

**CLERK OF THE BOARD OF SUPERVISORS
EXHIBIT/DOCUMENT LOG**

MEETING DATE & AGENDA NO. 04/10/2024 #10

STAFF DOCUMENTS (Numerical)

No.	Presented by:	Description:
1.		
2.		
3.		
4.		

PUBLIC DOCUMENTS (Alphabetical)

No.	Presented by:	Description:
A.	Lori Saldana	9page document
B.		
C.		
D.		
E.		
F.		
G.		



Protect Our Communities
Foundation

April 10, 2024

Chair Nora Vargas and Members of the Board of Supervisors
1600 Pacific Highway, Room 335
San Diego, California 92101

HAND DELIVERED

Re: Agenda Item 10,
April 10, 2024 Board of Supervisors Meeting

Chair Vargas and Members of the Board,

The Protect Our Communities Foundation (PCF) applauded the efforts of Supervisor Jim Desmond in bringing forward Agenda Item 09 at the May 24, 2023 Board of Supervisors meeting nearly one year ago. The need for “a better understanding of local conditions relating to existing residential, commercial and other infill renewable energy generation, with an emphasis on existing solar, including “an analysis of remaining rooftop and infill solar capacity in order to provide information that will inform and guide the Board in our decarbonization efforts,”¹ has only increased over the past year. However, despite the Board’s May 24, 2023 direction to staff to issue a solicitation for the necessary study and return to the Board with an update within six months, staff wholly failed to initiate any competitive procurement process.

Item 10 before the County today ignores the Board’s previous direction to staff to issue a solicitation for the necessary study. Additionally, the Item has not been presented with sufficient information to ensure that the County will in fact be guided by information “reflective of local reality” that “focuses on ratepayer control over their energy needs” and “the wellbeing of every community in the region, for both existing and future generations”² as the County intended when it issued its directives to staff last year to issue solicitations. No statement of work has been provided so that the Board can ascertain the ramifications of approving the single source contract that the Board is asked to approve today in conflict with its prior directives.

¹ Desmond Agenda Item 09 for May 24, 2023, p. 2.

² Desmond Agenda Item 09 for May 24, 2023, p. 2.



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The County should not approve Item 10 tomorrow. Instead, the County should (1) require staff to follow its May 24, 2023 directive to issue a solicitation for the much needed work; and (2) should not approve any contract without an adequate statement of work that incorporates an opportunity for stakeholder feedback and responses.

I. The County Should Direct Staff to Follow its May 24, 2023 Directive to Issue a Solicitation.

The County's past failures to adhere to its competitive procurement rules are currently being litigated.³ The County should not authorize yet another single source contract for substantially the same work that UCSD's School of Global Policy and Strategy was contracted to perform. As the County is already aware, numerous other entities could provide the services called for. Instead of adopting Item 10, the County should require its staff to following its May 24, 2023 direction to issue a solicitation:

In accordance with Section 401, Article XXIII of the County Administrative Code, authorize the Director, Department of Purchasing and Contracting to issue a solicitation or solicitations for a study of renewable energy generation, transmission, distribution, and storage capacity in the San Diego region that considers resiliency from power outages, economic benefits and costs, and local community context, and upon successful negotiations and determination of a fair and reasonable price, award contracts for a term of two years, with two option years and up to an additional six months if needed, and to amend the contracts as needed to reflect changes to services and funding.⁴

Notably, the Board letter omits any reference to the Board's May 24, 2023 directive "to issue a solicitation or solicitations" for the necessary study. Nor does the Board letter include any of the proposed findings that would be necessary to properly approve a single source contract. The County must follow Board Policy A-87 which requires the County to competitively procure the services necessary to perform the Board-directed study.

³ Please see attached Petition for Writ of Mandate.

⁴ May 24, 2023 Statement of Proceedings, The Minutes of the Board of Supervisors Regular Meeting Planning and Land Use Matters, County of San Diego, p. 31.



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II. The County Should Not Approve Any Contract Without An Adequate Statement of Work That Includes a Mechanism to Incorporate Stakeholder Feedback.

Additionally, no contract should be awarded without first ensuring an unbiased statement of work. Here, any statement of work for the program should be consistent with the Board's 2035 decarbonization directive⁵ and should include a process for stakeholder feedback and responses. The attached Appendix includes specific issues that should be included in a statement of work designed with the public interest in mind.

Adequately accounting for the greenhouse gas emissions reduction potential and other benefits of rooftop and parking lot solar, and the high costs of developing transmission lines needed for using power generated from remote, utility-scale renewable energy projects – if done correctly - will allow the County to ensure that its plan for the region reduces greenhouse gas emissions as quickly as possible and to the extent possible, will benefit communities of concern, and will provide maximum mitigation of adverse environmental impacts including climate change, land use, and human health impacts.

Kind regards,

Lori Saldaña, President
Bill Powers, P.E., Secretary
Michael Pinto, PhD, Treasurer
Dianne Jacob, Director
Denis Trafecanty, Director

⁵ Please see attached letter dated March 31, 2023 from PCF re Draft Implementation Playbook.



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Attachments (4) submitted via email only (PublicComment@sdcounty.ca.gov;
District1community@sdcounty.ca.gov; jim.desmond@sdcounty.ca.gov;
joel.anderson@sdcounty.ca.gov; Terra.Lawson-Remer@sdcounty.ca.gov;
Monica.MontgomerySteppe@sdcounty.ca.gov)

- (1) Letter dated March 31, 2023 from PCF to Board of Supervisors re draft Implementation Playbook, and attachments thereto;
- (2) Attachment 1: Verified Petition for Writ of Mandate;
- (3) Attachment 2: Center for Biological Diversity, *Roof-top-Solar Justice: Why Net Metering is Good for People and the Planet and Why Monopoly Utilities Want to Kill It* (March 2023);
- (4) Attachment 3: Synthesis Report of the IPCC Sixth Assessment Report (AR6) Summary for Policymakers (March 20, 2023).

APPENDIX

Resource documents:

1. August 2022 Final Technical Report (TR): Chapter 2, Chapter 7, Table 7.1 (Electricity Generation), p. 267, and Appendix A, pp. 457-471.
2. May 20, 2022 PDF comments on Draft TR deficiencies (pdf pp. 43-54): https://www.sandiegocounty.gov/content/dam/sdc/lueg/regional-decarb-frameworkfiles/2022_comments_final.pdf
3. January 25, 2023 PDF PowerPoint on TR deficiencies: <https://tinyurl.com/mr2xpj9b>
4. February 27, 2023 Petition for Writ of Mandate re TR deficiencies: <https://tinyurl.com/bddfsuf4>
5. Clean Coalition, *San Diego Solar Siting Survey*, September 2019: https://clean-coalition.org/wp-content/uploads/2019/09/San-Diego-Solar-Siting-Survey-Final-Summary-Report-09_wb-9-Sep-2019.pdf
6. Clean Coalition, *City of San Diego Draft Final Feed-In Tariff Design*, September 2019: https://clean-coalition.org/wp-content/uploads/2019/09/San-Diego-Final-FIT-Design-Recommendations-31_wb-9-Sep-2019.pdf
7. NREL, 2020 Annual Technology Baseline (xls spreadsheet, attachment)

- I. **New transmission capacity capital and delivery costs** – The TR states that increasing transmission capacity by 2,000 MW will be sufficient to accommodate additional electricity transmission between San Diego and Imperial Counties (p. 31).

Confirm That:

- a. The TR identifies a new transmission capital cost of \$3.9 billion (p. 267) to deliver solar and geothermal power from Imperial County to San Diego County load.
- b. “CREZ” means “Competitive Renewable Energy Zone”.
- c. Imperial County and Eastern San Diego County are identified together as the “Greater Imperial CREZ” by the state.⁶
- d. Chapter 2, Appendix 2.F, Table 2.F, p. 63, lists seven proposed transmission projects. Five of these projects are “Non-CREZ” transmission projects located in or near coastal San Diego County locations.
- e. Table 2.F lists one of these “Non-CREZ” transmission project as the “Internal San Diego reconductoring” project with a capital cost of \$89 million.
- f. Table 2.F lists two Imperial County transmission/transformer projects that total ~\$3.9 billion, that together increase renewable energy “deliverability” to load centers by over 1,800 MW.⁷

⁶ Brewster Birdsall et al., *Senate Bill 350 Study Volume IX: Environmental Study Prepared for California ISO*, July 8, 2016, p. 6 (Figure 1-1. Competitive Renewable Energy Zone (CREZ) Boundaries): <https://www.caiso.com/Documents/SB350Study-Volume9EnvironmentalStudy.pdf>.

⁷ New Imperial Valley - Serrano (Orange County) 500 kV line, \$3,680 million (1,412 MW increase in deliverability from Imperial County); New Imperial Valley 500/230 kV Bank at new substation, \$214 million (400 MW increase in deliverability from Imperial County).

- g. The cost per megawatt-hour (MWh) of renewable energy delivery over the \$3.9 billion transmission project can be determined by scaling from the known capital and annual cost, and renewable energy power flow, over SDG&E's existing 500 kV Sunrise Powerlink transmission line.⁸

Evaluate:

- h. Which, if any, of the transmission projects listed in Chapter 2, Appendix 2.F, Table 2.F are technically capable of accommodating a 2,000 MW increase in electricity transmission between San Diego and Imperial Counties.
- i. Whether and to what extent the "Internal San Diego reconductoring" Non-CREZ project can increase renewable energy transfer between Imperial County and San Diego County load.
- j. The transmission cost "adder" for any transmission projects listed in Chapter 2, Appendix 2.F, Table 2.F that are technically capable of accommodating a 2,000 MW increase in electricity transmission between San Diego and Imperial Counties.
- a. For reference, The Protect our Communities Foundation presented the following calculation of the transmission cost adder of the \$3.9 billion transmission project identified in Table 2.F:

The cost adder of the new San Diego – Imperial Valley transmission line with transformer capacity project, in dollars per megawatt hour, is calculated first by ascertaining the annual cost of the project, and then by dividing the annual cost of the project by the annual potential generation of the line: \$3.894 billion [estimated project cost] x 0.1349⁹ [new transmission line capital recovery factor] = \$525 million/yr [annual cost]; \$525 million/yr [annual cost] ÷ 4,119,351 MWh/yr¹⁰ [annual potential generation] = \$127/MWh.

⁸ The 500 kV Sunrise Powerlink is the most recently constructed SDG&E 500 kV line (online 2012). It was approved to increase the delivery of renewable energy from Imperial County to San Diego County demand centers. See D.08-12-058, December 18, 2008:

https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/95750.PDF.

⁹ The new transmission line capital recovery factor has been extrapolated from SDG&E's Sunrise

Powerlink application before the California Public Utilities Commission: \$254 million/yr [annualized cost] ÷ \$1.883 billion [total cost] = 0.1349/yr, with \$1.883 billion being the final Sunrise Power Link cost and \$254 million/yr being the annualized cost of Sunrise Power Link: (\$1.883 billion/\$1.265 billion) x \$164 million/yr + \$10 million/yr operations and maintenance = \$254 million/yr. (See D.08-12-058, p. 293 [final Sunrise Power Link cost: \$1.883 billion]; A.06-08-010, SDG&E Application Chapter IV (August 4, 2006), p. V-9 [original capital cost = \$1.265 billion]; *id.* at p. V-11 [\$164 million/yr annualized capital over 40 years + \$10 million/yr operations & maintenance].)

¹⁰ Extrapolated production of 1,812 MW of solar and wind generation interconnected to new San Diego –

- k. What changes to Chapter 2 of the TR, if any, are necessary to reflect the results of this evaluation.

II. Rooftop and parking lot solar potential – TR identifies 2.7 billion square feet (61,000 acres) of usable residential and commercial solar rooftop potential, and converts this into 3,360 MW_{ac} of solar potential (without calculations showing the conversion).

Confirm That:

- a. The conversion factor applied by Southern California Edison of roof area to solar electric output is 125,000 square feet per MW_{dc}.^{11,12}
- b. The “direct current-to-alternating current” conversion factor applied by Southern California Edison is 0.90.¹³
- c. 2.7 billion square feet of solar potential equals 21,600 MW_{dc} using the utility conversion factor.
- d. 2.7 billion square feet of solar potential converts to 19,440 MW_{ac} using the utility conversion factor.
- e. Google Project Sunroof, using a number of documented assumptions that limit rooftop solar potential, calculates a residential and commercial rooftop solar potential for San Diego County of 14,700 MW_{dc} (13,200 MW_{ac}).
- f. The TR excludes commercial parking lots from the rooftop solar potential calculation.
- g. San Diego County parking lot solar potential ranges from a low of 3,300 MW_{ac} (25% coverage) to 7,900 MW_{ac} (60% coverage).
- h. San Diego County has achieved 60% coverage in practice on its own commercial parking areas.

Imperial Valley transmission line: (1,812 MW [added generation identified in the [Technical Report](#) at p. 63] / 1,264 MW [actual renewables capacity connected to Sunrise Power Link]) x 2,873,543 MWh/yr [Sunrise Power Link annual production] = 4,119,351 MWh/yr. (R.20-08-020, Exhibit [PCF-24](#) [Powers Rebuttal Testimony], p. 37; Exhibit [PCF-60](#)).

¹¹ SCE is the only California IOU to propose a utility-scale commercial rooftop solar project. See the CPUC press release of the approval of this 500 MW project:

https://docs.cpuc.ca.gov/published/News_release/102580.htm.

¹² SCE A.08-03-015, Testimony, March 27, 2008, p. 26: “a crystalline module will generate approximately 12.3

9 W/sq ft.”; p. 32: “Generally, a 1 MW array employing crystalline modules will require 125,000 square feet of roof space.”

¹³ Ibid, p. 1. “Based on sample calculations, the conversion factor of 0.90 will convert from MW dc to MW alternating current (ac) using the California Energy Commission’s ac MW conversion (i.e., multiply MW dc by 0.90 to obtain MW CEC-ac Rating).”

Evaluate:

- i. The San Diego County residential and commercial rooftop solar potential, expressed as MW_{ac}.
 - j. What changes to the TR, if any, are necessary to reflect this commercial rooftop solar potential.
- III. **Commercial rooftop solar cost** – The TR assumes a “levelized cost of energy” (LCOE) for commercial rooftop solar of \$92/MWh referenced from a Clean Coalition City of San Diego solar siting survey¹, while relying on National Renewable Energy Laboratory (NREL) “Annual Technology Baseline” LCOE values for utility-scale solar and wind power capital cost and LCOEs (p. 25).

Confirm That:

- a. The Clean Coalition City of San Diego solar siting survey includes no commercial solar LCOE data.
- b. The companion Clean Coalition City of San Diego feed-in tariff design proposal (not referenced in the TR) includes proposed feed-in tariff pricing for commercial rooftop solar.
- c. A feed-in tariff is a fixed contract price, not a LCOE.
- d. None of the commercial rooftop feed-in tariffs listed in the Clean Coalition feed-in tariff design proposal equals \$92/MWh.
- e. The TR relies on the NREL ATB for utility-scale solar and wind power capital cost and LCOE (p. 25).
- f. The TR relied on the 2020 NREL ATB for utility-scale solar and wind cost.
- g. NREL publishes a LCOE for commercial rooftop solar in addition to utility-scale solar and wind power.
- h. The NREL 2020 LCOE for commercial solar in good sun areas like San Diego is \$49/MWh.¹⁴

Evaluate:

- i. The cost of commercial rooftop solar in San Diego County for the base year, expressed as \$/MWh.
- j. What changes to the TR, if any, are necessary to reflect this cost of commercial rooftop solar.

¹⁴ NREL, *U.S. Solar Photovoltaic System and Energy Storage Cost Benchmark: Q1 2020*, January 2021, p. 102 (pdf p. 119), Attachment B [Commercial Rooftop (200 kW), High resource (CF 20.4%), ITC]: <https://www.nrel.gov/docs/fy21osti/77324.pdf>

IV. **2050 electricity demand projection** – The TR uses a 2050 electricity demand projection of 49,979 gigawatt-hours (GWh), 2.6x the 2020 demand of 19,158 GWh, with no calculations or substantial evidence to support that projection. In contrast, the California Air Resources Board (CARB), the state agency charged with decarbonization planning, has developed a statewide 2045 decarbonization projection that is only 1.76x the 2022 electricity demand.

Confirm That:

- a. The TR projects a 2050 electricity demand of 49,979 GWh.
- b. No calculations or substantial evidence are provided to support the 49,979 GWh value.
- c. CARB issued its well referenced draft May 2022 “2022 SCOPING PLAN FOR ACHIEVING CARBON NEUTRALITY” at about the same time the draft March 2022 TR was issued.¹⁵
- d. CARB issued its final Scoping Plan in November 2022.¹⁶
- e. There is no reference or citation to the draft CARB 2022 Scoping Plan in the TR.
- f. The CARB determination that electricity demand will grow by 1.76x at full decarbonization in 2045 is well supported.
- g. San Diego County demand is a subset of the CARB statewide demand projection.
- h. The TR identifies a 2020 demand of 19,158 GWh.

Evaluate:

- i. The projected 2050 San Diego County electricity demand at full decarbonization, based on substantial evidence and reliable sources.
- j. What changes to the TR, if any, are necessary to reflect this projected electricity demand.

¹⁵ CARB, *DRAFT 2022 SCOPING PLAN UPDATE*, May 10, 2022, p. 161: <https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf>. “. . . growing electricity demand of about 50 percent by 2035 to nearly 80 percent by 2045 . . .”

¹⁶ CARB, *2022 SCOPING PLAN FOR ACHIEVING CARBON NEUTRALITY*, November 16, 2022, p. 202: <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>. “. . . growing electricity demand of 26 percent by 2030 and 76 percent by 2045 . . .”