CLEAN ENERGY ALLIANCE
COMMUNITY ADVISORY COMMITTEE SUBCOMMITTEE REPORT
November 12, 2026

Subcommittee Name: New Technologies

Subcommittee Members:

Member: Ann Feeney, Roger Davenport, Mika Nagamine, Joe Houde

Mission Statement:
Evaluate new technologies and identify possible applications for CEA

Problem Areas Identified: Need for many more local SWB installations, opportunities to use new tech such as solar windows and balcony solar. Huge opportunity to help avoid SDG&Es Golden Pacific Power Link

CAC Prioritized Recommendations to Board to Address Problem Areas:
See attached PowerPoint slide deck.

- **Slides 2&3. San Diego County residents can avoid billions of dollars of costs by rejecting GPP and deploying large amounts of SWB and other local technologies. This will also require partnerships with other organizations. Further, we can protect our fragile desert biome and regional water supplies.**
- **Slides 3&4 – Deploy balcony solar, window solar, and other local technologies**
- **Slide 5 - Develop programs to encourage use of balcony solar, e.g.**
    - **Spread the message**
    - **Offer discounts/rebates**
    - **Free upgrade to 100% clean energy**
    - **Find a grant to give free panels to those in arrears when they pay balance to current**
    - **Offer low/no interest loans for solar and heat pumps**
    - **Implement efficiency programs (Amory Lovins)**
    - **Be creative and expansive in your actions**

- **Slide 6 – Be aggressive in using local solar – use as many rooftops and parking lots as possible. Design programs to encourage local energy generation**
- **Slides 7&8 - Be creative using PPAs, V2G, VPPs, geothermal. Key goal - make GPP not only undesirable but also unneeded. Build an oceanic wind farm if needed. Ask SDG&E to fund and operate the wind farm. If they're uninterested, partner with SDCP and select a vendor.**

- **Slide 9 – Partner with UCSD's Agile Electrification Project and other research to identify best practices**
- **Slide 10 – Join a coalition to put solar over California's water delivery system. At least 13 GW of power will be generated. GPP needs 40 GW by 2035. This could be a key to stopping GPP and protecting our desert biome and water supply.**
- **Slide 11 – Partner with businesses to install large batteries and more generation.**
- **Slides 12-15 – Vista Irrigation District, the Anza Borrego Foundation, the Chaparral Institute and many other organizations have passed strong resolutions rejecting GPP. Join them! Act for our water and a natural desert! This is a great opportunity to be recognized as a key organization in San Diego County.**
- **Slide 16 – Local solar is enough**
- **Slide 17 – There will be many decisions along the path to success. Please consider this as a filter: Which of my actions protect something in my life or local surroundings that can't be rebuilt? Choose protection over money, etc.**
- **Slide 18 – Marketing ideas**
- **Slide 19 – Key Benefits: Local energy deployment, lower costs, strong partnerships and public image, and protecting our natural heritage.**
- **Slide 20 – Proposed 2027 committee**

Powers Engineering

July 25, 2025

Ricky Williams, Land Use/Environmental Planner
San Diego County Office of Sustainability and Environmental Justice
5500 Overland Ave., Suite 270
San Diego, CA 92123

Subject: Comments on National Renewable Energy Laboratory (NREL) Statement of Work (SOW), San Diego Regional Energy Study Phase 1, FIA-24-30263

Dear Ricky:

Thank you for the opportunity to comment on the May 1, 2025 NREL SOW for the San Diego Regional Energy Study Phase 1 Project. I am a board member of the Protect Our Communities Foundation (PCF) non-profit organization, the entity that raised concerns in 2022 during the Regional Decarbonization Framework (RDF) review process that ultimately led to the contract between San Diego County and NREL. I am also a consulting energy engineer and am writing this letter in that capacity.

The principal PCF concern was that the very low distributed energy resources (DER) estimate in the draft RDF would necessarily result in the County's decarbonization efforts being directed at remote, large-scale renewable resources. I applaud Supervisor Desmond for taking the lead in pursuing more detailed information on the DER potential in San Diego County. This letter is intended to provide NREL with PCF's "state of knowledge" of DER potential in San Diego County to inform NREL's efforts under FIA-24-30263. The recommendations are provided by relevant task in the SOW.

Task 3. Regional Energy Landscape, and Distributed Solar and Energy Storage Baseline

"*Analysis will summarize remaining rooftop, parking lot, and other infill capacity that could support future projects to maximize energy production in developed spaces.*"

Rooftop solar: I highly recommend that the Google Project Sunroof estimate for the solar potential of San Diego County residential and commercial rooftops serve as the point-of-departure for NREL's technical potential estimate for rooftop solar in San Diego County. Google Project Sunroof estimates the San Diego County rooftop solar potential at 41,200,000 megawatt-hours (MWh) per year, with a maximum installed capacity of 27,500 MW_{dc} of rooftop solar.[1]

[1] Google Project Sunroof, San Diego County rooftop solar potential, accessed July 24, 2025: https://sunroof.withgoogle.com/data-explorer/place/ChIJHWD_IzDr24ARKAeA6yv9DTU/.

Parking lot solar: A coarse estimate of parking lot solar potential in San Diego County is 4,400 to 8,000 MW_{dc}, equivalent to approximately 6,600,000 MWh to 12,000,000 MWh per year.[2]

Infill ground-mounted solar: NREL has previously estimated an in-fill groundmounted solar potential for California of 111 GW (111,000 MW_{dc}).[3] San Diego County is approximately 10 percent of California's population. This translates into an infill ground-mounted solar potential for San Diego County of approximately 11,000 MW_{dc}. This further converts to a solar energy generation potential of 16,500 MWh per year.[4]

Task 5. Quantify Costs and Co-impacts of Selected DERs

Task 5.2 Contractor will provide a qualitative summary outlining transmission and infrastructure needs to meet the San Diego region's energy demand. This summary will incorporate information from existing San Diego Gas & Electric's (SDG&E) transmission system plans and other regional and national transmission planning studies in comparison with DER baselines and projections identified in Task 3.

I would urge caution in assuming that SDG&E transmission system plans will be realized if the County were to pursue a renewable energy strategy built on maximizing DERs. The assumption that new DERs will include battery storage would largely eliminate the need for new transmission or distribution infrastructure to achieve 100 percent clean energy. This was the finding in a 2017 California Public Utilities Commission (CPUC) consultant report that evaluated the grid impact of the requirement that all new California residential construction from 2020 onward include rooftop solar. The report determined that incremental grid system upgrades would be unnecessary if new residential solar installations included battery storage.[5]

Task 6. Coordination, Communication and Community Engagement

Task 6.1. Contractor will coordinate, facilitate, and create content for at least three (3) meetings with Subject Matter Experts (SMEs) to inform and provide feedback on various project components, as directed by the Sponsor. The Contractor will identify relevant SMEs for these virtual meetings, as directed by the Sponsor. Relevant SMEs could include staff from other Sponsor' departments, investor-owned utilities, community choice aggregators, or regional and local agencies.

I recommend that public interest organizations involved in the RDF process also be included in the SME meetings. The public interest organizations should include at a minimum: PCF, the Utility Consumers' Action Network, Climate Action Campaign, and San Diego 350.

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[2] Time, *The Overlooked Solar Power Potential of America's Parking Lots*, December 8, 2022: https://time.com/6239651/solar-parking-lots-france-us/. US range of parking lot solar potential, 442 GW to 800 GW. San Diego County is approximately 1 percent of US population (3.3 million versus 340 million). Assume San Diego County parking lot solar potential is 4.4 GW (4,400 MW_{dc}) to 8 GW (8,000 MW_{dc}). Assume 1,500 MWh of solar generation per MW_{dc}. San Diego County parking lot solar generation potential is 6,600 to 12,000 MWh per year.

[3] NREL, *U.S. Renewable Energy Technical Potentials: A GIS-Based Analysis*, July 2012, Table 2, p. 10: https://docs.nrel.gov/docs/fy12osti/51946.pdf.

[4] 11 GW x 1,000 MW/GW x 1,500 MWh/MW = 16,500,000 MWh.

[5] GNV GL, *Residential Zero Net Energy Building Integration Cost Analysis*, October 18, 2017, p. xv: https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/1/6442455013-10007451-hou-r-02-d-zne-building-integration-costs-2017-10-18-final.pdf,

Thank you for this opportunity to comment on the NREL SOW for the San Diego Regional Energy Study Phase 1 Project.

Best regards,



Bill Powers, P.E.

Board member, Protect Our Communities Foundation

cc:

Supervisor Jim Desmond
Supervisor Monica Montgomery-Steppe
Supervisor Terra Lawson-Remer
Supervisor Paloma Aguirre
Supervisor Joel Anderson
Eden Brukman, Chief Sustainability Officer

Fw: New Climate TRACE analysis quantifies the emissions benefit of COP31 targets

From: Joe Houde joe@ecinstitute.com
To: Ana Alarcon aalarcon@thecleanenergyalliance.org, Ann Feeney feeney@scripps.edu, Mika Nagamine mika.nagamine@gmail.com, Roger Davenport solarguy@cal.berkeley.edu
Sent: Friday, November 13 at 12:23 PM

Hi,
Today's email supports our argument that we need massive local clean energy. Please share with our committee report.
Thanks,
Joe

From: Climate TRACE <coalition@climatetrace.org>
Sent: Friday, November 13, 2026 1:00 AM
To: Joe Houde <joe@ecinstitute.com>
Subject: New Climate TRACE analysis quantifies the emissions benefit of COP31 targets

CLIMATE TRACE

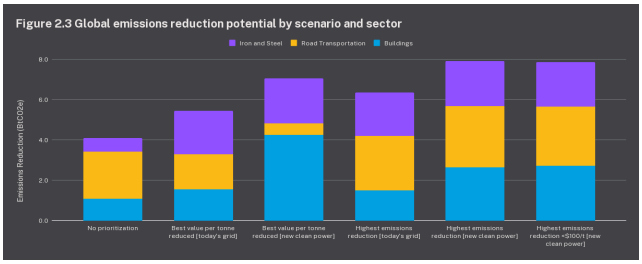
Dear Joe,

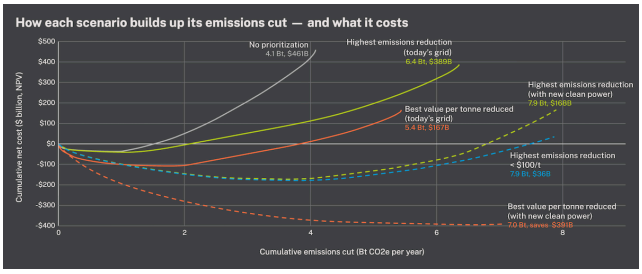
Meeting the electrification, waste, and buildings pledges at the center of the COP31 Action Agenda will significantly cut global greenhouse gases — but without a targeted, data-driven strategy, billions of tonnes of emissions reductions could be left on the table.

Using asset-level data from over 901 million emitting sources and 215 commercially deployable solutions, our new report, *Aiming Higher: The Additional Emissions Possibilities Presented by the COP31 Targets*, pinpoints exactly where and how leaders can get the biggest

climate and public health return on their investments.

Coalition cofounders Al Gore and Gavin McCormick discussed these findings and other perspectives in a presentation today on the COP31 stage. You can watch the recording on the UNFCCC YouTube channel here.





Key takeaways from the analysis:

- **Clean power doubles the impact:** Achieving the COP31 35x35 electrification target without prioritization cuts global emissions by 7% (4.1 billion tonnes CO_2e/year). Pairing electrification strategies with new clean power nearly doubles those cuts to 13.7% (7.9 Bt CO_2e/year) — for as little as one-twentieth the cost per tonne.
- **Grid context matters:** Electrifying vehicles and buildings on grids still reliant on coal or gas can backfire and offset emissions gains. In buildings alone, pairing electrification with clean power cuts 50% more emissions than electrifying on today's grid, and reduces energy demand 10x more than building envelope efficiency measures alone.
- **Massive public health co-benefits:** Reaching the 35x35 goal could slash fine particulate pollution (PM2.5) from buildings, transportation, and steel by over 60% globally — and up to 80% in developing nations. (Bonus: You can track how PM2.5 travels from major point sources in real

time using our industrial air pollution forecasts.)

- **Low-cost methane wins in waste:** Halving waste growth cuts 80.7 Mt CO_2e off projected disposal emissions, but covering unmanaged landfills can double those reductions at just one-tenth of current waste-management costs.



“Pursuing these goals without a plan is like trying to cook a meal with all the ingredients but no recipe. You end up with something on the table, but it’s not the meal you need to fuel you through the end of the day. We have the solutions we need to cut emissions. What leaders need now is the recipe that identifies the combination of locations and actions needed to deliver the best outcome. Climate TRACE data show us precisely where to direct action for maximum impact. Now leaders must act on it.”

— Climate TRACE co-founder and former U.S. Vice President Al Gore

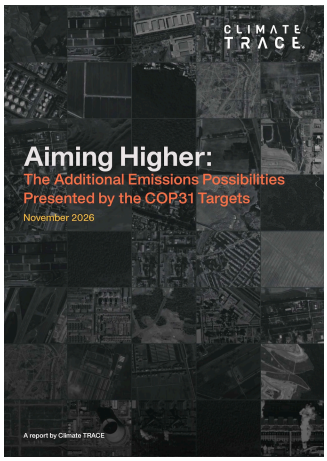
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"Our asset-level tracking has uncovered so many ways where execution dictates impact. If governments make smart decisions about how to meet these goals, there is now tremendous opportunity to double their climate progress while greatly slashing public health burdens — all

at a lower net cost."

— Climate TRACE co-founder Gavin McCormick



- Read the press release and key takeaways summary
- Direct download a PDF of the full report
- Watch Climate TRACE's COP31 presentation

Sincerely,
The Climate TRACE team

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