ADNU) & Cost Estimate			Wind/Solar Area Designation
		Existing System (MW)	Increase due to ADNU (MW)	ADNU	Construction Time (months)	Cost (\$millions)	
East of Miguel Constraint	Arizona, Imperial, Baja, Riverside	731	1,412	New Imperial Valley - Serrano 500 kV line	120	\$3,680	Solar
Encina-San Luis Rey Constraint	Arizona, Imperial, Baja, Non-CREZ within San Diego	2,901	3,718	New Encina - San Luis Rey 230 kV line	120	\$102	Solar
Imperial Valley transformer Constraint	Imperial	1,959	400	New Imperial Valley 500/230 kV Bank at new substation	105	\$214	Solar
San Luis Rey-San Onofre Constraint	Arizona, Imperial, Baja, Non-CREZ within San Diego	1,748	4,269	New San Luis Rey-San Onofre 230 kV line	120	\$237	Solar
San Diego Internal Constraint	Imperial, Non-CREZ within San Diego	968	2,067	Internal San Diego reconductoring	18	\$89	Solar
Silvergate-Bay Boulevard Constraint	Imperial, Baja, Non-CREZ within San Diego	1,202	2,119	Silvergate - Bay Blvd 230kV 3-ohm Series Reactor	72	\$31	Wind
San Diego Oceanside Constraint	Non-CREZ within San Diego	280	301	Oceanside ADNU	60	\$133	Solar

NREL 2021, capital cost for 1 MW_{dc} solar plus 2.4 MWh battery

NREL, *U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks: Q1 2021*, November 2021, p. 32: <https://www.nrel.gov/docs/fy22osti/80694.pdf>.

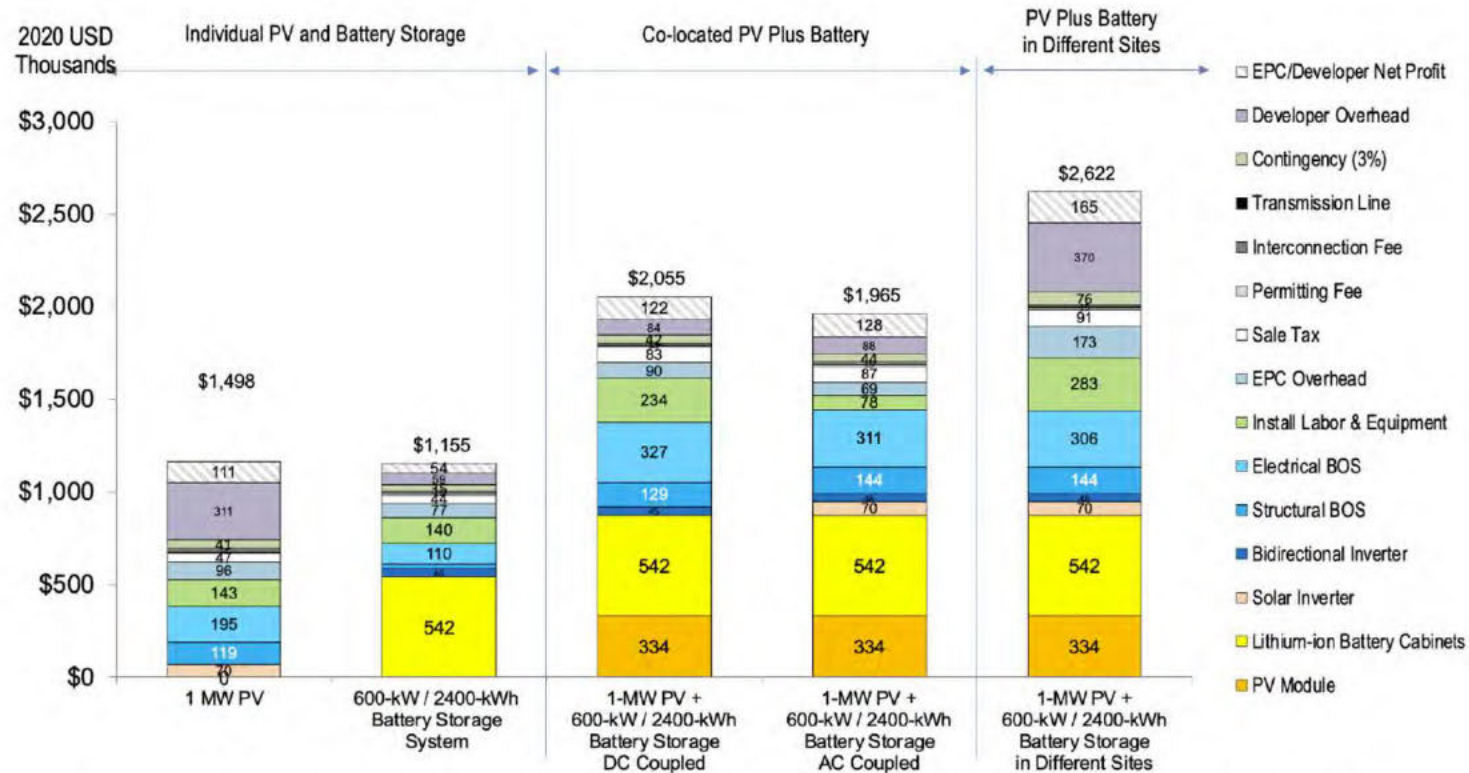


Figure 20. Cost benchmark for Commercial PV-plus-storage systems (4-hour duration) in different sites and the same site (DC-coupled and AC-coupled cases), Q1 2021

Cost of electricity for one 1,000 kW_{DC} commercial parking area solar, 3rd party-owned, with 2.4 MWh battery + RA payment (financed 5.5%, 20-year term)

Cost or (Credit), \$	Cost Element
2,000,000	Gross installed cost of single 1,000 kW _{DC} rooftop solar system + 2.4 MWh battery (NREL 2021, p. 32)
500,000	Gross installed cost of double-cantilever parking area shade structure, \$0.50/watt (2020 installed-cost estimate from two shade structure vendors, Kern Solar Structures and RBI Solar, for double-cantilever solar shade structures)
(650,000)	26 percent federal tax credit on gross cost in 2022
0	Battery storage incentive payment (in-front-of-meter battery storage is not eligible for SGIP incentive)
1,850,000	Net cost of PV + battery storage system
(649,020)	Depreciation on gross system cost less ½ tax credit: $[(\$2,500,000 - \$325,000) \times (21\% \text{ federal marginal corporate tax rate} + 8.84\% \text{ California marginal corporate tax rate})] = \$2,175,000 \times 0.2984 = \$649,020$.
1,200,980	Net cost of parking area PV + battery storage system, adjusted for depreciation.
100,402/yr	Annual system cost, 20-yr, 5.5% interest, capital recovery factor = 0.0836/yr: $\$1,200,980 \times 0.0836/\text{yr} = \$100,402/\text{yr}$.
0 (parking area)	SDCP rooftop lease payment to 3 rd party building owner: It is assumed there is no lease fee for parking areas where solar panel shade structures provide shade and weather protection for vehicles of 3 rd party customers/employees.
\$18,000	Annual fixed O&M, \$18/kW-year (NREL Q1 2021 solar & battery storage cost, Figure 25, p. 43).
(\$48,600/yr)	Local RA payment: $\$60/\text{kW-yr} \times 0.9 \times 1,000 \text{ kW} \times 0.9_{\text{dc-ac}} = \$48,600/\text{yr}$ [assume 90% net qualifying capacity for 4-hr storage (CPUC/Astrape, ELCC, Oct. 2021), average value of resource adequacy (RA) in SDG&E territory from Dec 2021 CPUC's "2020 RA Report, Table 10"]. Also includes a dc-to-ac conversion factor of 90 percent.
1,793,300 kWh/yr	Annual production, fixed solar, San Diego (Otay Mesa), assuming 10% losses (NREL PV Watts, zip code 92154)
\$0.033/kWh	100% financed solar + battery power: $(\$118,402/\text{yr} - \$48,600/\text{yr}) \div 1,793,300 \text{ kWh/yr} = \$0.033/\text{kWh}$

SDG&E 500 kV Sunrise Powerlink (SPL)

- Final capital cost: \$1.883 billion
- Final annualized cost: \$254 million/yr
- Rejected in October 2008 proposed decision as unnecessary for near-term reliability & no RPS deficit to meet
- Approved December 2008, voluntary SDG&E commitment to add 1,000 MW of solar
- Current interconnected renewables : 999 MW solar,
265 MW wind
- Total renewables annual production: 2,873,543 MWh/yr
- Cost premium of SPL transmission line: \$0.09/kWh

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] April 19 USD meeting/comments on the RDF and policy making
Date: Sunday, April 17, 2022 4:21:54 PM
Attachments: [RDF 2020 Comments \(Summary for Policymakers\) BT.pdf](#)

Hi RDF Team,

I will not be able to attend the April 19 meeting and am providing these preliminary comments on the RDF Draft Summary for Policymakers.

Please include these comments into the RDF project's public record and make them available to other project team members and any publicly accessible portal for the project.

Thank you,

Bill Tippetts

County of San Diego
Regional Decarbonization Framework Team
Michael.DeLaRosa@sdcounty.ca.gov
Murtaza.Baxamusa@sdcounty.ca.gov

Preliminary Comments on the County of San Diego's RDF Draft Summary for Policymakers from Bill Tippetts (REDACTED) sent via email 17APR2022

RDF Team:

Please include these comments in the RDF project public record file and provide them to all the other relevant staff on the RDF Team.

The following comments address the "Draft RDF Summary for PolicyMakers," which provides a readable but cursory overview of the full RDF Technical Report. I intend to provide comments on the RDF Draft Technical Report before the May 31 comment deadline. My comments also include suggestions that I believe should be made for modifying some aspects of the RDF technical report. The RDF presents useful overviews of the regional energy sectors and the needs for and pathways to reduce associated GHG emissions. However, it is essentially an aspirational document with no legal, policy or regulatory basis over the 18 cities and other agencies.

To put the urgency for local/regional comprehensive planning efforts like the RDF in context, the most recent IPCC report on the global climate change crisis (April 2022) stated that to limit global warming to around 1.5C (2.7°F), that global greenhouse gas emissions would have to peak "before 2025 at the latest, and be reduced by 43 per cent by 2030". That target is similar to what California's SB 32 requires, but despite recent reductions documented in the CA Air Resources Board 2019 emissions report, CARB has stated that much larger reductions are needed to reach the ambitious 2030 target — an additional 40 percent reduction below the original 2020 limit.

General Comment. The RDF provides guidance that is expected to be incorporated into the County's in-preparation revised Climate Action Plan (CAP). The relationship between the RDF and CAP has been explained by the County as follows: "The CAP Update team will be working closely with the Framework team throughout the development of both efforts. Staff will incorporate any policy, programming, and/or project guidance identified by the Framework that may apply to the CAP Update project. This may impact CAP measures, workforce development programs and policies, regional collaboration efforts, or any other identified item that overlaps in scope and application." (April 11, 2022, memo from Daviah Lynch, Director PDS to Board of Supervisors). This close correspondence between the RDF and CAP is crucial and It would be very helpful to the public reviewers of the CAP and RDF if the County would produce a cross-reference of the RDF pathway objectives, policies, and more specific recommendations

and how the County CAP measures are conforming to/implementing those. As implied in the County memo, if the RDF policy and pathways are the best guidance for the region, then the County's CAP should be able to demonstrate how implementing each of its mitigation measures, monitoring and enforcement meet or exceed what is recommended in the RDF. And because the CAP addresses more CO₂e emissions than the RDF, a clear explanation of the "GHG emission gaps" between the two documents will be important.

Page 4. Paragraph 1. At this time, a prudent RDF approach should not place any significant reliance on out-of-area carbon offsets (off-site credits). The present carbon market has too many questionable if not fraudulent carbon credits/markets (<https://www.offsetguide.org/concerns-about-carbon-offset-quality/>; <https://www.bloomberg.com/news/features/2021-06-02/carbon-offsets-new-100-billion-market-faces-disputes-over-trading-rules>). That being said, the constantly evolving status of technical options may at a later date warrant some use of carbon offsets that are not available regionally. The RDF technical report should provide a set of questions and provisional criteria that must be addressed in any update which might consider the (limited) allowance of offsite credits. That process should also include how possible use of offsite carbon credits could allow the region to avoid having to implement costly, difficult-to-attain internal reductions actions such as building fossil fuel burning peaking power plants.

Page 6. Figure 3. The RDF technical analysis did not consider "other" GHG emission sources and climate-forcing compounds (e.g., methane), which comprise 34% of all GHG (CO₂e) emissions, so the RDF is not really a comprehensive framework set of pathways to reach net zero by 2045. It is essential to address the energy system components, but a truly valuable analysis should at least include a more complete description of all emission sources, the pathways for reducing emissions from the energy system sectors and the most reasonable pathways reduce those "other" emission sources - in concert with the energy system pathways. As noted in my general comment, it is assumed that the County's revised CAP will address all GHG emissions.

Page 6. A reasonable if not necessary policy is for the RDF to consider the potential for obtaining clean electrical power from Imperial County and possibly Mexico (Baja CA) energy systems. The county's electric power system is already connected to the larger CAISO grid, and given the State's net zero goals and efforts to incentivize clean energy production (e.g. RDF Technical Report pages 9-18), a legitimate case can be made for considering the inclusion of additional "outside the county" green (clean) electricity sources as a fundamental piece of the overall strategy. Otherwise, CCAs, SDG&E, and other electricity providers will be completely dependent on a massive increase of local, clean power production - and based on the RDF's energy sector analysis - that means rapidly developing vast utility-scale solar and wind facilities throughout the eastern part of the county. Allowing for a limited amount of out-of-region clean energy may also reduce the region's need to build peak power/emergency power facilities that emit GHGs.

Locating a vast array of utility-scale renewable power facilities poses significant threats of environmental impacts to natural lands because unlike many other areas (e.g., fallowed/disturbed former agricultural lands in the Imperial Valley), there are no extensive areas of highly disturbed and/or fallowed lands in San Diego County where such facilities may be appropriate. The RDF does not present a simple, transparent discussion of how it developed the sensitivity maps - particularly for environmental/biological resources. For example, critical and important habitat and movement corridors for endangered Peninsular bighorn sheep occur in the Jacumba area and parts of the desert (<https://science.sandiegozoo.org/species/peninsular-bighorn-sheep>; CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE PENINSULAR BIGHORN SHEEP 2016-17 ANNUAL REPORT (accessed 14 April 2022 file:///C:/Users/Tippets/Downloads/pbs_%202016-17_report_final%20(2).pdf)). Any effective analysis of potential environmentally sensitive areas should include more readily accessible maps and explanations for the methods used to create those maps.

Page 7. A regionwide commitment to a single institutional structure is essential if the RDF is to have any substantial relevance. That commitment must involve the 18 cities, the County, SANDAG, and other major entities functioning as cooperating partners. Every local jurisdiction (and multi-jurisdiction entities) should commit to revising their CAPs to be consistent with the regional GHG emission targets/thresholds.

The RDF's acknowledgement that the regional energy system pathways do not address a third (34%) of the region's total emissions by 2035 (Figure 3 on Page 6), which is a serious flaw. It seems both obvious and essential that the RDF, if adopted by the County (and presumably agreed-to by all other relevant jurisdictions) must be updated within 5 years to fully incorporate additional analyses and identify approaches (pathways) and measures that would address the non-energy sector GHG emissions. The proposed "outside engagement" process should have that as a priority task.

Pages 9-14. The Levelized Cost of Energy/Electricity (LCOE) analysis methodology is intended to provide an objective means to compare possible pathways to reach the regional clean electricity supply. However, the LCOE approach has a number of crucial, potential drawbacks. Among these are that it is primarily useful from the investor-side, not the consumer side of electricity supply (and pricing), significant assumptions may not be either appropriate or apparent to the reviewer of the results, and specific inputs can substantially skew outcomes (see: https://en.wikipedia.org/wiki/Levelized_cost_of_energy and <https://www.sciencedirect.com/science/article/pii/S2211467X19300197>) For example, the "San Diego County Only" and "San Diego and Imperial County" alternatives do not appear to account for unavoidable, significant environmental impacts and mitigation costs and/or land costs). And because the County has not initiated any substantial effort to define the habitat priorities/needs of its future East County Multiple Species Conservation Plan, a broad-brush approach to "siting" large scale energy facilities would be extremely inappropriate. Conversely, the "Minimized Environmental Impact" alternative appears to be

so constraining that it essentially removes from consideration areas that may have substantial potential and not significantly impede the East County MSCP.

Also, it isn't apparent why the RDF seems to be intent on establishing a fully "self-sufficient" network (grid system) to supply the forecasted electrical energy to achieve net zero by 2045. As noted in a preceding comment (regarding page 6 of the summary), this region is and will continue to be part of much larger electricity supply system infrastructure/grid. While it is reasonable to identify potential areas that could accommodate a large share of this region's electricity supply, the implication that it is necessary to commit to building a self-sufficient system is not reasonable. The national and certainly California energy systems are moving toward full clean energy and those supplies should be exchangeable among use areas. Just as some areas will likely not be able to realistically produce all of their own clean energy, other areas will be able to produce much more energy than they require. The RDF should adopt a more robust assessment of clean energy production and sharing than is implied in the current draft version.

Page 15. The document provides a reasonable list of potential measures/actions currently available and/or in use within the region to reduce transportation-based emissions. But as noted in the document, even if all of the local CAPs were to implement their present transportation GHG emission reduction commitments they would not yield the GHG emission reductions that are necessary to achieve no net emissions.

Compounding the general deficiencies in transportation policies and measures, some jurisdiction's policies may worsen the situation. For example, the County's most recent CAP failed to specify strong GHG emission reduction targets, policies and implementation measures. And recently, the Board of Supervisors' guidance to staff was to find ways to exempt as much VMT from mitigation as possible within "traffic efficient areas" (more specifically, remove VMT as a barrier to development in infill areas), but many of those identified areas are not "VMT efficient" when the standard is the regional average VMT/capita. That approach could interfere with larger RDF and CAP goals and actions.

Pages 15-17. The above concern is just one example of why an effective approach to reducing transportation GHGs must encompass a regional collaboration with firm targets and commitments in addition to the individual jurisdiction's CAPs. Each jurisdiction's transportation emissions reductions should be roughly proportional to their share of regional emissions, which by necessity means that the jurisdictions must collaborate on regional solutions regarding public transportation, land use/development (both housing and employment), and ancillary services that can reduce single occupancy and carbon-burning vehicle use. That level of collaborative planning and implementation, which the RTP/SCS attempts to create, needs to be much more broadly improved and committed to by all the jurisdictions.

Page 17. The overall approach to pursue three pathways to building decarbonization, and many of the more specific recommendations appear consistent with best practices. However, for many who will have to convert from fossil fuel to electrical appliances and heating - and to add air conditioning that may be necessary in the future for a much higher percentage of residential homes as temperatures rise due to climate change the costs will be prohibitive as a stand-alone action. And as noted in the document, the life cycle for appliances may slow conversion to electrical devices. Two potential additions to the RDFs general policy recommendations (pages 154, et seq.) that could facilitate converting to electricity through a targeted/phased approach are:

1. Have the utility or CCA (building energy providers) pay for an energy audit to all customers to identify and rank the worst GHG emission-producing building uses and which conversions to electricity would be most cost-effective.
2. Adopt a regional requirement that all buildings (including residential) at the time of sale/resale, will convert gas appliances to electrical; or at a minimum establish building/household "emission standards" so that at the time of sale the building's or residence's emissions align with regional targets. Exceptions may be justifiable for buildings where that is technically infeasible or demonstrably much more costly than for comparable buildings and where low-carbon fuels can be used.

Page 18. To reduce existing - avoid creating additional - significant economic burdens and environmental injustice impacts to low-income homeowners and renters, serious consideration should be given to create a regional low interest loan or grant program to make those conversions (e.g., for rental units and housing projects that qualify as "affordable housing" - under 60% of AMI - those benefits could be applied to building owners/builders when justified).

Page 21. Natural Climate Solutions (NCS) must be part of the RDF and all relevant GHG emission reduction plans. This is particularly important because natural and working lands (NWLs) may currently store up to 58 MMT of CO₂ and annually sequester another 2 MMT - but future growth/buildout and the siting of new energy production facilities will remove some of that storage and potentially some of the sequestration. Obtaining commitments to maximize their conservation and improving their management should be a priority of the RDF. As we noted in preceding comments (re: page 6 and 9-14 of the draft summary), the siting of many new utility-scale solar and wind facilities poses a significant threat to important natural resource areas that support biodiversity, sensitive species and have some carbon storage/sequestration potential. As part of a RDF implementation plan, there must be a more definitive evaluation of the trade-offs from siting those facilities in terms of long term natural resource/value impacts versus the benefits of their energy production.

Pages 22-24. Though our region's NWLs have limited potential to counter our human-caused GHG emissions, their potential co-benefits are extremely valuable and must be factored into their overall role in the RDF. Coastal wetlands are important biological

(e.g., biodiversity, coastal marine species nursery areas, biofiltration) and physical (e.g., modulating coastal erosion, carbon capture/sequestration) habitats (see: https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/FINAL_DesignDraft_NWL_100821_508-opt.pdf). California's, and particularly southern California's coastal wetlands have been greatly reduced in extent (https://www.sfei.org/sites/default/files/biblio_files/826_Coastal_Wetlands_and_change_over_time_Aug_2014.pdf) and are further threatened by climate change/sea level rise, as noted in the RDF Technical Report (pages 184-185). In light of these multiple benefits, the RDF should place more emphasis and establish commitments from the relevant local jurisdictions (and collaborate with state and federal entities that manage coastal wetlands) to retain, replace and increase coastal wetlands.

Similarly, urban trees (the urban tree canopy/UTC) produce multiple co-benefits. Substantial research has shown that urban areas with higher UTC are correlated with lower summer temperatures, better air quality, healthier residents, etc. (<https://pubmed.ncbi.nlm.nih.gov/29247882/>; <https://canopy.org/tree-info/benefits-of-trees/>).

Retaining viable agricultural (working) lands and adopting best practices that can lower their GHG emissions and/or enhance GHG sequestration should be priorities in the RDF. When working lands are no longer viable for agricultural uses, they should be restored to natural lands if valuable to the region's conservation plans/needs, or considered for locating clean energy facilities.

Pages 24-26. The RDF must identify realistic means for minimizing employment impacts while encouraging the creation of new and more diverse job opportunities.

Pages 27-29. As described in the RDF, even if all of the measures in the current CAPs were implemented to their fullest, they would not reduce GHG emissions sufficiently to achieve net zero emissions by 2045. And though local jurisdictions and agencies may have legal/regulatory authorities to specify commitments that would reach net zero, it is unclear what additional measures they would be able to integrate and successfully implement into their revised CAPs. While "...there is an opportunity for most jurisdictions to strengthen their existing CAP measures... (Page 29)," the RDF provides little guidance about what those are except to refer to the transportation and building energy sectors.

Whether a RDF is adopted by the region's jurisdictions or not, it is apparent that a follow-on effort is needed to identify and prioritize what those additional measures should be. An independent, objective assessment of what would be most effective in terms of additional CAP measures, changes to the RTP/SCS (and all other relevant processes/plans) to close the GHG emissions "gap" to net zero would be extremely valuable. It is unclear if the "Guidebook to Regional Decarbonization" that is described in the RDF would provide

sufficiently detailed information and assistance to the local jurisdictions, but it sounds like a reasonable starting point.

Thank you for considering my comments and recommendations,

Bill Tippetts



From: [REDACTED]
To: [Baxamusa, Murtaza](#)
Cc: [De La Rosa, Michael](#); [Rasoulzadeh, Yasamin](#); [Appel, Rebeca](#); [Hanson, Elise A](#)
Subject: [External] RDF Comment Letter
Date: Friday, May 27, 2022 9:34:15 AM
Attachments: [image002.png](#)
[05272022_BloomEnergy_Comments-RDF Update.pdf](#)

Good morning Murtaza,

Hope you've been well. The RDF workshops have been really engaging and informative, thank you and the rest of the team for those. I am submitting our comment letter to the RDF Draft Technical Report and Draft Putting San Diego County on the High Road. As always, if you or the team have any questions or would like additional resources on SOFC and SOEC we're happy to assist.

Enjoy the long weekend.

Best,

Kendal Asuncion
Manager
Government Affairs and Policy

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May 27, 2022

Dr. Murtaza Baxamusa, Program Manager
County of San Diego
San Diego, CA 92123

**Re: San Diego County Regional Decarbonization Framework -
March 2022 Update**

Dear Dr. Baxamusa:

Bloom Energy is pleased to provide comments on San Diego County's Regional Decarbonization Draft Framework Technical Report (Technical Report) March 2022 Update and Putting San Diego County on the High Road Report March 2022 (Jobs Report). These comments are in addition to our letter submitted in December 2021. We appreciate the ongoing opportunity to help San Diego County (County) identify pathways and technologies to fully decarbonize. Bloom Energy hopes these comments continue to provide meaningful information to assist as the County shifts its focus to policy development and implementation.

Bloom Energy is an international clean technology company headquartered in San Jose, CA, where the company manufactures high heat solid oxide distributed fuel cell power systems, which are among the most energy efficient on the planet. Bloom Energy Servers produce reliable electricity using an environmentally superior non-combustion process that reduces carbon dioxide emissions while virtually eliminating localized air pollution and water usage. Bloom fuel cells are fuel flexible and can run on natural gas, biogas, hydrogen or a combination of hydrogen and methane. The result is an energy infrastructure option that combines increased electrical reliability and improved energy security with significantly lower environmental impacts than many alternatives.

In December 2021, Bloom Energy submitted comments on Chapter 2, *Geospatial Analysis of Renewable Energy Production*. These detailed the environmental, reliability and resiliency attributes of stationary fuel cells, opportunities to utilize biogas, a recommendation to include electricity produced from biogas and green hydrogen via fuel cells in the Decarbonization Framework. The comments also provided additional information the way fuel cells connected to a decarbonized gas system support building and transportation electrification.

Stationary fuel cells remain uniquely suited to provided 24/7/365 clean firm power required by data centers, hospitals, universities, and other facilities that cannot tolerate power outages. As mentioned in our previous letter, fuel cells can also serve as part of a microgrid configuration and support the grid during supply shortfalls. The North American Electricity Reliability Corporation (NERC) 2022 Summer Reliability Assessment warns that the California area has high probability of forced outages due to inadequate resources.¹ Fuel cells as part of a microgrid formation can support the operations of critical facilities during such outages, while incorporating intermittent renewables like solar and wind.

We are pleased that the Jobs Report includes fuel cells as part of the important discussion about distributed energy resources and their role in the energy transition. NERC's Reliability Assessment reinforces that reliable and resilient clean firm energy will be a critical to the county's success. As

¹ See North American Electricity Reliability Corporation 2022 Summer Reliability Assessment WECC-CA/MX. This Assessment may be found at https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2022.pdf

such, we encourage the County to consider fuel cells as part of overall renewable energy portfolio in the Technical Report. The Jobs Report primarily attributes fuel cells capability to natural gas. Bloom Energy's fuel cells can also run on biogas, biomethane or renewable hydrogen. By utilizing these renewable they are eligible resource under California's Renewable Portfolio Standard and can achieve even greater reductions, while providing resiliency and reliability.² Fuel cells are a mature technology and can transition from today's natural gas system to a decarbonized gas system to deep decarbonization and regional energy reliability and resilience.

Thank you for the chance to provide input on San Diego County's Decarbonization Framework. We look forward to future opportunities to work with you to help the County achieve its decarbonization goals. Please see us as an information resource as well as a technology provider and feel free to contact us with any questions.

Sincerely,

Kendal K. Asuncion
Manager, Government Affairs

CC: Michael De La Rosa, Group Program Manager – Land Use & Environment Group
Yasamin Rasoulzadeh, Staff Officer – Land Use & Environment Group
Rebeca Appel, Program Coordinator – Land Use & Environment Group
Elise Hanson, Management Fellow – Land Use & Environment Group

² See Fuel Cells for Resilience and Decarbonization in California, by Dr. Jeff Reed and Dr. Jack Brouwer for additional information. This presentation may be found on the California Public Utilities Commission's website at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/resiliency-and-microgrids/resiliency-and-microgrids-events-and-materials/10_2021_ca-stationary-fuel-cell-collaborative.pdf.

From: [Baxamusa, Murtaza](#)
To: [Lueg, Zerocarbon](#)
Subject: FW: [External] March 16 Item 5 RDF comments
Date: Tuesday, March 15, 2022 6:35:30 AM
Attachments: [BPG RDF comments 3-14-22.pdf](#)

From: Donna Tisdale [REDACTED]
Sent: Monday, March 14, 2022 3:41 PM
To: FGG, Public Comment <PublicComment@sdcounty.ca.gov>
Cc: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>; Anderson, Joel <Joel.Anderson@sdcounty.ca.gov>
Subject: [External] March 16 Item 5 RDF comments

Hello,

Please find the attached Boulevard Planning Group comments on the Regional Decarbonization Framework, Item 5 on the March 16th Board of Supervisors meeting.

Regards
Donna Tisdale, Chair
[REDACTED]

BOULEVARD PLANNING GROUP

Po Box 1272, BOULEVARD, CA 91905

DATE: 3-14-22

TO: San Diego County Board of Supervisors via PublicComment@sdcounty.ca.gov ; cc: Murtaza H. Baxamusa, PhD, AICP, Program Manager for Regional Sustainability, via Murtaza.Baxamusa@sdcounty.ca.gov

FROM: Donna Tisdale, Chair; [REDACTED]

RE: March 16 Board of Supervisors Agenda Item #5: REGIONAL DECARBONIZATION FRAMEWORK (RDF)¹

Chairman Fletcher, Vice Chair Vargas, Supervisors Anderson, Lawson-Remer and Desmond,

Our Boulevard Planning Group (BPG) previously voted to authorize me as the Chair to submit comments on the one-sided RDF. Despite all the lofty claims of sustainability, environmental justice, equity, and more, there seems to be no valid concern or plans to address the real world adverse impacts /results of these plans on the two most disproportionately targeted and predominantly low-income rural communities of Boulevard and Jacumba.

As a reminder, here are some demographics:

- **Boulevard, CA 91905²**: 1, 700 residents; median income: \$41,694; Public school race / ethnicity: 38% white; 38% Hispanic; 12 % American Indian or Alaskan; 4 % black; 71% of school kids eligible for free meals.
- **Jacumba Hot Springs, CA 91934³**: 737 residents; median income \$36,000; Public school race /ethnicity 50 % white 30% Hispanic; 65% of school kids eligible for free meals.

In your rush to transition to allegedly clean and green energy, you are apparently more than willing to throw our vulnerable, at risk, and vastly underserved and disproportionately targeted rural communities and my native Imperial County under the electric bus.

It is painfully evident that our previous comment letter (11-15-21), incorporated in full by reference, has once again fallen on deaf ears, along with our many other comment letters that have been submitted in self defense in the last 15-20 years or so for the many major wind, solar, transmission, and other projects purposely inflicted upon us.

Last year, Chairman Fletcher inexplicably and callously stated that it “warmed his heart” when the Board unanimously voted to approve Terra-Gen’s Boulder Brush Substation in Boulevard that supports 60 new 600 ft tall wind turbines to be planted onto Campo Reservation’s rolling ridges covering 9 miles north to south and several miles east to west, abutting both the Boulevard Planning Area and the Campo/Lake

¹ <https://www.sandiegocounty.gov/content/sdc/cob/bosa/bos-calendar-meetings.html?date=03/16/2022&meetingtype=BOARD%20OF%20SUPERVISORS%20-%20LAND%20USE>

² <https://mail.zipdatamaps.com/91905>

³ <https://mail.zipdatamaps.com/91934>

Morena Planning Area with occupied neighborhoods throughout the Campo Reservation and neighboring communities. Terra-Gen never hosted meetings with project details for tribal members or neighbors. They are not community-minded.

That vote to approve Terra-Gen's Boulder Brush ignored the community pleas and petitions represented by our Boulevard Planning Group and a majority of voting-age Campo tribal members. Adding insult to injury, that meeting was conducted over the phone so you did not even have to look at our faces while you voted to condemn our communities. There is nothing clean or green about miles of 600 ft tall thumping turbines surrounding us or hundreds of acres of solar panels smothering our open fields and floodplains.

- **FYI: (excerpt-emphasis added) East County Magazine, January 3, 2022 (San Diego's East County)** ⁴“...*Terra-Gen has been fined over a half million dollars following an investigation that accused the company of submitting “false or misleading information to the California System Operator (CAISO)” regarding the capabilities and output of a wind power facility owned by Terra-Gen's subsidiary Cameron Ridge, LLC.* Under a [settlement](#) announced by the Federal Energy Regulatory Commission (FERC), Terra-Gen has agreed to pay a civil penalty of \$510,962.43 to the U.S Treasury and an additional \$117,231 to CAISO to benefit CAISO customers. In addition, the company must be subject to compliance monitoring.”

Temporary jobs for mostly out of area laborers and alleged Community Benefits do not and cannot make up for what these projects represent including visual blight, electrical and acoustical pollution, nuisance, adverse impacts to public health and safety, decreased property values, increased fire risk, loss of habitat and many other resources at our ground-zero.

If you truly want to sacrifice our neighborhoods for alleged ‘public good’, then you must find a way to buy out willing residents at fair market value. We are the ‘public’, and deserve protection, too.

Why are our targeted and disproportionately impacted rural communities left out of the following RDF statements / alleged intentions?

- “...County’s broad commitment to sustainability and social justice”
- “promoting social equity and prosperity”
- “...protecting and promoting public and environmental health and ensuring sustainable and resilient communities”
- economic benefits from emissions reductions, and the associated high-quality job creation in the green economy
- (excerpt) “As outlined by the draft, the County, local governments, and agencies play a role in promoting social equity and prosperity, just as all play a role in protecting and promoting public and environmental health and ensuring sustainable and resilient communities. The draft study outlines recommendations and strategies to show how addressing climate change and ensuring the creation of family-supporting, green jobs can be complementary.”

EQUITY IMPACT STATEMENT:

⁴ <https://www.eastcountymagazine.org/terra-gen-fined-half-million-dollars-falsifying-data-wind-turbine-energy-production>

- **(Excerpt)** “The Integrated Regional Decarbonization Framework (Framework) is centered on equity. The voices of underserved communities were critical in the development of the Draft Integrated Framework and will continue to play an important role by engaging throughout the implementation design and development, as the County begins its robust and concerted public outreach with all the draft reports available. The newly established Office of Environmental and Climate Justice will help support the Framework by coordinating between community groups and public agencies to improve access to information and ongoing components of the Framework, as well as position the historically underserved communities to leverage State and federal resources on climate mitigation, adaptation, and resiliency. “
- **Response:** Where is the concern for and study of the cumulative and cumulatively significant adverse environmental and social justice impacts related to the focus of most of the large scale wind and solar in the predominantly low-income and already disproportionately impacted Boulevard and Jacumba Planning Areas? Industrial wind and solar projects do have impacts at ground zero. People live here!

ADDITIONAL QUESTIONS:

- Why does “Just Transitions” not apply to rural communities targeted as renewable energy sacrifice zones?
- Where are the contracted consultants for RDF? We have not been contacted by them.
- Where is the Office of Environmental and Climate Justice in this? Do they only work with pre-selected and politically connected groups and communities? We have not heard from them.
- When will staff and decision makers actually visit our disproportionately targeted communities with local stakeholders and not just meet with lobbyists, developers, and absentee landowners with financial incentives to industrialize our neighborhoods and scenic vistas?
- Why are rural property owners expected to accept the planned devastation and loss of our human and natural environment, along with the related economic harm, for the benefit of goals set by an Executive Order and decision makers who probably don’t even know or care where we are on the map?

REALITIES:

- While the concept may seem laudable, actually reaching the lofty RDF scenarios will be extremely costly and potentially cost prohibitive economically and socially, including all the taxpayer funded subsidies and tax credits for alleged renewable energy projects.
- It comes as no surprise that our vulnerable rural area is tagged as ‘low impact high quality for renewable energy development’ at the same time our sensitive lands and resources are ignored and not identified as worthy of protection or conservation.
- No East County Multiple Species Conservation Plan has been approved. Please identify any such protected lands in the most targeted Boulevard / Jacumba area. (The Star Ranch in Campo Valley is miles from Boulevard and Jacumba).
- Much of our land previously identified for incorporation into the East County MSCP has already been impacted by industrial wind, solar, transmission. Has lack of finalizing the ECMSCP been by design, to allow for the renewable energy sacrifice zone?

- Over reliance on resources in suppressed Imperial County (DAC), with NO land use authority is elitist in nature and problematic in so many ways.
- ***Imperial County has already sacrificed over 25,945 acres productive farmland, and the multiplier jobs that go with it, in the name of so-called renewable energy for mostly out-of-area urban consumers. See ICPDS Energy Project List – Alternative Power Projects 2021⁵:***
- The San Diego region will be competing for Imperial County resources with many other cities, utilities, and community choice advocates. The same is true for Boulevard and Jacumba.
- Siting, paying for, and overcoming the expected pushback related to the massive electrical transmission upgrades required to reach goals will be costly and extremely time consuming.
- Battery Energy Storage Systems (BESS) also take up lots of space and represent increased fire risk in rural areas with limited services, especially lithium ion batteries.
- SDG&E's 140 MW Valley Center battery Storage project recently went online⁶



LEGAL CHALLENGES WILL FOLLOW:

- **Currently, there are active lawsuits challenging project approvals for the following Boulevard / Jacumba projects:**
 - Terra-Gen's 252 MW Campo Wind with 60-586'tall turbines (9 miles north to south), Campo/Boulevard. (9th Circuit Court of Appeals)
 - FAA Campo Wind approval (9th Circuit Court of Appeals)
 - Terra-Gen's Campo Wind -related Boulder Brush Substation in Boulevard. (Superior Court)
 - BayWa's \$97 million 90 MW JVR Solar with 20 MW BESS (691 acres) in Jacumba. (Superior Court)
- **Previously, legal challenges were filed by property owners and non-profits against the following Boulevard / Jacumba/ IV projects.**
 - SDG&E's \$1.9 billion Sunrise Powerlink through Boulevard, Jacumba, Campo.

⁵ <https://docs.google.com/spreadsheets/d/1zQqJ8b1AyB54WjyWQpwY94j7x6CMsL88/edit#gid=1288587879>

⁶ <https://www.valleycenter.com/articles/vc-battery-storage-project-fully-online/>

- SDG&E's \$435 million ECO Substation/ Boulevard Substation (58 acres) upgrade with 13 miles of new 138 kV line in Jacumba and Boulevard
- Sempra's 100MW Energia Sierra Juarez Wind I. Total phases 400 MW cross border connection to ECO Substation
- 132 MW Iberdrola's Tule Wind I- 52 turbines in Boulevard (12,360 acres- 6 mile string of turbines north to south in previously protected public land) (SCE contract)
- 69 MW Iberdrola's Tule Wind II,– 24 turbines – not yet built
- Soitec Solar's Rugged Solar and Tierra Del Sol Solar: Boulevard. Permitted but never built
- Ocotillo Wind (SDG&E contract)
- Numerous industrial solar projects in Imperial County proposed for productive farmland.

STRIKEOUT UPDATE:

ENERGY

- (Excerpt) "All of these would mean that less land would need to be developed in the region and, importantly, that less land around rural communities would need to be developed. Thus, rural communities would not need to bear as much of the burden for renewable energy development. (The trade-off of course is that everyone pays more for electricity unless prices come way down)."
- ***This trade-off statement seems to pit urban vs rural –unless you want to pay more to protect rural communities. Was that necessary for inclusion? Is it a valid statement? Does it entail the cost of the establishment and building major transmission upgrades and new corridor routes?***
- *The transmission upgrade costs alone to import energy from rural San Diego County and Imperial County would seem prohibitive—even if you can get all the allegedly necessary projects through the approval process in a timely manner.*

DISADVANTAGED COMMUNITIES:

- The RDF avoids and evades the ground zero impacts for our rural communities targeted as unwilling hosts of the majority of the industrial scale wind and solar, using outdated RETI, solar roof top assessments going back to 2003, and more.
- Shunting off these obnoxious, unsightly, unhealthy and transformative projects that would cover hundreds to thousands of acres, to rural east county (District 2) and Imperial County for a total of 51%), is elitist. Out of sight out of mind.
- Boulevard and Jacumba reportedly qualify as Disadvantaged Communities but are not officially recognized as such. None of the maps identify our rural DACs.
- Attachment A Technical Report: Figure 2.8 does show Boulevard and Jacumba as located in AB1550⁷ low income communities
- SDG&E's project applications usually claim, for their own benefit, that their projects will benefit our "low-income communities".

⁷ chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.ccair.org%2Fwp-content%2Fuploads%2F2015%2F12%2Fab_1550_visual_fact_sheet_by_the_sb_535_coalition.pdf&chunk=true

- Industrial wind, solar and electrical transmission / storage equipment generated harmful levels of noise, vibrations, electrical pollution that move through the air, ground, and utilities that can enter homes through common connections.
- Professional acousticians and investigators have documented the pollution generated by these projects. That documentation has been submitted to the County numerous times.
- ***Our BPG comments formally submitted to the County on Campo Wind FEIS (3-11-2020); Boulder Brush Facilities MOU, FEIR (3-12-21); JVR Solar (8-12-21); and Community Benefits (10-26-21) are hereby incorporated in full by reference.***

AGRICULTURAL RESOURCES

Imperial County has already sacrificed over 25,945 acres productive farmland in the name of so-called renewable energy, much of which is exported to benefit San Diego. See ICPDS Energy Project List – Alternative Power Projects 2021⁸:

- ***The Department of Conservation reports the conversion / loss of 20,340 acres of farmland in Imperial County in the 8 year period between 2010 and 2018.***
 - According to California Department of Conservation (DOC), the Imperial County 2010-2012 Land Use Conversion Table A-9 Part III, the total conversion was 5,393 acres.
 - The DOC's the 2012-2014 Imperial County Land Use Conversion report (Table C-1) recorded a total loss of 6,800 acres of agriculture land to non-farm use⁹.
 - In DOC's 2014-2016 Farmland Conversion Report (Table A-9), Imperial County recorded a total loss of 2,050 acres to non-ag use¹⁰.
 - How much more farmland has been lost between 2018 and 2021? Unfortunately, the DOC reports that information is not yet available.
 - The available figures between 2010 and 2018 record an average annual loss of 2,543 acres in Imperial County.
 - The annual statewide average loss was 49,829 acres, according to the DOC's Farmland Mapping and Monitoring Program, NET important Farmland Conversion from 1984-2014. That annual rate of loss has likely increased exponentially since 2014 due to conversion to renewable energy.
- Despite claims to the contrary, the loss / conversion of productive farmland is significant and cumulatively considerable.

OPEN SPACE IS RECOGNIZED IN STATE CONSTITUTION AS IMPORTANT—AS IT SHOULD BE

The importance of open space in California is also recognized in the state Constitution (Art. XIII, Section 8), state statutes (Civil Code section 815; Government Code sections , 51071, 51220, and 65561¹¹

⁸ <https://docs.google.com/spreadsheets/d/1zQgJ8b1AyB54WjyWQpwY94j7x6CMsL88/edit#gid=1288587879>

⁹ https://www.conservation.ca.gov/dlrp/fmmp/Pages/2012-2014_Farmland_Conversion_Report.aspx

¹⁰ https://www.conservation.ca.gov/dlrp/fmmp/Pages/2014-2016_Farmland_Conversion_Report.aspx

¹¹ https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=1.&title=7.&part=&chapter=3.&article=10.5 .

- ARTICLE 1. Declaration [51070 - 51073] (*Article 1 added by Stats. 1974, Ch. 1003.*)51071. The Legislature finds that the rapid growth and spread of urban development is encroaching upon, or eliminating open-space lands which are necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use and conservation of natural resources. (*Added by Stats. 1974, Ch. 1003.*)
- ARTICLE 2. Declaration [51220 - 51223] (*Article 2 added by Stats. 1965, Ch. 1443.*)51220. (excerpts) The Legislature finds:(a) That the preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state's economic resources, and is necessary not only to the maintenance of the agricultural economy of the state, but also for the assurance of adequate, healthful and nutritious food for future residents of this state and nation...(d) That in a rapidly urbanizing society agricultural lands have a definite public value as open space, and the preservation in agricultural production of such lands, the use of which may be limited under the provisions of this chapter, constitutes an important physical, social, esthetic and economic asset to existing or pending urban or metropolitan developments...f) For these reasons, this chapter is necessary for the promotion of the general welfare and the protection of the public interest in agricultural land.(*Amended by Stats. 1980, Ch. 1219.*)
- 65560 excerpt: "Open space used for the managed production of resources, including, but not limited to, forest lands, rangeland, agricultural lands, and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers, and streams that are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
- 65561 excerpt: The Legislature finds and declares as follows:(a) That the preservation of open-space land, as defined in this article, is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.(b) That discouraging premature and unnecessary conversion of open-space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage noncontiguous development patterns which unnecessarily increase the costs of community services to community residents.

Rural residents make many sacrifices in order to live close to nature, quiet places, and incredible star-filled dark skies. The conversion of rural neighborhoods to industrial wind and solar negates those sacrifices and values.

Thank you for consideration of these comments. Time restrictions and personal obligations do not allow for better-edited and condensed comments.

###

From: [REDACTED]
To: [Fletcher, Nathan \(BOS\)](#); [Vargas, Nora](#); [Lawson-Remer, Terra](#); [Anderson, Joel](#); [Desmond, Jim](#)
Cc: [Baxamusa, Murtaza](#); [Lueg, Zerocarbon](#)
Subject: [External] Climate Action Campaign: Initial RDF Chapter 8 Response Letter
Date: Wednesday, February 9, 2022 8:27:54 AM
Attachments: [2022-02-09 CAC RDF Chapter 8 Initial Response Letter.pdf](#)

Honorable Chair and Supervisors,

On behalf of Climate Action Campaign, please accept the attached letter outlining our initial response to the Regional Decarbonization Framework Chapter 8 Local Policy Opportunity Analysis.

Thank you, and we look forward to partnering with you on this important initiative.

--

Best,

Matthew Vasilakis (he/him)

Co-Director of Policy

Climate Action Campaign

[3900 Cleveland Ave, Suite 208](#)

[San Diego, CA 92103](#)

[REDACTED]

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Our Mission is Simple: Stop the Climate Crisis





February 9, 2022

County Board of Supervisors
County Administration Center
1600 Pacific Hwy,
San Diego, CA 92101
Via Email

Subject: Climate Action Campaign initial response to draft Chapter 8 Local Policy Opportunity Analysis of the Regional Decarbonization Framework

Honorable Chair and Supervisors,

On behalf of Climate Action Campaign (CAC), we would like to express our tentative support for the analysis and conclusions drawn from the draft Chapter 8 Local Policy Opportunity Analysis of the Regional Decarbonization Framework, and appreciate the Energy Policy Innovation Center's data based approach to Climate Action Plan (CAP) review.

CAC periodically assesses the region's CAPs and corresponding implementation, authoring a [Climate Action Plan Report Card](#) to score jurisdictions on their climate action efforts. Chapter 8's Policy Opportunity Analysis outlines many of the same conclusions our report cards have highlighted over the last 5 years:

- Jurisdictions are not on track to achieving zero carbon emissions in line with state law and international agreements to avert the worst impacts of climate change.
- Climate policy is disjointed and inconsistent across jurisdictions, creating disparities, inefficiencies, and inequities in implementation and planning.
- Social equity continues to be an afterthought, with few jurisdictions integrating climate equity and racial justice into their policy prescriptions and implementation efforts.
- Buildings, land use, transportation and mode share continue to be the most difficult to electrify and shift as jurisdictions fail to commit and take the necessary steps to decarbonize these sectors.
- Regional approaches to climate policy can help correct some of the current problems in climate policy, planning and implementation.
- It is critical that any regional action include the participation and inclusion of community and place-based organizations and working class communities of color.

We look forward to providing the County with a more thorough comment letter on the specific conclusions and recommendations outlined in Chapter 8. In the interim, we want to elevate [Assemblymember Chris Ward's AB 1640](#) which would authorize the creation of Regional Climate Networks (RCN) to coordinate regional climate action policy and implementation. We hope the County and other jurisdictions will join the community in supporting AB 1640 and a RCN housed at SANDAG.

Thank you, and we look forward to partnering with you on this important initiative.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Vasilakis', with a long horizontal flourish extending to the right.

Matthew Vasilakis
Co-Director of Policy
Climate Action Campaign

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Cc: [Baxamusa, Murtaza](#); [REDACTED]; [REDACTED]; [REDACTED]
Subject: [External] Re: RDF Technical Report - Technical Working Group
Date: Tuesday, May 31, 2022 2:33:56 PM
Attachments: [2022-05-31 CAC SDCK HCS Final RDF Comments Letter.pdf](#)

Hello Elise, thank you. Please accept the attached letter with our most recent comments on the draft RDF.

Let me know if you have any questions. Thank you.

On Mon, May 23, 2022 at 3:43 PM Lueg, Zerocarbon <Zerocarbon.Lueg@sdcounty.ca.gov> wrote:

Dear Matthew,

Thank you for your comments on the first draft of the RDF's Technical Report as a member of the Technical Working Group. Authors incorporated your feedback and suggestions into the draft that is currently available for review and public comment. Your contributions helped to strengthen the RDF's analyses and helped to clarify the chapters and the overall project. We truly appreciate all the feedback on the last iteration.

We would like to reach out to see if you and/or anyone from your team will be providing any additional comments or letters to the authors during this comment period. As a reminder, the deadline for comment on the second draft of the Technical Report and on the first draft of the Workforce Report is on May 31st. The documents are available for download on the [project website](#) (pdf links: [Technical Report](#), [Summary for Policy Makers](#), and [Workforce Report](#)) or on the [engagement site](#). Additionally, comments can be made directly onto the documents via the engagement site. If you have any trouble accessing the documents, I am happy to send any of them as an attachment to an email.

Please let me know if you have any questions.

Best,

Elise

Elise Hanson

Management Fellow

Land Use and Environment Group

County of San Diego

EliseA.Hanson@sdcounty.ca.gov

--

Best,

Matthew Vasilakis (he/him)

Co-Director of Policy

Climate Action Campaign

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Dynamic Action for a Sustainable Planet

May 31, 2022

Murtaza H. Baxamusa, PhD, AICP
Land Use and Environment Group
County of San Diego
San Diego, CA 92101
Via Email

Subject: San Diego climate organization comments on the draft Regional Decarbonization Framework

Dear Dr. Murtaza H. Baxamusa,

We are San Diego-based organizations working to expand and accelerate our collective efforts to achieve the equitable and transformational policies required to stop the climate crisis, including support for the development of a Regional Decarbonization Framework (RDF) that can align local and state climate goals, secure local, state and federal funding, and implement critical climate policies, programs and projects.

We applaud the County for developing the Regional Decarbonization Framework (RDF) as a regional tool that can help our communities take action in line with climate science, as well as promote public health, equity, and a prosperous green economy with good paying union jobs. The potential for the RDF is huge, and we hope this plan can model regional climate planning and decarbonization for the rest of the nation. We offer the following comments and recommendations:

Implementation

Again, we applaud the County for leading in this regional planning effort and we hope the County will continue to seek ways to partner and collaborate with other jurisdictions and agencies to develop a truly regional approach to climate action planning and implementation. Chapter 8 of the RDF makes clear the disjointed and siloed approach our cities are taking is not

working. It is critical that our region works together to adopt best practices, complete mitigation and resiliency projects, and lure state and federal funding to leverage local resources.

Implementation efforts must include detailed and specific implementation and funding plans with associated costs. Communities need to know how much climate action policies, programs and projects cost so they may prioritize, budget, and secure funding to successfully meet local and state climate goals. We recommend the County RDF elevate SANDAG's Climate Action Plan Cost Analysis as a tool for cities to develop implementation and funding plans and/or develop a new tool as part of broader regional climate collaboration.¹

Regional Collaboration

To aid in that effort, we recommend the County support Assemblymember Chris Ward's bill AB 1640, which would allow regions to establish Regional Climate Networks. AB 1640 can be a game changer in how jurisdictions and agencies tackle some of the most challenging and pressing decarbonization efforts.² We hope the County can support this bill and once passed, co-establish a Regional Climate Network with cities and agencies in the region to implement policies, projects and programs outlined in the RDF, local CAPs and other climate planning documents.

Community Engagement

We recommend the County put a strong emphasis on engaging communities and workers that will be impacted by the climate crisis and our transition to a zero carbon economy. Implementation will require extensive community and stakeholder engagement, and the RDF and any climate policy initiative will require accessible and inclusive outreach processes. We recommend the County continue to engage community and place-based organizations, labor and workforce leaders, and others to build consensus and achieve mutual goals.

Proven Technologies and Policies

As the region looks to develop pathways to achieving a zero carbon future, it is imperative that jurisdictions and agencies reject overtures by the fossil fuel industry to supplant proven climate-friendly technologies and policies with their own. The fossil fuel industry has orchestrated a false campaign to achieve "net zero emissions," lobbying federal, state and local

¹ San Diego Association of Governments and Energy Policy Innovation Center. [Regional Climate Action Planning Framework: Technical Appendix IV, CAP Implementation Cost Analysis](#). (May 2018).

² Open States. [AB 1640 Office of Planning and Research: regional climate networks: regional climate adaptation and resilience action plans](#). (May 19, 2022).

governments to adopt their preferred solutions to the climate crisis. These proposals include “renewable natural gas,” “clean fuels,” “clean hydrogen,” biomethane, carbon capture and storage, and more. Many of these technologies are neither proven nor scalable within the short time frame we have to decarbonize and stem the worst impacts of climate change.

We recommend the County RDF and any regional climate action moving forward not adopt or prioritize fossil fuel industry backed solutions to the climate crisis that are only in service to their products, infrastructure and profits.³ We must center proven, community-centered decarbonization pathways first.

Equity & Worker Justice

As climate action policy advances, we must ensure equity is centered to achieve broader economic, racial and social justice. Fossil fuel workers, communities of concern, and working-class communities of color need to be at the table providing guidance and support for policies that can protect them from climate change and uplift their communities and households.

Conclusion

We applaud the County for leading on this critical document that can help protect public health, build a fossil fuel free economy, and create a climate safe San Diego region. We hope the final RDF, paired with a robust implementation plan with identified funding strategies and project timelines, and coordinated by a Regional Climate Network or other regional agency, can become the backbone for regional climate action, and model complete decarbonization pathways for other metropolitan areas across the state and nation.

Sincerely,

Matthew Vasilakis,
Co-Director of Policy
Climate Action Campaign

Lucero Sanchez,
Community Policy Coordinator
San Diego Coastkeeper

Karinna Gonzalez,
Climate Justice Policy Manager
Hammond Climate Solutions

³ Climate Action Campaign. [Climate Action Campaign Response to SDG&E Greenwashing Report](#). (April 27, 2022).

From: [REDACTED]
To: [Fletcher, Nathan \(BOS\)](#); [Vargas, Nora](#); [Lawson-Remer, Terra](#); [Anderson, Joel](#); [Desmond, Jim](#)
Cc: [Baxamusa, Murtaza](#); [Lueg, Zerocarbon](#)
Subject: [External] Climate Action Campaign Response to SDG&E's Greenwashing Report
Date: Wednesday, April 27, 2022 9:00:08 AM
Attachments: [2022-04-08 CAC Response to SDG&E Report County of SD.pdf](#)

Honorable Chair, Vice Chair and Supervisors,

Please accept the attached letter regarding our comments on SDG&E's "net zero" report.

Thank you.

--

Best,
Matthew Vasilakis (he/him)
Co-Director of Policy
Climate Action Campaign
[3900 Cleveland Ave, Suite 208](#)
[San Diego, CA 92103](#)
[REDACTED]

www.climateactioncampaign.org

Twitter: [@sdclimateaction](#) / [@thoughteds](#)

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Our Mission is Simple: Stop the Climate Crisis





April 27, 2022

Board of Supervisors
County Administration Center
1600 Pacific Highway
San Diego, CA 92101
Via Email

Subject: Climate Action Campaign Response to SDG&E Greenwashing Report

Honorable Chair, Vice Chair and Supervisors,

On behalf of Climate Action Campaign, we would like to express our concern over SDG&E's recent report outlining their recommendations to achieve a "net-zero" future.

As a community-based organization that has worked with nearly every jurisdiction in the region to develop robust Climate Action Plans, advance Community Choice Energy programs, and partner with communities to develop, pass and implement climate-friendly policies, we are alarmed that SDG&E continues to propagate false solutions and dead-end pathways to prolong the dangerous burning of fossil fuels to maintain their shareholder profits, while harming San Diego families and our climate.

In their report, SDG&E is recommending "flexible approaches to technology and policy" that will extend the life of their fossil fuel products and infrastructure. To be clear, technologies and policies that center on "clean fuels," "renewable natural gas," "clean hydrogen" and carbon capture and storage will not be in service to the County's Regional Decarbonization Framework, CAP Update, environmental justice, or equitable climate policy implementation. They are merely attempts to keep our communities hooked on SDG&E fossil fuel products and infrastructure.

SDG&E's report is timely considering the recent United Nations Intergovernmental Panel on Climate Change (IPCC) report that highlighted the dire situation we find ourselves in on climate policy. However, while the IPCC report makes clear that we need to stop burning all fossil fuels as quickly as possible by mid-century and have the existing technologies to do so, SDG&E's approach heads in the opposite direction, doubling down on fossil fuel through 2045, while relying on costly, unproven, and unscalable technologies.

With the information and technology we have today, fossil fuel corporations and a lack of political will are the only things preventing us from stopping the climate emergency, and advancing a fossil fuel-free economy centered in equity and built with good union jobs that

leaves no community or worker behind. As the County finalizes the Regional Decarbonization Framework and recasts its Climate Action Plan, we hope there will be no support for SDG&E's greenwashing attempts to divert what limited time and resources we have away from proven and existing solutions. The County must protect and advance community interests, not SDG&E's shareholders.

We look forward to continuing working with you on this important matter.

Sincerely,

A handwritten signature in dark ink, appearing to read 'M. Vasilakis', with a long horizontal flourish extending to the right.

Matthew Vasilakis
Co-Director of Policy
Climate Action Campaign

From: [Baxamusa, Murtaza](#)
To: [Hanson, Elise A](#)
Cc: [Lueg, Zerocarbon](#)
Subject: FW: [External] Green Jobs and Carbon Sink Farming
Date: Friday, April 29, 2022 4:20:17 PM
Attachments: [Green Jobs in Sustainable Agriculture.pdf](#)

From: Co Director <carbonsinkfarms@gmail.com>
Sent: Friday, April 29, 2022 3:49 PM
To: Vargas, Nora <Nora.Vargas@sdcounty.ca.gov>; Lawson-Remer, Terra <Terra.Lawson-Remer@sdcounty.ca.gov>
Cc: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>
Subject: [External] Green Jobs and Carbon Sink Farming

Dear Supervisors Vargas and Lawson-Reemer,

Carbon Sink Farms is a collaboration of small farms across San Diego that are committed to reducing greenhouse gas emissions and improving climate resilience by shifting our agricultural practices. For the last few years, we have been implementing carbon farming and innovating our practices to ensure we are informed partners in the policy-making process.

Attached you'll find our advocacy letter for **Green Jobs and Carbon Sink Farming in San Diego county**. The signatories of this letter are supporting a handful of recommendations for how San Diego County can elevate the agricultural sector in its efforts to accelerate green employment across our region.

Thank you for your consideration.

Carbon Sink Farms
www.carbonsinkfarms.org
carbonsinkfarms@gmail.com

To: Nora Vargas and Terra Lawson-Reemer
From: Bea Alvarez, Co-Director
Carbon Sink Farms
14909 Pauma Valley Dr, Pauma Valley, 92061
Contact: carbonsinkfarms@gmail.com
Date: 4/29/2022



RE: Green Jobs and Carbon Sink Farming

Dear Green Jobs Champions,

Sustainable agriculture is among the most urgently needed work in the United States, for at least three reasons: we face a climate crisis, a health crisis, and a rural economic crisis. Addressing these pressing crises through sustainability transition will require growing our agricultural workforce: both because the current farm population is aging, and because sustainable agriculture is knowledge-intensive work that substitutes experiential knowledge of farm ecosystems for harmful industrial inputs. Given its social value, sustainable agriculture ought to be a welcoming profession. But at present, agriculture is decidedly unwelcoming for nearly all who work in it – making new entry unviable unless significant investments are made to change the trajectory.

As early adopters of climate-smart, sustainable farming practices, we have a handful of recommendations for how San Diego County can elevate the agricultural sector in its efforts to accelerate green employment across our region.

1) Recognize healthy soil as vital public infrastructure.

The world grows 95% of its food in the uppermost layer of soil, making topsoil one of the most important components of our food system. But due to conventional farming practices, nearly half of the most productive soil has disappeared and soil on US cropland is eroding 10 times faster than it can be replenished. Soils contain approximately 75% of the carbon pool on land – *three times more than the amount stored in living plants and animals*. Therefore, we must link the loss of topsoil to the climate crisis and accelerate the regeneration of healthy soil as a vital climate solution.

2) Support carbon sink voluntary incentives to compensate the private sector for its investments in soil infrastructure.

The vast majority of soil cultivation is undertaken by the private sector. Farmers resist mandates because our individual circumstances are extremely variable. Voluntary incentives are a more appropriate mechanism to influence farmer behavior. We know that carbon sink farming methods create healthier topsoil and that there are significant co-benefits to healthy soil. Yet, County staff seem reluctant to elevate carbon farming as an important climate

solution. We understand the significant barriers presented by existing (or no pre-existing) policy, but encourage the Board of Supervisors to act decisively to invest in a carbon sink incentive pilot that can demonstrate how the private agricultural sector can contribute to climate solutions.

3) Prioritize purchasing from carbon sink farms to stimulate green job growth.

The County can demonstrate the value of carbon sink farming and stimulate green job growth on sustainable farms by prioritizing County produce purchases from farms with an active Carbon Farm Plan. The County could utilize existing staff at Agricultural Weights and Measures to verify active practices in a similar way that Farmers Market certification is maintained. Farms with a reliable buyer are more likely to add additional workers and new farmers are more likely to launch farm businesses if they can see a path towards economic viability.

4) Plan for farmer/farmworker protections during climate events.

We can assume that climate change will bring higher temperatures and more frequent extreme weather events to San Diego County. Adequate preparation for these events will improve our resilience to them. Therefore, we recommended including opportunities (such as outreach and education about weather warning systems or state and federal disaster mitigation programs) into our local green job plan.

5) Invest in mentorship, training and new farmer incubation programs.

Farmers/farmworkers are extremely busy individuals and carbon sink, sustainable, or regenerative practices take time to study, integrate and act upon. Further, the practices are extremely context specific and we are only beginning to have local knowledge to demonstrate. Alongside efforts to incentivize new practices, we need a significant investment in farmer-to-farmer mentorship and San Diego-specific, multilingual, training programs for existing farmers. Resources must also be found to support beginning farmers during their first three to five years of operation to ensure they can successfully launch new green businesses.

6) Invest in affordable (and green) rural housing to ensure farming is a viable occupation.

Without affordable housing (particularly in rural and peri-urban parts of San Diego) there is zero chance that green job growth will occur in the agricultural sector. We recommend the County identify resources at the US Department of Food and Agriculture (USDA) and California Department of Food and Agriculture (CDFA) to build or restore the housing stock in San Diego's unincorporated areas. We also recommend that the County actively engage affordable housing developers in the construction of farmworker-specific housing.

7) Invigorate investments in sustainable agriculture education at community colleges.

As in any green job sector, adequate training is a key component to success. We recommend the County identifies opportunities at our fantastic community colleges to offer training, certification and associate degrees in sustainable, climate smart agriculture. We encourage these training programs to be bilingual so that the Spanish-speakers that fuel our food system have equal opportunity to participate.

8) Integrate more science into Farm to School education programs to interest future farmers in pursuing a green career in agriculture.

Interest in sustainable agriculture as a green career begins early. We firmly believe that farming as a green profession should be more actively integrated into school-based programs such as Farm to School. The County could partner to secure grant funding in this area and utilize programs such as Master Gardeners to teach about the intersection of climate change and our food system.

We sincerely thank you for providing leadership to ensure that San Diegans have quality green jobs in our changing economy. We also appreciate your commitment to equity and ensuring that farmers and farmworkers have a significant place in a greener future.

Sincerely,

Carbon Sink Farms Network

Behneman Farm
A La Vuelta Farm
Solidarity Farm
Hukama Farms
Sage Hill Ranch Gardens
Community Roots Farm
Grow Eco Farm

Sea + Soil, 1000 Tiny Farms
Paradise Valley Farm
Garden Unidos
Diwa Ng Lupa Farm
BeeWorthy Farms
Little Bitty Farm
Full Send Farm

Pixca Farm
Black Mountain Farm
Sweet Spot Farm
Highlands Orchard
Apple Blossom Farm

Organizational Sign On



From: [Howard Lee](#)
To: [Baxamusa, Murtaza](#); [Lueg, Zerocarbon](#)
Cc: [De La Rosa, Michael](#); [Hanson, Elise A](#)
Subject: [External] RE: Reminder - Regional Decarbonization Framework Workshops start April 7 - (Energy, Land & Agriculture, Transportation, Buildings, Jobs)
Date: Tuesday, April 26, 2022 2:55:59 PM
Attachments: [image002.png](#)

Hi Regional Decarbonization Framework (RDF) staff,

Thanks for the invite to the recent RDF Workshop. I did a cursory review of the draft RDF that states that the City of Coronado CAP is pending, so I added a comment that it was approved on March 15, 2022.

Please keep me and other City staff posted on future meetings.

Offhand, ideas for our region to collaborate could involve:

- Identify regional cross sectoral partnerships and key strategies and steps to reduce GHG emissions - identify key partners and strategies where partnerships could lead to innovative solutions and GHG emission reductions
- Fund/launch a regional San Diego based small business incubator for firms that focus on decarbonization and innovation
- Regional energy efficiency reach code program for existing buildings (optional, but offer incentives/subsidies/tax credits)
- Regional green energy/net zero energy recognition program for residential and non-residential buildings
- Economic study analyzing financial implications of transition to EV, impacts on gas tax revenues, and identify new funding sources to offset potential losses
- Business plan to study a regional commuter zero emissions ferry service program

Have a great week. Thanks.

Sincerely,

Howard Lee, AICP | Associate Planner - Active Transportation
Community Development Department | City of Coronado
1825 Strand Way | Coronado, CA 92118
619.522.2423 | hlee@coronado.ca.us

From: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>
Sent: Monday, April 4, 2022 7:19 AM
To: Lueg, Zerocarbon <Zerocarbon.Lueg@sdcounty.ca.gov>
Cc: De La Rosa, Michael <Michael.DeLaRosa@sdcounty.ca.gov>; Hanson, Elise A <EliseA.Hanson@sdcounty.ca.gov>
Subject: Reminder - Regional Decarbonization Framework Workshops start April 7 - (Energy, Land & Agriculture, Transportation, Buildings, Jobs)

CAUTION: This email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or attachments.

Happy Monday!

I wanted to send out a quick reminder that the Regional Decarbonization Framework (RDF) Workshops start this Thursday, April 7. The first sector to be discussed will be Energy. It will be an opportunity for cities, agencies and stakeholders to dive deep into policy, programs and projects in decarbonizing these key sectors. Workshop registration information is stated below. Thank you for your interest in the RDF and we appreciate you sharing the workshop information with your colleagues.

For more information on the Regional Decarbonization Framework, please visit the [project website](#) or project [engagement portal](#). Questions about the forum can be emailed to zerocarbon@sdcounty.ca.gov or please feel free to reach out to me, Michael or Elise from the County's LUEG Executive Office.

Regards,
Murtaza

Murtaza H. Baxamusa, PhD, AICP
Program Manager for Regional Sustainability
Land Use and Environment Group (LUEG)
County of San Diego



From: County of San Diego <sdcounty@service.govdelivery.com>
Sent: Thursday, March 31, 2022 6:50 PM
To: De La Rosa, Michael <Michael.DeLaRosa@sdcounty.ca.gov>
Subject: [External] Workshops on Decarbonizing Energy, Land Use and Agriculture, Transportation, Buildings, Jobs

San Diego County



Join Us for These Upcoming Workshops

The Regional Decarbonization Framework project team is hosting a series of workshops on the four sectors analyzed in the Framework's Technical Report, as well as related workforce implications.

These workshops will allow stakeholders to discuss data, findings, technical details, and policies with the County project team and subject-matter experts.

Workshop Details:

Registration links are provided below. You must be registered to receive the event Zoom link.

- Energy: Thursday, April 7, 2 to 4 p.m.

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Land Use and Agriculture: Thursday, April 14, 2 to 4 p.m.

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Transportation: Thursday, April 21, 2 to 4 p.m.

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Buildings: Thursday, April 28, 2 to 4 p.m.

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Jobs: Thursday, May 5, 2 to 4 p.m.

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Live translation will be provided. You may request translation services on your zoom registration form for a specific workshop by 5 p.m. The Monday before the scheduled meeting. We look forward to your participation.

For more information on the Regional Decarbonization Framework, please visit the [project website](#) or project [engagement portal](#). Questions about the forum can be emailed to zerocarbon@sdcounty.ca.gov.

انضم إلينا هذه الورشات القادمة

يستضيف فريق مشروع إطار العمل الإقليمي لخفض انبعاثات الكربون سلسلة من ورشات عمل حول القطاعات الأربعة التي خضعت للتحليل في التقرير الفني للإطار، بالإضافة إلى انعكاسات القوى العاملة ذات الصلة.

ستتيح ورشات العمل هذه لأصحاب الشأن مناقشة البيانات والنتائج والتفاصيل الفنية والسياسات مع فريق مشروع المقاطعة والخبراء في الموضوع.

تفاصيل ورشات العمل:

(Zoom) تم توفير روابط التسجيل أدناه. يجب أن تكون مسجلاً حتى تتلقى رابط الفعالية في زووم.

- الطاقة: الخميس، 7 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- استخدام الأراضي والزراعة: الخميس، 14 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- وسائل النقل: الخميس، 21 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- المباني: الخميس، 28 إبريل، من الساعة 2 عصرًا وحتى 4 عصرًا
<https://bit.ly/RDF-Buildings-Sector-Workshop>

- الوظائف: الخميس، 5 مايو، من الساعة 2 عصرًا وحتى 4 عصرًا
<https://bit.ly/RDF-Jobs-Sector-Workshop>

الخاص بك (Zoom) سيتم توفير ترجمة مباشرة. يمكنك طلب خدمات الترجمة لورشة عمل محددة باستخدام نموذج التسجيل في زووم بحلول الساعة 5 مساءً من يوم الاثنين الموافق قبل الاجتماع المقرر. نحن نتطلع إلى مشاركتك معنا

للحصول على المزيد من المعلومات حول إطار العمل الإقليمي لخفض انبعاثات الكربون، يرجى زيارة [الموقع الإلكتروني لمشروع أو بوابة zerocarbon@sdcounty.ca.gov](mailto:zerocarbon@sdcounty.ca.gov) المشاركة في المشروع يمكن إرسال استفساراتك حول المنتدى عبر البريد الإلكتروني.

敬請參加這些即將舉行的研討會

区域脱碳框架项目团队正在就框架技术报告中分析的四个部门以及相关的劳动力影响举办一系列研讨会。

这些研讨会将允许利益相关者与本县项目团队和主题专家讨论数据、调查结果、技术细节和政策。

研讨会详情：

下面提供了注册链接。必须注册才能收到活动 Zoom 链接。

- 能源：4 月 7 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- 土地使用和农业：4 月 14 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- 交通：4 月 21 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- 建筑物：4 月 28 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- 就业：5 月 5 日（周四）下午 2 点到 4 点

<https://bit.ly/RDF-Jobs-Sector-Workshop>

会提供现场翻译。您可以在预定会议前周一下午 5 点之前在 Zoom 注册表中为特定研讨会请求翻译服务。期盼您的参与。

有关区域脱碳框架的更多信息，请访问[项目网站](#)或项目[参与门户网站](#)。论坛相关问题可电邮至 zerocarbon@sdcounty.ca.gov。

Acompáñenos en estos próximos talleres

El equipo del proyecto del Marco de Descarbonización Regional está organizando una serie de talleres sobre los cuatro sectores analizados en el Informe Técnico del Marco, así como sobre las implicaciones relacionadas con la mano de obra.

Estos talleres permitirán a las partes interesadas debatir sobre los datos, las conclusiones, los detalles técnicos y las políticas con el equipo del proyecto del Condado y los expertos en la materia.

Detalles del taller:

A continuación se ofrecen los enlaces de inscripción. Debe estar registrado para recibir el enlace del Zoom del evento.

- Energía: Jueves 7 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Uso de la tierra y agricultura: Jueves 14 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Transporte: Jueves 21 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Edificios: Jueves 28 de abril, de 2 a 4 p. m.

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Trabajos: Jueves 5 de mayo, de 2 a 4 p. m.

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Se proporcionará traducción en directo. Puede solicitar los servicios de traducción en su formulario de inscripción de Zoom para un taller específico antes de las 5 p. m. del lunes anterior a la reunión programada. Esperamos su participación.

Para obtener más información sobre el Marco Regional de Descarbonización, visite la [página web del proyecto](#) o el [portal de compromiso](#) del proyecto. Las preguntas sobre el foro pueden enviarse por correo electrónico a zerocarbon@sdcounty.ca.gov.

Sumali sa Amin Para sa mga Paparating na mga Workshop Na Ito

Ang lupon ng proyekto sa Balangkas ng Rehiyonal na Dekarbonisasyon ay magsasagawa ng isang serye ng mga workshops sa apat na mga sektor na pinag-aralan sa Teknikal na Ulat ng Balangkas, pati na rin ang mga kaugnay na implikasyon sa manggagawa.

Ang mga workshop na ito ay magpapahintulot sa mga stakeholder na talakayin ang mga datos, mga natuklasan, teknikal na detalye, at mga patakaran sa lupon ng proyekto ng County at mga eksperto sa paksa.

Mga Detalye ng Workshop:

Ang mga link sa pagpaparehistro ay ibinigay sa ibaba. Dapat kang magparehistro upang matanggap ang link sa Zoom para sa kaganapan.

- Enerhiya: Huwebes, Abril 7, alas 2:00 hanggang alas 4:00 ng hapon.

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Paggamit ng Lupa at Agrikultura: Huwebes, Abril 14, alas 2:00 hanggang alas 4:00 ng hapon

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Transportasyon: Huwebes, Abril 21, alas 2:00 hanggang alas 4:00 ng hapon.

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Mga Gusali: Huwebes, Abril 28, alas 2:00 hanggang alas 4:00 ng hapon

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Mga Trabaho: Huwebes, Mayo 5, alas 2:00 hanggang alas 4:00 ng hapon

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Ipagkakaloob ang pagsasalin sa panahon ng workshop. Maaari kang humiling ng mga serbisyo sa pagsasalin sa iyong form ng pagpaparehistro sa Zoom para sa isang partikular na workshop sa hindi lalampas sa alas 5:00 ng hapon ng Lunes bago ang nakatakdang pulong. Inaasahan namin ang iyong pakikilahok.

Para sa karagdagang impormasyon sa Balangkas ng Rehiyonal na Dekarbonisasyon, mangyaring bisitahin ang [website ng proyekto](#) o [portal ng pakikipag-ugnayan sa proyekto](#). Ang mga tanong tungkol sa forum ay maaaring i-email sa zerocarbon@sdcounty.ca.gov.

Hãy Tham Gia Các Hội Thảo Sắp Tới Đây cùng Chúng Tôi

Nhóm dự án Khung Không Carbon Khu Vực đang tổ chức một loạt hội thảo về bốn lĩnh vực được phân tích trong Báo Cáo Kỹ Thuật của Khung, cũng như các tác động liên quan đến lực lượng lao động.

Các hội thảo này sẽ cho phép các bên liên quan thảo luận về dữ liệu, phát hiện, chi tiết kỹ thuật và chính sách với nhóm dự án của Quận và các chuyên gia về chủ đề.

Chi Tiết Hội Thảo:

Liên kết đăng ký có ở bên dưới. Quý vị phải đăng ký để nhận được liên kết Zoom của sự kiện.

- Năng Lượng: Thứ Năm, ngày 7 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Sector-Workshop-4-7-22>

- Sử Dụng Đất và Nông Nghiệp: Thứ Năm, ngày 14 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Land-and-Ag-Sector-Workshop>

- Giao Thông Vận Tải: Thứ Năm, ngày 21 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Transportation-Sector-Workshop>

- Tòa Nhà: Thứ Năm, ngày 28 tháng 4, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Buildings-Sector-Workshop>

- Việc Làm: Thứ Năm, ngày 5 tháng Năm, 2:00 đến 4:00 chiều

<https://bit.ly/RDF-Jobs-Sector-Workshop>

Bản dịch trực tiếp sẽ được cung cấp. Trước cuộc họp đã lên lịch, quý vị có thể yêu cầu dịch vụ dịch thuật trên biểu mẫu đăng ký Zoom của mình cho một hội thảo cụ thể trước 5:00 chiều Thứ Hai. Chúng tôi mong có được sự tham gia của quý vị.

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This email was sent to michael.delarosa@sdcounty.ca.gov using GovDelivery Communications Cloud on behalf of: County of San Diego · 1600 Pacific Highway · San Diego, CA · 858-694-3900



From: [Baxamusa, Murtaza](#)
To: [Petterson, Cody](#); [Flores, David](#)
Cc: [Demorest, Erin](#); [Hanson, Elise A](#)
Subject: FW: City of San Diego Letter of Comment on the County Regional Decarbonization Framework
Date: Thursday, June 2, 2022 10:10:02 AM
Attachments: [image001.png](#)
[image003.png](#)
[RDF Comments May312022_CityofSanDiego.pdf](#)
[image002.png](#)
[image004.png](#)

Hi Cody & David,

We just wanted you to be aware of the letter we received from the City of San Diego on the RDF.

Murtaza

Murtaza H. Baxamusa, PhD, AICP
Program Manager for Regional Sustainability
Land Use and Environment Group
County of San Diego



From: Muto, Alyssa <AMuto@sandiego.gov>
Sent: Tuesday, May 31, 2022 4:25 PM
To: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>; Demorest, Erin <Erin.Demorest@sdcounty.ca.gov>; De La Rosa, Michael <Michael.DeLaRosa@sdcounty.ca.gov>; Aghassi, Sarah <Sarah.Aghassi@sdcounty.ca.gov>
Cc: Granda, Adrian <adgranda@sandiego.gov>; Akers, Dion <DAkers@sandiego.gov>; Buso, Shelby <SBuso@sandiego.gov>; Werner, Heather <HWerner@sandiego.gov>; Saldaña, Moriah <MSaldana@sandiego.gov>; Wilde, Randy <RWilde@sandiego.gov>; Lawrence, Jessica <JLawrence@sandiego.gov>; Sturak, Jeff <JeffSturak@sandiego.gov>
Subject: [External] City of San Diego Letter of Comment on the County Regional Decarbonization Framework

Dr. Baxamusa,

Thank you again for meeting with the City of San Diego on the County's proposed Regional Decarbonization Framework (RDF). The City has prepared the attached letter providing feedback and

comment on the RDF progress to date and areas for cooperation between our organizations moving forward. We encourage the County to explore the City's draft Climate Action Plan further for additional ideas on specific actions and programs that have been identified by the City and our stakeholders to address regional emissions.

We appreciate all of the collaboration on this important regional effort, and look forward to working together as we move to a net zero goal regionally.

Respectfully submitted,

Alyssa

Alyssa M. Muto

Director, Sustainability and Mobility Department
City of San Diego (619) 533-3103

May 31, 2022

Subject: **Regional Decarbonization Framework**

Dear Dr. Baxamusa,

The City of San Diego appreciates the County of San Diego's work to elevate the urgency of the climate crisis and develop pathways to a net zero carbon future. We believe that the assessment and strategic planning for reducing regional greenhouse gas emissions through the Regional Decarbonization Framework (RDF) is a major step forward to ensure the region is coordinated and prepared to mitigate climate change and protect our residents. This collaborative approach is needed to identify the actions we will need to take collectively as municipalities to address the climate crisis.

As the first city in the region to develop a Climate Action Plan (CAP) with a net zero greenhouse gas emissions [goal](#), we fully support the effort to develop partnerships across agencies and jurisdictions to further climate action and share in the benefits and burdens of this work. While the updated CAP is in a draft form, it is quickly nearing completion with adoption expected as soon as summer of this year. To ensure that the RDF remains reflective of near-term commitments to reduction of greenhouse gas emissions, the City recommends and requests that the County incorporate the City's updated CAP into the RDF and the calculations for regional emissions reductions. This will ensure a more accurate reflection of where the region is with our commitments in adopted Climate Action Plans, and where gaps remain to meet a regional net zero goal. The difference in greenhouse gas reductions from the City's 2015 adopted CAP to the current CAP is significant, accounting for an additional reduction of 4,634,381 MT.

We have shared the City of San Diego's draft CAP update and associated proposed actions that provide opportunities for regional partnership and collaboration. Throughout the development of the CAP, the City of San Diego sought stakeholder and resident input to ensure we have a community driven plan. This included hearing from over 3,300 residents through both City led activities and in collaboration with the Institute for Local Government (ILG) and local community-based organizations (CBOs). Our collaboration with these CBOs and nonprofits ensured that vulnerable populations were not left out of the planning process. The City would like to support the County in engagement and outreach to create access for all residents to both be informed of the goals and impacts on their homes, families and jobs, but also share the challenges and priorities for an equitable and just transition to net zero.

We are continuing our own outreach efforts as we prepare to bring the CAP update and our working draft of the Climate Action Plan Implementation Matrix to City Council Committee in June, and on to the full City Council as early as July for consideration and adoption. Following the adoption of the CAP, the City will be bringing forward a Municipal Energy Implementation Plan and supporting policies to make sure our own city

buildings, through regular maintenance and grant-funded opportunities, are made more resilient, efficient, and electrified with 100% renewable power from San Diego Community Power.

We thank you for the opportunity to comment on this draft Regional Decarbonization Framework and for investing in the initial research and outreach necessary for meaningful, regional action to address the existential threat of climate change. We have found the regional collaboration through SANDAG and the San Diego Regional Climate Collaborative to be instrumental in moving climate action forward in the region through partnership on best practices, identifying opportunities for funding and resources, and working through barriers as a team.

Thank you again for providing us the opportunity to provide feedback on the framework. We look forward to continued collaboration.

Respectfully Submitted,

A handwritten signature in black ink that reads "Alyssa Muto". The script is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Alyssa Muto
Department Director
Sustainability & Mobility Department

Actions for Regional Collaboration:

Strategy 1: Decarbonization of the Built Environment

- Identify funding sources, including SDCP and SDG&E, for advancing residential weatherization projects, appliance exchanges and broad building retrofits in Communities of Concern.
- Expand residential Photo Voltaic deployment incentives/programs.
- Establish policies that incentivize developers to use less GHG intensive materials and practices (EVs, Low-Carbon concrete, recycled materials, etc).
- Advance workforce development programs for energy efficiency and renewable energy projects.

Strategy 2: Clean & Renewable Energy

- Develop financial support programs to incentivize solar on multifamily buildings, providing financial benefits to tenants and families within communities of concern.
- Develop financial support programs to incentivize deployment of building-scale renewables and mandate the use of renewables through building codes, while engaging residents and other stakeholders in the process.
- Partner with SDCP to incentivize local generation of utility scale renewables.
- Explore pilot projects for a variety of grid resilience services (demand response, emergency back-up, demand charge reduction, etc.) through three modes of EV integration (grid-to-vehicle, vehicle-to-building, vehicle-to-grid).
- Work with the Air Pollution Control District (APCD), San Diego Unified School District and other school districts serving the City to support the conversion of the school bus fleet to zero emissions vehicles.
- Work with SANDAG, APCD and MTS to procure a fully zero emissions bus fleet, where technologically feasible.
- Continue to work with SANDAG, APCD, U.S. Navy, the Port of San Diego and other partners on medium and heavy duty (MD/HD) ZEV infrastructure planning. Consider future policies to advance MD/HD ZEV adoption and utilization in the Portside Communities.

Strategy 3: Mobility & Land Use

- Review and improve micro-mobility policies/shared use mobility programs, especially focused in Communities of Concern and first mile/last mile applications.
- Partner with micromobility operators to optimize the number of scooters available in mobility hubs and/or near transit.
- Partner with public safety to review and reform education programs and enforcement policies related to pedestrian and traffic safety.
- Explore fee structure/incentive program to increase cost savings for shared transportation network company (TNC) trips relative to private TNC trips.

- Work with SANDAG and MTS to develop dedicated bus lanes or shared bus and bike lanes as part of Community Plan Updates to increase transit efficiency and on-time performance, focusing on routes supporting residents within underserved communities and high-frequency connections for riders going to schools, universities and jobs.
- Expand free youth transit pass program to more residents, prioritizing students of all ages and residents in Communities of Concern.
- Prioritize and assist MTS with siting and design of complete transit stops in Communities of Concern, including shade trees, lighting, trash bins.
- Create programs and incentives for transit passes bundled with all new major developments within one mile of a major transit stop.
- Partner with MTS for priority right of way for buses and trolley.
- Support MTS, SANDAG and Caltrans in the creation of transit right of way for regional transit connections.
- Establish a team and roadmap to support actions that require connectivity and close the digital divide.
- Implement temporary and permanent car-free zones/zero emission zones.

Strategy 4: Circular Economy & Clean Communities

- Establish a multidisciplinary team of subject matter experts across City departments with a focus on land use, economic growth, neighborhood vitality and healthy food access to work with community members to expand urban agricultural programs and develop policies to encourage community based farms, including demonstration projects.
- Invest in a network of local food sourcing, aggregation, distribution and processing infrastructure including regional food hubs, neighborhood scale commercial kitchens or shared kitchens, and other food businesses, particularly in low-income communities.
- Incentivize incorporation of urban agriculture features into development plans, including indoor agriculture, edible forestry, community gardens, etc.
- Increase community participation with Urban Agriculture Incentive Zone(UAIZ) program.
- Partner with franchise waste haulers to address barriers to increasing diversion rates.

Strategy 5: Resilient Infrastructure and Ecosystems

- Acquire Open Space Conservation Land.
- Create a pilot carbon farming program on vacant public land.
- Protect and maintain existing trees.
- Develop local water supply and reduce dependence on imported water.
- Support ongoing gallon per capita water use (GPCD) targets.

Strategy 6: Emerging Climate Action

This strategy is broad by design, areas of focus within Strategy 6 include developing more effective partnerships with regional partners such as the Port of San Diego, SANDAG and the County of San

Diego; advancements to ensure energy resilience and exploration of alternative fuel sources; further research to understand potential land and water carbon sequestration opportunities; and developing pilot projects that catalyze new techniques and technologies from all sectors.

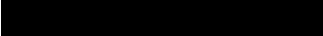
[Updated Climate Action Plan with GHG emission reductions \[Appendix A\]](#)

From: AEMAdmin@sdcounty.ca.gov
To: [Lueg, Zerocarbon](#)
Subject: Comments on the Draft Local Policy Opportunity Analysis
Date: Thursday, February 3, 2022 2:03:02 PM

You've received a new form based mail from <https://www.sandiegocounty.gov/content/sdc/sustainability/regional-decarbonization.html>.

Values:

Name :
Jason Anderson

Email :


Comments :

Cleantech San Diego supports the draft Regional Decarbonization Framework and the associated draft Local Policy Opportunity Analysis. By working together and coordinating efforts, local governments can support the increased adoption of renewable energy, including local projects, for the benefit of the economy and the environment. Cleantech San Diego suggests including language that recommends streamlining the permitting process for all renewable energy projects in the region, including utility-scale renewable energy generation and battery storage projects, including those within the County's jurisdiction.

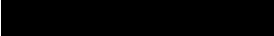
Submit :
Submit

From: AEMAdmin@sdcounty.ca.gov
To: [Lueg, Zerocarbon](#)
Subject: Comments on the Draft Local Policy Opportunity Analysis
Date: Thursday, February 3, 2022 8:32:23 PM

You've received a new form based mail from <https://www.sandiegocounty.gov/content/sdc/sustainability/regional-decarbonization.html>.

Values:

Name :
Bea Alvarez

Email :


Comments :

San Diego needs to invest in our local food system as a key sector in the fight against climate change. Our farmers can help mitigate our significant carbon footprint and get us to net zero faster--while simultaneously producing the healthiest, fresh food imaginable. This Decarbonization Strategy dabbles in carbon farming--and makes an excellent start--but It is essential that it become a more central strategy centered on equity, and that the right investments are made now!

Submit :
Submit

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] Comments on the draft RDF
Date: Tuesday, May 31, 2022 4:56:26 PM
Attachments: [Landis RDF comments 20220528.pdf](#)

Dear Mr. Baxamusa,

I want to add my personal comments to the record on this document, and they are attached. Please let me know if you can open them.

Thank you for the opportunity to comment on this! I look forward to the next steps.

Best,

Frank Landis

May 31, 2022

County of San Diego, LUEG
Attention: Murtaza Baxamusa
1600 Pacific Hwy., Room 212
San Diego, CA 92101
via email to ZeroCarbon@SDCounty.ca.gov

RE: San Diego Regionalization Decarbonization Framework – 2022 Draft

Dear Mr. Baxamusa:

My name is Frank Landis, and normally I testify as the conservation chair for the San Diego Chapter of the California Native Plant Society. While CNPS supports San Diego County's efforts to decarbonize, here I am speaking as only for myself. I want to comment on the Regional Decarbonization Framework (RDF) draft, because I know from my personal experience that one section is flawed and easily fixed. That section is on RDF p. 47, quoted below:

Workforce Issues in Natural Lands Preservation and Restoration; and Urban Greening

Avoiding changing the land use of natural habitat, restoring existing habitat, implementing other land conservation measures and greening the urban landscape are the key policies to address greenhouse gas emissions in this sector. These activities are generally all considered services performed by government. Occupations vary, and are not well defined in the Bureau of Labor Statistics occupation codes. Here too we expect blue-collar jobs to predominate, including landscapers and gardeners, conservation workers, etc. and a smaller proportion of professional workers such as soil scientists and environmental planners.

As these are publicly funded activities, the workers who carry out these services are often public employees, covered by public employee collective bargaining contracts with family supporting wages, benefits and sometimes career paths. In some cases, they are employees of private businesses who have contracts with local government agencies. When these services are contracted out to private or non-profit businesses, there is a danger of a decrease in job quality, as has occurred in many privatized public service contracts.

Job quality can be ensured when activities associated with greening of urban landscapes and conserving and restoring natural lands are carried out with public sector workers. Therefore, expanding public sector employment is a high road strategy. If local governments decide to contract out these activities, they can still ensure job quality through bidding processes that incorporate one or more of the labor demand policy levers as described in Chapter 2. Promoting bidding processes based on maximizing quality and the economic development benefits of public investment is a tried-and-true strategy with successful examples in

California, as illustrated in the state High-Road Plan. These high road contracts include services, such as the procurement of waste services, and manufacturing, such as the procurement of electric buses for public transit. Such contracting language can also be applied to the activities discussed here, from urban tree planting to wetlands restoration.

This subsector also offers the opportunity to develop or expand inclusionary hiring practices for these family-supporting jobs. The extent to which diversity and inclusion exist in the family supporting public sector jobs tends to vary by local government agency, and there may be room for improvement. If so, a key opportunity exists to create high road training partnerships with local government agencies. Together, the public agency employer, the union representing the workers, and community colleges or other training institutions can develop preparatory programs for these jobs, using the same methodologies of the pre-apprenticeship programs described in Chapter 3.

This section makes some problematic assumptions. I am going to share my history, to help you understand the problems with the assumptions underlying this section. I have an environmental science degree from UC Berkeley, a MA in botany from Humboldt State University, and a PhD in botany from UW Wisconsin-Madison. I was a member of the TA union as a grad student, and after I graduated, I earned \$27,000 per year as a postdoc with no job security. Originally I had hoped become a professor, but the jobs dried up during the Bush years, so I went to work as a consultant. When I worked as an environmental consultant, I earned a median wage, this with three degrees.

Here are some lessons to learn from my experience:

- There is a supply of talented labor being wasted in the biology, botany, wildlife science, conservation, and environmental science fields nationwide, perhaps worldwide. Most of the students and grad students I studied with for years are not working in the fields they studied. Over 95% of PhD's in ecology in the US the year I graduated did not get faculty jobs. That was my situation. One of my former lab mates sells real estate. Another was a ski instructor for a while. **The critical need is not to build new educational programs, but to build pipelines between the training programs that already exist and jobs postings that fail to attract properly skilled applicants.**
- Training centers for highly skilled professionals already exist in California. They include UC Berkeley, UC Davis, UC Riverside, Cal Poly Pomona, Cal poly San Luis Obispo, Humboldt Polytechnic University, and the California Botanic Garden. This is highly skilled work, but the students are not finding jobs posted here, while recruiters here are not finding the job-seekers there. Fixing this is trivial, but essential work.
- There are also highly skilled workers from Mexico and elsewhere, often working here as laborers and foremen, because their skills are not recognized or appropriately rewarded. I know this because I have talked with some of them. They need to be respected according to their skill level, because much of the good work already done in the County depends on them. We need more people like them.
- The final part of the pipeline is to help prepare San Diegans who want to work in this field for existing collegiate training programs, and to work with those training programs to improve their graduates' employability. This needs to be done at the high school level,

by informing high school guidance counselors of these programs. It can also be done at the adult re-entry level.

- While I agree that African-Americans are under-represented in the environmental field, my classmates were majority female. Botany especially has been seen as a woman's science since Victorian times.

Finally, I agree that it would be helpful to work with local community colleges to help train local landscape workers and contractors how to work with native plants and how to make their work more carbon neutral. This dovetails with current County proposals to do the same thing in the service of promoting native plant landscaping. It would be simpler to combine efforts rather than run them separately.

Another issue is the RDF's apparent desire to rebuild the conservation sector for retrained union jobs from elsewhere in the economy. This has been tried before, when the Board of Forestry tried to pass legislation that only Registered Professional Foresters could prepare CEQA documents. The problem is that their education did not provide them with the skills they needed to work on CEQA documents. This would have provided job security for RPFs as the forest industry contracted, at the loss of highly skilled professionals who already knew the field. It is a negative-sum game that will result in removing skilled workers from the workforce, at a time when we need more skilled workers, not fewer.

Is there concern about loss of union jobs? I don't think many conservation workers will object to being organized by unions, especially if issues like living wages and promulgation of professional standards for the industries are placed front and center.

The draft RDF also states "[w]hen these services are contracted out to private or non-profit businesses, there is a danger of a decrease in job quality, as has occurred in many privatized public service contracts. This is needs to be reworked or removed. There are a range of skilled people in all sectors, public, commercial, and non-profit. Why does it make sense to suggest that the County Department of Parks and Recreation produces higher quality work than non-profits like the San Diego Zoo Wildlife Alliance or the Nature Conservancy? I know that the County relies on both for-profit and non-profit corporations for critical environmental work. The good parts of the status quo need to be incorporated into the RDF.

In closing, I want to stress that I support the County's decarbonization efforts and I want to see them succeed. I also want to acknowledge that of course the RDF is a high-level policy document. The issue here is that the high level policies around work force development are poorly grounded, and may cause more harm than good if implemented as written. The solutions are quite straightforward. They involve recognizing the skilled people, in government, in non-profits, and in non-profits, who have dedicated their careers here already. It involves making it easier to hire more people like them, by connecting to training programs that already exist. And finally, it involves making it easier for those who want to do this work to get trained and hired.

Thank you for taking my comments. Please keep me informed of all updates on this program at [REDACTED].

Sincerely,

/S/

Frank Landis, PhD

From: [Baxamusa, Murtaza](#)
To: [Lueg, Zerocarbon](#)
Subject: FW: [External] JCSG comments on BOS March 16, 2022 Land Use Agenda item 05: Update on decarbonization framework
Date: Tuesday, March 15, 2022 6:48:32 AM
Attachments: [JCSG ltr to clerk of the board regarding decarbonization.docx](#)

From: Kazmer, Gregory <Gregory.Kazmer@sdcounty.ca.gov>
Sent: Monday, March 14, 2022 3:04 PM
To: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>
Cc: Aghassi, Sarah <Sarah.Aghassi@sdcounty.ca.gov>
Subject: FW: [External] JCSG comments on BOS March 16, 2022 Land Use Agenda item 05: Update on decarbonization framework

Just wanted to make sure you received this...thanks!

From: Cherry Diefenbach [REDACTED]
Sent: Monday, March 14, 2022 1:42 PM
To: FGG, Public Comment <PublicComment@sdcounty.ca.gov>
Cc: Anderson, Joel <Joel.Anderson@sdcounty.ca.gov>; Lawson-Remer, Terra <Terra.Lawson-Remer@sdcounty.ca.gov>; Fletcher, Nathan (BOS) <Nathan.Fletcher@sdcounty.ca.gov>; Desmond, Jim <Jim.Desmond@sdcounty.ca.gov>; Vargas, Nora <Nora.Vargas@sdcounty.ca.gov>
Subject: [External] JCSG comments on BOS March 16, 2022 Land Use Agenda item 05: Update on decarbonization framework

To whom it may concern:

Please include this letter and the attached email in the BOS packages for March 16, 2022 Land Use Agenda Item 05.

Jacumba Community Sponsor Group (JCSG)

March 14, 2022

From: Chair, JCSG: Cherry Diefenbach [REDACTED] [REDACTED]
[REDACTED]

To: Clerk of the Board: Please provide a copy of this letter and the attachment in the board packages of the San Diego County Board of Supervisors: Anderson, Desmond, Fletcher, Lawson-Remer, & Vargas

Comments on the update to the Integrated Regional Decarbonization Framework: Land Use Agenda Item 05 for March 16, 2022

Back in November 30, 2021, the JCSG submitted detailed comments on the

draft Regional Decarbonization Framework (RDF). (See attached email.) Sadly, our comments were not even acknowledged in Attachment C: Summary of Comments Received on the Technical Report. (Many of those comments are still applicable though the page numbers referenced have been changed.)

Once again, we take exception to the parts of the draft Technical Report that include maps which fail to accurately identify community locations where massive renewable energy projects are proposed and comments that generalize the minimal winter heating requirements of the “populated regions of the County.” The Technical Report’s dismissive approach to the winter heating needs of backcountry residents living in communities like Pine Valley, Boulevard, Descanso, Campo, and Julian, and on Indian reservations like Manzanita, Campo, and others is frankly, shameful. **Are the impacts of the decarbonization framework not a County-wide concern or will it continue to take a one-size fits all approach to all communities?**

Page 22 of BOS Land Use Item 05 states that “All draft reports are out for review and comment through May 31, 2022.” **It is the opinion of the JCSG that the Regional Sustainability Land Use and Environmental Group’s outreach to community groups and the public-at-large has been ineffective at best and that the proposed comment period is too short given the voluminous amounts of materials that the public has been asked to review.**

If the BOS is really serious about gaining the public’s support of embracing carbon reduction strategies that will certainly increase the cost of living for all County residents, then it must require the Program Manager do a better job of soliciting, acknowledging, and actually incorporating public feedback into this very complicated framework. **To that end, we hope the BOS will consider recirculating pertinent RDF documents and extending the public comment period on those documents until August 1, 2022.**

In the meantime, the JCSG will continue its thorough review of the 530+ page decarbonization technical report. We will submit additional detailed comments at a later date.

Respectfully,

Cherry Diefenbach

Chair, JCSG

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Cc: [Anderson, Joel](#); [Fletcher, Nathan \(BOS\)](#); [Lawson-Remer, Terra](#); [Vargas, Nora](#); [Desmond, Jim](#)
Subject: [External] JCSG comments on the draft regional decarbonization Framework (RDF)
Date: Tuesday, November 30, 2021 4:35:04 PM
Attachments: [JCSG Nov 30, 2021 comments on the draft RDF.pdf](#)

To whom it may concern:

Attached are the Jacumba Community Sponsor Group's public comments on the draft RDF.

Cherry Diefenbach
Chair, JCSG

JACUMBA COMMUNITY SPONSOR GROUP (JCSG)

November 30, 2021

From: Chair, JCSG: Cherry Diefenbach [REDACTED]

To: Regional Decarbonization Framework Project Team

Comments on the draft Regional Decarbonization Framework (RDF)

On October 11, 2021, the JCSG authorized me to submit initial comments on the 332-page draft Regional Decarbonization Framework (RDF), a document which uses problematic assumptions to develop five “technically and economically feasible” energy pathways that could lead to net-zero carbon emissions. Some of these assumptions follow.

“All planned and permitted solar sites in San Diego County will be constructed and that (electrical) storage will meet intermittency demands.” (pg. 46) These two premises are uncertain at best. The BOS is currently receiving vocal and legal pushback from communities where renewable energy facilities (solar and wind) have been approved for construction. The State of California currently experiences electrical reliability shortfalls in the power grid with flex alerts during peak summertime usage. Those flex alerts are a problem even before the shift to 100 percent renewable energy and a conversion to electric vehicles (EVs). The County does not have anywhere close to the needed battery storage facilities to “meet intermittency demands.” They are likely to receive challenges by the public when those storage facilities are proposed for placement near the power’s point-of-use (urban areas).

“Cost is the most important criteria for site selection.” (pg. 46) This statement seems to ignore the County’s focus on social equity and environmental justice, which play an integral part of the discussion of all new ordinances going forward.

“Geothermal supply in Imperial County is shared with San Diego in an amount equivalent to the ratio of their combined population.” (pg. 46) Are mutual agreements in place to support this? What if Imperial County decides to sell their geothermal energy to Los Angeles County or they decide to use more of their own thermal energy resources within their own County?

“High quality wind resources are relatively scarce in CA.” (pg. 33) The placement of off shore wind turbines may be controversial but they represent a viable high-quality wind resource that must be a part of the regional renewable energy portfolio.

“No offshore wind.” (pg. 46) This assumption seems to be in conflict with the RDF’s recommendation on pg. 221 to “accelerate the leasing development of offshore wind areas.” All means of renewable energy generation should be considered when seeking to attain net-carbon zero.

“Winter climate in the populated regions of San Diego County is very moderate, so there is little need for backup heat.” (pg. 132) A number of rural communities: Boulevard, Jacumba, Descanso, Campo, Julian, Pine Valley, etc., routinely experience freezing temperatures and winter snow.

“Broadband access now extends to the most remote parts of the world and the COVID-19 crisis encourages professionals to adapt to a virtual workplace.” (pg. 238) However, it is not currently available or reliable in some of our rural communities such as Boulevard, Descanso, and Guatay.

“It is taken as a given based on past modeling exercises, that CA reaching net-zero in 2045 is both possible and can be done at manageable cost...” (pg. 7) RDF Table 5.5 shows a comparative installation cost analysis for heat pump water heaters which appear to be twice as expensive as existing gas heaters. The final RDF plan should also include a table which compares actual monthly heating costs of using them.

“The ability to approach 100% reliance on zero carbon resources may also depend on the willingness of end

users to adapt their energy use to smooth demand peaks.” (pg.24) It is unlikely that County residents will be amenable to limiting their use of appliances/air-conditioners or recharging of their EVs when renewable energy production is low (after sunset and when the wind is not blowing).

“SANDAG’s Conserved Land Areas are undesirable for renewable development.” (pg.46) In the interests of fairness and reducing carbon emissions, there should be no “sacred cows.”

The draft RDF also includes a number of cautionary statements about its implementation.

“The right pathway for the decarbonization of the San Diego region is at this moment, impossible to know...” (pg. 7)

“Pathways are not the forecasts of what will happen.” (pg. 8)

“Details of the modeling analyses and the implications are subject to change before the (RDF) work is finalized in February 2022.” (pg. 10)

On pg. 222, the draft RDF states: “San Diego represents a tiny fraction of global emissions (thought to be to be less than .08 percent) and its real impact could be influencing the climate policies of other regions of the country and beyond.” That premise seems to be aspirational as best. Other nearby regions like Mexico may choose not to adopt costly carbon emissions curtailment policies and RDF has no control for requiring them to do so. Reductions in our carbon emissions are also easily offset by the carbon that is released by California’s huge wildfires. How many tons of carbon were released during the million-plus-acre wildfires that California experienced in 2021? What are the net carbon sequestration losses from the wildfire deforestation? The RDF should provide those statistics as well.

That does not mean our region should not continue to seek “reasonable pathways” that would support GHG reductions. However, county leaders must acknowledge that many of the proposed RDF solutions for doing so will prove to be quite expensive for local residents and businesses still trying to recover from the lingering effects of the COVID pandemic. While it may be reasonable to require that new residential and commercial building codes reflect a move away from the use of natural gas, the RDF acknowledges the electrification of existing buildings will be costly and impractical in many cases. For example, future ordinances that would restrict the use of wood-burning stoves/fireplaces, propane heaters/stoves will negatively affect poor rural residents who tend to live in older houses. Residents living on small fixed incomes are also unlikely to afford the costs of replacing working appliances/and fossil fuel heating systems with more expensive electrical ones, let alone install an expensive electric vehicle (EV) charger. Additionally, older homes may not be wired to accommodate the increased power demands of an all-electrical home with an EV charger. With much of the electrical power in the unincorporated areas in East County subject to frequent power outages during “Red Flag Warnings,” the continued use of alternate energy sources for residential and commercial properties will remain important for both heating and cooking. Will use of gasoline-powered emergency generators also be restricted in the name of climate change? Although San Diego has some of the finest weather in the nation, solar generators are not a viable replacement for gasoline or propane-powered generators. Without backup power sources, rural residents, who are often dependent on wells, will also lose their ability to pump water, or charge an EV.

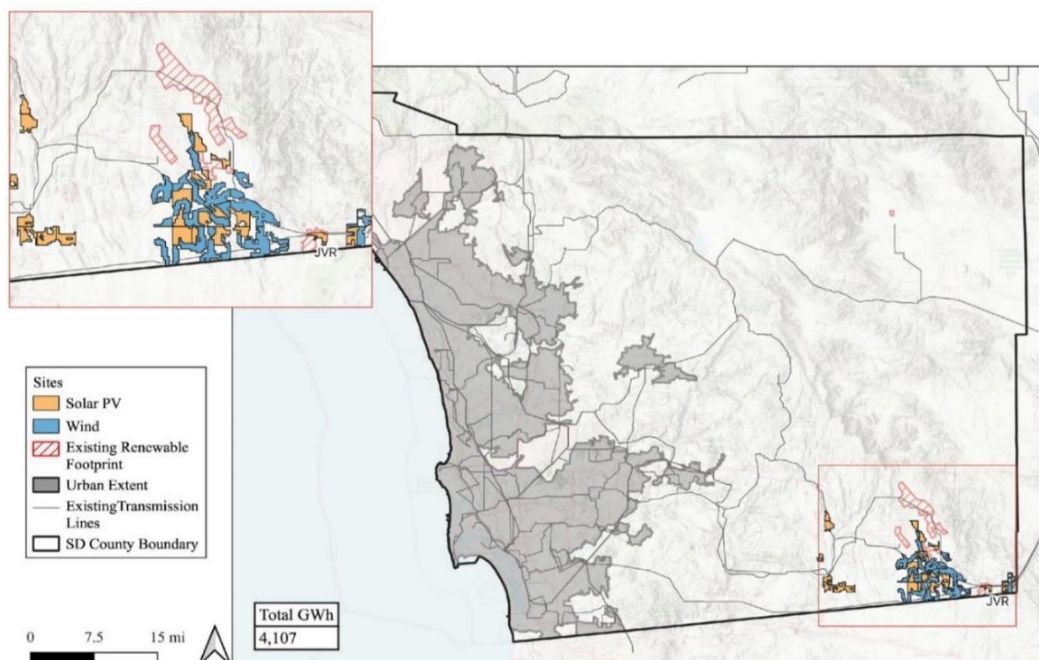
The RDF seeks to limit all carbon emissions. Will the “fear” of carbon emissions prohibit CALFIRE’s use of prescribed burns to reduce forest fuels by thinning forest undergrowth and removing dead brush? This wildfire mitigation strategy is essential and should be expanded.

The draft RDF presents a variety of renewable energy resource scenarios that could produce 100 percent of San Diego County’s electrical demand in 2045. These scenarios require transmission system upgrades to share electrical and geothermal power generated in Imperial County. To meet the necessary electrical power demand predicted for 2045, this plan projects that new six new transmission lines need to be installed and two new 100-MW power facilities located in either San Diego or Imperial counties would need to be brought on-line each year.

California Executive Order B-55-18 directs the State to become net-zero by 2045, and that will be challenging enough to achieve. The San Diego region does not need to surpass the State mandate and negatively impact the quality of life for residents just so the County can claim to be a “decarbonization leader.” In fact, on pg. 6, the RDF states: “For decarbonization to be effective, cohesive policies at the federal, state, and local government levels are necessary.” If the county supervisors decide to constrain the net-zero timeline to 2035, then four new 100-MW clean power plants would be needed each year.” This simply will not be feasible unless the County intends to circumvent appropriate CEQA reviews.

Renewable energy candidate project areas, or CPAs, are defined within the draft RDF as “low-impact, high-quality areas for wind and solar development in San Diego and neighboring Imperial County.” Using a least cost scenario, CPA criteria identifies land of “low pecuniary value and that it is developable, likely to face fewer legal and social barriers.” (Translation: identify land that is cheap and next to poor rural residents without the political or financial means to effectively resist its placement.) Within San Diego County, this plan primarily focuses on the areas of Jacumba and Boulevard as the “best” future industrial-scale renewable energy generation areas or

CPAs.
(Figure 2.13 below shows the RDF’s 2025 CPAs for wind and solar facilities.)



Jacumba residents find it offensive that RDF plan maps do not bother to label the rural communities that will be “swallowed up” by a slew of renewable energy projects. It is much easier for the RDF to propose the blanketing of those unincorporated areas with renewable energy facilities when it doesn’t acknowledge the presence of communities. The draft RDF can then essentially offer them as “sacrifice zones” necessary to supply the electrical power demands of urban areas. *Under RDF scenarios, private property within the Jacumba and Boulevard areas will become worthless and unlivable for residents.* Where is the social equity in destroying the quality of life for the low-income residents of these two disadvantaged rural communities?

On pg. 23, the RDF uses outdated non-residential rooftop solar siting data from taken from the City of San Diego to model the non-residential solar siting potential for the other cities and unincorporated areas of the region. The RDF must use real 2021 data, not modeled assumptions, to determine how much rooftop capability exists currently within the region. This information is critical to projecting future solar siting potential.

County leaders must stop allowing renewable energy developers to target the “low hanging fruit”—like Jacumba, Boulevard, and other rural communities for the placement of their industrial facilities. It would be refreshing and unprecedented, if going forward, the go-to-solution for green energy production in the County did not come off the backs of rural residents and negatively impact the important scrub and chaparral ecosystems which naturally store and sequester carbon and nitrogen. In the interests of social equity and a genuine concern for the environment, the BOS and city mayors should instead incentive (subsidize if necessary) point-of-use rooftop solar and battery storage systems for urban residential and business properties. Elected leaders should also prioritize infill solar and energy storage facility placement near the urban centers where the power will be utilized even if purchasing that land will initially cost more. It is only fair that everyone, especially wealthier city residents, also have “some skin in the renewable energy market,” since most of the renewable energy will be going to them.

On pg. 25, the RDF discusses the option of overbuilding renewable CPAs and then using curtailment on existing transmission lines. Larger CPAs that consume carbon sequestering land and impact the quality of life for nearby rural communities and local wildlife should not be a part of any credible scenario for achieving a regional net-zero carbon future. Rather than restricting the flow of electricity from generating facilities, the RDF should instead promote the placement of additional battery storage facilities where the power will be used.

The RDF states on pg. 60, “to accelerate electrification, SANDAG and SDG&E would need to increase the levels of incentives and rapidly advance EV charging infrastructure installations, focusing first on Communities of Concern (CoCs) then in places where transit is not yet viable.” Those two priorities should be reversed since the CoCs are located within mobility hubs where mass transit opportunities are plentiful and possibly even free. It is the rural residents who do not and never will have mass transit opportunities.

Table 3.3 on pg. 62 provides data on EV population, population share and VMT share. Some of the data, like the Share of Regional VMT uses outdated 2012 figures which should not be the basis future predictions. **The RDF needs to provide current VMT figures.** That same

comment applies to the internal SANDAG surveys on found on pg. 77, where 2009 data is used to model a horizon year of 2050!

The RDF further states on pg. 35: **“In all scenarios, such a high reliance on intermittent renewables requires a need for reliability studies to quantify how much additional long and short duration energy storage, clean dispatchable power, and demand side management may be needed.”** The shift to renewable energy and decarbonization strategies should not be a question of whether the County can convince residents (or coerce them through higher energy costs) to limit their electrical usage during the evening hours when renewable energy resources are generally diminished. Nor should the transition to a carbon neutral future overlook the inherent reliability of clean nuclear power plants which require a much smaller footprint than solar and wind facilities. They could provide a reliability that is currently missing from the RDF’s near total reliance on solar and wind resources. County residents will not accept a power grid that has the reliability of one found in a third-world nation. **Any path toward net-zero carbon emissions should have, as its primary goal, the provision of plentiful and reliable power for residents.** Given that the RDF states 98 percent of renewable power will come from solar generation, it appears that this plan will only add to the current “episodic nature of California’s power grid,” to use Governor Newsom’s unfortunate words from earlier in 2021. Where does the RDF address grid reliability solutions when our region has multiple consecutive days of cloudy/rainy weather?

Jacumba residents moved to the backcountry to get away from urban congestion, over-reaching governmental regulations, and unaffordable home prices. With a diverse population made up of 40 percent Spanish speakers who have an average annual income of less than \$30K, our village should be considered as a Community of Concern (COC), because it is one. SANDAG and the RDF should include Jacumba as a COC because Jacumba would then be eligible to receive benefits from public investments and industrial-size renewable energy projects would not be allowed to surround it. Also, as a COC, Jacumba could receive economic subsidies for electrification and receive priority placement of EV charging stations.

As the County moves forward with implementing decarbonization goals, backcountry residents need to be provided with real opportunities for engagement and involvement in the process. As stakeholders, it is we the people who will end up paying twice as much to use low carbon fuel over natural gas, and twice as much to install/operate newer heat pump technology. A phased-in electrification process should start with changes to new construction building codes. If electrification is proposed (or even really necessary) for existing buildings, low-income residents (rural and urban) should have equal access to governmental financial assistance. Additionally, the RDF should prioritize the retrofitting of solar and battery storage systems on privately-operated high-rise commercial/residential structures, government-owned buildings, schools, hospitals, shopping centers, and urban parking lots. That effort should be done before thousands of acres of land that naturally sequesters GHGs next to rural communities like Jacumba and Boulevard are destroyed with the placement of industrial-scale green energy facilities. Urban infill (including utility micro-grids) for areas like Otay Mesa should also be a foundation of any environmentally-sound regional decarbonization plan regardless of the cost of land.

The RDF states on pg. 215, “several of the pathways to decarbonization depend upon technologies that have not reached wide-scale distribution including long-term battery storage, low-carbon fuels, and heat pumps.” San Diego County leadership should recognize that statement for what it is...an opportunity to act with caution, forethought, and deliberation. It should not be a race to proclaim San Diego’s “greenness” before Los Angeles County or another county does so. Besides, even climate experts agree that net-zero carbon emissions provide no guarantee that global temperatures will not continue to increase.

The electrification of existing private homes, the imposition of dietary guidelines (restrictions) designed to reduce the carbon footprint, tighter governmental control over the operation of private vehicles, and the decarbonization strategies like carbon capture which are described on RDF pgs. 221 and 222 will not impact the politicians who will eagerly embrace more regulations in the name of “saving the planet.” These are the same folks who praise mass transit because they don’t have to rely on it; they demand that everyone use newer green technology because they can afford to pay the higher costs of installing/operating it. **Finally, we the people strongly request that the RDF team does not rush to promote net-zero carbon pathways that will make our county one of the most restrictive and expensive places to operate a business or raise a family.**

Respectfully,

Cherry Diefenbach
Chair, JCSG

From: [REDACTED]
To: [Hanson, Elise A](#); [Appel, Rebeca](#); [Rasoulzadeh, Yasamin](#); [Baxamusa, Murtaza](#); [De La Rosa, Michael](#)
Subject: [External] Elon Musk announces Tesla will switch to hydrogen in 2024
Date: Wednesday, April 13, 2022 9:10:02 AM

I hope you get it. Don't be lemmings and take San Diego County with you. It is time to change your direction.

Electric is not sustainable and hurts the earth!

Best Regards,

Matt Pfeffer

[REDACTED]

From: [Rimga Viskanta](#)
To: [Lueg, Zerocarbon](#)
Subject: [External] My comments regarding the Regional Decarbonization Framework
Date: Wednesday, February 9, 2022 10:49:00 AM
Attachments: [image001.png](#)
[Report Comments.docx](#)

I took some time to write up my own personal thoughts, but I would like to emphasize that these thoughts have NOT been officially vetted by our City Manager nor by our Council, so they reflect my individual ideas only at this point. As someone who is actively working in this field, I wanted to synthesize some of my observations in case they help inform the work you are undertaking.

Thank you,



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We do not need more “collaboration.” We need “collective action.”

The greatest obstacles to regional climate **action** are:

1. Jurisdictional budget silos and
2. The absence of a regional entity with the sole authority to authorize, fund, initiate and monitor regional climate action projects that cross jurisdictional boundaries.

To break down the budget and project management silos, **I recommend the consideration of a Regional Climate Action Joint Powers Authority (JPA)** to pool funding from federal, state and local sources such as CCA's, Foundations, or any future carbon trading programs. The JPA's purpose would be to fund and implement the strategies and projects recommended by the Regional Decarbonization Framework. The JPA could have a member from each City, Tribal Group, County and perhaps other stakeholder groups. There are many operational details to consider in the formation of a JPA and if there is any interest in exploring this idea further, I can propose some. Some of my ideas include a decision-making tool already being developed by SANDAG that creates a consistent project selection methodology that considers economics, equity, environmental impact, feasibility and robustness. The JPA will be able to fund, initiate and monitor those climate actions which individual jurisdictions have no power or funding to undertake on their own.

We are expert collaborators in the San Diego Region. We don't need more thinking about what to do. We need to do what we already know is critical. As I engage in Climate Action Planning and implementation efforts in the City of Solana Beach, my access to my peers in every other City in San Diego is one email or phone call away. We convene throughout the year to strategize and learn from one another. We draw from the expertise of local universities and the latest scientific research which is readily available to all. We attend networking meetings and seminars with the private sector through organizations such as CleanTech. We understand equity is an issue and we see solutions.

Below is a list of the regional climate collaborative efforts that either I personally have been a part of; I have utilized their resources to do my work; or I know they exist as a resource. I began to provide hyperlinks, but the list became too long, but you can easily find their websites by using an Internet search. The focus of these groups varies and includes policy making, research, planning, advocacy, networking, and information-sharing, but all have attempted to collaborate with one another across sectors and jurisdictions. On nearly every website you will see the intention is to cut across sectors in the region to address the most pressing climate issues.

- [San Diego Regional Climate Collaborative](#)
 - Science-based strategies already documented, for example: [“Comparing Sea Level Rise Adaptation Strategies in San Diego: An Application of the NOAA Economic Framework”](#)
- Alliance of Regional Collaboratives for Climate Adaptation (ARCCA)
- [Accelerate to Zero Emissions](#)
- SANDAG-Elected Officials
- [SANDAG-Environment Division](#)
- [SANDAG-Regional Energy Strategy](#)
- [SANDAG- Regional Climate Action Planning Framework](#)
- CALeVIP
- [Center for Sustainable Energy](#)

- [CleanTech San Diego](#)
 - [Southern California Energy Innovation Network](#)
 - [San Diego Regional Policy & innovation Center](#)
 - [CalSeed](#)
 - Leaders for Outdoor Equity
 - 2 Regional CCA's
 - San Diego County Air Pollution Control District
 - [Climate Science Alliance](#)
 - Hazard Mitigation Planning Group (made up of all San Diego jurisdictions)
 - [Equinox](#) [Project's](#) [Quality](#) [of](#) [Life](#) [Dashboard](#)
-
- Sustainable Development Solutions Network (International)
 - San Diego Foundation Climate Initiative
 - San Diego Climate Action Network
 - San Diego 350
 - North County Climate Change Alliance
 - Climate Action Campaign
 - San Diego Green New Deal Alliance
 - Sunrise Movement San Diego
 - San Diego Climate Mobilization Coalition
 - Hammond Climate Solutions
 - Bike San Diego
 - San Diego Coastkeeper
 - Surfrider Foundation
 - Sierra Club
 - Nature Conservancy
 - Municipal Environmental Sustainability Citizen Commissions
 - Green Infrastructure Consortium
 - University of San Diego, San Diego State, UC San Diego, Scripps Research Institute
 - Regional Climate Action Plans which are largely coordinated efforts already
 - Labor Groups

It's important to recognize that the Regional Decarbonization Framework is not a novel collaboration effort for the region to address climate change. In fact, it is only the latest in a long line of regional efforts.

The Regional Decarbonization Framework, however, does do an excellent job of distilling myriad policies into four major decarbonization pathways. It also does an excellent job assigning specific policies to those categories and it clearly concludes that current Climate Action Plans collectively fall short of meeting targets, because so many of the required actions cross jurisdictional boundaries and require regional cooperation. But **I strongly disagree with the following statement in the report:** "While the region faces significant challenges in the coordination of 18 cities and several key agencies, given the right incentives, the fragmentation within the region can facilitate competitive pressure that increases the likelihood of policy innovation among the many cities."

Incentives are not the issue and competitive pressure between jurisdictions will not increase the likelihood of policy innovation nor of collective action. If anything, we need less competition. We need fewer grant applications and reporting requirements associated with grants. We need to spend less time creating

pretty plans and being judged on how well we develop plans and stop incentivizing the current tendency to generate plans that are aspirational at best. The City of Solana Beach has one of the highest percentages of electric vehicle registrations per capita in the County. Is it because I am a brilliant employee who figured out a great strategy to move my City toward EV's? No. It's just that wealthy people like Teslas. Nothing I've done here would help southern cities shift toward EV's. Why not use resources that might get pooled toward this City to address equity instead? Use those resources and eliminate burdensome rebate incentive applications that mostly wealthy people have time to fill out and monitor and utilize the JPA structure to buy Chevy Bolts for low-income households instead and make sure their communities have the chargers to go with them.

We need more honesty in our Climate Action Planning Process and Implementation. We need to be able to explicitly state in our Climate Action Plans that the measures within our jurisdictional control will not meet greenhouse reduction targets set by the State and we should not be penalized for our honesty. The Regional Decarbonization Framework report describes how even the best-case Climate Action Plan measures, if fully implemented by every City in the region, would not be enough to reach the State greenhouse reduction goals primarily because many of the highest greenhouse gas emissions are a result of processes not within the control of individual jurisdictions.

Right now, my city's budget won't pay for a project in another city's boundaries. And I have attended collaborative sessions with colleagues around the region and we have come up with regional project ideas. And then what? We all return to our daily jurisdictional jobs and the regional project ideas remain as ideas only until the next convening. The ability to plan for the region is not generally in our job descriptions. To make matters more bureaucratically convoluted, there are separate collaborative sessions that only include our elected officials who cannot have the bandwidth to be experts in all policy areas. These meetings might lay out bold visions, calls to action and the need to work as a region to maximize federal or state funding. And then what? Climate Emergency Declarations are passed and promises to work together are made, but Staff from all the jurisdictions have NOT been called upon, in any meaningful fashion, to work out the details together of how to implement a regional project.

Opportunities for regional policy ***implementation and action*** in the areas of equity, transportation and green infrastructure for hazard mitigation (shoreline protection, flood management, waterway protection for recreation) are possible. A regional Climate Action JPA could pick up the baton and actualize the GHG reduction measures that cities cannot accomplish alone.

From: [REDACTED]
To: Lueg_ZeroCarbon
Cc: [REDACTED]
Subject: [External] Comment on Decarbonization Plan
Date: Tuesday, May 31, 2022 2:46:15 PM
Attachments: [image002.png](#)
[image003.png](#)
[image007.png](#)
[image008.png](#)



SAVE OUR FOREST AND RANCHLANDS



May 31st, 2022

Department of Regional Sustainability,
Land Use & Environment

Via Electronic Mail

Email: zerocarbon@sdcounty.ca.gov

Dear Sirs,

To begin, CNFF and SOFAR recognize that much deserved praise belongs to the authors of the draft Decarbonization Plan. In a highly technological and industrialized society, decarbonization happens to be very complicated and difficult subject. As the basis of life and most forms of energy, carbon is omnipresent and its removal from the social forms of wealth, property and work is indeed a Herculean task, especially when wealth in Southern California, the sprawl capital of the world, is concentrated in the auto based home building industry.

Still, the task must be done because in our modern/machine world, the mountainous release of carbon into the atmosphere by the overexploitation of the Earth is a dangerous disease that is killing the planet. And by all credible reports the danger has morphed into an urgent planet threatening emergency. In this respect, the art of planning and city-building resembles the art of medicine, because in all disease diagnoses the physician must distinguish between cause and symptom of the disease. Symptomatic relief is a familiar subject to us all, because in the symptom of pain we want relief. Nevertheless, it is the duty

of doctor to determine the cause of the disease, which analogy leads us directly to the matter at hand and this question: is the County's draft decarbonization plan treating a symptom or cause of the carbon disease?

An answer to [this](#) question is found in an [UN report](#) from a collection of world eminent scientists:

"We need to stop regarding the climate emergency as a stand-alone environmental problem. Global heating, although ruinous, is not the sole symptom of our present struggling Earth system but is only one of the many facets of the accelerating environmental crisis. Policies to alleviate the climate crisis or any of the other threatened planetary boundary transgressions should not be focused on symptom relief but on addressing their root cause: the overexploitation of the Earth."

The root cause of overexploitation of earth is first and foremost a cultural and political problem that slowly but surely gets embedded in land use and transportation planning. Direct evidence of this fact in the San Diego region can be seen in the dark history of the County's CAP program that has been embroiled in political/legal limbo for over a decade with disastrous consequences for the environment. Only a resolute and determined activist group, the Sierra Club, saved the day for Climate from a fraudulent political/planning bureaucracy. The very same political black hole was dramatically revisited in the County's enactment of the California State law, SB743, to reduce VMT as the leading contributor to GHG emissions. Against all environmental standards and consciousness, the County's plan actually increased VMT instead of reducing it! Only another activist group, CNFF, with the preeminent legal aid of Shute Mihaly, again saved the day from catastrophe.

These alarming examples of political abuse of authority with regard to climate prove the point that politics not carbon is the root cause of our accelerating environmental crisis. In this regard, Einstein has some important wisdom to share when he said: **"No problem can be solved from the same level of consciousness that created it"**. First and foremost, we need to change our political consciousness about the core of planning theory on land use and transportation: humanity is not alien to and master of Nature but rather embedded in and a part of our living Earth. What we do to Nature, we do to ourselves. As a part of Nature we have obligate and deep responsibilities to care for the immediate and larger ecological whole. The rallying cry, 'think global act local' is simple but true. Unless political ecology leads political economy, we are doomed.

Given the deep political and cultural roadblocks to change, the question is can we reverse course and institute transformational change to meet the urgent emergencies of Climate, Housing and Ecology? It might seem impossible; nevertheless the signs of change and breakthroughs are on the horizon. And the most promising of political breakthroughs is the recent [SANDAG series 14](#) growth forecast that dramatically reduces housing growth in the unincorporated lands and transfers those same General Plan units to the urban areas for reasons of 1) GHG reduction; 2) access to transit; 3) affordability.

Because of vital need for land preservation coupled with fact of the job/housing imbalance in unincorporated lands it is of paramount importance to support SANDAG's sustainable community strategy of limiting housing growth in the back country and building more transit accessible housing in the urban areas. On the [jobs/ housing imbalance](#) see pages 10-11

Fast tracking transit infrastructure is the key to solving our housing, climate and ecological crises. The potential [LOSSAN rail corridor improvement](#) solution as an alternative to freeway widening is perfect example of this point. And in-depth study by Caltrans of a rail tunnel under UTC shows dramatic

improvement of both VMT reduction and cost benefit to UTC employees. The exact same benefits to climate, housing, the work force and ecology could be had at a much greater regional level if transit, bike, walk mobility were improved in urban centers of employment, housing, and business, i.e., mobility hubs. For both Southern California and our own region, the LOSSAN rail corridor upgrade should be an urgent first level priority for funding and building. On housing, transit and affordability, see pages 2-8 of [SANDAG letter](#).

Another dramatic illustration of the futility of the draft decarbonization plan is the squalid story of the Newland Sierra project on Merriam Mt. The developers of Newland would have easily accepted the terms of the decarbonization plan with solar power, electric charging outlets, wind turbines, and nearness to so-called 'smart growth I-15 corridor' and use these carbon reduction features to promote one of the greatest Nature killing projects in San Diego history. Providence and the miracle of the near-by Golden Door Spa combined to stop the destruction of Merriam Mt at the cost of millions! San Diego is in eternal debt to Golden Door for their remarkable resistance to the tyrannical politics of sprawl growth. And yet again, the series 14 sustainable regional plan is the answer to the cause and not the symptoms of sprawl because the series 14 plan would never have allowed Newland Sierra to be conceived in the first place.

Our bio region is an interconnected interwoven ecological whole that is not separated by political power districts. The region's ecological health has been severely damaged by helter-skelter sprawl and chaotic freeway proliferation. The local ecological pyramid has been gravely challenged with keystone species like mountain lion and deer herd severely depleted and endangered, Lower down on the base of the bio-pyramid, the insect and plant population is also challenged. In this regard, USD scientist [Pregill's comments](#) on the Alpine Community Plan have relevance for the entire region.

"In Southern California there are now more than 100 species of plants and animals occupying coastal sage scrub that are under legislative protection, or are so proposed. The California Gnatcatcher and the San Diego subspecies of Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*.) are conservation flag bearers. Both of these small birds are localized and barely hanging on as isolated breeding populations in protected or inaccessible areas. Both are a State listed species of special concern, and the Gnatcatcher also is considered threatened under the federal Endangered Species Act. The Coast Horned Lizard, has become rare to non-existent in coastal sage scrub because of habitat loss, predation by feral cats, and the displacement of native ant species by the introduced Argentine ant (*Linepithema humile*), which the horn lizard will not eat.

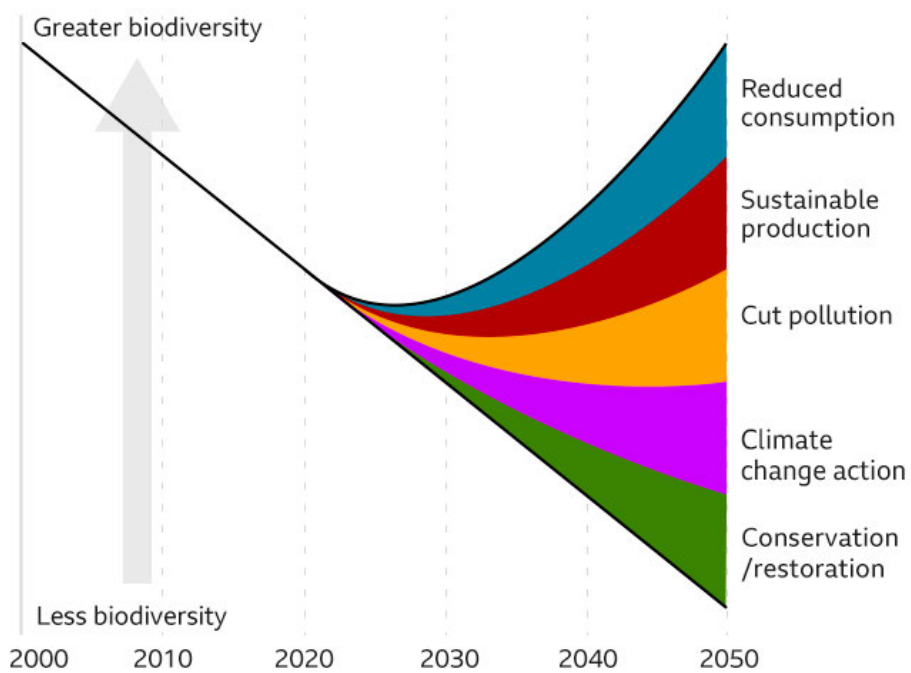
The Plan needs to anticipate, not simply react. Ecosystem functions are being crippled if not collapsing altogether with increasing frequency, and at larger scales. Just as Southern California is a recognizable biodiversity hot spot so too is it becoming an epicenter for extinction. We should not let short-sightedness, excessive commercial opportunity, indifference, and the lack of political will take over land stewardship.

On a near daily basis reports from around the world, including regionally, announce alarming new statistics, both current and projected, about human- engendered habitat loss and extinction. They happen by both immediate (pollution, urbanization, deforestation) and evolving (climate change and its consequences) activities. Consider that terrestrial arthropods, especially pollinating insects, have been disappearing faster than they can be inventoried. Invasive species of plants, animals, parasites and pathogens are displacing native life forms, and in some instances are interacting with human populations with undesirable if not deadly consequences. If regional planning is to succeed it must confront these issues boldly.

The County, and by extension Alpine, has a precious opportunity. It can set *the* example for sensible, forward-thinking planning in the backcountry in the 21st century. It can better define and defend the biotic and geographic attributes of the area, and celebrate the environmental resources that surround the community. We should not passively permit 300% increases in housing and the attendant urbanization when doing so damages and destroys the community's very essence. Such a plan would start with Alternative 1 in the CPU SEIR, which preserves the greatest amount of open space and ensures conservation of forest values."

Chaotic uncontrolled [overexploitation of Earth](#) is producing a toxic waste dump in the atmosphere, on the land, in our waters, in our food, and in plant and animal metabolism. And the climate symptom is only 1/5th the problem!

How different actions could help restore biodiversity



Source: UN/Convention on Biological Diversity

BBC

The San Diego region has some of worst non auto mobility mode share in Nation and since carbon fueled auto based infrastructure produces ½ of emissions, how does clean energy change direction of our auto Armageddon?

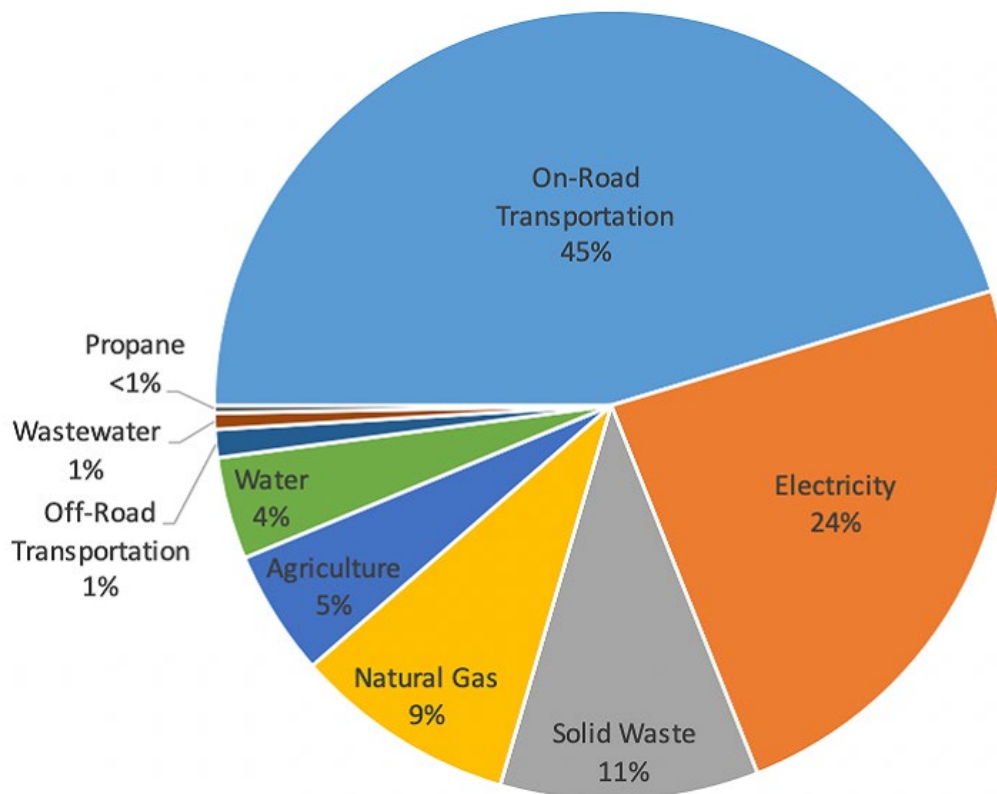


Figure 1: Breakdown of GHG Emissions (2014)

Conclusion: Political and planning implementation of the SANDAG series 14 forecasts is the bedrock transformational change needed for our region if we are really serious about treating the deadly symptoms of overexploitation of the earth's resources. At the same time, on the basis of the above cause and symptom analysis, series 14 implementation will also be a leadership test of whether or not our political agencies are truly serious about real change versus political posturing about symptoms that only make the problem worse.

Sincerely,

Duncan McFetridge
Director, CNFF
President, SOFAR

From: [Keehan, Kathleen](#)
To: [Lueg, Zerocarbon](#)
Cc: [Baxamusa, Murtaza](#); [Luther, Eric](#)
Subject: RE: RDF Technical Report - Technical Working Group
Date: Tuesday, May 31, 2022 1:50:43 PM
Attachments: [Item 5 Att A Resolution Carbon Sustain.pdf](#)

Hi Elise, Murtaza,

Thank you for the opportunity to comment on the RDF Technical Report. We appreciate the opportunity to partner with the County in this effort and offer the following comments.

- In November of 2021 the San Diego County Air Pollution Control District passed a resolution of support for the development of the RDF (enclosed), and APCD continues to support efforts to reduce air pollution in the region, including greenhouse gas emissions.
- Table 3.2 on Page 68 outlines the relevant goals, targets, and actions that regional agencies are taking regarding transportation decarbonization. For APCD, the table could also include our MOU with the California Air Resources Board (CARB) to enforce mobile source emission regulations.
- Similarly, on page 338, the document mentions that APCD can enforce the idling regulations. As part of our MOU with CARB, APCD actively enforces those regulations.
- Pages 487 and 488 address indirect source emissions and the Air District's ability to regulate those emissions. HSC 40100.6.5 requires APCD to "consider adopting an indirect source rule to address pollution from mobile sources that is associated with stationary sources, such as ports, warehouses, and distribution centers" and that we are currently in the process reviewing potential concepts to present to our Governing Board for consideration later in 2022.
- The footnote vi on page 509 has a non-functioning link. The working link should be: [Subpart TTTT-Greenhouse Gas Emissions for Electric Generating Units \(sdapcd.org\)](#)

Please feel free to reach out to us with any questions or if you need additional information. We forward to working with you in the future to implement these decarbonization actions.

Sincerely,
Kathy Keehan

Kathleen Keehan (she/her/hers)

Supervising Air Resources Specialist
San Diego County Air Pollution Control District
10124 Old Grove Rd, San Diego, CA 92131
Desk: 858-586-2726
Kathleen.Keehan@sdapcd.org
www.sdapcd.org

From: Lueg, Zerocarbon <Zerocarbon.Lueg@sdcounty.ca.gov>

Sent: Monday, May 23, 2022 3:44 PM

To: Keehan, Kathleen <kathleen.keehan@sdapcd.org>

Cc: Baxamusa, Murtaza <Murtaza.Baxamusa@sdcounty.ca.gov>

Subject: RDF Technical Report - Technical Working Group

Dear Kathleen,

Thank you for your comments on the first draft of the RDF's Technical Report as a member of the Technical Working Group. Authors incorporated your feedback and suggestions into the draft that is currently available for review and public comment. Your contributions helped to strengthen the RDF's analyses and helped to clarify the chapters and the overall project. We truly appreciate all the feedback on the last iteration.

We would like to reach out to see if you and/or anyone from your team will be providing any additional comments or letters to the authors during this comment period. As a reminder, the deadline for comment on the second draft of the Technical Report and on the first draft of the Workforce Report is on May 31st. The documents are available for download on the [project website](#) (pdf links: [Technical Report](#), [Summary for Policy Makers](#), and [Workforce Report](#)) or on the [engagement site](#). Additionally, comments can be made directly onto the documents via the engagement site. If you have any trouble accessing the documents, I am happy to send any of them as an attachment to an email.

Please let me know if you have any questions.

Best,
Elise

Elise Hanson
Management Fellow
Land Use and Environment Group
County of San Diego
EliseA.Hanson@sdcounty.ca.gov

Resolution No.
Meeting Date: 11/4/2021

RESOLUTION SUPPORTING THE COUNTY OF SAN DIEGO DEVELOPMENT OF A FRAMEWORK
FOR A REGIONAL CARBON SUSTAINABILITY PLAN IN PARTNERSHIP WITH THE UNIVERSITY
OF CALIFORNIA SAN DIEGO SCHOOL OF GLOBAL POLICY AND STRATEGY

WHEREAS, the Mission of the San Diego County Air Pollution District is to *improve air quality to protect public health and the environment*; and

WHEREAS, the District has a history of collaborating with member cities, agencies, universities, industry, non-governmental organizations, and communities to develop policies and programs to reduce air pollution; and

WHEREAS, reducing greenhouse gases has a direct co-benefit of lessening harmful air pollutants that can cause diseases such as cancer and asthma; and

WHEREAS, the District is directly working to assess, plan, mitigate, and ultimately reduce air pollution as called for by Federal and State legislation and in partnership with the United States Environmental Protection Agency and the California Air Resources Board; and

WHEREAS, on January 27, 2021, the County of San Diego (County) Board of Supervisors directed the Chief Administrative Officer to develop a framework for a regional carbon sustainability plan in partnership with the University of California San Diego School of Global Policy and Strategy (UC San Diego GPS), which shall include strategies and initiatives to achieve carbon neutrality in the region by 2035; and

WHEREAS, regional collaboration is essential to develop policies and programs to achieve a balance between anthropogenically generated greenhouse gas emissions (primarily carbon dioxide) with the removal of emissions via carbon sinks or through the elimination of emissions by certain sources altogether; and

WHEREAS, a regional framework for a carbon sustainability plan will support alignment of multiple climate action plans created by agencies throughout the region and may serve to advance interconnected strategies that collectively help the region achieve its climate action planning goals, all of which will have the co-benefit of reducing air pollution; and

WHEREAS, the District and County are working to collaborate and build regional support for land use, transportation, and environmental issues for the betterment of the region; and

WHEREAS, in addition to improving air quality, public health and the environment, rapidly reducing greenhouse gas emissions, climate strategies, initiatives, and investments to be included the County's regional carbon sustainability plan will have a high potential to provide other substantial co-benefits, including, reducing the burden of transportation costs on working families, increasing the dynamism of our regional economy, and providing San Diegans with thousands of well-paying jobs building the infrastructure that will propel our region into the future.

NOW THEREFORE, BE IT RESOLVED, that the San Diego County Air Pollution Control District Governing Board hereby supports development of a framework for regional carbon sustainability plan and directs the Interim Air Pollution Control Officer and/or their designated representative(s) to collaborate with the County and other entities on the framework, as a means for the San Diego region to improve air quality along with combating global climate change.

APPROVED AS TO FORM AND LEGALITY
Rodney Lorang, Senior Deputy County Counsel

From: [REDACTED]
To: [Lueg, Zerocarbon](#)
Subject: [External] SDBEC Letter SD County RDF LPO
Date: Sunday, February 27, 2022 3:03:48 PM
Attachments: [SDBEC Letter SD County RDF LPO Feb 2022.pdf](#)

SD County staff,

Please see the attached letter with comments from the San Diego Building Electrification Coalition on the recently released draft Local Policy Opportunity Analysis.

Thank you,
Kelly Lyndon



28 February, 2022

Re: San Diego Regional Decarbonization Framework- Chapter 8 Local Policy Opportunities

Dear Honorable San Diego County Supervisors,

The [San Diego Building Electrification Coalition](#) (SDBEC) is an alliance of community, business, faith, justice, and environmental organizations coming together to accelerate electrification in residential and commercial buildings.

We appreciate that the County of San Diego is taking steps to analyze the future impacts regional Climate Action Plans will have on meeting GreenHouse Gas reduction targets, and hope that these preliminary steps can catalyze critically needed urgent actions. We support the key findings in section 8.1 of this chapter including the following:

- Local Jurisdictions Have Authority to Influence and Regulate GHG Emissions
- Current CAP Commitments are Insufficient to Reach Decarbonization Goals
- Opportunities Exist for More Jurisdictions to Adopt and Strengthen Existing CAP Measures
- Additional Policies Would be Needed to Decarbonize Transportation and Buildings
- Opportunities Exist for Regional Collaboration in all Decarbonization Pathways
- Additional Work Would be Needed to Integrate Social Equity into Climate Planning

We also support the following local policy opportunities discussed in section 8.6.6:

- Integrate Equity Considerations into Building Decarbonization Policy Process
- Adopt Reach Codes for New Buildings and Additions/Alterations to Existing Buildings
- Implement More Policies to Increase Efficiency in Existing Buildings
- Evaluate Policies to Accelerate Electrification in Existing Buildings
- Local Governments Continue to Demonstrate Building Efficiency and Electrification
- Potential for Regional Collaboration
 - Regional Program to Support Reach Code Policy Development
 - Regional Program for Decarbonizing Existing Buildings

We do have a key recommendation for section 8.6 Decarbonizing buildings, regarding method 3 to reduce GHG emissions from buildings: “increasing use of low-carbon fuels”.

- We recommend low carbon fuels should be considered only when electrification is not viable, e.g. certain industrial processes.



And for section 8.6.6 we recommend the following important opportunities be added:

- Provide guidance on limiting exceptions to decarbonization policies, including a process to evaluate requests for exceptions.
- Evaluate policies to reduce the carbon-intensity of building materials
- Regional planning to phase out methane gas infrastructure, including a target date for when all methane gas plumbing lines shall be capped and/or decommissioned.

Lastly, we recommend that the county be a role model and begin building electrification efforts now in its own jurisdiction, implementing no regret policies without waiting for a CAP update. In particular, the county can direct staff to develop an all-electric reach code for new buildings to take effect in early 2023, and develop a plan to electrify municipal buildings.

Sincerely,

 Ann Feeney Strategy Committee Chair San Diego Building Electrification Coalition	 SAN DIEGO GREEN BUILDING COUNCIL Colleen FitzSimons Executive Director San Diego Green Building Council	 Luke Stroth Green New Deal at UCSD
 CENTER FOR COMMUNITY ENERGY Susan Wayo Board Member & Secretary Center for Community Energy	 The Climate Reality Project SAN DIEGO CHAPTER Leslie Gomez San Diego Climate Reality Project	 CLIMATE ACTION C A M P A I G N Matthew Vasilakis Co-Director of Policy Climate Action Campaign



 Jim Miller Vice President AFT 1931	 Kelly Lyndon Co-chair Building Electrification San Diego 350	North County  Marian Sedio Board Member North County Climate Change Alliance
 Sean Armstrong Managing Principal Redwood Energy	 Tyson Siegle Energy Analyst The Protect Our Communities Foundation	 Lucero Sanchez Community Policy Coordinator San Diego Coastkeeper
 Peter Zahn, CEO Futures Unbound	 Alex Kaufman PE CEM Founder Solutions in Sustainability	 American Institute of Architects San Diego
 Rhea and Armin Kuhlman Co-Chair, Climate Justice Team First Unitarian Universalist Church of San Diego	 FORWARD DINING SOLUTIONS LLC PUSHING SUSTAINABLE KITCHEN DESIGN FORWARD Chef Christopher Galarza, Founder Culinary Sustainability Consultant Forward Dining Solutions LLC.	 EMERALD KEEPERS Amy Steward Executive Director Emerald Keepers



 Adam Cooper Political Action Team Leader Sunrise Movement San Diego	 Oliver Curley Sustainability Coordinator Leading Edge Consulting Services, LLC	
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From: [Sebastian Sarria](#)
To: [Lueg, Zerocarbon](#)
Cc: [Wier, Emily](#); [Petterson, Cody](#); [Garcia, Denice](#); [FEG, Public Comment](#)
Subject: [External] Public Comment from SDCP on Item #6 - Draft Local Policy Opportunity Analysis
Date: Wednesday, February 9, 2022 8:32:59 AM
Attachments: [Letter to County re RDF 2.9.22.pdf](#)

Hi,

Enclosed, please find a public comment letter from our Chief Operating Officer, Cody Hooven, on the draft Local Policy Opportunity Analysis.

Thank you,

Sebastian Sarria

Pronouns: He/Him/His

Program and Policy Manager

Mobile 407.925.1376

sdcommunitypower.org





815 E Street, Suite 12716
San Diego, CA 92101-4195
sdcommunitypower.org

February 9, 2022

To: San Diego County Board of Supervisors

Via: email

RE: Item #6 – Receive the Report on the Draft Local Policy Opportunity Analysis as part of the Regional Decarbonization Framework Update

Dear Chair Fletcher and Honorable Supervisors,

On behalf of San Diego Community Power (SDCP), we want to express support for Item 6 – Receive the Report on the Draft Local Policy Opportunity Analysis as part of the Regional Decarbonization Framework (RDF) Update. As the Community Choice Aggregator (CCA) representing the cities of Chula Vista, Encinitas, Imperial Beach, La Mesa, San Diego, National City, and unincorporated San Diego County, SDCP is committed to playing a key role in the region's deep decarbonization efforts through the procurement of clean electricity and reaching our goal of 100% renewable energy by 2035 or sooner.

By providing clean, renewable energy choices at competitive rates and investing in innovative programs that benefit residents, businesses, the environment, and the economy, SDCP is uniquely situated in responding to the needs of communities we serve and supporting the tremendous efforts already underway in the region. For example, Section 8.7.1 speaks to actions we are already taking to increase carbon-free electricity supply. This past year, SDCP approved a power purchase agreement of 90 MW of solar energy and 70 MW of battery storage from a project located in San Diego County, along with hundreds of megawatts of power from neighboring regions for the benefit of our customers.

Additionally, SDCP has created a local Feed-In Tariff (FIT) program to help increase the availability of local renewable resources from small-scale, wholesale suppliers. Beyond this, we have an opportunity to collaborate with the agencies we serve in enhancing the decarbonization of transportation and buildings through our clean energy supply. In doing so, promoting social equity is integral to success of the region. We acknowledge the importance of centering equity and recognize the region's Communities of Concern and have committed to leading on equity in climate action.

In summary, SDCP is an ally in tackling the climate crisis through deep decarbonization of the region. We are here as a resource and look forward to continuing to work with you.

Regards,

A handwritten signature in blue ink, appearing to read "Cody Hooven", is written over a light blue rectangular background.

Cody Hooven
Chief Operating Officer

cc: Emily.Wier@sdcounty.ca.gov
Denice.Garcia@sdcounty.ca.gov

Cody.Petterson@sdcounty.ca.gov
publiccomment@sdcounty.ca.gov



From: [Young, Dallin C](#)
To: [Lueg, Zerocarbon](#)
Cc: [Hanson, Elise A](#); [Baxamusa, Murtaza](#); [De La Rosa, Michael](#); [Ruis, Warren](#)
Subject: [External] RDF Technical Report & Workforce Report comments
Date: Tuesday, May 31, 2022 1:18:08 PM
Attachments: [image003.png](#)
[image004.png](#)
[image005.png](#)
[SDG&E - Regional Decarbonization Framework Comments May 2022.pdf](#)

Good afternoon LUEG team,

We greatly appreciate the opportunity to comment on the second draft of the RDF Technical Report and the Workforce Report. Thank you for all of the work you and your teams have put into this effort.

On behalf of San Diego Gas & Electric, I would like to submit the attached letter as our commentary. We look forward to working with the County to finalize this framework and a decarbonized future.

Thank you for your time and please let us know if you have any questions.

Dallin Young

Public Affairs Manager

T 619.676.1335 | M 619.626.6628

E DYoung1@sdge.com

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For more information about privacy at SDG&E visit sdge.com/privacy.



Dallin Young
Public Affairs Manager
8330 Century Park Court, CP31D
San Diego, CA 92123
dyoung1@sdge.com

County of San Diego
Attn: Decarbonization Team
1600 Pacific Coast Highway
San Diego, CA 92101

Delivered by e-Mail

May 31, 2022

RE: Regional Decarbonization Framework, Draft Local Policy Opportunity Analysis and Putting San Diego County on the High Road: Climate Workforce Recommendations for 2030 and 2050

Dear Mr. De La Rosa, Dr. Baxamusa, Ms. Hanson, and Project Team,

At San Diego Gas & Electric Company (SDG&E), we would like to extend our gratitude and compliments to the County for your efforts developing both the *Local Policy Opportunity* and the *Putting San Diego County on the High Road* additions to the comprehensive *Regional Decarbonization Framework* (RDF). The County of San Diego has led the region, state and nation in many critical areas, and this body of work highlights the County's continued leadership position. Thank you for allowing SDG&E to opine and highlight areas of support and collaboration. Please see below for our detailed comments related to both documents and their related topics.

Decarbonization of the Energy Supply

SDG&E is committed to achieving net zero GHG emissions by 2045 and last month we released "[The Path to Net Zero: A Decarbonization Roadmap for California](#)" to demonstrate how we plan to accomplish this goal. While other studies have been published on how to decarbonize California's economy through electrification of sectors such as transportation and buildings, SDG&E's study also incorporates for the first time the utility industry standard for reliability using industry-specific planning tools to chart what we believe to be an achievable approach.

The industry standard considers an electric system to be reliable if it experiences only one power outage every ten years due to the probability of energy demand exceeding supply. Some key takeaways and learnings for our region from the study are as follows:

- California is estimated to need to decarbonize at 4.5 times the pace over the past decade to reach its carbon neutrality goal and mitigate the negative impacts of climate change.

- Electric generation capacity is estimated to need to increase to about four times the capacity that existed in 2020, to support transportation and building electrification. Between 2020 and 2045, electric consumption is expected to increase by 96%.
- To keep electric service reliable, California will need to complement its growing portfolio of intermittent solar and wind generation with a mix of clean, firm and flexible resources that can be dispatched at any time to meet needs. Installing 40 GW of new battery storage, as well as 20 GW of dispatchable generation from 100% clean hydrogen combustion by 2045 is projected as necessary to meet this goal. According to the California Independent System Operator, the statewide grid has interconnected about 2,600 MW of energy storage as of January 2022, but no electric generation from 100% clean hydrogen combustion.
- It is estimated that by 2045, there will be demand for 6.5 million metric tons of clean hydrogen across the economy, 80% of which is projected to be used to enhance the reliability of the electric supply.
- The implementation of the Roadmap requires regulatory and political support from four fronts to: 1) prioritize electric sector reliability; 2) maintain affordability and enhance equity; 3) incentivize innovation and adaptability; 4) and enable the deployment of decarbonization infrastructure.

We understand the enormity of the task ahead, which is why we have already begun our transition. This year SDG&E completed and activated the Kearny Energy Storage Project that includes 20 MW or 80 MWh of battery energy storage for our local grid. Our Borrego Springs Green Hydrogen project will pilot hydrogen as long duration energy storage, which is a key aspect for grid reliability during the transition away from carbon intense fuel sources. Both facilities allow excess renewable energy, typically solar and wind, to be stored for use when needed by the grid later in the day.

How SDG&E can support the County's efforts to decarbonize the electrical supply:

- Energy information sharing and updates on SDG&E's path to decarbonization, how it impacts County constituents and where there are opportunities for the County's accounts
- Work with the County to identify priority locations for new energy storage projects
- Continue to support our region's Community Choice Aggregators (CCAs), including a dedicated team for CCA support and issue resolution for San Diego Community Power, the County's chosen CCA provider

Decarbonization of Buildings

SDG&E shares the County's ambitions for achieving meaningful GHG reductions from building end energy uses. Through our Reach Codes Program, we are able to provide technical support to local governments that wish to adopt ordinances that exceed statewide Title 24 minimum energy efficiency requirements for new buildings, additions, or alterations. Support for local governments include research and analysis for establishing performance levels relative to Title 24 and cost effectiveness per Climate Zone through a 'Reach Code Cost Effectiveness Study'; drafting of model ordinance templates for regional consistency, assistance for completing and expediting the application process required for approval by the CEC and supporting implementation once effective.

As more residents and home builders adopt all electric appliances, SDG&E is ready for this transition. Reliability and resiliency are essential for the success of the region's decarbonization efforts. SDG&E has consistently been acknowledged as a leader in reliability, receiving the ReliabilityOne® award for "Outstanding Reliability Performance" among utilities in the West for the last 16 consecutive years. We continue to improve our infrastructure in preparation of a more electric future.

How SDG&E can support the County's efforts to decarbonize buildings:

- Conduct workshops between SDG&E experts and County staff on Reach Codes to support electrification
- Create working group between SDG&E and the County to determine the necessity of new customer programs or changes to existing programs
- Provide feedback on the County's permitting processes to increase "electrification readiness" for commercial and residential customers/constituencies

Decarbonization of Transportation

As cited in the draft RDF, the transportation sector continues to be the largest contributor of GHGs in our region, which is why SDG&E proudly joined the Accelerate to Zero (A2Z) Emissions Collaborative to develop and implement a Regional EV and Transportation Electrification Strategy. As the County migrates to a community choice aggregator and our regional energy mix becomes cleaner, the share of overall emissions that transportation represents will continue to increase.

To demonstrate our commitment to this effort, our SDG&E teams continue to create innovative clean transportation programs to encourage and enable the transition to driving electric. Through our "Power Your Drive" program, we have already installed over 3,000 chargers at 255 locations and are working towards our next goals of installing charging infrastructure to support approximately 3,000 medium- and heavy-duty EVs at 300 sites, and at or near apartments and condominium complexes at about 100 locations. The Governor's executive order requiring sales of all new passenger vehicles to be zero-emission by 2035 will further accelerate the transition to driving electric and makes current investments into EV charging infrastructure even more critical.

Additionally, last year we launched our five-year vehicle-to-grid (V2G) pilot project with the Cajon Valley Union School District that will test the flow of electricity from six electric school buses to and from the grid. In July, crews finished construction of six 60 kW bi-directional DC fast chargers. The batteries onboard the buses will soak up the energy during downtime and when clean energy is abundant on the grid and discharge energy to the grid during peak hours as well as reduce energy costs for the school district. Lessons learned from this project can pave the way for similar developments with trucks in the future, further assisting with regional decarbonization efforts.

How SDG&E can support the County's efforts to decarbonize transportation:

- Position SDG&E experts with County personnel to find solutions on best how to electrify County vehicles/fleets with both decarbonization and fiscal goals in mind
- Share research and development information on efforts and programs such as "Vehicle to Grid" and "Vehicle to Everything" solutions
- Gather feedback from the County on priority locations for EV infrastructure investments
- Provide recommendations on how the County can continue to streamline permitting for transportation electrification infrastructure

Natural Climate Solutions

The RDF's comparative Climate Action Plan (CAP) analysis identified urban tree planting as the only quantified CAP measure in the natural climate solution pathway and SDG&E hopes to assist with your tree planting efforts. In 2021, SDG&E began its "Sustainable Tree" program with the goal of providing or planting a combined total of 10,000 trees annually to support local biodiversity and promote environmental stewardship. Although this program is available to both residents and local governments throughout SDG&E's service territory, partnering with local governments can be more impactful because of their ability to identify beneficial locations for tree planting in urban areas under their jurisdiction. Our strong collaboration with the County allowed us to donate 2,000 trees for placement on County parks and

land. By building relationships such as these, SDG&E and the County can help each other reach our shared goals of increasing tree canopy and reducing GHGs throughout our region.

How SDG&E can support the County’s natural climate solutions:

- Work with Department of Park and Recreation to identify tree species suitable for planting near SDG&E infrastructure
- Provide expertise on the appropriate trees to County departments through our “Sustainable Tree” program
- Partner with the County to promote SDG&E’s “tree rebate” program for residents in underserved communities

Putting San Diego on the High Road – Climate Workforce Recommendations for 2030 and 2050

SDG&E’s partnership with the International Brotherhood of Electrical Workers is one we are proud of. IBEW employees, in collaboration with other employees from local trades have helped build one of the most resilient grids in the nation. SDG&E supports an equitable, and informed transition for affected workforces. Our energy ecosystem employs highly skilled professionals, such as boilermakers, pipefitters, welders, and laborers, whose jobs may be at risk from electrification. Although their jobs will evolve, these skills will still be necessary in a decarbonized future. Policies and programs that support the workforce transformation through the energy transformation are of utmost importance to our company. With effective policies and programs in place, we are confident that our highly trained employees will be able to adapt and meet the infrastructure and climate goals of the County and the other municipalities we serve.

Working at SDG&E in a skilled and trained capacity provides workers with a livable wage, health benefits for themselves and their families, and a chance at a dignified retirement. Importantly, these are the employees who will lead the innovation in the energy space, regardless of the fuel pathway selected. SDG&E will be relentless about protecting our employees and skilled contractors who will build the future of San Diego’s energy system.

How SDG&E can support the County’s workforce transition:

- Position SDG&E experts with County personnel to provide data for workforce readiness studies and future workforce planning efforts, designed to support a just transition

SDG&E’s Sustainability Goals

We’ve built our business model on encouraging climate reducing technologies – and this body of work is demonstrated in SDG&E’s first-ever company-wide sustainability strategy, [*Building A Better Future: SDG&E’s Commitment to Sustainability*](#). Through this sustainability plan, we have developed a series of actionable and long-term goals aligned with California’s ambitious climate agenda, some of which have been discussed above. The plan calls for regional cooperation and will likely evolve over time to reflect stakeholder feedback, regulatory changes and technological breakthroughs. We have tried to build on our strengths, focusing on the areas of environmental stewardship, clean transportation, grid modernization, community engagement, and company operations to help support economy-wide carbon neutrality. The full report is available at sdge.com/sustainability.

In closing, we recognize the urgency to address climate change and its impacts, and we support California’s clean energy goals. Our desire is that the County and all jurisdictions will look to SDG&E as a dedicated collaborator in the implementation of our sustainability strategies. Collectively, we can work together on solutions that result in meaningful GHG reductions.

Best Regards,

A handwritten signature in black ink, appearing to read 'Dallin Young', with a stylized, looping flourish extending to the right.

Dallin Young
Public Affairs Manager
San Diego Gas & Electric

County CCs:
Chair Nathan Fletcher
Vice Chair Nora Vargas
Supervisor Joel Anderson
Supervisor Terra Lawson Remer
Supervisor Jim Desmond

SDG&E CCs:
Warren Ruis, Director of Regional Public Affairs
Brittany Syz, Director of Environmental Services & Sustainability

From: [REDACTED]
To: [Lueg_Zerocarbon](#)
Subject: [External] Fwd: Public comments, for the record. CORRECTED copy
Date: Wednesday, March 16, 2022 12:18:42 PM
Attachments: [Sierra Club CA Synthetic Turf Position.pdf.pdf](#)

Please note: infill amounts corrected...1-5k tons.

Thank you.
Dianne Woelke MSN
Begin forwarded message:

From: D Woelke [REDACTED]
Date: March 16, 2022 at 12:10:34 PM PDT
To: Zerocarbon.Lueg@sdcounty.ca.gov
Subject: Public comments, for the record

Since the available link (https://engage.sandiegocounty.gov/rdf/forum_topics/land-use-forum) for submission of comments is not working properly (nor allowing password reset), I am submitting comments here. Additionally, I ask you once again to provide greater notice for meetings. Most people do not have an opportunity to rearrange their lives with a single day's notice to be able to attend and this can easily be seen as a mechanism for limiting public engagement. Thank you.

If plastics were a country, it would be the 5th largest emitter of green house gasses, warming the planet double that of aviation. Plastics are on track to exceed coal fired power emissions by 2030.

“As of 2020, the U.S. plastics industry is responsible for at least 232 million tons of CO₂e gas emissions per year. This amount is equivalent to the average emissions from 116 average-sized (500-megawatt) coal-fired power plants.”

Polyethylene is the most highly produced plastic globally. It is also the most frequently discarded material. Methane and ethylene are emitted at 2x and 76x more readily from polyethylene, respectively, in air than when in water. Methane traps 90% more heat than carbon dioxide.

Synthetic turf is made from polyethylene, with additional toxic and carcinogenic chemicals. Each regulation sized plastic soccer field (approximately 81k square feet), constitutes 500k pounds of plastic waste: 40k pounds of blades and backing, over 400k pounds of infill (2-9 pounds per square foot); 1.4 million plastic bags. Each year, 1k-5k tons of microplastic infill migrate off field (requiring replacement to maintain safety), and 551-661 pounds of PFAS laden degrading microplastic blades- lost to air, water and soil. The industry is installing 3-4 new plastic fields daily across the country. From a global perspective, in 2020, 58 BILLION plastic bag equivalents were installed with a predicted 78.3 BILLION equivalents in 2023.

San Diego County has more than 1.85 MILLION square feet of petrochemical synthetic turf in it's parks and playgrounds- exclusive of residential, commercial and plastic used tire crumb in playgrounds. It is to the great detriment of our county that synthetic turf has not been deemed an appropriate place in the decarbonization plan.

Respectfully submitted,
Dianne Woelke MSN



Sierra Club San Diego Chapter Opposes Synthetic Turf

The Sierra Club San Diego Chapter is opposed to the installation of synthetic turf and crumb rubber on sports fields and school grounds.

We shouldn't operate on the principle that a toxic mix of chemicals is innocent until proven guilty. Ann Marie Buerkle, Acting Chair of the U.S. Consumer Product Safety Commission said in 2017: "Our approach to playing surfaces should be very simple – no one should be exposed to harmful chemicals. Period." The Sierra Club agrees.

When it comes to synthetic turf, the most sensible approach should be to follow the precautionary principle of assuming something involving chemicals is hazardous until scientific evidence proves that it is not. The Sierra Club believes that when evidence gives us good reason to believe that a substance may be harmful, we should act to prevent harm. This is a summary of the threats to the environment caused by synthetic turf and crumb rubber:

Toxic Chemical Exposure and Absorption

The crumbed rubber contains a toxic mix of over 300 identified chemicals, with 50 known carcinogens alone. It also contains neurotoxins and endocrine disruptors. These include; benzene, benzidine, trichloroethylene, volatile organic compounds (VOCs), carbon black, lead, chromium, styrene and cadmium. When the synthetic components break down, as they inevitably do, the chemicals and plastic materials can be inhaled, ingested or absorbed through skin or wounds. This exposes anyone playing on synthetic turf to the health risks and diseases caused by the toxic mix of chemicals.

Pollution of Local Waterways and Ocean

The toxic chemical mix is carried away from the playing field when it rains, polluting the areas surrounding the fields, the creeks or streams nearby, and carried by our storm water system to pollute the ocean.

Disinfecting Chemicals Pollution

Synthetic fields require the regular use of disinfecting chemicals to remove pathogens from the body fluids that are spilt during play. These disinfecting chemicals then also migrate into the environment around the fields and get washed into our streams and out into the ocean by the storm water collection system.

150 - 200 Degrees – Burns and Heat Island

Threats to the natural environment include the fact that synthetic turf gets really hot. Synthetic turf absorbs heat the way asphalt does. It reaches 150 degrees easily and has been measured as hot as 200 degrees F. This causes several serious problems. First to the people that are playing on hot synthetic turf, it can contribute to skin burns, dehydration, overheating and heat stroke.

Second, is the negative heat island effect of synthetic turf. It absorbs heat from the sun all day and it stays hot at night for several hours after the sun sets. It radiates heat and increases the ambient temperature causing a giant heat island in the surrounding area. Between the chemicals and the heat absorption, the soil beneath synthetic turf is uninhabitable for living organisms. Normal soil is alive with organisms that contribute to a healthy, complex environment for birds, animals and people.

Toxic Landfill Waste

Millions of pounds of synthetic turf are accumulating because there is no good way to dispose of it. There's only one place in the world that can recycle all of it and that place is in Denmark. A 2016 report prepared for the state of California on recycling and reuse of synthetic turf fields stated that no examples of an actual recycling project for all the components of a removed field in California could be found.

Ground Water Pollution & Removal of Natural Infiltration

Synthetic turf leaches dangerous chemicals into the ground water system rather than providing a natural filtration system. When it can be absorbed into the soil through natural grass, rain is naturally filtered and it replenishes the ground water. We need more, not less natural infiltration. In the urban core and suburban areas of Oceanside, the paved areas (streets, sidewalks and driveways) and buildings do not allow water to be absorbed into the soil and much of our rain water is sent out to the ocean through the storm water system.

Benefits of Real Grass

Real grass is a sustainable carbon sink, it absorbs carbon in the atmosphere and improves air quality.

Grass is a natural coolant. It cools the air around it and doesn't absorb solar heat. It counteracts the heat island effects of hot asphalt and buildings.

The soil it grows in contains bio-diverse communities of organisms that are essential for clean water and air. Nitrogen-fixing bacteria and other live micro-organisms help soil break down harmful contaminants such as body fluid spills -- an essential ecosystem service for a healthy environment.

Grass is an important component of the water cycle. Rain is infiltrated through grass from the surface into the soil and then replenishes ground water supplies.

Helping people enjoy a healthy, natural environment is a primary goal of the Sierra Club. Denying children and adults the opportunity to play on natural grass represents a significant loss. Given the toxicity, high temperatures and other environmental concerns surrounding the synthetic alternative, the choice is clear.

From: [REDACTED]
To: [Baxamusa, Murtaza](#); [De La Rosa, Michael](#); [Lueg, Zerocarbon](#)
Subject: [External] Regional Decarbonization Framework - Comments from SWIA
Date: Tuesday, May 31, 2022 3:48:08 PM
Attachments: [RDF 2022 Summary for Policymakers-Tech Report SWIA Comments 31May2022.pdf](#)
[SWIA RDF comments Nov2021.3docx \(2\) \(1\).pdf](#)

Hi Michael and Murtaza,

Please add SWIAs comment letter on the latest draft of the RDF (Summary/Technical Report) into the formal administrative record for the project.

SWIA supports the intent/goal of the RDF to establish the most effective pathways to "decarbonize" the four major energy streams. We make a number of recommendations that we believe will improve the draft, including using a more discrete modeling approach when evaluating potential locations for utility-scale renewable energy facilities in the desert (Eastern SD and western Imperial counties), additional building energy policies, and other items.

We also attached our November 2021 letter because a number of recommendations that we made are still relevant.

We look forward to working with the County and other stakeholders as this process advances.

Regards,

Bill Tippetts (Board, SWIA)



Southwest Wetlands Interpretive Association
PO Box 575
Imperial Beach, CA 91933

31 May 2022

County of San Diego, LUEG
Attention: Murtaza Baxamusa
1600 Pacific Hwy., Room 212
San Diego, CA 92101

(submitted 31 May 2022 via email to ZeroCarbon@SDCounty.ca.gov)

Subject: San Diego Regionalization Decarbonization Framework – 2022 Draft

Dear Mr. Baxamusa:

The Southwest Wetlands Interpretive Association (SWIA) is a non-profit organization dedicated to helping preserve and enhance wetlands throughout southern California – and particularly in the Tijuana River watershed and South San Diego Bay. Historical losses of Bay wetlands have occurred from development, and climate change and sea level rise represent significant additional threats to natural resources and infrastructure/developments in and around San Diego Bay.

The following comments address the “2022 Draft RDF Summary for Policy Makers,” which provides a readable but cursory overview of the full RDF Technical Report. Where relevant, comments and recommendations are made for modifying some aspects of the RDF Technical Report (SWIA commented on the original RDF and many of our comments and recommendations remain relevant – see attached letter). The RDF presents useful overviews of the regional energy sectors, the need for a pathways approach/analysis to reduce associated GHG emissions, and opportunities to achieve those reductions.

Please include these comments in the RDF project public record file and provide them to all the other relevant staff on the RDF Team.

However, the RDF Technical Framework report is a very lengthy and complex (529 pages) and aspirational document with no legal, policy or regulatory basis over the 18 cities and other agencies. Our past and current recommendations highlight areas and policies that should be incorporated to clarify and improve how those pathways can be implemented.

To put the urgency for local/regional comprehensive planning efforts like the RDF in context, the most recent IPCC report on the global climate change crisis (April 2022) stated that to limit global warming to around 1.5C (2.7°F), that global greenhouse gas emissions would have to peak “before 2025 at the latest, and be reduced by 43 per cent by 2030”. That target is similar to what California’s SB 32 requires, but despite recent reductions documented in the CA Air Resources Board 2019 emissions report, CARB has stated that much larger reductions are needed to reach the ambitious 2030 target — an additional 40 percent reduction below the original 2020 limit. Furthermore, and as acknowledged in the Introduction to the RDF, even if all of the jurisdictions fully implemented their climate action plans (CAPs), the region would fall far short of reducing its GHG emissions to meet interim targets and ultimately net zero emissions by 2045 per state goals.

General Comment. The RDF provides guidance that is expected to be incorporated into the County’s in-preparation revised Climate Action Plan (CAP). The relationship between the RDF and CAP has been explained by the County as follows: “The CAP Update team will be working closely with the Framework team throughout the development of both efforts. Staff will incorporate any policy, programming, and/or project guidance identified by the Framework that may apply to the CAP Update project. This may impact CAP measures, workforce development programs and policies, regional collaboration efforts, or any other identified item that overlaps in scope and application.” (April 11, 2022, memo from Daviah Lynch, Director PDS to Board of Supervisors). This close correspondence between the RDF and CAP is crucial and It would be very helpful to the public reviewers of the CAP and RDF if the County would produce a cross-reference of the RDF pathway objectives, policies, and more specific recommendations and how the County CAP measures are conforming to/implementing those. As implied in the County memo, if the RDF policy and pathways are the best guidance for the region, then the County’s CAP should be able to demonstrate how implementing each of its mitigation measures, monitoring and enforcement meets or exceeds what is recommended in the RDF. And because the CAP addresses more CO₂e emissions than the RDF, a clear explanation of the “GHG emission gaps” between the two documents – and at least some discussion about what will be needed to close that gap is essential.

Page 4. Paragraph 1. At this time, a prudent RDF approach should not place any significant reliance on out-of-area carbon offsets (off-site credits). The present carbon

market has too many questionable if not fraudulent carbon credits/markets (<https://www.offsetguide.org/concerns-about-carbon-offset-quality/>; <https://www.bloomberg.com/news/features/2021-06-02/carbon-offsets-new-100-billion-market-faces-disputes-over-trading-rules>). That being said, the constantly evolving status of technical options may at a later date warrant some use of carbon offsets that are not available regionally. The RDF technical report should provide a set of questions and provisional criteria that must be addressed in any update which might consider the (limited) allowance of offsite credits. That process should also include how possible use of offsite carbon credits could allow the region to avoid having to implement costly, difficult-to-attain internal reductions actions such as building fossil fuel burning peaking power plants.

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Page 6. A reasonable if not necessary policy is for the RDF to consider the potential for obtaining clean electrical power from Imperial County and possibly Mexico (Baja CA) energy systems. The county's electric power system is already connected to the larger CAISO grid, and given the State's net zero goals and efforts to incentivize clean energy production (e.g. RDF Technical Report pages 9-18), a legitimate case can be made for considering the inclusion of additional "outside the county" green (clean) electricity sources as a fundamental piece of the overall strategy. Otherwise, CCAs, SDG&E, and other electricity providers will be completely dependent on a massive increase of local, clean power production - and based on the RDF's energy sector analysis - that means rapidly developing vast utility-scale solar and wind facilities throughout the eastern part of the county. Allowing for a limited amount of out-of-region clean energy may also reduce the region's need to build peak power/emergency power facilities that emit GHGs.

Locating a vast array of utility-scale renewable power facilities poses significant threats from environmental impacts to natural lands because unlike many other areas (e.g.,

fallowed/disturbed former agricultural lands in the Imperial Valley), there are no extensive areas of highly disturbed and/or fallowed lands in San Diego County where such facilities may be appropriate. The RDF does not present a simple, transparent discussion of how it developed the sensitivity maps - particularly for environmental/biological resources. For example, critical and important habitat and movement corridors for endangered Peninsular bighorn sheep occur in the Jacumba area and parts of the desert

(<https://science.sandiegozoo.org/species/peninsular-bighorn-sheep>; CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE PENINSULAR BIGHORN SHEEP 2016-17 ANNUAL REPORT (accessed 14April2022 file:///C:/Users/Tippets/Downloads/pbs_%202016-17_report_final%20(2).pdf)). Any effective analysis of potential environmentally sensitive areas should include more readily accessible maps and explanations for the methods used to create those maps.

Page 7. A regionwide commitment to a single institutional structure is essential if the RDF is to have any substantial relevance. That commitment must involve the 18 cities, the County, SANDAG, and other major entities functioning as cooperating partners. Every local jurisdiction (and multi-jurisdiction entities) should commit to revising their CAPs to be consistent with the regional GHG emission targets/thresholds. Optimally, that regionwide commitment and the entity to oversee it should not require the creation of an entire new layer of governance. Or at least it should be a limited, oversight entity that focuses only on promoting and coordinating how the pathways are being implemented – leaving each local jurisdiction to be responsible for its implementation, enforcement and monitoring.

The RDF's acknowledgement that the regional four energy system pathways do not address a third (34%) of the region's total emissions by 2035 (Figure 3 on Page 6), which is a serious omission. It seems both obvious and essential that the RDF, if adopted by the County (and presumably agreed-to by all other relevant jurisdictions) must be updated within 5 years to fully incorporate additional analyses and identify approaches (pathways) and measures that would address the non-energy sector GHG emissions. The proposed "outside engagement" process should have that as a priority task.

Pages 9-14. The Levelized Cost of Energy/Electricity (LCOE) analysis methodology is intended to provide an objective means to compare possible pathways to reach the regional clean electricity supply. However, the LCOE approach has a number of crucial, potential drawbacks. Among these are that it is primarily useful from the investor-side, not the consumer side of electricity supply (and pricing), significant assumptions may not be either appropriate or apparent to the reviewer of the results, and specific inputs can substantially skew outcomes (see: https://en.wikipedia.org/wiki/Levelized_cost_of_energy and <https://www.sciencedirect.com/science/article/pii/S2211467X19300197>) For example, the

“San Diego County Only” and “San Diego and Imperial County” alternatives do not appear to account for unavoidable, significant environmental impacts and mitigation costs and/or land costs). And because the County has not initiated any substantial effort to define the habitat priorities/needs of its future East County Multiple Species Conservation Plan, a broad-brush approach to “siting” large scale energy facilities would be extremely inappropriate. Conversely, the “Minimized Environmental Impact” alternative appears to be so constraining that it essentially removes from consideration areas that may have substantial potential and not significantly impede the East County MSCP.

Also, it isn't apparent why the RDF seems to be intent on establishing a fully “self-sufficient” network (grid system) to supply the forecasted electrical energy to achieve net zero by 2045. As noted in a preceding comment (regarding page 6 of the summary), this region is and will continue to be part of much larger electricity supply system infrastructure/grid. While it is reasonable to identify potential areas that could accommodate a large share of this region's electricity supply, the implication that it is necessary to commit to building a self-sufficient system is not reasonable. The national and certainly California energy systems are moving toward full clean energy and those supplies should be exchangeable among use areas. Just as some areas will likely not be able to realistically produce all of their own clean energy, other areas will be able to produce much more energy than they require. The RDF should adopt a more robust assessment of clean energy production and sharing than is implied in the current draft version.

Page 15. The document provides a reasonable list of potential measures/actions currently available and/or in use within the region to reduce transportation-based emissions. But as noted in the document, even if all of the local CAPs were to implement their present transportation GHG emission reduction commitments they would not yield the GHG emission reductions that are necessary to achieve no net emissions.

Compounding the general deficiencies in transportation policies and measures, some jurisdiction's policies may worsen the situation. For example, the County's most recent CAP failed to specify strong GHG emission reduction targets, policies and implementation measures. And recently, the Board of Supervisors' guidance to staff was to find ways to exempt as much VMT from mitigation as possible within “traffic efficient areas” (more specifically, remove VMT as a barrier to development in infill areas), but many of those identified areas are not “VMT efficient” when the standard is the regional average VMT/capita. The “gap” between what could/should be implemented and what ends-up being promulgated by local jurisdictions poses a big problem for RDF implementation. As shown

in the RDF (Table 8.10), transportation-based GHG emission reductions will rely mostly on reducing VMT and much increased EV share.

Pages 15-17. The above concern is just one example of why an effective approach to reducing transportation GHGs must encompass a regional collaboration with firm targets and commitments in addition to the individual jurisdiction's CAPs. Each jurisdiction's transportation emissions reductions should be roughly proportional to their share of regional emissions, which by necessity means that the jurisdictions must collaborate on regional solutions regarding public transportation, smart land use/development (that more closely locates housing and employment and/or provides more efficient transportation options), and ancillary services that can reduce single occupancy and carbon-burning vehicle use. That level of collaborative planning and implementation, which the RTP/SCS attempts to create, needs to be much more broadly improved and committed to by all the jurisdictions.

Page 17. The overall approach to pursue three pathways to building decarbonization, and many of the more specific recommendations appear consistent with best practices. However, for many who will have to convert from fossil fuel to electrical appliances and heating - and to add air conditioning that may be necessary in the future for a much higher percentage of residential homes as temperatures rise due to climate change the costs will be prohibitive as a stand-alone action. And as noted in the document, the life cycle for appliances may slow conversion to electrical devices. Potential additions to the RDFs general policy recommendations (pages 154, et seq.) that could facilitate converting to electricity through a targeted/phased approach include:

1. Have the utility or CCA (energy providers) pay for an energy audit for all customers to identify and rank their residence/building's individual energy uses and their associated GHG emissions and identify which conversions to electricity would be most cost-effective.
2. Adopt a regional requirement that all buildings (including residential) at the time of sale/resale, will convert gas appliances to electrical; or at a minimum establish building/household "emission standards" so that at the time of sale the building's or residence's emissions align with regional targets. Exceptions may be justifiable for buildings where that is technically infeasible or demonstrably much more costly than for comparable buildings and where low-carbon fuels can be used.
3. Have all rental/lease units provide renters/leasees a copy of the building's energy audit and energy costs so that informed choices can be made by renters/leasees.

Page 18. To reduce existing - avoid creating additional - significant economic burdens and environmental injustice impacts to low-income homeowners and renters, serious

consideration should be given to create a regional low interest loan or grant program to make those conversions (e.g., for rental units and housing projects that qualify as “affordable housing” - under 60% of AMI - those benefits could be applied to building owners/builders when justified).

Page 21. Natural Climate Solutions (NCS) must be part of the RDF and all relevant GHG emission reduction plans. This is particularly important because natural and working lands (NWLs) may currently store up to 58 MMT of CO₂ and annually sequester another 2 MMT - but future growth/buildout and the siting of new energy production facilities will remove some of that storage and potentially some of the sequestration. An important ancillary benefit from natural and working lands is their co-benefits. When deciding on the “value” (benefits to costs) of implementing NCS actions, every jurisdiction must also consider the full set of their benefits.

Obtaining commitments to maximize their conservation and improving their management should be a priority of the RDF. As we noted in preceding comments (re: page 6 and 9-14 of the draft summary), the siting of many new utility-scale solar and wind facilities poses a significant threat to important natural resource areas that support biodiversity, sensitive species and have some carbon storage/sequestration potential. As part of a RDF implementation plan, there must be a more definitive evaluation of the trade-offs from siting those facilities in terms of long term natural resource/value impacts versus the benefits of their energy production.

Pages 22-24. Though our region’s NWLs have limited potential to counter our human-caused GHG emissions, their potential co-benefits are extremely valuable and must be factored into their overall role in the RDF. Coastal wetlands are important ecosystem features with high biodiversity and serve as coastal marine fish species nursery areas. Also, they provide important physical functions including biofiltration, modulating coastal erosion, as well as capturing/sequestering carbon (see: https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/FINAL_DesignDraft_NWL_100821_508-opt.pdf). California’s, and particularly southern California’s coastal wetlands have been greatly reduced in extent (https://www.sfei.org/sites/default/files/biblio_files/826_Coastal_Wetlands_and_change_over_time_Aug_2014.pdf) and are further threatened by climate change/sea level rise, as noted in the RDF Technical Report (pages 184-185). In light of these multiple benefits, the RDF should place more emphasis and establish commitments from the relevant local jurisdictions (and collaborate with state and federal entities that manage coastal wetlands) to retain, replace and increase coastal wetlands.

Similarly, urban trees (the urban tree canopy/UTC) produce multiple co-benefits. Substantial research has shown that urban areas with higher UTC are correlated with lower summer temperatures, better air quality, healthier residents, etc. (<https://pubmed.ncbi.nlm.nih.gov/29247882/>; <https://canopy.org/tree-info/benefits-of-trees/>).

Retaining viable agricultural (working) lands and adopting best practices that can lower their GHG emissions and/or enhance GHG sequestration should be priorities in the RDF. When working lands are no longer viable for agricultural uses, they should be restored to natural lands if valuable to the region's conservation plans/needs, used for clean energy facilities, or if appropriate and within smart growth/transit priority areas, rezoned to accommodate clean, affordable housing.

Pages 24-26. The RDF must identify realistic means for minimizing employment impacts while encouraging the creation of new and more diverse job opportunities.

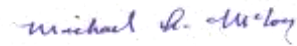
Pages 27-29. As described in the RDF, even if all of the measures in the current CAPs were implemented to their fullest, they would not reduce GHG emissions sufficiently to achieve net zero emissions by 2045. And though local jurisdictions and agencies may have legal/regulatory authorities to specify commitments that would reach net zero, it is unclear what additional measures they would be able to integrate and successfully implement into their revised CAPs. Chapter 8 provides a strong analysis of the potential benefits from implementing more aggressive measures (e.g., "Best CAP Commitment Scenario" as described on Page 369).

Whether the RDF is adopted by the region's jurisdictions or not, it is apparent that a follow-on effort is needed to prioritize and advocate for the timely implementation of the most efficient (effective, higher emission reductions/cost, and equitable) additional measures. An independent, objective assessment of what would be most effective in terms of additional CAP measures, changes to the RTP/SCS (and all other relevant processes/plans) to close the GHG emissions gap to net zero would be extremely valuable. It is unclear if the "Guidebook to Regional Decarbonization" that is described in the RDF would provide sufficiently detailed information and assistance to the local jurisdictions, but it sounds like a reasonable starting point.

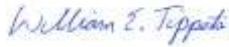
Thank you for considering our comments and recommendations,

Murtaza Baxamusa
Page 9

Please contact Bill Tippets [REDACTED] regarding any discussion of our comments.
Sincerely,

Handwritten signature of Michael R. McCoy in blue ink.

Mike McCoy
President

Handwritten signature of William E. Tippets in blue ink.

Bill Tippets
Board Member

Attachment

Cc: SWIA Board

County of San Diego
Regional Decarbonization Framework Team
Michael.DeLaRosa@sdcounty.ca.gov
Murtaza.Baxamusa@sdcounty.ca.gov

Preliminary Comments on the County of San Diego's RDF Draft Summary for Policymakers from Bill Tippetts ([REDACTED]) sent via email 17APR2022

RDF Team:

Please include these comments in the RDF project public record file and provide them to all the other relevant staff on the RDF Team.

The following comments address the "Draft RDF Summary for PolicyMakers," which provides a readable but cursory overview of the full RDF Technical Report. I intend to provide comments on the RDF Draft Technical Report before the May 31 comment deadline. My comments also include suggestions that I believe should be made for modifying some aspects of the RDF technical report. The RDF presents useful overviews of the regional energy sectors and the needs for and pathways to reduce associated GHG emissions. However, it is essentially an aspirational document with no legal, policy or regulatory basis over the 18 cities and other agencies.

To put the urgency for local/regional comprehensive planning efforts like the RDF in context, the most recent IPCC report on the global climate change crisis (April 2022) stated that to limit global warming to around 1.5C (2.7°F), that global greenhouse gas emissions would have to peak "before 2025 at the latest, and be reduced by 43 per cent by 2030". That target is similar to what California's SB 32 requires, but despite recent reductions documented in the CA Air Resources Board 2019 emissions report, CARB has stated that much larger reductions are needed to reach the ambitious 2030 target — an additional 40 percent reduction below the original 2020 limit.

General Comment. The RDF provides guidance that is expected to be incorporated into the County's in-preparation revised Climate Action Plan (CAP). The relationship between the RDF and CAP has been explained by the County as follows: "The CAP Update team will be working closely with the Framework team throughout the development of both efforts. Staff will incorporate any policy, programming, and/or project guidance identified by the Framework that may apply to the CAP Update project. This may impact CAP measures, workforce development programs and policies, regional collaboration efforts, or any other identified item that overlaps in scope and application." (April 11, 2022, memo from Daviah Lynch, Director PDS to Board of Supervisors). This close correspondence between the RDF and CAP is crucial and It would be very helpful to the public reviewers of the CAP and RDF if the County would produce a cross-reference of the RDF pathway objectives, policies, and more specific recommendations

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Pages 9-14. The Levelized Cost of Energy/Electricity (LCOE) analysis methodology is intended to provide an objective means to compare possible pathways to reach the regional clean electricity supply. However, the LCOE approach has a number of crucial, potential drawbacks. Among these are that it is primarily useful from the investor-side, not the consumer side of electricity supply (and pricing), significant assumptions may not be either appropriate or apparent to the reviewer of the results, and specific inputs can substantially skew outcomes (see: https://en.wikipedia.org/wiki/Levelized_cost_of_energy and <https://www.sciencedirect.com/science/article/pii/S2211467X19300197>) For example, the "San Diego County Only" and "San Diego and Imperial County" alternatives do not appear to account for unavoidable, significant environmental impacts and mitigation costs and/or land costs). And because the County has not initiated any substantial effort to define the habitat priorities/needs of its future East County Multiple Species Conservation Plan, a broad-brush approach to "siting" large scale energy facilities would be extremely inappropriate. Conversely, the "Minimized Environmental Impact" alternative appears to be

so constraining that it essentially removes from consideration areas that may have substantial potential and not significantly impede the East County MSCP.

Also, it isn't apparent why the RDF seems to be intent on establishing a fully "self-sufficient" network (grid system) to supply the forecasted electrical energy to achieve net zero by 2045. As noted in a preceding comment (regarding page 6 of the summary), this region is and will continue to be part of much larger electricity supply system infrastructure/grid. While it is reasonable to identify potential areas that could accommodate a large share of this region's electricity supply, the implication that it is necessary to commit to building a self-sufficient system is not reasonable. The national and certainly California energy systems are moving toward full clean energy and those supplies should be exchangeable among use areas. Just as some areas will likely not be able to realistically produce all of their own clean energy, other areas will be able to produce much more energy than they require. The RDF should adopt a more robust assessment of clean energy production and sharing than is implied in the current draft version.

Page 15. The document provides a reasonable list of potential measures/actions currently available and/or in use within the region to reduce transportation-based emissions. But as noted in the document, even if all of the local CAPs were to implement their present transportation GHG emission reduction commitments they would not yield the GHG emission reductions that are necessary to achieve no net emissions.

Compounding the general deficiencies in transportation policies and measures, some jurisdiction's policies may worsen the situation. For example, the County's most recent CAP failed to specify strong GHG emission reduction targets, policies and implementation measures. And recently, the Board of Supervisors' guidance to staff was to find ways to exempt as much VMT from mitigation as possible within "traffic efficient areas" (more specifically, remove VMT as a barrier to development in infill areas), but many of those identified areas are not "VMT efficient" when the standard is the regional average VMT/capita. That approach could interfere with larger RDF and CAP goals and actions.

Pages 15-17. The above concern is just one example of why an effective approach to reducing transportation GHGs must encompass a regional collaboration with firm targets and commitments in addition to the individual jurisdiction's CAPs. Each jurisdiction's transportation emissions reductions should be roughly proportional to their share of regional emissions, which by necessity means that the jurisdictions must collaborate on regional solutions regarding public transportation, land use/development (both housing and employment), and ancillary services that can reduce single occupancy and carbon-burning vehicle use. That level of collaborative planning and implementation, which the RTP/SCS attempts to create, needs to be much more broadly improved and committed to by all the jurisdictions.

Page 17. The overall approach to pursue three pathways to building decarbonization, and many of the more specific recommendations appear consistent with best practices. However, for many who will have to convert from fossil fuel to electrical appliances and heating - and to add air conditioning that may be necessary in the future for a much higher percentage of residential homes as temperatures rise due to climate change the costs will be prohibitive as a stand-alone action. And as noted in the document, the life cycle for appliances may slow conversion to electrical devices. Two potential additions to the RDFs general policy recommendations (pages 154, et seq.) that could facilitate converting to electricity through a targeted/phased approach are:

1. Have the utility or CCA (building energy providers) pay for an energy audit to all customers to identify and rank the worst GHG emission-producing building uses and which conversions to electricity would be most cost-effective.
2. Adopt a regional requirement that all buildings (including residential) at the time of sale/resale, will convert gas appliances to electrical; or at a minimum establish building/household "emission standards" so that at the time of sale the building's or residence's emissions align with regional targets. Exceptions may be justifiable for buildings where that is technically infeasible or demonstrably much more costly than for comparable buildings and where low-carbon fuels can be used.

Page 18. To reduce existing - avoid creating additional - significant economic burdens and environmental injustice impacts to low-income homeowners and renters, serious consideration should be given to create a regional low interest loan or grant program to make those conversions (e.g., for rental units and housing projects that qualify as "affordable housing" - under 60% of AMI - those benefits could be applied to building owners/builders when justified).

Page 21. Natural Climate Solutions (NCS) must be part of the RDF and all relevant GHG emission reduction plans. This is particularly important because natural and working lands (NWLs) may currently store up to 58 MMT of CO₂ and annually sequester another 2 MMT - but future growth/buildout and the siting of new energy production facilities will remove some of that storage and potentially some of the sequestration. Obtaining commitments to maximize their conservation and improving their management should be a priority of the RDF. As we noted in preceding comments (re: page 6 and 9-14 of the draft summary), the siting of many new utility-scale solar and wind facilities poses a significant threat to important natural resource areas that support biodiversity, sensitive species and have some carbon storage/sequestration potential. As part of a RDF implementation plan, there must be a more definitive evaluation of the trade-offs from siting those facilities in terms of long term natural resource/value impacts versus the benefits of their energy production.

Pages 22-24. Though our region's NWLs have limited potential to counter our human-caused GHG emissions, their potential co-benefits are extremely valuable and must be factored into their overall role in the RDF. Coastal wetlands are important biological

(e.g., biodiversity, coastal marine species nursery areas, biofiltration) and physical (e.g., modulating coastal erosion, carbon capture/sequestration) habitats (see: https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/FINAL_DesignDraft_NWL_100821_508-opt.pdf). California's, and particularly southern California's coastal wetlands have been greatly reduced in extent (https://www.sfei.org/sites/default/files/biblio_files/826_Coastal_Wetlands_and_change_over_time_Aug_2014.pdf) and are further threatened by climate change/sea level rise, as noted in the RDF Technical Report (pages 184-185). In light of these multiple benefits, the RDF should place more emphasis and establish commitments from the relevant local jurisdictions (and collaborate with state and federal entities that manage coastal wetlands) to retain, replace and increase coastal wetlands.

Similarly, urban trees (the urban tree canopy/UTC) produce multiple co-benefits. Substantial research has shown that urban areas with higher UTC are correlated with lower summer temperatures, better air quality, healthier residents, etc. (<https://pubmed.ncbi.nlm.nih.gov/29247882/>; <https://canopy.org/tree-info/benefits-of-trees/>).

Retaining viable agricultural (working) lands and adopting best practices that can lower their GHG emissions and/or enhance GHG sequestration should be priorities in the RDF. When working lands are no longer viable for agricultural uses, they should be restored to natural lands if valuable to the region's conservation plans/needs, or considered for locating clean energy facilities.

Pages 24-26. The RDF must identify realistic means for minimizing employment impacts while encouraging the creation of new and more diverse job opportunities.

Pages 27-29. As described in the RDF, even if all of the measures in the current CAPs were implemented to their fullest, they would not reduce GHG emissions sufficiently to achieve net zero emissions by 2045. And though local jurisdictions and agencies may have legal/regulatory authorities to specify commitments that would reach net zero, it is unclear what additional measures they would be able to integrate and successfully implement into their revised CAPs. While "...there is an opportunity for most jurisdictions to strengthen their existing CAP measures... (Page 29)," the RDF provides little guidance about what those are except to refer to the transportation and building energy sectors.

Whether a RDF is adopted by the region's jurisdictions or not, it is apparent that a follow-on effort is needed to identify and prioritize what those additional measures should be. An independent, objective assessment of what would be most effective in terms of additional CAP measures, changes to the RTP/SCS (and all other relevant processes/plans) to close the GHG emissions "gap" to net zero would be extremely valuable. It is unclear if the "Guidebook to Regional Decarbonization" that is described in the RDF would provide

sufficiently detailed information and assistance to the local jurisdictions, but it sounds like a reasonable starting point.

Thank you for considering my comments and recommendations,

Bill Tippetts





Southwest Wetlands Interpretive Association
PO Box 575
Imperial Beach, CA 91933

16 November 2021

County of San Diego, LUEG
Attention: Murtaza Baxamusa
1600 Pacific Hwy., Room 212
San Diego, CA 92101

(submitted 16 November 2021 via email to ZeroCarbon@SDCounty.ca.gov)

Subject: San Diego Regionalization Decarbonization Framework - Draft

Dear Mr. Baxamusa:

The Southwest Wetlands Interpretive Association (SWIA) is a non-profit organization dedicated to helping preserve and enhance wetlands throughout southern California – and particularly in the Tijuana River watershed and South San Diego Bay. Historical losses of Bay wetlands (particularly vegetated and shallow-subtidal types) have occurred from development, and climate change and sea level rise represent significant additional threats to natural resources and infrastructure/developments in and around San Diego Bay.

SWIA supports many elements and approaches in the Regional Decarbonization Framework. We look forward to participating in the revision/refinement process to create a vision that our region can use as the local governments, businesses, and public choose how to effectively and quickly reduce our carbon emissions to net zero. Our specific comments are provided below.

Study Framework

We support a countywide overview of how the system-wide approach and the use of modeling and pathways can be used to identify the most potentially viable means (i.e., multiple pathways) to achieve the plan's goals of decarbonization by 2045. Equally important are the identification of potential dead-end or nonviable "opportunities," key decision points, and opportunities for synergies among the key sectors: energy, transportation, and land use. That said, the next version of the document should provide more discussion regarding how the "pathways" approach integrates with the realities that this

region has already initiated a host of planning decisions and plans. For example, as referenced later in the document, SANDAG has identified a specific set of “pathways” – the 5 Big Moves – that would put the region onto a set of fairly clearly delineated pathways for reducing greenhouse gas emissions. That would not necessarily preclude other “transportation sector pathways,” and the document should clarify how the multiple pathways approach accommodates existing planning efforts and where there potentially serious impediments to or conflicts with more effective pathways.

An additional comment is that because the approach utilizes a “high-level” view of the existing and future conditions, which can miss crucial issues or even locational concerns, we believe that some refinements to the assumptions or modeling parameters may be necessary. A too-broad analysis may fail to appropriately address lower-level, but important concerns. Where relevant, we provide examples in our subsequent comments.

Geospatial Analysis of Renewable Energy Production

Implicit in the statement on Page 12 of the document, “Decarbonization of the electric sector in San Diego County will require substantial deployment of new renewable resources,” is that significant new clean energy is essential to achieve the region’s zero carbon goal. The analysis of potential utility-scale production clearly identifies how that could be achieved by 2045. However, the screening process for siting renewable facilities applies a too coarse-grained method by treating each of the primary screening criteria (e.g., low environmental impact, high pecuniary value, high carbon sequestration, developable) as independent decision choices. The evaluation of a theoretical countywide renewable “project” pathway should utilize all of these criteria, with some level of “within criterion” (low-to-high constraint) rating to assess the least constrained – or most optimized – alternative pathway(s) that could meet the project objectives. Even under the rubric of a generalized “pathways,” the analysis should not disregard how the County and local jurisdictions must (and do) use integrated planning processes – and CEQA – when doing large-scale planning. The reality is that all of those criteria should be part of a comprehensive, integrated screening process.

It isn’t clear why the pathway analysis did not examine out-of-San Diego/Imperial counties options for obtaining renewable power. San Diego obtains a large part of its current renewable energy via the larger CALISO and Western States power grid systems, and other areas will be investing in/building solar, wind and other renewable facilities. The next version of the document should address “outside” renewable energy supply options, even if that is concluded to be a lesser or “dead-end” pathway.

An example of the problem is the application of the screening criteria as independent assessment variables in the LCOE-based selection analysis. The “low environmental impact” criterion is so broadly applied as depicted in Figure 2.9 – essentially all of San Diego County except within the urban zone – that it precludes a reasoned examination of possible facility siting. Conversely, except when constrained by low environmental impacts (as defined in the document and analyzed in CPA Scenario 1), all of the analyses would direct significant new production into the Jacumba Hot Springs east area (in both the

San Diego only and San Diego/ Imperial siting assumptions) and Borrego Springs area (San Diego facility siting only). The Jacumba focus area appears to encompass a critical wildlife movement corridor/area for the federal endangered Peninsular bighorn sheep population that moves to/from the Sierra Juarez Mountains just south of the international border up and into the Anza-Borrego Desert and mountains. A recent study of the populations of bighorn sheep in the area (Michael R. Buchalski, et al. 2015. Genetic population structure of Peninsular bighorn sheep (*Ovis canadensis nelsoni*) indicates substantial gene flow across US–Mexico border. *Biological Conservation* (184): 218-228) concluded that “construction of a US–Mexico border fence or wind energy infrastructure would disrupt connectivity of the metapopulation. Future conservation efforts should focus on identifying dispersal corridors and maintaining functional connectivity to facilitate recolonization of unoccupied habitat.” Prioritizing this area for utility-scale renewable (solar and wind) facilities appears to pose a serious threat to the only known, viable wildlife connection for this endangered subspecies between California and Baja California.

The discussion of transmission line upgrades/improvements doesn’t address if the Borrego Springs site (or those listed in the document) would require new transmission rights-of-way. While the siting of utility-scale facilities has its own problems, getting new/expanded transmission lines approved appears to have much greater resistance (<https://www.theatlantic.com/science/archive/2021/07/america-is-bad-at-building-power-lines-lets-fix-that-transmission-climate/619591/>).

The wide range of potential rooftop solar installation as a percentage of supply (5-30%) warrants revisiting in the next version of the document. Improving the pace and extent of rooftop solar could significantly reduce the reliance on utility-scale facilities that consume/disturb natural and working lands (which sequester carbon, as discussed later in the document and our comments). What pathways are feasible to put the region on track to achieve the higher end estimate? Does the passage of the federal infrastructure bill clarify some of the pathway uncertainties that are identified in the current document?

We raise these issues because the document states as one of its objectives/outcomes, to identify and avoid potential dead-end opportunities, thereby preventing wasteful efforts and expenditures that would slow the achievement of full decarbonization by 2045. These are only two concerns and many others will certainly be raised about how successful the pathway approach is and where revisions and improvements should be made in the next version.

Accelerating Deep Decarbonization in the Transportation Sector

We agree that the currently proposed 2021 RTP/SCS provides a strong foundation for meeting legislatively mandated near-and-midterm GHG emission reduction targets and that it is insufficient to put the region on a pathway to achieve longer-term targets/goals (i.e., reduce emissions by 40% by 2030 and reach decarbonization by 2045). While there are numerous opportunities to encourage EV adoption, and the down-scaled analysis by jurisdiction is useful to show how significant that adoption would have to be, it would be helpful to place some kind of weighting on the opportunities and constraints relative to the EV adoption pathway.

The emphasis on increasing the number of EVs above the RTP projection as a primary pathway to accelerate reductions in transportation-generated GHG emissions also identified that “SANDAG would need to adopt an aggressive implementation timeline for Complete Corridors and Transit Leap, focusing on implementation in the parts of the County where transit will be most viable and well-utilized.” We agree, but the document does not provide sufficient analysis of opportunities and constraints associated with those crucial/concurrent needs (consider revising Figure 3.4, which could integrate a relative scaling of value to meeting the objective). Advancing the pace of mode share shifts to transit is one of the most problematic concerns that many transportation advocates have with the RTP. The RDF should provide a more refined assessment (“pathway analysis”?) of the relationship and interdependence between an (electrified) transit leap and greatly increased entry of EVs into the transportation system, which also has ramifications to VMT.

We concur that the geographic opportunity (i.e., infill or VMT-efficient) areas are likely the most effective locations for implementing many of the VMT reduction strategies in Table 3.6. Similar to our concern in the previous comments, the document does not present sufficient guidance (or identify cautionary “dead-ends”) regarding the pathways to link those strategies to current and projected VMT efficient areas (which are also more amenable to active transportation options).

Natural Climate Solutions and Other Land Use Considerations

In general, we concur with the primary conclusion that natural lands play a significant role in reducing GHG emissions and should, to the maximum extent feasible, be conserved. In particular, forests, woodlands, riparian/bog, and shrublands provide the bulk of carbon storage and have relatively higher sequestration-to-carbon storage ratios. In any “pathway” blueprint, those vegetation community types should be priorities for conservation and management (to retain their ecological services for carbon as well as biological values). However, climate change presents a real threat to the extent (and location) of vegetation communities and a forward-looking decarbonization effort must consider how climate change may impact the long-term capacity for these vegetation communities to continue to provide those levels of carbon storage and sequestration. Even so, it seems apparent that the region should be placing further limitations on development and disturbance of natural lands. That approach is consistent with this document’s findings/recommendations that reducing development outside of VMT efficient/infill areas would improve GHG emission reductions and reduce VMT in the region.

The blue carbon (coastal wetlands, including seaweeds/seagrasses) discussion is particularly disheartening in light of projected sea level rise impacts – absent an aggressive commitment to implement significant coastal wetlands restoration and creation. The likely net loss of carbon storage and reduced sequestration argues for a “new pathway” that does more than slow the losses. In line with the document’s policy recommendations, we strongly recommend the coastal jurisdictions and agencies (e.g., Port of San Diego) that control land uses along the shoreline/public tidelands should immediately identify and plan for shoreline retreat and coastline adaptation that will slow or reverse current and historical losses of coastal wetlands.

According to the document (Figure 4.2 and as stated on Page 92), agriculture is generally a net GHG emitting land use. But this region is reported as a net negative land use/cover (Table 4.2). [The description of this agriculture's status of a net emitting or net reduction sector is confounded by the estimate that the decades-long removal of tree crops increased (one-time) emissions and has reduced agriculture's carbon storage significantly.] We support the retention of working/agricultural lands, particularly if the crops and management practices can increase carbon storage while maintaining economic viability. Where agricultural production cannot be reasonably sustained, those lands should be prioritized for restoration to their natural vegetation community types – all of which are effective at carbon storage and sequestration.

We are in general agreement with the document's conclusions and policy recommendations regarding urban trees. In particular, there is a need for more urban trees, the species of trees should be compatible with our arid climate, and the importance of co-benefits – particularly for urban areas that are tree-poor (i.e., poor and disadvantaged communities) and where climate change effects (urban heat impacts) will be most distressing – throughout the region.

Decarbonization of Buildings

We concur that a transition to electrification of buildings should be a priority that is pursued quickly and aggressively, as described in the key actions. One issue that is not discussed in this section is the likelihood that one of more Community Choice Aggregation (CCA) entities may replace SDG&E in part or wholly. How would that affect the "pathway" assessment?

Employment Impacts through Decarbonization for the San Diego Region

We have no specific comments but support the recommendation that a steady transition of the energy-associated workforce is preferable to attempting a series of episodic efforts.

Key Policy Considerations for the San Diego Region

We concur that the current efforts to reduce GHG emissions is fragmented and that an overarching framework to achieve decarbonization would be more effectively coordinated through a single entity. What is not so clear is whether that should be the County of San Diego, SANDAG, a new joint powers agency, or another form of coordinating entity. Most of the GHG emissions are produced within the 18 cities, which is where most of the reductions should also be focused. But as demonstrated in the energy supply section of the document, the majority of new renewable energy facilities will be located within the unincorporated county or outside of San Diego County.

Though the document's statement and reasoning that "The government of San Diego County is a natural coordinating body in the San Diego region" (Page 207) has merit, it isn't clear why SANDAG wouldn't be able to serve as a coordinating entity – even if that required a legislative change to its authority.

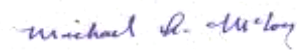
SANDAG, which is a singular entity with all 18 cities and the County of San Diego as voting members (and advisory members representing other major governmental entities), is responsible for planning the regional transportation system and for regional comprehensive planning. And while neither SANDAG nor the County has land use authority over the cities or independent government entities, SANDAG can significantly influence land use decisions through its transportation planning and funding decisions.

Regardless of which entity is selected as the coordinating entity, we fully agree that there is an imminent need for more integrated climate planning across the county is needed. The City of San Diego recently announced that it intends to achieve decarbonization by 2035 (<https://www.kpbs.org/news/local/2021/10/27/san-diego-aims-net-zero-carbon-emissions-2035>), but that necessitates other regional (San Diego County) planning and implementation – as well as state and federal support – to succeed. For example, the tremendous GHG emission reductions that will be required of its transportation sector are dependent upon a restructured and advanced regional transportation system and infrastructure buildout, access to timely and affordable renewable energy, and cooperation from the other jurisdictions. Absent a regional coordinating entity/agreement, it is not clear how the city will realistically achieve its laudable goal.

In summary, SWIA supports the planning approach and many of the pathway findings and policy recommendations. Certain improvements in the methodology are needed and we look forward to working with the County of San Diego and all the jurisdictions as the next version of the document is prepared.

Please contact Bill Tippetts [REDACTED] regarding any discussion of our comments.

Sincerely,



Mike McCoy
President



Bill Tippetts
Board Member

Cc: SWIA Board

From: [Garn, John C](#)
To: [Lueg, Zerocarbon](#)
Cc: [Wynn, Susan](#); [Brown, Sally](#)
Subject: [External] Comments on the San Diego Regional Decarbonization Framework, San Diego County, California
Date: Wednesday, June 1, 2022 3:19:15 PM
Attachments: [20220601_2022-0047842_GEN-TA-001-SD Regional Decarbonization Framework Comments.pdf](#)

Good afternoon,

I hope this finds you healthy.

Please see attached.

Please note - some Firewall or email security settings will strip the digital signature from the letter. Please review the attachment and if the digital signature is not intact, contact me for an alternate method of transmittal through the secure FWS fileshare program.

A hard copy letter will not follow.

Sincerely,
John

John Garn
(He, Him, His)
Administrative Assistant
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United States Department of the Interior

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In Reply Refer to:
FWS-SD-2022-0047842-GEN-TA-001

June 1, 2022
Sent Electronically

Michael De La Rosa
Group Program Manager
Land Use & Environment Group
County of San Diego
1600 Pacific Highway,
San Diego, California 92101

Subject: Comments on the San Diego Regional Decarbonization Framework, San Diego County, California

Dear Michael De La Rosa:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft San Diego Regional Decarbonization Framework (Draft RDF); the San Diego Regional Decarbonization Framework Summary for Policy Makers (Summary); and Putting San Diego on the High Road, Climate Workforce Recommendations for 2030 and 2050 (Workforce Recommendations) for San Diego County, California. The comments provided in this letter are based on information provided in these documents, our knowledge of sensitive and declining species and habitats, and our participation in regional conservation planning efforts.

The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Federal Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), including habitat conservation plans (HCP) developed under section 10(a)(1) of the Act.

PROJECT DESCRIPTION

The County of San Diego has prepared the Draft RDF to inform policy-making in regional, county, and city governments with the goal of reducing greenhouse gas emissions in the San Diego region. The Draft RDF examines the total production and consumption of energy in the electric power, transportation, and buildings sectors, and models science-based pathways to net zero carbon emissions for the region by 2045, which is consistent with the Paris Climate Agreement and State mandates. The Draft RDF identifies least cost and most effective near-term solutions for reducing emissions in each sector which are identified as “low-regrets” actions.

The Draft RDF identifies the need for renewable energy infrastructure development, including siting renewable energy facilities, constructing new and upgraded transmission infrastructure, and investing in energy storage infrastructure, such as batteries and pumped storage hydropower.

The Draft RDF identifies the need to reduce emissions from transportation, which is identified as the largest contributor to regional emissions. Existing strategies to reduce transportation emissions through vehicle miles traveled (VMT) reduction strategies and vehicle electrification strategies are not projected to achieve the State's zero emission goals. The Draft RDF identifies additional opportunity areas to reduce VMT by enhancing transit and active transportation (biking and walking), encouraging smart growth, urban connectivity, and density by changing zoning to promote mixed-use developments and disincentivize parking.

The Draft RDF identifies the need to reduce emissions in buildings with a focus on electrifying systems like space and water heating, and using lower-carbon fuels where electrification is not yet feasible.

Service Comments

We offer the following comments on the Draft RDF to assist the County in avoiding and minimizing potential impacts on sensitive resources:

General Comments

1. San Diego has been a leader in the development and implementation of regional Natural Community Conservation Planning Programs/Habitat Conservation Plans (NCCP/HCPs). We recommend that the Draft RDF include an analysis of the potential effects to all the regional NCCP/HCPs resulting from Draft RDF policies (e.g., siting of renewable energy facilities, construction of transmission infrastructure and pumped storage hydropower). The conservation design (i.e., preserves and habitat linkages) has been completed for all of the NCCP/HCPs throughout San Diego County. We recommend that the Final RDF include policy guidance that prioritizes maintaining the integrity of regional NCCP/HCPs, which have been collaboratively designed over decades. Regional NCCP/HCPs provide a network of connected reserve lands that are designed to maintain ecosystem processes, regional biodiversity, and habitat linkages between core reserve areas that will allow wildlife to move in response to climate change.
2. San Diego County's pivot away from fossil fuels is intended to reduce emissions and address climate change, which will help conserve ecosystem processes for the benefit of listed species. The Draft RDF relies, in part, upon VMT reduction strategies to reduce emissions from transportation, which is identified as the largest contributor to regional emissions. Lane management changes [e.g., conversion of High-occupancy vehicle (HOV) lanes to High-occupancy toll (HOT) lanes] may result in increased VMT. We recommend that the Final RDF include a discussion of how regional policies will be defined to ensure that the proposed Complete Corridors Strategy will be implemented in a manner that will prioritize reductions in VMT over gains from managed lanes,

consistent with updated CEQA guidelines pursuant to SB 743, to reduce greenhouse gases and limit climate change and its associated effects.

3. The Draft RDF relies upon the proposed Complete Corridors Strategy, which supports alternatives to single occupancy driving, including active transportation. The Complete Corridors Strategy includes a network of off-street bikeways and trail alignments, many of which are located along riparian areas and wildlife movement corridors. Recreational activity has been associated with shifts in the composition of natural communities from native to nonnative species, declines in the distribution and density of native wildlife species (Reed and Merelender 2008), reduction in the diversity and abundance of wildlife species (Banks and Bryant 2007), reduction in the density and diversity of bird communities (Szaro 1980; Blakesley and Reese 1988), alterations in the spatial and temporal use of habitat by wildlife (George and Crooks 2006; Cardoni *et al.* 2008), increases in the vigilance and flight of wildlife (Taylor and Knight 2003), and increases in the measured physiological stress response of wildlife (Arlettaz *et al.* 2007). The Final RDF should incorporate guidance to ensure that active transportation bikeway and trail alignments are located in a manner that does not result in decreased functionality of regional wildlife corridors, leading to habitat fragmentation. We recommend that the Final RDF include policy guidance requiring that siting of active recreation alignments include thorough analyses of impacts to wildlife movement that consider the best available science to maintain wildlife connectivity for target species, superseding any consideration of recreational usage within wildlife corridors.

Specific Comments

1. The Draft RDF presents two least cost scenarios (Scenario 1 and 2) and six additional options (Candidate Project Area, or CPA Scenario 1 through 6) for the siting of renewable energy facilities. This nomenclature is confusing because there are two different siting options with the labels Scenario 1 and 2. The Summary mixes up this nomenclature [e.g., the Summary states that CPA 3 restricts land with high conservation value (page 11), while the Draft RDF states that CPA 1 restricts land with high conservation value (page 40) and CPA 3 restricts land with high carbon sequestration potential (page 42)]. The scenario nomenclature in the Final RDF and Summary should be revised to present consistent and easy to understand information.
2. The Draft RDF states that the boundary for the study is the San Diego region, which is defined by the boundaries with Orange County, Imperial County, and Mexico as well as the boundary with state waters. In order to ensure the successful implementation of the RDF goals to reduce emissions and address climate change, which will help to conserve ecosystem processes for the benefit of listed species, the Final RDF should incorporate policy guidance to ensure that energy imported from Mexico meets the regional decarbonization framework goals and conservation design principles outlined in General Comment 1. In addition, the border region between San Diego and Baja California Norte is an important core habitat area and linkage area for many sensitive species including the federally endangered Peninsular bighorn sheep (=Nelson bighorn

sheep) [Peninsular Range DPS; (*Ovis canadensis nelsoni*); bighorn sheep] and golden eagle (*Aquila chrysaetos*), and potential impacts to these species should be avoided and minimized to the maximum extent practicable.

3. CPA 1 (page 31 and 40) is intended to be the alternative that sites renewable energy facilities to avoid high conservation value land within San Diego County. However, CPA 1 (and most of the other CPAs) exclude rooftop solar due to high cost. With rooftop solar excluded, the County concludes that it is not possible to meet regional energy demands while avoiding high conservation value land. We recommend that the Final RDF include additional CPA Scenarios restricting land with high conservation value in both San Diego and Imperial Counties, with and without rooftop solar, to provide a range of broader scenarios that allow for the avoidance of areas with high conservation value.
4. The Draft RDF (page 32) estimates a region-wide rooftop solar potential capacity of approximately 3,360 Megawatt, Alternating Current (MW AC). With an assumed 20 percent capacity factor, this corresponds to 5,930 Gigawatt hour (GWh) annual generation region-wide, or 12 percent of estimated 2050 electricity demand. However, other estimates of rooftop photovoltaic potential for the San Diego Region are significantly higher (e.g., 4,691 MW, or 10,244 GWh; Anders and Bialek 2006). The Final RDF should include an explanation of why this estimate is lower than other regional estimates for region-wide rooftop solar potential capacity.
5. The Draft RDF (page 36) states that the results of the primary, least-cost site selection scenarios cluster largely around Jacumba Hot Springs in the southeast and Borrego Springs in the northeast parts of unincorporated San Diego County. Jacumba Hot Springs is identified as an essential connectivity area within the South Coast Ecoregion (Spencer *et al.* 2010; California Essential Habitat Connectivity Project). In addition, the Jacumba Hot Springs area supports populations of the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*; Quino), and State species of special concern, the California glossy snake (*Arizona elegans occidentalis*). Species of concern that may occur in the vicinity of Borrego Springs are the federally threatened and state endangered Peirson's milkvetch (*Astragalus magdalenae* var. *peirsonii*) and the flat-tailed horned lizard (*Phrynosoma mcallii*). Concentrating the green energy footprint on urban rooftops and infill areas would minimize impacts to these sensitive resources.

The California glossy snake is sensitive to nighttime lighting and persists in limited areas of the County that minimize nighttime lighting. Borrego Springs is an International Dark Sky Community, and the lack of development in Jacumba Hot Springs has similarly enabled this area to maintain its dark skies. The Draft RDF proposal to concentrate the County's green energy development footprint within communities that are making a significant effort to limit energy consumption and nighttime lighting extends the impact of energy consumption into these remaining habitat refugia for species that are sensitive to nighttime lighting. We recommend that the Draft RDF be revised to incorporate policies to protect these habitats from this disproportionate impact.

6. We recommend that the County promote potential decarbonization tools that also minimize impacts to high conservation value lands. The Workforce Recommendations (pages 6, 30) recommends supporting models of distributed solar that are community scale rather than on individual homeowner's roofs, to lower the cost of energy generation, and to facilitate contracting models that can require labor standards in an effort to maintain high paying jobs during the transition from fossil fuels to green energy. The documentation provided does not include data to support the claim that community scale solar jobs generally pay more, or provide stable long-term jobs, or employ local residents. It is also not clear why the County could not adopt policies on any promotions for individual homeowner rooftop solar that promote labor standards, similar to what is proposed for partnerships with Transportation Network Companies (TNCs) on page 8 of the Workforce Recommendations.

We appreciate the County's proposal to reduce emissions and address climate change, which will help conserve ecosystem processes for the benefit of listed species, and the opportunity to comment on the Draft RDF. If you have any questions regarding this letter, please contact [Sally Brown](#)¹.

Sincerely,

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