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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of LS Power Grid California,
LLC (U-247-E) for a Certificate of Public
Convenience and Necessity Authorizing
Construction of the Collinsville 500/230 kV
Substation Project

A. 24-07-018 (Filed July 30, 2024)

**PREPARED TESTIMONY OF EXPERT DEBORAH GALIMBA
ON BEHALF OF CALIFORNIA FOREVER**

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TABLE OF CONTENTS

I. INTRODUCTION3
II. CAISO TRANSMISSION PLANNING PROCESS6
III. REGULATORY DEVELOPMENTS IMPACTING THE FUTURE OF HUMBOLDT
BAY WIND PROJECTS9
IV. RECOMMENDED ALTERNATIVES28
V. CONCLUSION.....34

A. 24-07-018

DIRECT TESTIMONY OF DEBORAH GALBIMA

I. Introduction

Q. PLEASE STATE YOUR FULL NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Deborah Galimba. I am the Founder, Chief Executive Officer and Senior Consultant of X UTILITY, a Woman-Owned Small Business (WOSB), Woman Business Enterprise (WBE-NWBOC), and LGBT-Certified firm incorporated in California, with offices in Fresno, California and Honolulu, Hawaii. My office address is 1132 Draper Street, Kingsburg, California, 93631.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am serving as an expert witness on behalf of California Forever (CAF) in the above-captioned proceeding.

Q. WHAT IS YOUR PROFESSIONAL BACKGROUND?

A. I am a subject matter expert in transmission and utility-scale renewable energy siting, environmental permitting, land rights acquisition, and regulatory compliance, with over 29 years of experience in electric utility infrastructure development. I have supported wholesale and retail renewable deployments across multiple utility service territories throughout the United States, and have successfully interconnected over 2.4 Gigawatts of renewable transmission and distribution generation and new electric load service across the United States.

Prior to founding X Utility, I benefited from a 20-year career at Pacific Gas & Electric (PG&E) (from April 1995 to April 2015), where I was employed performing numerous infrastructure, transmission and interconnection-based roles, including but not limited to, the following most recent positions:

- **Senior Consulting Project Manager- Electric Generator Interconnection (July 2010 – April 2015)** – responsible for initiating, planning, executing and monitoring large (\$1 million to \$58 million) transmission capital projects, including substations, transmission line upgrades and new construction. I performed utility analyses of CAISO System Impacts Cluster Studies specific to utility network upgrades and grid integration of renewable project scopes, scheduled and budgeted execution plans. In this role, I led planning efforts,

1 coordinated study teams, determined cost allocations, managed project execution teams
2 including, substation engineering, protection, operations, land rights and permitting, testing
3 and commission, telecommunications, SCADA, metering, conduct generator substation
4 commissioning and PTO test energy release letters to CAISO. I perform, oversight of utility
5 contractors, Engineering, Procurement and Construction (EPC) vendors – scope, schedule,
6 budget and forecast Network Upgrade and Direct Assignment project cost and determine final
7 project close invoice and cost reconciliation. I also performed renewable communication
8 outreach and provided interconnection transparency to streamline CAISO grid tie
9 interconnections at distribution and transmission voltage classes.

- 10 • **Senior Project Manager - Transmission Substation and T-line (Jan 2008 - Jan 2010)** –
11 Responsible for managing individual annual capital portfolio of over \$20 million (plan, scope,
12 forecast, schedule and deliver project in service), including obtaining local land use permits
13 and CEQA clearances, including facilitating protest resolution, and managing EPC vendor
14 contracts and draft Request For Proposal (RFP) packages. I oversaw the entitlement,
15 development and implementation of numerous complex, multi-year capital
16 transmission/distribution generation, T-line and substation projects including, financial
17 forecasting, assessment of project risks, scope development, obtaining project authorization,
18 job estimate preparation, permitting compliance and coordination, construction mobilization
19 and EPC contract invoicing.

20 **Q. PLEASE DISCUSS YOUR EXPERIENCE WORKING ON TRANSMISSION AND**
21 **INTERCONNECTION PROJECTS AND ISSUES.**

22 **A.** My permitting expertise covers the full project lifecycle from initial planning, electric point of
23 interconnection site identification, environmental constraint screening through General Order (GO)
24 131-D and 131-E, CEQA permit acquisition, agency coordination, public comment protest resolution,
25 and construction feasibility compliance. As a former PG&E Senior Consulting Project Manager, I
26 helped pioneer PG&E's Generator Interconnection group and led numerous multi-agency permitting
27 processes for complex utility infrastructure projects in PG&E's service territory, including GO-131-
28 D for T-line reconductoring, utility line relocations, new substation construction, transmission ring

1 bus installations, and switching stations. I interfaced directly with local jurisdictions, state
2 environmental agencies, and federal authorities to develop mitigation and sequence permit activities
3 along the project critical path, minimizing regulatory-driven schedule and cost risk. I also was
4 responsible for overall project compliance with all applicable PG&E safety procedures, Utility
5 Standard Practices, Federal and State regulations, and Generation Tariff requirements throughout the
6 permitting, acquisition and construction phases.

7 **Q. PLEASE PROVIDE BACKGROUND ON X UTILITY.**

8 **A.** I founded X Utility in November 2014. Since its formation, I have assisted our Firm establish a
9 10+ year history of working with and on behalf of large investor-owned utilities (IOU), renewable
10 and transmission development teams, EPC vendors, municipal utilities, community choice
11 aggregators, tribal governments, cities/counties, and universities.

12 **Q. PLEASE DISCUSS YOUR EXPERIENCE AS A TRANSMISSION EXPERT IN PUBLIC**
13 **AGENCY MATTERS.**

14 **A.** I am recognized as an industry expert and have worked with federal, state, and local agencies, as
15 well as tribal entities and non-profit entities (i.e., community choice aggregators). I also have 10 plus
16 years acting as an outside counsel for the Department of Energy (DOE), including working in the
17 following capacities:

- 18 • Department of Energy (DOE), Solar Energy Technologies Office (SETO) – Technical Assistant
19 Interconnection Expert — Utility-Scale Renewable Siting and Planning; Solar program and
20 Long-Duration Energy Storage (EnergyWerx, 2024–2025)
- 21 • DOE SETO, Reviewer and Technical Assistant — Connected Community Solar Program
22 (2018)
- 23 • DOE, Grant Reviewer (2018-2021)

24 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

25 **A.** The purpose of my testimony is to highlight the shortcomings regarding the planning,
26 configuration, justification and public need for the Collinsville Substation (“Substation” or the
27 “Project”) as currently designed and sited.

28 ///

1 **II. CAISO Transmission Planning Process**

2 **Q. ARE YOU FAMILIAR WITH CAISO’S 2020-2021 TRANSMISSION PLAN AND ITS**
3 **IDENTIFICATION OF THE PROJECT?**

4 **A.** Yes. I understand that the CAISO 2021-2022 Transmission Plan identified the Project as a needed
5 upgrade to the California electric grid.

6 **Q. DID CAISO JUSTIFY THE PROJECT’S NEED BASED ON INCREASED CAPACITY**
7 **FROM HUMBOLDT OFFSHORE WIND, EVEN PRIOR TO FORMALLY IDENTIFYING**
8 **THE “HUMBOLDT-TO-COLLINSVILLE” HVDC Line”**

9 **A.** Yes. As a preliminary point, I understand that CAF has consistently raised concerns regarding
10 linkages between the Project and the proposed HVDC Line and previously recommended that the
11 EIR evaluate the \$4.59 billion, 260-mile Humboldt-to-Collinsville HVDC transmission line (the
12 “HVDC Line”) as a “component” of the Project to avoid improper piecemealing under CEQA. In the
13 FEIR’s Responses to Comments document,¹ the CPUC has stated:

14 “the Humboldt 500 kV Substation, with 500/115 kV Transformer, and a 500 kV line to
15 Collinsville [HVDC operated as AC] Project is appropriately analyzed as a cumulative project
16 in the EIR. CAISO’s determination of the need for the Humboldt substation and a HVDC line
17 connecting to the Collinsville Substation is independent of CAISO’s determination of the need
18 for the Proposed Project. For example, the Humboldt project features would support future
19 offshore wind energy development and delivery, whereas the Proposed Project is separately
20 needed in the near term for the reasons stated in the EIR and documented in the CAISO
21 Transmission Plans. Each project has independent utility. Furthermore, the assumption that
22 the HVDC line would connect to the Collinsville Substation is based on CAISO’s long-term
23 planning and grid development projections. If the Collinsville Substation were not
24 constructed, the Humboldt project could still be constructed and the HVDC line could be
25 connected to an alternate substation....]”²

26
27 ¹ FEIR, Volume II, Responses to Comments, available at
28 [ia.cpuc.ca.gov/environment/info/panoramaenv/collinsville/FEIR/Collinsville_FEIR_Vol1_RTC on DEIR.pdf](https://ia.cpuc.ca.gov/environment/info/panoramaenv/collinsville/FEIR/Collinsville_FEIR_Vol1_RTC%20on%20DEIR.pdf)
2
28 https://ia.cpuc.ca.gov/environment/info/panoramaenv/collinsville/FEIR/Collinsville_FEIR_Vol1_RTC%20on%20DEIR.pdf

1 The record, however, demonstrates a consistent and significant linkage between the Project and
2 proposed HVDC line that long predates CAISO’s identification of the HVDC line in its 2023-2024
3 Transmission Plan.

4 First, the Bureau of Ocean Energy Management (“BOEM”) published a comprehensive study
5 titled *Northern California Offshore Wind Generation and Load Compatibility Assessment* (BOEM-
6 2020-045).³ This study evaluated transmission alternatives for interconnecting Humboldt offshore
7 wind to the CAISO grid, including an option to “Build new Collinsville 500 kV Substation” and loop
8 in existing 500 kV lines, with the Collinsville connection terminating at Pittsburg Substation.⁴ The
9 study specifically analyzed an alternative connecting Humboldt offshore wind to the Vaca Dixon 500
10 kV Substation, noting that “the additional scope of work to implement the Collinsville Project would
11 bring in another 500 kV source into the bay area and serve bay area demand.” This document was
12 published in September 2020 — six (6) months *before* the CAISO Board adopted the 2020-2021
13 Transmission Plan in March 24, 2021, formally identifying the Collinsville Substation as a policy-
14 driven project.

15 Second, at its February 7, 2022 stakeholder meeting, CAISO presented the draft 2021-2022
16 Transmission Plan, which included the Collinsville 500/230 kV Substation as a recommended new
17 policy project.⁵ The presentation studied nine combinations of Humboldt offshore wind
18 interconnection alternatives, including “Humboldt offshore wind at Collinsville” as one of the three
19 transmission scenarios. The presentation also showed the offshore transmission development plan
20 with the Collinsville substation connected by HVDC Bipole to north coast offshore wind, at an
21 estimated cost of \$3.0 billion for the Collinsville option.

22 Third, CAISO published its first *20-Year Transmission Outlook* in May 2022.⁶ It identified
23 the need for 4,000 MW of north coast offshore wind (including from the Humboldt wind energy area)
24 and stated: “the ISO identified the need for two 500 kV AC lines connecting to the Fern Road 500
25

26 ³ BOEM, *Northern California Offshore Wind Generation and Load Compatibility Assessment with Emphasis*
27 *on Electricity Grid Constrains, Mitigation Measures and Associated Costs – First Synthesis Report* (Sept.
28 2020), available at <https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/environmental-science/BOEM-2020-045.pdf>

⁴ *Id.*, at 4.10, 4.62-4.71.

⁵ <https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/20-Year-transmission-outlook>

⁶ <https://stakeholdercenter.caiso.com/InitiativeDocuments/20-YearTransmissionOutlook-May2022.pdf>

1 kV substation and a HVDC line to the Collinsville 500/230 kV substation.” The document evaluated
2 three interconnection options for Humboldt Bay offshore wind, including “Option 3 (Collinsville):
3 \$3.0 B.” The document explicitly discussed an HVDC Bipole from north coast offshore wind to
4 Collinsville, with illustrations showing the Collinsville substation as a key terminus for the HVDC
5 line from the Humboldt area.

6 Fourth, Jeff Billinton, Director of Transmission Infrastructure Planning at CAISO, presented
7 “Transmission Planning for Offshore Wind” at a CEC workshop on November 10, 2022.⁷ The
8 presentation identified "Option 3: HVDC Bipole to Collinsville 500/230 kV substation" as one of
9 three interconnection options for 1.6 GW of Humboldt offshore wind.⁸ It also discussed how further
10 evaluations were being performed for interconnection of up to 14.4 GW of offshore wind in the north
11 coast, with the Collinsville substation playing a key role in the transmission architecture.

12 **Q. IN YOUR OPINION, DOES THE COLLINSVILLE SUBSTATION’S CEQA RECORD**
13 **ALSO ESTABLISH A LINKAGE BETWEEN THE PROJECT AND OFFSHORE WIND**
14 **PROJECTS IN THE HUMBOLDT WEA?**

15 **A.** Yes. Although the Humboldt WEA is not expressly referenced in the DEIR,⁹ numerous excerpts
16 therein and in other CEQA documents establish a linkage between the future offshore wind projects
17 and a need for the Project as currently proposed and sited. These include:

- 18 • **DEIR at 1-1 to 1-2** – “As a result, the need for a new 500/230 kV substation and double-
19 circuit 230 kV transmission line was identified specifically to address multiple overloads on
20 the 230 kV corridor between Contra Costa and Newark substations under N-0, N-1, and N-2
21 contingency conditions, and to provide additional supply from the 500 kV system into the
22 Bay Area to increase reliability to the area and *advance additional renewable generation in*
23 *the northern area.*” (Emphasis added).

24 ⁷ <https://efiling.energy.ca.gov/GetDocument.aspx?tn=247363&DocumentContentId=81748>

25 ⁸ See also CAISO, August 8, 2022 Blog Post titled “Offshore wind could boost California’s transition
26 towards clean-energy future” available at <https://www.caiso.com/about/news/energy-matters-blog/offshore-wind-could-boost-californias-transition-towards-clean-energy-future#:~:text=Aug%208%2C%202022%20%E2%80%94%20And%20transmission%20planning%20%2C%20analysis%20and%20approval%20are%20core%20ISO%20responsibilities%2C%20which%20is%20why%20AB%20525%20directs%20the%20CEC%20to%20consult%20with%20the%20ISO%20and>

27 ⁹ https://ia.cpuc.ca.gov/environment/info/panoramaenv/collinsville/DEIR/Collinsville_Draft%20EIR_Volume%201_November%202025.pdf

- 1 • **DEIR at 1-4** – Project Objective #5 is to “Facilitate deliverability of load from existing and
2 proposed renewable generation projects in the northern Greater Bay Area and corresponding
3 progress toward achieving California’s RPS goals in a timely and cost-effective manner by
4 California utilities.”
- 5 • **DEIR at 2-2, n. 2** – Stating that Project would entail “two new single-circuit 500 kV
6 transmission lines to be constructed and operated by PG&E would be extended to interconnect
7 PG&E’s existing Vaca Dixon-Tesla 500 kV Transmission Line to the proposed LSPGC
8 Collinsville Substation (i.e., the PG&E 500 kV interconnection lines,” and describing the
9 Vaca Dixon-Tesla 500 kV Transmission Line as “part of California’s high-voltage alternating
10 current (AC) transmission network, *facilitating bulk power transfer from the northern part of*
11 *the state to load centers in the Bay Area* and Central California.” (Emphasis added).
- 12 • **Scoping Meeting Presentation at 4** – confirming that one of the Project’s primary project
13 objectives was to “Facilitate deliverability of loan from existing and proposed renewable
14 energy projects, and progress California’s renewable energy goals.”¹⁰

15 **III. Regulatory Developments Impacting the Future of Humboldt Bay Wind Projects**

16 **Q. ARE YOU FAMILIAR WITH THE HUMBOLDT WIND PROJECTS AND BOEM’S**
17 **LEASE AWARDS?**

18 **A.** Yes. The Humboldt Wind Energy Area (WEA) is over 200 square miles located in federal offshore
19 waters off the coast of northern California's Humboldt County.¹¹ Beginning in or about 2016, BOEM,
20 in coordination with the Department of the Interior (Interior) and the State of California, started to
21 consider these offshore areas for wind energy development. BOEM then issued a Request for Interest,
22 followed by a formal Call for Information and Nominations in October 2018.¹² BOEM designated the
23 Humboldt WEA in July 2021,¹³ and issued a Final Environmental Assessment and Finding of No
24 Significant Impact for site characterization and lease of the Humboldt WEA in May 2022.¹⁴

25 _____
26 ¹⁰ DEIR, Appendix B (Scoping Report), available at
https://ia.cpuc.ca.gov/environment/info/panoramaenv/collinsville/DEIR/Collinsville_Draft%20EIR_Appendix%20B_Scoping%20Report.pdf

27 ¹¹ *Id.*

28 ¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

1 On December 6, 2022, BOEM held the first-ever offshore wind lease sale in the Pacific,
2 offering five lease areas totaling approximately 373,268 acres off central and northern California,
3 including two leases in the Humboldt WEA.¹⁵ RWE Offshore Wind Holdings, LLC (RWE) obtained
4 lease OCS-P 0561 for the Humboldt WEA, comprising 63,338 acres for \$157.7 million,¹⁶ and
5 California North Floating, LLC (a joint venture by Copenhagen Infrastructure Partners and Vineyard
6 Offshore, LLC) obtained lease OCS-P 0562, comprising 69,031 acres for \$173.8 million.¹⁷

7 To date, both entities have engaged in stakeholder meetings, but neither have completed a
8 Construction and Operations Plan (“COP”) or environmental review pursuant to CEQA or NEPA.¹⁸
9 According to RWE’s website, engineering and surveying was anticipated in 2025, followed by
10 permitting in 2026, construction in 2027, and operation in 2028.¹⁹

11 To support offshore wind development, the Humboldt Bay Harbor, Recreation and
12 Conservation District planned to develop the Humboldt Bay Offshore Wind Heavy Lift Multipurpose
13 Marine Terminal.²⁰ The project originally received a \$426 million federal grant from the U.S.
14 Department of Transportation; however, that grant was canceled by the Trump Administration in
15 August 2025 as part of a broader withdrawal of federal offshore wind funding (see immediately
16 below).²¹

17 As of the date of this testimony, I understand that offshore wind development activities in the
18 Humboldt WEA have been completely halted due to, among other things, the Administration’s
19 permitting moratorium and funding cancellations, notwithstanding ongoing stakeholder engagement
20 activities.

21 ///

22 ¹⁵ BOEM, *Canopy Offshore Wind, LLC (OCS-P 0561)*, <https://www.boem.gov/renewable-energy/state-activities/canopy-offshore-wind-llc-ocs-p-0561> (last visited May 11, 2026).

23 ¹⁶ *Id.*

24 ¹⁷ BOEM, *California North Floating LLC (OCS-P 0562)*, <https://www.boem.gov/renewable-energy/state-activities/california-north-floating-llc-ocs-p-0562> (last visited May 11, 2026).

25 ¹⁸ *Id.*

26 ¹⁹ RWE, *Humboldt Wind Farm*, <https://americas.rwe.com/our-energy/onshore-wind/onshore-wind-projects-and-locations/humboldt-wind-farm/> (last visited May 11, 2026).

27 ²⁰ Humboldt Bay Harbor, Recreation, & Conservation District, *Humboldt Bay Offshore Wind Heavy Lift Marine Terminal Project*, <https://humboldt-bay.org/humboldt-bay-offshore-wind-heavy-lift-marine-terminal-project-3> (last visited May 11, 2026).

28 ²¹ U.S. Dep’t of Transportation, *Trump’s Transportation Secretary Sean P. Duffy Terminates and Withdraws \$679 Million from Doomed Offshore Wind Projects*, <https://www.transportation.gov/briefing-room/trumps-transportation-secretary-sean-p-duffy-terminates-and-withdraws-679-million> (Aug. 29, 2025).

1 **Q. ARE YOU FAMILIAR WITH FEDERAL DIRECTIVES THAT HAVE NEGATIVELY**
2 **IMPACTED THE OFFSHORE WIND INDUSTRY, INCLUDING THE HUMBOLDT WIND**
3 **PROJECT?**

4 **A.** Yes. On January 20, 2025, President Trump signed a Presidential Memorandum titled
5 “Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing
6 and Review of the Federal Government's Leasing and Permitting Practices for Wind Projects” (the
7 “Memorandum”).²² The Memorandum invokes the President’s authority under Section 12(a) of the
8 Outer Continental Shelf Lands Act (OCSLA),²³ to withdraw all areas within the OCS from disposition
9 for wind energy leasing, effective January 21, 2025, and remaining in effect until the Memorandum
10 is revoked. The Memorandum has three principal operative provisions (i) it indefinitely withdraws
11 all OCS areas from new or renewed wind energy leasing, (ii) it directs the Secretary of the Interior to
12 conduct a comprehensive review of the “ecological, economic and environmental necessity of
13 terminating or amending any existing wind energy leases,” identify any legal bases for removal, and
14 submit a report with recommendations to the President, and (iii) it prohibits all relevant agencies—
15 including the Department of the Interior, the Department of Agriculture, the Department of Energy,
16 and the Environmental Protection Agency—from issuing new or renewed approvals, rights of way,
17 permits, leases, or loans for offshore wind projects until a comprehensive assessment of the
18 government’s current wind leasing and permitting practices is completed.

19 I understand that no timeline was provided for the completion of the comprehensive review,
20 leaving significant uncertainty for offshore wind lessees and proponents of projects ancillary to
21 offshore wind development, such as the Humboldt Bay Offshore Wind Marine Terminal.

22 **Q. ARE YOU AWARE OF ANY OTHER FEDERAL MANDATES OR GUIDANCE ISSUED**
23 **AFTER THE TRUMP ADMINISTRATION’S WIND MEMOMRANDUM?**

24 **A.** Yes. Since issuing the January 2025 Memorandum, the Trump Administration has undertaken a
25 series of additional federal actions to halt or reverse offshore wind development, including but not
26 limited to:

27 ²² <https://www.whitehouse.gov/presidential-actions/2025/01/temporary-withdrawal-of-all-areas-on-the-outer-continental-shelf-from-offshore-wind-leasing-and-review-of-the-federal-governments-leasing-and-permitting-practices-for-wind-projects/> (Jan. 20, 2025).

28 ²³ 43 U.S.C. § 1341(a).

- 1 • **January 20, 2025:** Acting Secretary of the Interior Walter Cruickshank issued Secretarial Order
2 3415, temporarily suspending the authority of DOI bureaus and offices to issue any onshore or
3 offshore renewable energy authorization.²⁴ Although Order 3415 was vacated by a federal court
4 in December 2025,²⁵ on February 17, 2026, the federal government filed a notice of appeal to
5 the United States Court of Appeals for the First Circuit.²⁶
- 6 • **July 29, 2025:** Secretary Burgum issued Order 3437, titled “Ending Preferential Treatment for
7 Unreliable, Foreign-Controlled Energy Sources in Department Decision Making,” which
8 directed the Department to eliminate any preferential treatment toward wind and solar energy
9 and mandated comprehensive reviews of all wind-related regulations, policies, and practices.²⁷
10 Order 3437 demonstrated new Secretary of the Interior Burgum’s support for President Trump’s
11 anti-offshore wind position and an effort to ensure that the Department disfavors offshore wind
12 projects in its day-to-day decision making.
- 13 • **August 1, 2025** – Secretary Burgum issued Order 3438, "Managing Federal Energy Resources
14 and Protecting the Environment," directing the Department to “optimize the use of lands under
15 its direct management” during NEPA reviews by considering the surface area footprint of
16 proposed energy projects, an approach likely to hinder permitting of wind and solar projects on
17 federal lands. The Order questions “whether the use of Federal lands for any wind and solar
18 projects is consistent with the law, given these projects’ encumbrance on other land uses, as well
19 as their disproportionate land use when reasonable project alternatives with higher capacity
20 densities are technically and economically feasible.”²⁸
- 21 • **August 5, 2025:** Interior rescinded 3.5 million acres of designated OCS Wind Energy Areas and
22 its renewable energy leasing schedule.²⁹
- 23 • **August 29, 2025:** the Administration canceled \$679 million in federal funding for 12 offshore

24 Acting Secretary of the Interior, Order No. 3415, available at <https://www.doi.gov/document-library/secretary-order/3415-temporary-suspension-delegated-authority>

25 *New York v. Trump*, No. 25-cv-11221 (D. Mass. Dec. 12, 2025).

26 https://www.climatecasechart.com/documents/trump-administration-appealed-massachusetts-district-court-order-finding-wind-energy-orders-unlawful_4549

27 Secretary of the Interior, Order No. 3437, available at <https://www.doi.gov/document-library/secretary-order/so-3437-ending-preferential-treatment-unreliable-foreign>

28 Secretary of the Interior, Order No. 3438, available at <https://www.doi.gov/document-library/secretary-order/so-3438-managing-federal-energy-resources-and-protecting>

29 90 Fed. Reg. 37386 (Aug. 5, 2025).

1 wind projects across the United States, including a \$426 million grant for the Humboldt Bay
2 Offshore Wind Terminal.³⁰

3 In addition to the above, BOEM has issued stop-work orders requiring projects to indefinitely
4 pause all development, construction, and operation activity, including against Empire Wind and
5 Revolution Wind, which were fully permitted projects at the time.³¹ In particular, on **December 22,**
6 **2025**, BOEM issued lease suspension orders to five major east coast offshore wind projects, directing
7 the suspension of all activity for 90 days for asserted national security reasons.³² Each of these orders
8 were revoked or enjoined following court intervention.³³ Relatedly, rather than defend offshore wind
9 approvals previously issued by BOEM during the Biden Administration in pending litigation, Interior
10 moved to vacate or remand those approvals back to the agency and declined to litigate.³⁴

11 Finally, notwithstanding a series of court orders rejecting the Administration's actions,
12 granting injunctions to lift stop-work orders and even vacating Secretarial Order 3415, the Trump
13 Administration has turned to financial incentives to encourage self-dismantling of the offshore wind
14 industry. Most recently this Spring, the Administration arranged buyouts whereby offshore wind
15 energy developers are paid to cancel their projects and federal leases. In **March 2026**, the
16 Administration agreed to pay nearly \$1 billion to TotalEnergies to cancel two projects off the coasts
17 of New York and North Carolina.³⁵ In **April 2026**, the Administration agreed to pay a combined \$885
18 million to cancel projects by Bluepoint Wind and Golden State Wind off the coasts of New York,
19 New Jersey, and California.³⁶

20 ///

21 ///

22 ³⁰ See Note 9, *supra* (emphasis added).

23 ³¹ Institute for Energy Economics and Financial Analysis, *Offshore wind stop-work orders are costing*
24 *consumers, delaying needed electricity*, [https://ieefa.org/resources/offshore-wind-stop-work-orders-are-](https://ieefa.org/resources/offshore-wind-stop-work-orders-are-costing-consumers-delaying-needed-electricity)
25 [costing-consumers-delaying-needed-electricity](https://ieefa.org/resources/offshore-wind-stop-work-orders-are-costing-consumers-delaying-needed-electricity) (Jan. 28, 2026).

26 ³² U.S. Dep't of the Interior, *The Trump Administration Protects U.S. National Security by Pausing Offshore*
27 *Wind Leases*, [https://www.doi.gov/pressreleases/trump-administration-protects-us-national-security-pausing-](https://www.doi.gov/pressreleases/trump-administration-protects-us-national-security-pausing-offshore-wind-leases)
28 [offshore-wind-leases](https://www.doi.gov/pressreleases/trump-administration-protects-us-national-security-pausing-offshore-wind-leases) (Dec. 22, 2025).

³³ See *Renew Northeast v. U.S. Dep't of Interior*, No. 25-cv-13961 (D. Mass. Apr. 21, 2026).

³⁴ See, e.g., *Town and County of Nantucket v. Burgum*, No. 25-cv-906 (D.D.C. Nov. 4, 2025).

³⁵ The New York Times, *Trump Administration to Pay \$1 Billion to Energy Giant to Cancel Wind Farms*,
27 <https://www.nytimes.com/2026/03/23/climate/offshore-wind-gas-trump-total.html> (Mar. 23, 2026).

³⁶ Los Angeles Times, *Trump administration paying wind developers to walk away from California offshore*
28 *leases*, [https://www.latimes.com/environment/story/2026-04-27/trump-administration-pays-wind-developer-](https://www.latimes.com/environment/story/2026-04-27/trump-administration-pays-wind-developer-to-walk-away-from-california-offshore-lease)
[to-walk-away-from-california-offshore-lease](https://www.latimes.com/environment/story/2026-04-27/trump-administration-pays-wind-developer-to-walk-away-from-california-offshore-lease) (Apr. 27, 2026).

1 **Q. ARE YOU AWARE OF ANY DELAYS OR CHANGES TO THE PERMITTING**
2 **TIMEFRAMES FOR THE HUMBOLDT WEA OR OTHER CALIFORNIA WIND**
3 **PROJECTS?**

4 **A.** I understand that BOEM was in the initial stages of preparing a draft Programmatic
5 Environmental Impact Statement (PEIS) for five California lease areas. Specifically, on November
6 2024, BOEM published a draft PEIS assessing the potential environmental impacts of commercial-
7 scale offshore wind development across all five California lease areas. A 90-day public comment
8 period was opened, originally set to close on February 12, 2025. However, virtual public meetings on
9 the draft PEIS were subsequently postponed following the change in federal
10 administration. However, BOEM postponed virtual public meetings on the draft PEIS in light of the
11 President’s Memorandum.

12 In the event a PEIS is ever finalized, circulated for public comment, and adopted by BOEM,
13 it may be subject to legal challenge from project opponents and/or environmental NGOs. Moreover,
14 if the PEIS were to ever be adopted and escape legal challenge, project-level NEPA reviews would
15 be required for individual wind projects, including the Humboldt Bay Wind Energy Project.³⁷

16 Lastly, as stated above, on April 27, 2026, the Department of Interior and, among others,
17 Golden State Wind, LLC (developer of the Morro Bay WEA) entered into the above-described Lease
18 Termination and Reimbursement Agreements.³⁸ Pursuant to the terms of its agreement, Golden State
19 Wind has at this point surrendered its offshore leases (including Lease No. OCS-P 0564) in exchange
20 for the federal Government agreement to reimburse Golden State on a “dollar-for-dollar” basis tied
21 to proof of Golden State’s new investments in qualifying fossil-fuel or conventional energy
22 infrastructure projects.³⁹

23 **Q. TO THE EXTENT THEY EVER PROCEED, WILL HUMBOLDT BAY WIND**
24 **PROJECTS REQUIRE FEDERAL APPROVALS IN ORDER TO BE CONSTRUCTED AND**

25 ³⁷ <https://www.boem.gov/renewable-energy/state-activities/california-activities#:~:text=Virtual%20public%20meetings%20on%20the%20BOEM%E2%80%99s%20draft%20PEIS%20for%20Potential%20Mitigation%20of%20Future%20Development%20of%20Wind%20Lease%20Areas%20Offshore%20California%20have%20been%20postponed%20.>

26 ³⁸ Settlement Agreement between the United States and Golden State Wind LLC, available at
27 <https://www.boem.gov/renewable-energy/state-activities/golden-state-settlement-agreementpdf>

28 ³⁹ <https://www.latimes.com/environment/story/2026-04-27/trump-administration-pays-wind-developer-to-walk-away-from-california-offshore-lease>

ENERGIZED?

A. Yes. Notwithstanding the doubtful outlook for the offshore wind projects in the Humboldt Bay WEA, such projects would require numerous federal approvals, clearances and authorizations.

As discussed above, the Humboldt WEA is located on the Outer Continental Shelf (OCS), entirely within federal waters and beyond the 3-nautical-mile limit of state jurisdiction. BOEM would be the lead federal agency for permitting and NEPA purposes, pursuant to its authority granted in the OCSLA. The central federal authorization is BOEM's approval of a Construction and Operations Plan (COP), which describes the project the developer intends to construct and operate. Before approving a COP, BOEM conducts a full National Environmental Policy Act (NEPA) review, typically through an Environmental Impact Statement (EIS). BOEM then issues a Record of Decision describing its approval, conditional approval, or denial of the project, along with any required modifications or mitigation measures. Prior to the COP phase, lessees must also submit a Site Assessment Plan (SAP) describing proposed site characterization and assessment activities, which is subject to its own BOEM review.

In addition to BOEM's approval of a COP, offshore wind projects in the Humboldt area would require numerous federal approvals, including but not limited to, those listed in **Table A** below.

Table A
List of Probable Federal Approvals Required for Offshore Wind Projects

Federal Agency	Approval	Governing Statute
BSEE (Bureau of Safety and Environmental Enforcement)	Safety and environmental oversight, compliance, and enforcement	30 CFR § 285
U.S. Army Corps of Engineers (USACE)	Section 404 Individual Permit (dredge/fill in navigable waters); Section 10 Permit (structures in navigable waters)	Clean Water Act § 404; Rivers and Harbors Act § 10
National Marine Fisheries Service (NMFS)	Essential Fish Habitat Consultation and Assessment; Incidental Take Authorization under MMPA; ESA § 7 Consultation (marine and anadromous species)	Magnuson-Stevens Act; Marine Mammal Protection Act; Endangered Species Act
U.S. Fish and Wildlife Service (USFWS)	Mandatory consultation on each project; Incidental Take Authorization for protected species (terrestrial, freshwater, and select seabirds); ESA § 7 Consultation	Endangered Species Act; Migratory Bird Treaty Act

Federal Agency	Approval	Governing Statute
U.S. Environmental Protection Agency (EPA)	OCS Air Permit (Clean Air Act requirements, including BACT and NAAQS evaluation for projects beyond 25 nm)	Clean Air Act
U.S. Coast Guard	Private Aids to Navigation (PATON) Permit	Ports and Waterways Safety Act
Federal Aviation Administration (FAA)	No-Hazard Determination to Air and Navigation	Federal Aviation Act
Advisory Council on Historic Preservation	Section 106 Consultation	National Historic Preservation Act

It is also worth noting that offshore wind projects – including those in the Humboldt WEA — would likely require a suite of state and local approvals. For example, I understand that component parts—particularly transmission cables—would need to pass through state waters, requiring a lease from the California State Lands Commission. The California Coastal Commission would also need to issue a Federal Consistency Determination under the Coastal Zone Management Act (CZMA), a Coastal Development Permit, and a Certification of Consistency. Additional permits would be needed from the Humboldt Bay Harbor, Recreation and Conservation District, Humboldt County, and the North Coast Air Quality Management District for onshore infrastructure and construction.

Q. HOW WOULD YOU CHARACTERIZE THE FUTURE PROSPECTS FOR OFFSHORE WIND PROJECTS IN THE HUMBOLDT WEA?

A. The future of utility-scale offshore wind energy projects — including those in the Humboldt WEA — remains highly uncertain, if not improbable. The Trump Administration continues to pursue new strategies to impede the industry. The Administration is unlikely to approve any new wind projects for the foreseeable future, and appeals of adverse court rulings remain pending in federal courts. Therefore, the timely development of future wind projects in California – including in the Humboldt WEA – appears entirely unachievable.

The economic consequences of the Administration’s actions have been severe on potential wind projects. Capital inflows to the renewable energy sector fell by over 36 percent in the first half

1 of 2025,⁴⁰ and major developers have announced significant workforce reductions.⁴¹ Thousands of
2 offshore wind jobs are at risk nationwide.⁴² The combination of lease freezes, permit pauses, and
3 funding cuts has eroded investor confidence, increased financing risk, delayed project timelines, and
4 raised the cost of capital for an industry that depends on long-lead, capital-intensive investments.

5 For the Humboldt project specifically, the path forward is wholly contingent on the outcome
6 of ongoing litigation, potential changes in Administration policy, and whether California's
7 leaseholders can maintain their positions through a period of extended regulatory uncertainty. While
8 the developers continue to engage with stakeholders, the project cannot advance to construction
9 without federal permits, which seem very unlikely to be granted in the current environment.

10 **Q. DOES THE OUTLOOK FOR HUMBOLDT OFFSHORE WIND PROJECTS**
11 **CONSTITUTE A CHANGE IN CIRCUMSTANCES NOT PREVIOUSLY CONSIDERED IN**
12 **CAISO TRANSMISSION PLANS AND THE PROJECT'S CEQA REVIEW?**

13 A. Yes. Based on my review of publicly available documents, disruption of the permitting
14 timeframes for Humboldt Bay offshore wind projects constitutes a substantial change in
15 circumstances that was not considered in CAISO Transmission Plans (2020 through 2025) or the
16 Project's ongoing CEQA environmental review.

17 The CAISO 2023-2024 Transmission Plan was approved by the CAISO Board of Governors
18 on May 23, 2024, just fifteen (15) months before the federal withdrawal of \$426.7 million in
19 construction grant funding on August 29, 2025. The 2023-2024 Transmission Plan identified the
20 HVDC Line as a policy-driven project.⁴³ Appendix I of the 2023-2024 Transmission Plan ("Appendix
21 I") states that need finding without qualification:

22 "[CAISO] has identified a policy-driven need for the New Humboldt 500 kV Substation with
23

24 ⁴⁰ Bloomberg, US Renewable Investments Feel 36% on Trump's Policies, BNF Says
<https://www.bloomberg.com/news/articles/2025-08-26/us-renewable-investments-fell-36-on-trump-s-policies-bnef-says> (last visited May 11, 2026).

25 ⁴¹ The New York Times, *Troubled Wind Developer Orsted to Cut 25% of Staff*,
<https://www.nytimes.com/2025/10/09/business/orsted-wind-developer-job-cuts.html> (Oct. 9, 2025).

26 ⁴² *Id.*

27 ⁴³ In May 2025, CAISO announced that it selected Viridon as the approved project sponsor to finance,
28 construct, own, operate and maintain both the New Humboldt 500 kV Substation, with a 500/115 kV
transformer, and the HVDC Line. <https://www.caiso.com/notices/2023-2024-transmission-planning-process-approved-project-sponsor-for-the-new-humboldt-500-kv-substation-with-a-500-115-kv-transformer-and-500-kv-line-to-collinsville-hvdc-operated-as-ac-and-new-humboldt-to-fern-road-500kv-line-projects>

1 500 kV line to Collinsville project as part of the overall transmission plan *to integrate the*
2 *offshore wind resources in the north coast to the rest of the CAISO system.*”⁴⁴

3 This core assumption is now implausible. Absent the huge influx of anticipated generation and
4 transmission need from offshore wind projects in the Humboldt WEA, there is no independent
5 reliability driver for the HVDC Line or the Collinsville Substation. The Substation and the
6 transmission infrastructure that feeds into it were designed, sized, and sited for one purpose: to receive
7 1.6 GW of Humboldt offshore wind generation and deliver it to the California grid by June 1, 2034.

8 Appendix I did acknowledge that, given “the inherent uncertainty with the development of new
9 technologies such as floating offshore wind,” the ISO would take steps to balance long-lead
10 transmission commitments with the pace of offshore wind development. Unfortunately, this language
11 describes technology maturation risk related to the engineering challenge of commercializing floating
12 turbines. It does not, however, describe or consider the specific scenario that has now materialized: a
13 wholesale federal policy reversal that has withdrawn federal funding, permitting and environmental
14 review commitments, and has even compensated certain offshore wind developers to exit the
15 California market. These are not the same risk category. CAISO’s general acknowledgment of
16 technology uncertainty provides no analytical basis or consideration for concluding these changed
17 circumstances as minor or inconsequential.

18 **Q. ARE YOU AWARE OF ANY FEDERAL NAVIGATION IMPROVEMENT PROJECTS**
19 **THAT COULD CONFLICT WITH THE COLLINSVILLE SUBSTATION AS CURRENTLY**
20 **SITED?**

21 **A.** Yes. The Substation, as currently sited and configured, will also conflict with the federal
22 government’s long-stated plans to dredge the Sacramento River corridor to aid marine navigation. In
23 April 2022, members of California’s Congressional delegation wrote to Governor Newsom
24 requesting that the State designate an agency to serve as the non-federal partner for the U.S. Army
25 Corps of Engineers’ proposed San Francisco Bay to Stockton Navigation Improvement Project. That
26 project, which was congressionally authorized under the Water Resources and Development Act of
27 2020, proposes to deepen the John F. Baldwin and Stockton Deepwater Ship Channels from the

28 ⁴⁴ https://stakeholdercenter.caiso.com/InitiativeDocuments/AppendixI-BOARDAPPROVED_2023-2024_TransmissionPlan.pdf

1 current -35-foot mean lower low water (MLLW) to -45-foot MLLW. The Army Corps narrowed the
2 project’s study area to a 13.2-mile length of the navigation channel from central San Francisco Bay
3 to the City of Avon — a corridor that runs directly through the Sacramento-San Joaquin Delta waters
4 adjacent to the proposed Collinsville Substation site. The project also contemplates the beneficial
5 reuse of dredged material for ecosystem restoration in the Sacramento-San Joaquin Delta.

6 Congress directed the Army Corps to complete the feasibility study for the project and, if
7 determined feasible, to proceed directly to preconstruction planning, engineering, and design.
8 Although the study was temporarily suspended in November 2020 after the Port of Stockton and
9 Contra Costa County each informed the Army Corps that they were unable to serve as cost-sharing
10 sponsors — both citing the regional scope and associated costs as prohibitive for local government
11 — the Congressional delegation’s April 2022 letter urged the Governor to designate a statewide or
12 regional state agency as the non-federal partner to allow the Army Corps to resume the study. The
13 siting of the Substation in the same tidal wetland corridor where the Army Corps proposes to conduct
14 major channel deepening and dredged material reuse activities presents an obvious physical and
15 regulatory conflict. Construction of submarine cables and substation infrastructure in this corridor
16 could interfere with future dredging operations, impede navigation channel improvements, and
17 complicate the beneficial reuse of dredged material for Delta ecosystem restoration — yet neither the
18 CAISO Transmission Plans nor the Project’s DEIR appear to have considered this conflict.

19 **Q. DOES THE ABSENCE OF 1.6 GW OF GENERATION CAPACITY FROM HUMBOLDT**
20 **OFFSHORE WIND PROJECTS INVALIDATE THE LOCATION, SIZING AND**
21 **INTERCONNECTION CONFIGURATION FOR THE COLLINSVILLE SUBSTATION?**

22 **A.** Yes. The Collinsville transmission corridor involves two legally and operationally separate
23 projects approved in different CAISO planning cycles. First, the Substation currently before this
24 Commission was identified in the CAISO 2021-2022 Transmission Planning Process. Its stated
25 purpose is to address 230 kV reliability overloads on the Contra Costa-Newark corridor and provide
26 additional 500 kV supply into the northern Greater Bay Area. The Substation’s proposed in-service
27 date is June 1, 2028, which remains highly improbable at this time, and the Project’s approved sponsor
28 agreement contemplates that LS Power will commence construction on or before June 18, 2026 —

1 which is now impossible given the scope and procedural schedule for this proceeding.⁴⁵ Second, the
2 260-mile HVDC Line identified in the CAISO 2023-2024 Transmission Planning Process is a wholly
3 separate project. It has no independent justification. Its entire purpose is to deliver 1.6 GW of
4 Humboldt offshore wind to the California grid by June 1, 2034.

5 The omission of the Humboldt wind projects and estimated sizing thereof (1.6 GW) beseeches
6 a reassessment of the transmission infrastructure (existing and new) to determine the operational need
7 and public purpose of the Collinsville Substation, as currently designed and sited. This material
8 change in circumstances mandates a reassessment of three (3) core technical questions about the
9 Substation — that neither the Application (in this proceeding), CAISO Transmission Plans, or the
10 Project’s EIR have examined:

- 11 (i) Is it prudent or necessary to keep the Substation in its proposed location?
- 12 (ii) Is the Collinsville Substation’s sizing and interconnection configuration justified by 230
13 kV transmission reliability needs alone?
- 14 (iii) Is it prudent to interconnect a substation at this location – via 4.5 miles of submarine cables
15 in environmentally-sensitive areas – to the Pittsburg location?

16
17 **Question 1: Is it prudent or necessary to keep the Collinsville Substation in its proposed**
18 **location?**

19 A. No, not without further modeling or reliability assessments which have not occurred.
20 As illustrated in the following demonstratives, the proposed location for the Collinsville Substation
21 was selected for the ultimate configuration: providing an available 500/230 kV interconnection
22 point on the Vaca-Dixon to Tesla 500 kV backbone. Please see supporting images below.

23 ///

24 ///

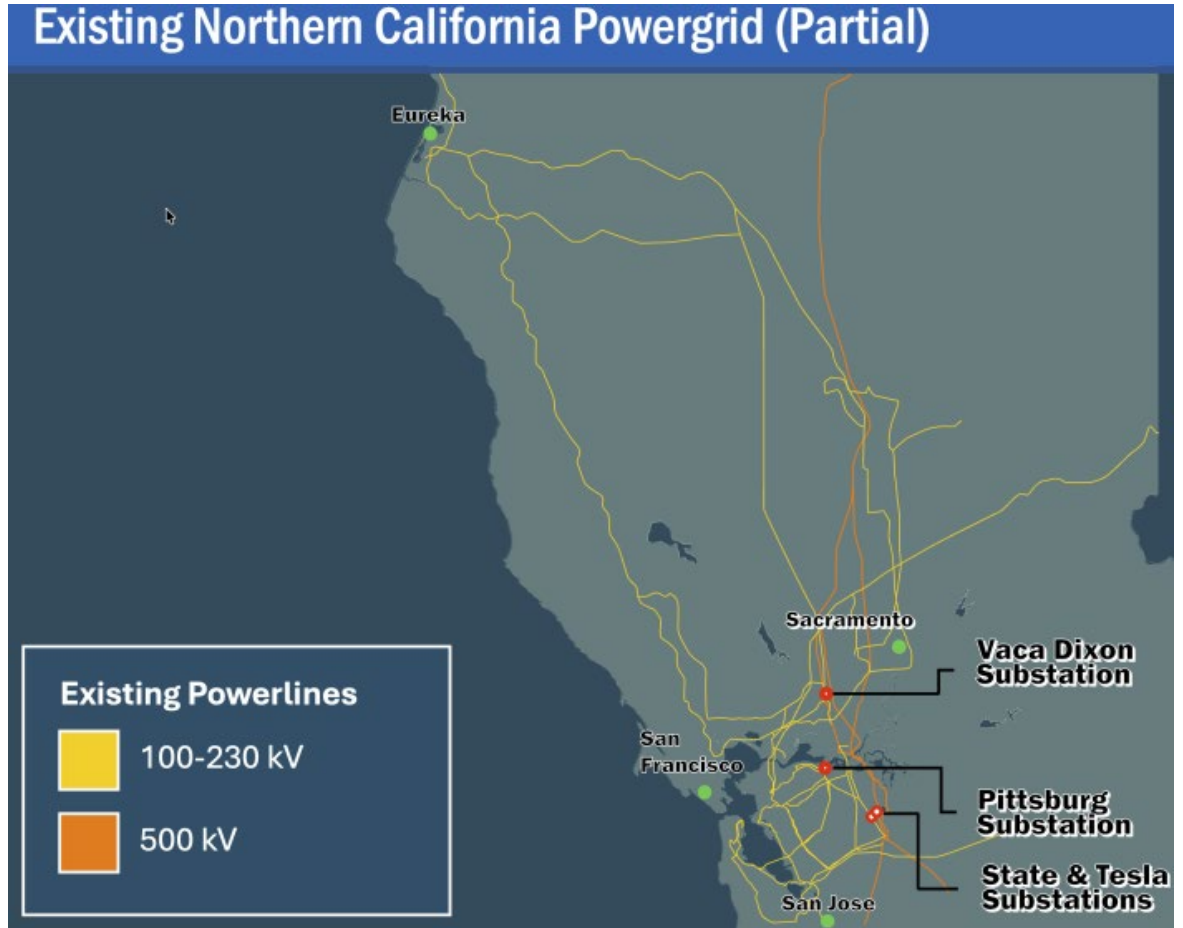
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28 ⁴⁵ Application, Appendix A (Approved Project Sponsor Agreement – Redacted), at Appendix B (Project Milestones), available at <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M536/K706/536706066.PDF>

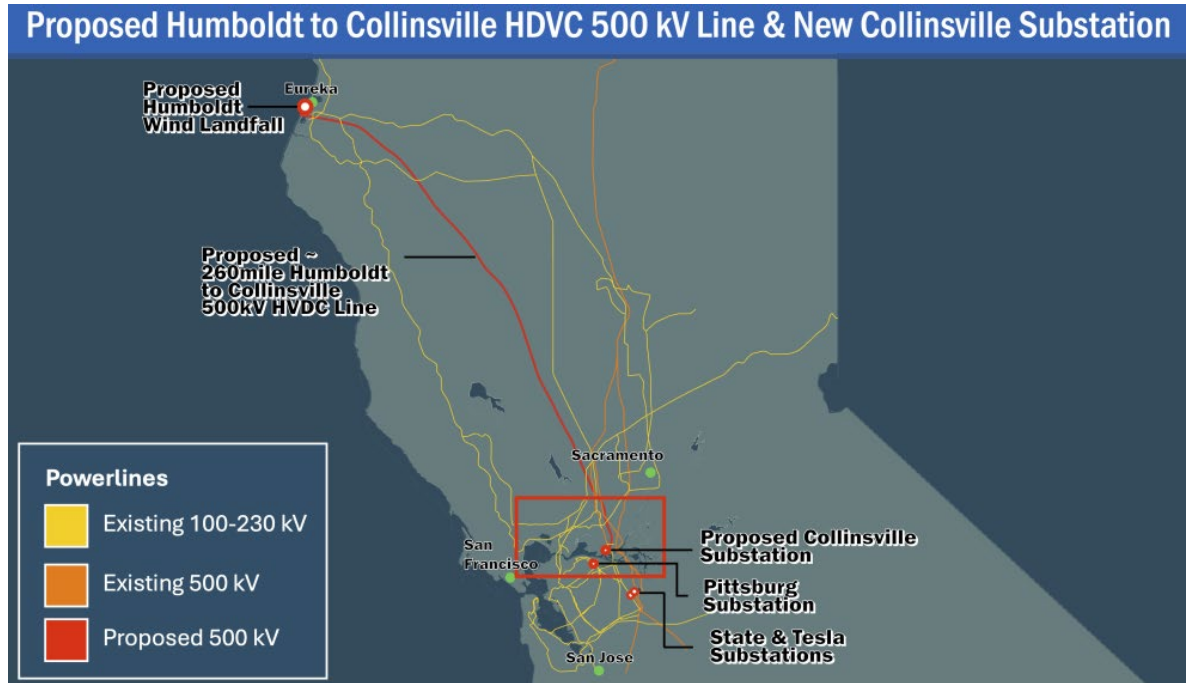
Image 1 (major relevant components of the northern California electrical transmission grid as it currently exists. These include the existing 100-230 kV and 500 kV lines and four substations on or in close proximity to the Vaca Dixon-Tesla 500 kV line)



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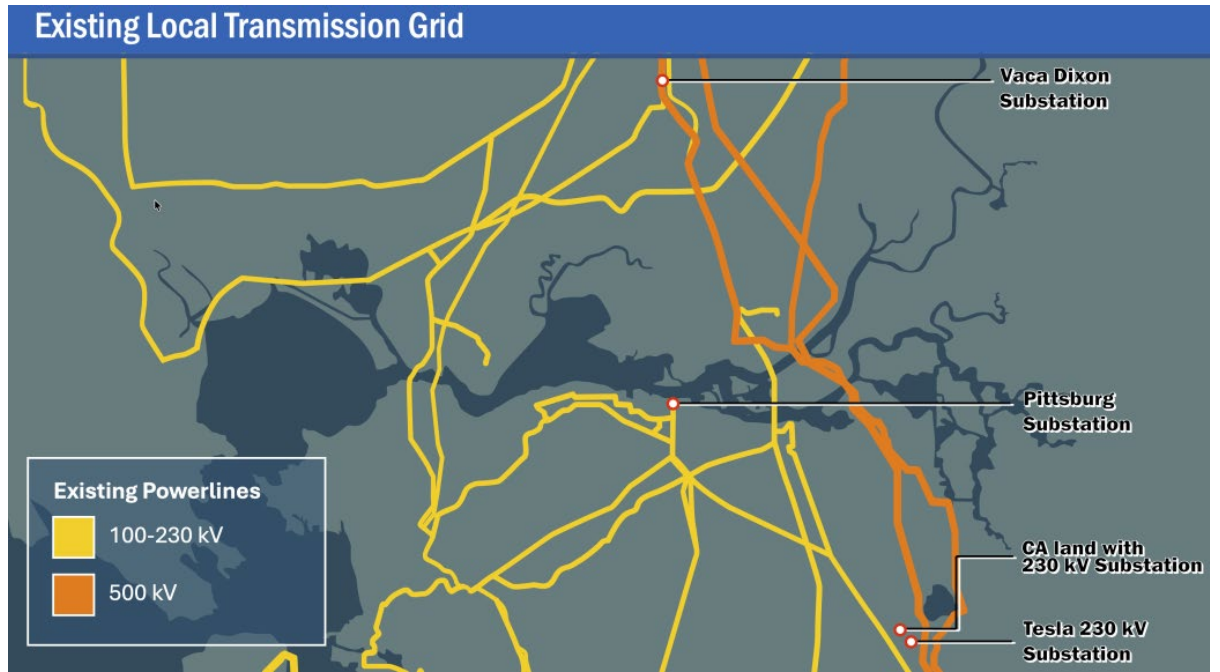
Image 2 (proposed route of the approximate 260-mile Humboldt-to-Collinsville 500 kV line intended to deliver the now cancelled northern wind power from Humboldt County to the Collinsville substation, also depicted)



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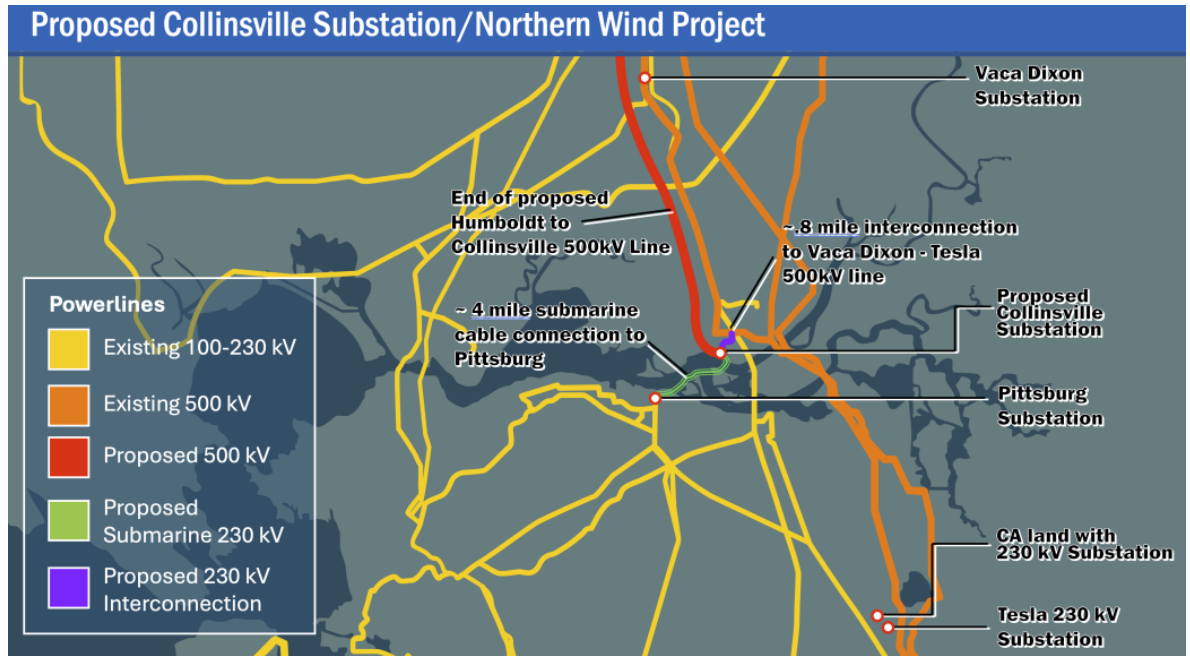
Image 3 (close-up view of the existing transmission grid between the Vaca Dixon substation to the north, and State land & Tesla substations immediately to the south, of the proposed Collinsville substation)



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1 **Image 4** (same view as Image 3, except with the addition of the Collinsville substation
 2 and its proposed inter-connections with the (1) end of the proposed approximate 260-mile
 3 Humboldt-to-Collinsville 500 kV line, (2) Vaca Dixon-Tesla 500 kV line and (3) Pittsburg
 4 substation via the proposed approximate 4-mile submarine cable to the southwest)



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 15 As shown above, the Collinsville Substation is proposed in a remote location in tidal
 16 wetlands in the Sacramento-San Joaquin Delta. The California Department of Fish and Wildlife
 17 (CDFW) has already recommended relocating the Substation in its December 17, 2025 DEIR
 18 comments due to documented impacts on the salt marsh harvest mouse and migratory bird habitat.

19 Importantly, CAISO’s *2024 20-Year Transmission Outlook* identifies an alternative North
 20 Coast transmission routing option described as “from the North Bay Area west of Collinsville.”⁴⁶
 21 CAISO's acknowledgment of this alternative establishes that Collinsville is *not* the only technically
 22 viable terminus. With the Humboldt offshore wind load assumption removed from the equation,
 23 the selection of Collinsville as the HVDC Line terminus cannot be defended without new modeling
 24 that does not appear in the record. The recent shift in wind policy and Federal funding
 25 abandonment requires CAISO and the CPUC to examine alternative terminus locations consistent
 26 with the routing alternatives identified in the CAISO *2024 20-Year Transmission Outlook*, and
 27

28 ⁴⁶ CAISO, *2024 20-Year Transmission Outlook* (Jul. 31, 2024) at 37, available at
<https://www.caiso.com/documents/2024-20-year-transmission-outlook-jul-31-2024.pdf>

reevaluation of reduced-scope substation alternatives.

Question 2: Is the Collinsville Substation’s sizing and interconnection configuration justified by 230 kV transmission reliability needs alone?

A. No. The proposed 230 kV submarine cables connecting the Collinsville Substation to PG&E's existing Pittsburg Substation (shown in Image 4) purport to have an independent reliability justification—addressing 230 kV overloads on the Contra Costa-Newark corridor. However, the proposed combined infrastructure design—230 kV submarine cables to Pittsburg, a 500 kV backbone tap at Vaca-Dixon to Tesla, and future land rights accommodations for a ± 500 kV HVDC terminus—was not determined by 230 kV reliability needs. The strategic placement of Collinsville was wholly predicated on the Substation being co-located adjacent to a 500 kV transmission corridor capable of serving as the receiving terminus for the 260-mile HVDC line delivering 1.6 GW of offshore wind from the Humboldt Area. That generation assumption no longer holds—and the Substation's justification does not survive its removal.

The reactive power requirements, voltage stability margins, and contingency response characteristics documented in Appendix I of the 2023-2024 CAISO Transmission Plan were all calibrated around 1.6 GW of offshore wind at the Humboldt sending end. Without that generation, those specifications are likely over-built. More critically, the Vaca-Dixon to Tesla corridor's behavior under no-generation or reduced-generation contingency conditions—with the HVDC line energized but the wind absent—has never been modeled. Adverse reactive power flows onto that corridor have not been evaluated.

This is not a theoretical concern. Prudent utility practice—and NERC, WECC and CAISO reliability criteria—require N-1 and N-1-1 contingency analysis for any new 500 kV backbone connection. That analysis has not been performed for the scenario now most likely to occur: the HVDC line energized with little or no offshore wind generation would significantly reduce the land area to accommodate the line. Without that generation, the Collinsville Substation at this configuration and location presents as an over-engineered, idle capital asset. The Vaca-Dixon to Tesla corridor was not selected because it is the optimal pathway for moving solar or battery storage resources from north to south — it was selected to serve the HVDC line and its offshore

1 wind delivery assumptions. Those assumptions have materially changed.

2 CAISO’s own acknowledgment that the HVDC line *cannot operate independently from*
3 *the Substation project*—and that *the Substation's location in Collinsville predetermines the*
4 *corridor of the HVDC line*—is factually correct, and it raises fundamental questions that must be
5 answered before the Substation is approved and the FEIR is certified. The CPUC and CAISO must
6 produce sufficient modeling to justify the Collinsville Substation’s proposed 500 kV tap-point
7 under current, not assumed, conditions.

8 **Question 3: is it prudent to interconnect the Collinsville Substation —via 4.5 miles of submarine**
9 **cables— to the Pittsburg Substation?**

10 A. No. The proposed 230 kV submarine cables connecting the Collinsville Substation to PG&E’s
11 existing Pittsburg Substation purport to have an independent reliability justification —addressing
12 230 kV overloads on the Contra Costa-Newark corridor. However, the combined infrastructure
13 design—230 kV submarine cables to Pittsburg, a 500 kV backbone tap at Vaca-Dixon to Tesla
14 and future land rights accommodations for a ±500 kV HVDC terminus—was not determined by
15 230 kV reliability needs alone.

16 The strategic placement of Collinsville was wholly predicated on the Substation being co-
17 located adjacent to a 500 kV transmission corridor capable of serving as the receiving terminus for
18 the 260-mile HVDC line delivering 1.6 GW of offshore wind from the Humboldt Area. That siting
19 decision drives the submarine cable routing—the Pittsburg interconnection is a consequence of the
20 Collinsville site selection, not an independent engineering determination that submarine
21 interconnection at this voltage and length is the most reliable or cost-effective solution available.

22 That distinction matters because 230 kV submarine cables present a distinct and compounding
23 set of reliability and operational risks that overhead transmission lines do not —and those risks are
24 materially elevated at this location: *i.e.*,

- 25 • **Charging Current and Reactive Power.** High-voltage submarine cables generate
26 significant capacitive charging current due to their physical construction — a
27 conductor surrounded by insulation and a grounded sheath, submerged in a
28 conductive medium. At 230 kV over 4.5 miles, the cable itself becomes a net VAR

1 producer under light-load conditions, requiring reactive power absorption that may
2 not be available at either the Collinsville or Pittsburg endpoints. Without sufficient
3 reactive compensation, voltage instability on the Contra Costa-Newark corridor —
4 the very problem the submarine cables purport to solve — could be worsened rather
5 than improved under certain contingency conditions.

- 6 • **Fault Detection and Isolation.** Submarine cable faults are categorically more
7 difficult to detect, locate, and isolate than overhead line faults. A fault on a submerged
8 230 kV cable does not present the same visual, thermal, or electrical signature as an
9 overhead fault. Fault location requires specialized equipment and methodology, and
10 isolation requires taking the entire cable out of service. There is no sectionalizing
11 capability mid-span. On a critical 230 kV interconnection serving Bay Area load
12 centers, an unplanned cable outage with an extended repair timeline poses a direct N-
13 1 contingency exposure.
- 14 • **Repair Time and In-Kind Replacement.** Submarine cable repair is not comparable
15 to overhead line repair. A damaged or failed submarine cable segment requires a
16 specialized marine vessel, a cable-lay contractor, and a splice or full segment
17 replacement — a process that can take months, not days. There is no rapid in-kind
18 replacement path. That extended outage duration must be modeled as a credible
19 contingency, and the system must be shown to perform reliably without the cable for
20 the duration of a realistic repair window. That analysis does not appear to be publicly
21 available.
- 22 • **Thermal Limitations and Load Cycling.** Submarine cables have constrained
23 thermal dissipation relative to overhead lines of equivalent voltage class. Buried or
24 submerged in sediment, heat cannot dissipate as efficiently, limiting the cable's
25 sustained ampacity. Load cycling — common in a grid increasingly dominated by
26 variable renewable generation — accelerates thermal fatigue and insulation
27 degradation. At 230 kV, insulation failure is a catastrophic, not incremental event.
- 28 • **Marine Environment and Third-Party Risk.** The 4.5-mile submarine route crosses

1 an active waterway. Anchor strikes, dredging activity, and vessel groundings
2 represent credible third-party damage risks entirely absent from overhead
3 transmission planning. These risks require specific route surveys, burial depth
4 analysis, and ongoing monitoring — the adequacy of which has not been established
5 in the record.

6 CAISO’s own acknowledgment that the HVDC line *cannot operate independently from*
7 *the Substation project*—and that *the Substation’s location in Collinsville predetermines the*
8 *corridor of the HVDC line*—is factually correct and it exposes the 230 kV submarine cable
9 interconnection for what it is: not a standalone reliability solution, but an infrastructure
10 commitment engineered around an offshore wind delivery assumption that no longer exists.
11 The reactive power requirements, voltage stability margins and contingency response
12 characteristics documented in Appendix I were all calibrated for 1.6 GW of offshore wind at
13 the Humboldt sending end. Without that generation, those specifications are likely over-built,
14 and the adverse reactive power flows onto the Vaca-Dixon to Tesla corridor—a critical
15 pathway serving Central Valley, Bay Area, and Silicon Valley load centers—have never been
16 modeled for the changed-circumstances scenario.

17 The CPUC and CAISO must demonstrate that the 230 kV submarine cable interconnection
18 was evaluated against terrestrial alternatives, that reactive compensation requirements have
19 been fully modeled, and that the system remains reliable under a credible long-duration cable
20 outage contingency before the Substation is approved and the FEIR is certified.

21 **IV. Recommended Alternatives**

22 **Q. DO EQUALLY EFFECTIVE, ENVIRONMENTALLY SUPERIOR TRANSMISSION**
23 **ALTERNATIVES EXIST THAT SHOULD HAVE BEEN CONSIDERED BY CAISO AND**
24 **THE CPUC? IF SO, PLEASE PROVIDE EXAMPLES.**

25 **A.** Yes. The Project was identified by CAISO in its 2021-2022 Transmission Plan as a project to
26 address multiple overloads on the 230 kV corridor between Contra Costa and Newark and to provide
27 an additional 500 kV supply into the northern Greater Bay Area. The stated reliability need does not
28 require a new substation sited in the Sacramento-San Joaquin Delta at Collinsville. There are several

1 cost-effective, technically equivalent alternatives (one existing, two proposed below) that address the
2 same Contra Costa-Newark 230 kV constraint by leveraging infrastructure that PG&E has already
3 constructed, permitted, and placed in service. The following alternatives warrant further evaluation
4 — including current CAISO power flow modeling and cost-per-MW-of-relief analysis — before this
5 Commission can approve LS Power’s CPCN application and/or certify the Final EIR for the Project.

6 **1. Reconductored Pittsburg–Tesla 230 kV Lines Already Address the Same**
7 **Transmission Constraint as the Project**

8 The Project and the reconductored Pittsburg-Tesla lines share the same hub: the Pittsburg
9 Substation. The Project feeds power into that hub from the north via submarine cable; the
10 reconductored lines carry power out of that hub southward toward the Contra Costa-Newark corridor.
11 CAISO identified the Project in its 2021-2022 Transmission Plan to relieve overloads on that
12 downstream corridor. Yet, the record does not demonstrate that the additional thermal capacity
13 created by the 2013-2015 Pittsburg-Tesla reconductoring was modeled or credited against the
14 identified Contra Costa-Newark constraint before the Project was identified. This represents a
15 material analytical gap in CAISO’s planning process.

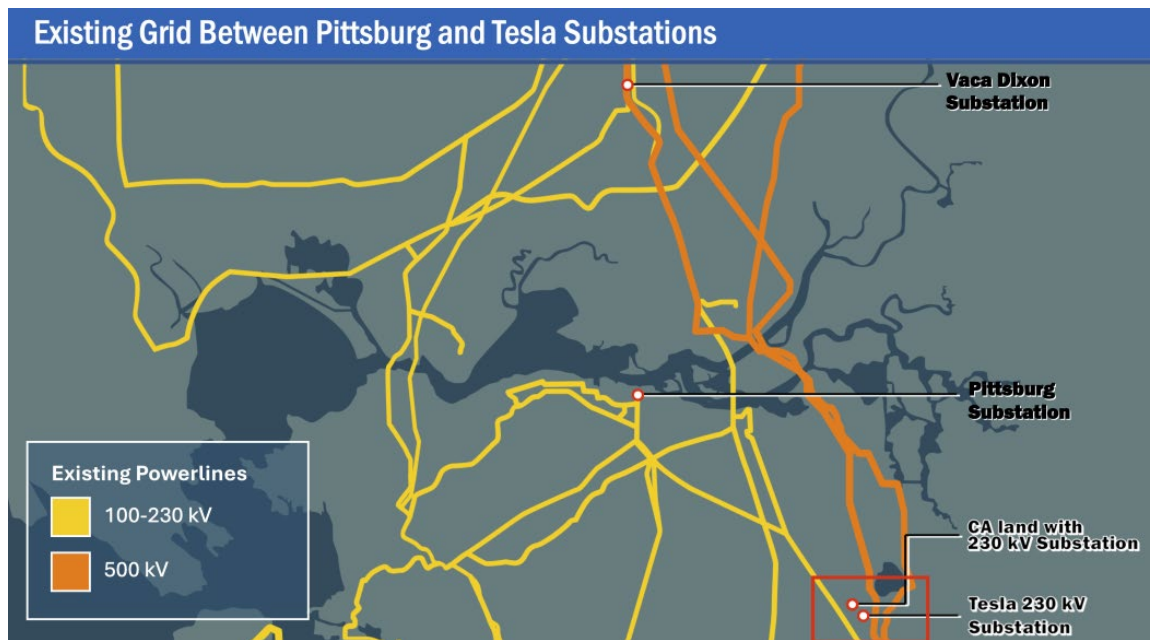
16 If already-reconductored lines provide sufficient incremental capacity to resolve the identified
17 overloads under current and near-term load conditions, the Substation in a tidal wetland, with 4.5
18 miles of submarine cable beneath the Sacramento River, cannot be justified as the least-cost, least-
19 environmental-impact solution. The Commission should require the project proponent and/or CAISO
20 to produce a sensitivity analysis demonstrating the residual constraint that exists on the Contra Costa-
21 Newark 230 kV corridor after full credit is given for the capacity added by (i) the Pittsburg-Tesla
22 reconductoring, as well as (ii) the emergency of new battery energy storage systems (BESS)
23 (standalone or co-located with utility-scale solar projects) in generation load centers, like the Central
24 Valley.

25 **2. PG&E’s Bethany Gas Compressor 230 kV Substation – An Existing Interconnection**
26 **Point Adjacent to the Vaca Dixon–Tesla 500 kV Backbone**

27 As illustrated below, PG&E operates existing 230 kV substation facilities at the Bethany Gas
28 Compressor Station, located in the Bethany area adjacent to the existing 500 kV Vaca Dixon–Tesla

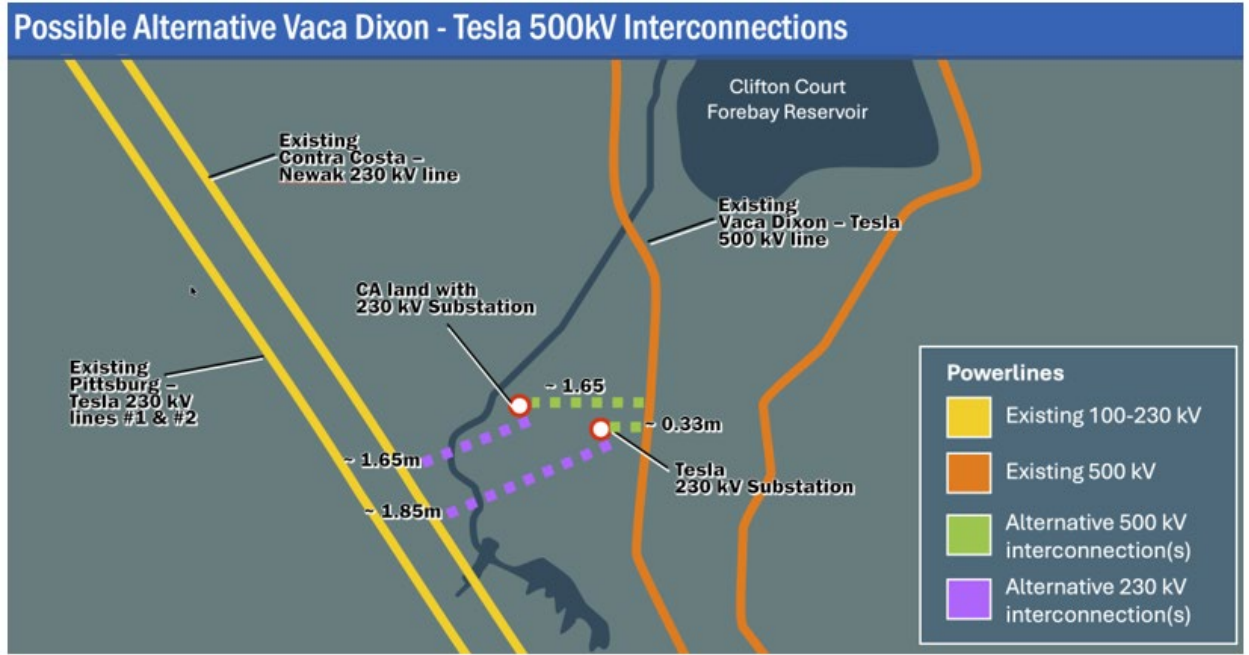
1 transmission line — the same backbone corridor the Project proposes to interconnect. The Pittsburg-
2 Tesla 230 kV reconductoring traverses the western shore of Bethany Reservoir en route to Tesla
3 Substation, confirming that this corridor is already interconnected to the same transmission
4 infrastructure that the Project relies on.⁴⁷

5 **Image 5** (the Vaca Dixon and State and Tesla substations are sited near the Vaca Dixon-Tesla
6 500 kV line. They are also close to the existing Contra Costa-Newark and Pittsburg-Tesla 230 kV
7 lines to the west).



47 See, CEQANet, *PG&E Pittsburg-Tesla Reconductoring Project*, available at <https://ceqanet.lci.ca.gov/Project/2011102034> (describing reconductoring project as follows “in order to maintain service reliability and meet increasing electric load demands in the City of Pittsburg and surrounding areas in Contra Costa and Alameda counties, PG&E proposes to replace approximately 31 miles of 230 kilovolt transmission line between Pittsburg and Tesla Substations. This project will minimize the potential for future power demand overloads, and ensure service reliability to the East San Francisco Bay Area”).

1 **Image 6** (suggests two possible alternative interconnections between the Vaca Dixon-Tesla 500 kV
2 line and adjacent East Bay 230 kV grid via either the State and Tesla substations via shorter distances
3 over flat farmland.



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15 Utilizing the existing Bethany Gas Compressor 230 kV substation as an interconnection point
16 would allow new capacity to be injected into the 230 kV network at a location that is already within
17 the stressed corridor, on already-permitted and already-disturbed land, without new rights-of-way,
18 without submarine cable beneath the Sacramento River, and without any construction in the
19 Sacramento-San Joaquin Delta tidal wetlands that have driven the California Department of Fish and
20 Wildlife’s relocation recommendation. This alternative would be subject to the same N-1 and N-1-1
21 contingency analysis and load flow modeling that CAISO applied in approving the Project. Neither
22 LS Power nor CAISO has considered or evaluated this substantially less costly and environmentally
superior alternative.

23 **3. California Aqueduct District Office Substation – Kelso–Tesla 230 kV Interconnection**
24 **in the Bethany Area**

25 The California Aqueduct District Office substation, also located in the Bethany area adjacent to
26 the 500 kV Vaca Dixon–Tesla corridor, also provides an “existing-infrastructure” alternative via the
27 Kelso–Tesla 230 kV substation. Like Option 2 (see above), this location is situated within an existing
28 utility corridor on already-disturbed land, directly adjacent to the same 500 kV backbone the Project

1 proposes to loop into. The Kelso–Tesla 230 kV path is geographically and electrically positioned
2 closer to the Contra Costa–Newark congestion source than the proposed Collinsville terminus, which
3 is located approximately 28 miles to the northwest of the Newark 230 kV congestion zone.
4 Interconnecting at the Kelso–Tesla 230 kV substation would deliver relief at the point of need, on
5 existing footprint, without the submarine cables and associated tidal wetland and habitat impacts, and
6 at a substantially lower capital cost. CAISO’s own planning record identifies this corridor as part of
7 the broader Greater Bay Area transmission system under study. This alternative should be modeled
8 as a standalone solution and compared to the Project on both cost and reliability performance metrics.

9 **Q. DO THESE EXAMPLES OF ENVIRONMENTALLY SUPERIOR ALTERNATIVES**
10 **QUESTION THE JUSTIFICATION FOR THE COLLINSVILLE SUBSTATION AS**
11 **CURRENTLY PROPOSED?**

12 **A.** Yes. NERC, WECC, and CAISO reliability planning standards require that transmission
13 solutions be the result of a rigorous alternatives screening process that identifies the least-cost,
14 technically viable solution to a demonstrated reliability need. The identified congestion is on the
15 Contra Costa–Newark 230 kV corridor — a corridor that is geographically centered in the East Bay
16 between Pittsburg and Newark. The Project’s purported solution is to route 230 kV submarine cables
17 4.5 miles north across the Sacramento River to a new substation in Collinsville, Solano County — a
18 location approximately 28 miles northwest of the Newark end of the congested corridor. The project
19 proponent has offered no engineering justification in the record as to why relief to a Contra Costa–
20 Newark constraint must be sourced from a 500/230kV substation located approximately 28 miles to
21 the north, in a tidal wetland, rather than from the existing PG&E infrastructure already positioned
22 within the stressed corridor at the Bethany area substations or at the Pittsburg hub itself. CAISO’s
23 *2024 20-Year Transmission Outlook* acknowledges a North Bay transmission routing option
24 described as running “from the North Bay Area west of Collinsville,” confirming that Collinsville is
25 not the only technically viable interconnection point on the Vaca Dixon–Tesla backbone.⁴⁸ The
26 Commission should require a direct cost comparison, using current CAISO power flow models,
27 between the Project and each of the Bethany-area alternatives on a cost-per-MW-of-relief basis before
28

⁴⁸ CAISO, *2024 20-Year Transmission Outlook*, at 37.

1 approving construction.

2 **Q. WHAT ACTIONS DO YOU RECOMMEND LS POWER, CAISO AND/OR THE CPUC**
3 **TAKE TO ADDRESS THE CONCERNS RAISED IN YOUR TESTIMONY?**

4 **A.** In my professional opinion, the deleterious outlook of offshore wind projects in the Humboldt
5 WEA constitutes a substantial change in circumstances that was not considered in CAISO
6 Transmission Plans, the Project’s ongoing CEQA environmental review, or in this proceeding prior
7 to this testimony. Based on that conclusion, at least two (2) specific actions are required to remediate
8 that issue:

- 9 1. Postpone certification of the Final EIR until the CPUC, as lead agency, evaluate the changed
10 circumstances from a CEQA perspective, including analyzing (i) the extent to which the stated
11 “Project Objectives”⁴⁹ in the EIR remain accurate and feasible and (ii) environmentally
12 superior alternatives that were not previously considered in the Appendix C Alternatives
13 Screening Report, including the PG&E Bethany Compressor Station 230kV Substation and
14 the Aqueduct District Office 230kV substation station (discussed above).
- 15 2. Revised Transmission Modeling – In its CAISO 2025-2026 Transmission Planning process,
16 CAISO must run a sensitivity scenario removing the 1.6 GW Humboldt offshore wind
17 assumption from the North Coast planning portfolio. That scenario must model whether the
18 Collinsville terminus location, the Vaca-Dixon to Tesla 500 kV backbone tap, and the 230 kV
19 Pittsburg submarine connection remain operationally justified *without* the offshore wind load.
20 CAISO must produce and make available all N-1 and N-1-1 contingency modeling of the
21 Vaca-Dixon to Tesla transmission corridor with the HVDC Line energized at zero or reduced
22 generation. If such modeling does not exist, the planning record for a \$4.59 billion
23 transmission investment is incomplete. In the alternative, the project proponent must produce
24 N-1 and N-1-1 contingency modeling using the Collinsville 500/230KV, scope, schedule,
25 electric forecasted modeled values, land area, cost metrics and apply to both location
26 alternatives, Bethany Gas Compressor 230 kV substation and the California Aqueduct District

27 _____
28 ⁴⁹ See, e.g., DEIR at 1-4, Project Objective #5 (Facilitate deliverability of load from existing and proposed renewable generation projects in the northern Greater Bay Area and corresponding progress toward achieving California’s RPS goals in a timely and cost-effective manner by California utilities.)

1 Office locations when tapping into either the 230kV Pittsburg- Telsa Line #1 or 2 or the
2 230kV Kelso-Tesla transmission line alternative. This evaluation will demonstrate whether
3 either location can resolve the identified overloads at lower cost and with reduced
4 environmental impact compared to the Project.

5 **V. Conclusion**

6 **Q. DO YOU HAVE ANY CONCLUDING REMARKS FOR YOUR TESTIMONY?**

7 **A.** As I have addressed in Section V of this testimony, the Collinsville Substation location was
8 selected because it provided a ready 500/230 kV interconnection point on the Vaca Dixon–Tesla
9 backbone where the 260-mile Humboldt-to-Collinsville HVDC Line could deliver 1.6 GW of
10 Humboldt offshore wind to the California grid. The Substation’s reliability justification for
11 addressing the Contra Costa-Newark 230 kV overloads does **not** require the Collinsville location. It
12 required a new 500/230 kV interconnection point on the Vaca Dixon–Tesla backbone. Removing the
13 HVDC Line and emergency of offshore wind potential — which have now materially collapsed with
14 the August 2025 withdrawal of \$426.7 million in federal construction funding, the programmatic
15 federal offshore wind permitting freeze, and the Administration’s buyout of major California offshore
16 wind developers — the selection of the Collinsville for the stated transmission reliability goals cannot
17 be defended without new modeling. The Bethany-Area substations described above sit adjacent the
18 same Vaca Dixon–Tesla 500 kV backbone. Both locations could satisfy the stated reliability goals of
19 the Project, but at significantly less costs and ratepayer burdens *and* associated tidal wetland impacts.
20 CDFW has already formally recommended relocating the Project in its December 17, 2025 comments
21 on the Project’s Draft EIR due to documented impacts to salt marsh harvest mouse habitat and
22 migratory bird resources. That relocation recommendation, combined with the collapse of the
23 offshore wind justification for the Collinsville location, makes evaluation of the Bethany-area
24 alternatives not merely advisable under CEQA — it makes it legally compelled.

25 Dated: May 13, 2026

HOLLAND & KNIGHT LLP



David Robinson
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