

DOCKETED

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Environmental Information and Renewable Energy Planning

California Offshore Wind Research, Data, and Applications



Scott Flint

1/28/2020

Staff Workshop on Offshore Wind Research, Data, and Applications

California Energy Commission



California Statewide Energy Gateway

<https://caenergy.databasin.org/>

Access to:

- Project Gateways
- Applications
- Logic Models
- Datasets



CALIFORNIA STATEWIDE ENERGY GATEWAY

Get Started

Explore

Create

Workspace

About the California Statewide Energy Gateway

This gateway brings together energy planning related information and applications across California, and serves as a launchpad for accessing additional gateways and applications for specific planning processes.

California Statewide Energy Planning

California Regional Energy Planning

California County Energy Planning

ENERGY RELATED APPLICATIONS



California Climate Console

The climate console is a web application designed for exploring climate change projections for a selected area of interest.



California Energy Infrastructure Planning Analyst

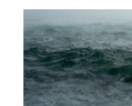
California Energy Infrastructure Planning Analyst was created by the Conservation Biology Institute for the California Energy Commission to assist with planning energy development throughout the state to improve planning efficiency and to avoid environmental risks based on the best available spatial datasets.

ENERGY RELATED GATEWAYS



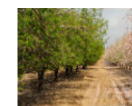
Desert Renewable Energy Conservation Plan Gateway

The DRECP Gateway was created to support final development of the Desert Renewable Energy Conservation Plan. It will be used to engage and inform all interested parties about ongoing planning and management issues in the California desert.



California Offshore Wind Energy

The Offshore Renewable Wind Energy Gateway assembles geospatial information on ocean wind resources, ecological and natural resources, ocean commercial and recreational uses and community values. This information will help identify areas off of California that are potentially suitable for wind energy generation.



San Joaquin Valley Gateway

The San Joaquin Valley Gateway provides a regional tool to help planners and resource managers develop and implement integrated multiple-benefit solutions for long-term environmental and economic sustainability. The Gateway also showcases programs and projects that have used this information resource to address resource conflicts in the Valley.



Renewable Energy Transmission 2.0 Gateway

The Renewable Energy Transmission Initiative (RETI) 2.0 Gateway supports the public process of identifying potential transmission that could access and integrate renewable energy with the most environmental, economic, and community benefits.



California Offshore Wind Energy Gateway

<https://caoffshorewind.databasin.org//>

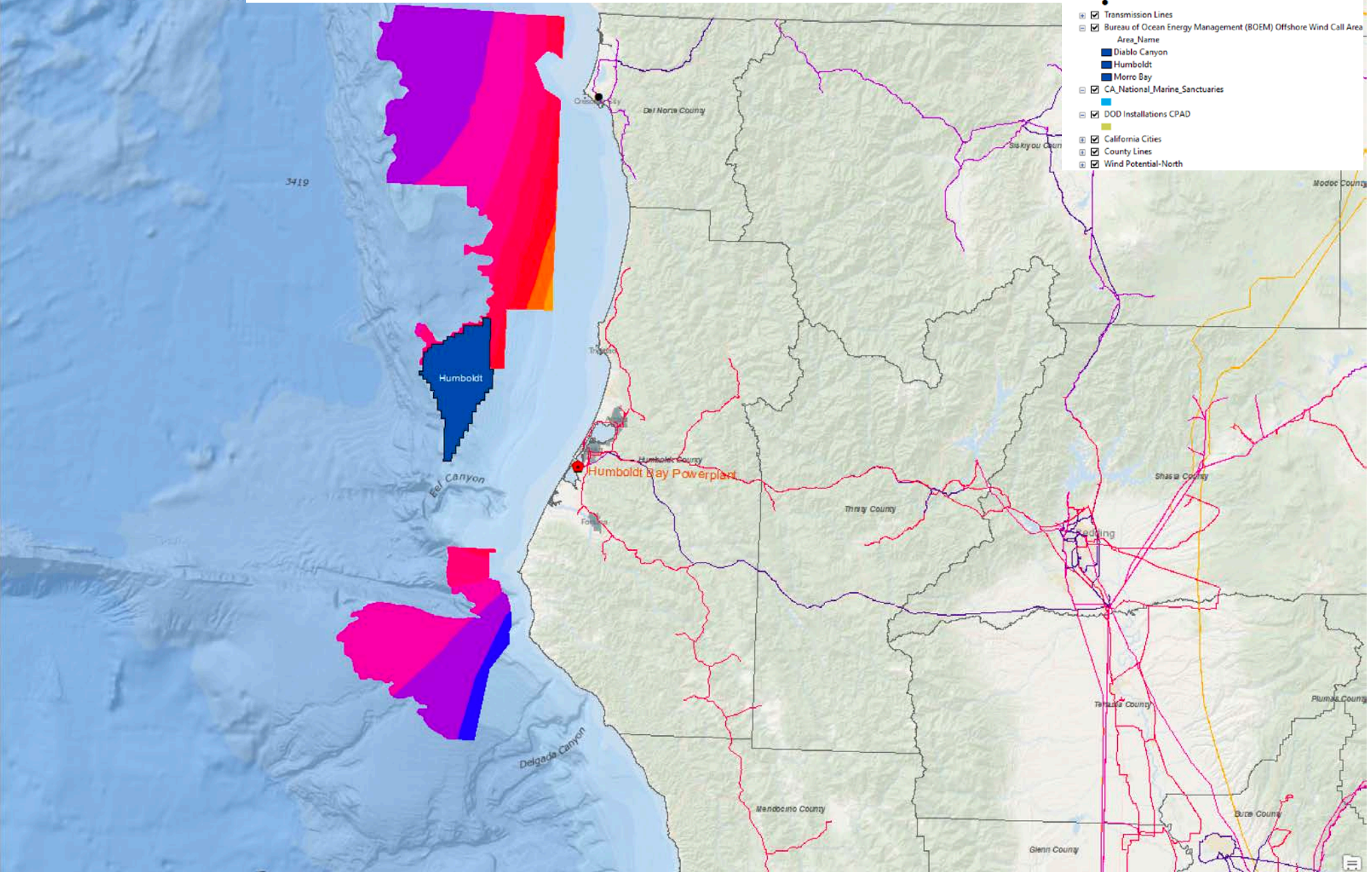
Access to:

- Technical, Ocean Use and Environmental Datasets relevant to the assessment of offshore wind
- Thematic maps that illustrate key data sets

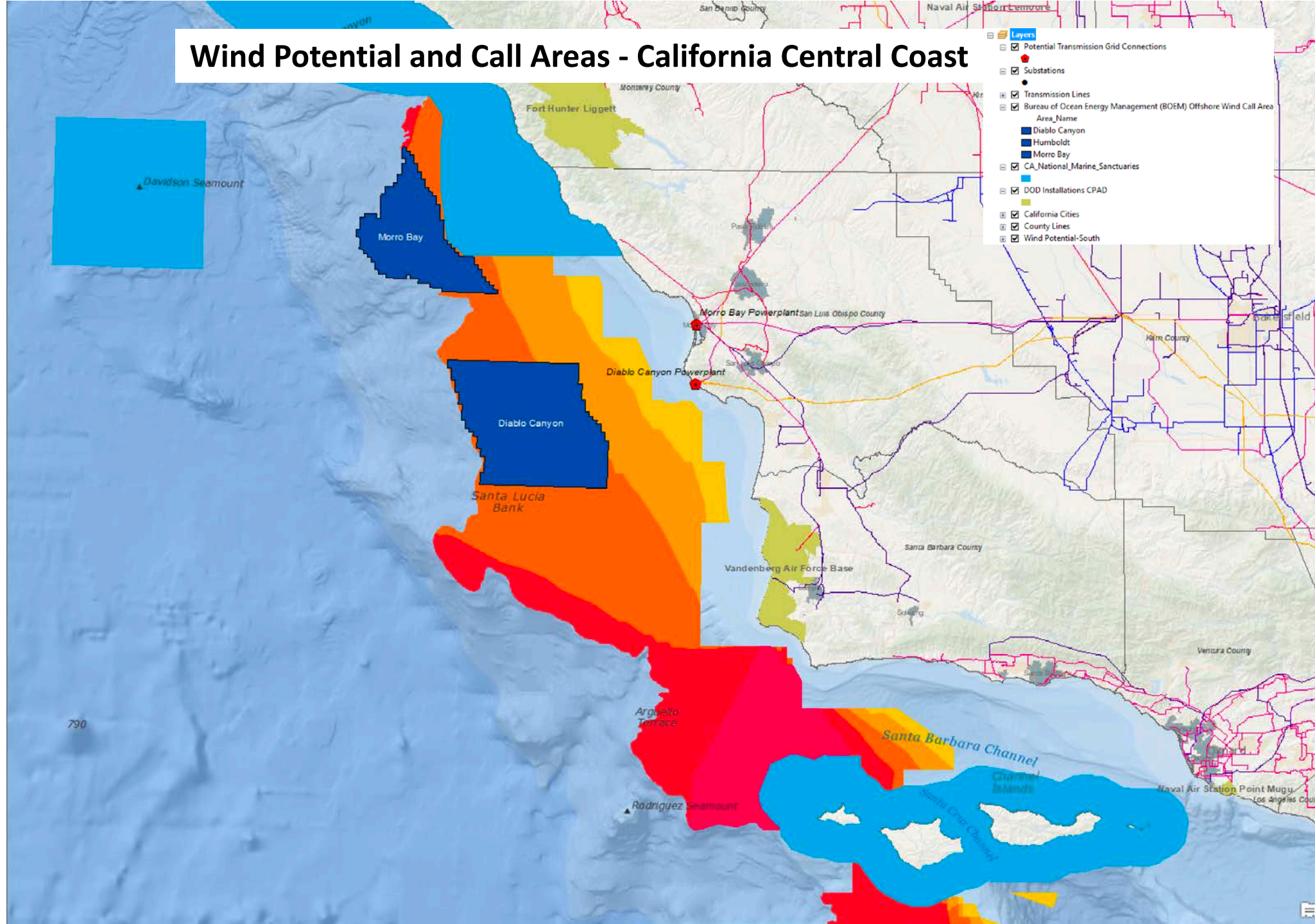
The screenshot shows the homepage of the California Offshore Wind Energy Gateway. At the top, there is a search bar and navigation tabs for 'Get Started', 'Explore', 'Create', 'Community', and 'My Workspace'. The main content area features a large introductory text block with a 'read more' link and a background image of ocean waves. Below this are four thematic map tiles: 'California Marine & Coastal Energy', 'California Marine & Coastal Management', 'California Marine & Coastal Ecology and Natural Resources', and 'California Marine Fishing and Traditional Uses'. A 'Featured Items' section displays six map thumbnails with titles: 'California Commercial Fishing Recent History', 'West Coast USA Federal and State Marine Protected Areas', 'California Offshore Wind Resources', 'Central California Offshore Use Zones', 'Central California Offshore Geology and Wind Technology Depth Zones', and 'Central California Offshore Biological Resources'. To the right of these is a larger map titled 'California Off-Shore Wind Resources' with a descriptive caption. At the bottom, there are two call-to-action buttons: 'Download the Fact Sheet & Get Involved' and 'Follow Progress'.

Wind Potential and Call Areas - California North Coast

- Layers
- Potential Transmission Grid Connections
- Substations
- Transmission Lines
- Bureau of Ocean Energy Management (BOEM) Offshore Wind Call Area
 - Area Name
 - Diablo Canyon
 - Humboldt
 - Morro Bay
- CA_National_Marine_Sanctuaries
- DOD Installations CPAD
- California Cities
- County Lines
- Wind Potential-North



Wind Potential and Call Areas - California Central Coast





Environmental Applications – Initial Development Under DRECP and RETI 2.0

DRECP SITE SURVEY ANALYST

Select a Location

Model Results

Mean

Click a column below to view the map and model diagram

Category	Value
Highest (+1)	
Very High	
High	
Moderate (0)	
Low	
Very Low	
Lowest (-1)	

Terrestrial Intactness

Conservation Value

Soil Sensitivity

Physical Refugia

Selected Union

Low Development

Low Fragmentation

Low Veg State Impacts

Explore the complete set of model inputs on Data Basin

RENEWABLE ENERGY TRANSMISSION INITIATIVE (RETI) 2.0

ENVIRONMENTAL / LAND USE REPORTER

Download PDF report

Managed for extractive uses (GAP 3): 0 ha

Not protected (GAP 4): 10,700 ha

Easement: 0 ha

Unassigned: 0 ha

Terrestrial Intactness

Very Low	6,206 ha
Low	4,875 ha
Moderately Low	9,718 ha
Moderately High	0 ha
High	0 ha
Very High	0 ha

Designated Critical Habitat

Desert tortoise	271 ha
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California Energy Infrastructure Planning Analyst



California Energy Infrastructure Planning Analyst

(ceipa.databasin.org)



California Energy Infrastructure Planning Analyst was created by the Conservation Biology Institute for the California Energy Commission to assist with planning energy development throughout the state to improve planning efficiency and to avoid environmental risks based on the best available spatial datasets. This easy-to-use online tool allows you to locate areas (**Find Areas**) that meet specified criteria under three major data categories - Energy, Environment, and Land Use. Once candidate sites are identified, standardized summaries can be generated for single or multiple sites clicking the Run Analysis button.

The **Analyze Areas** function invites you to draw points, lines, or polygons on screen (buffer these features if desired) or upload existing shapefiles from your computer with an easy drag-and-drop option. One or more of your shapes can then be assessed against a number of preloaded datasets resulting in standardized reports for easy download and use. The simple viewer allows you to view all of the preloaded content plus your drawn or uploaded shapes against a variety of base maps for easy exploration. All spatial datasets in the tool are also available on Data Basin through quick links for further detailed review and use in customized maps of your design.

Show/Hide layers

Boundaries

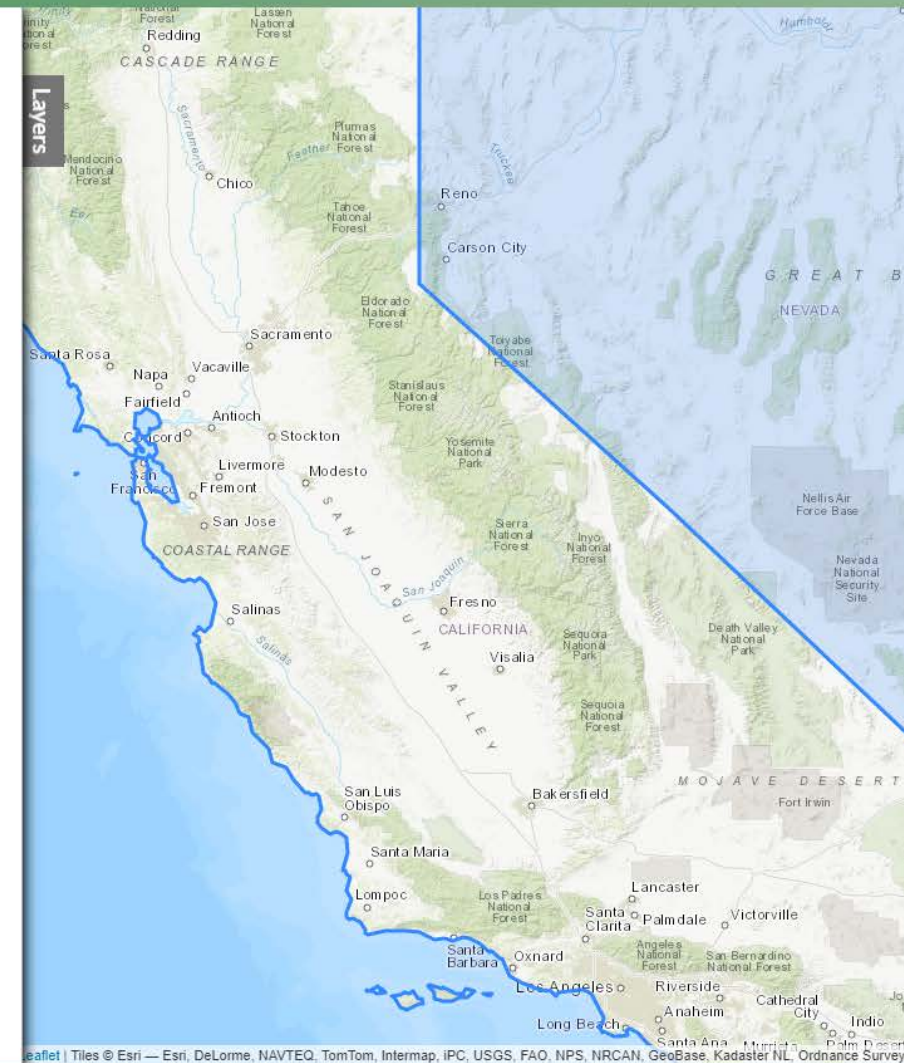
- Ecoregions
- Counties
- DRECP
- San Joaquin Valley

Energy

- Wind Power Density
- Annual Average Direct Normal Solar Resource
- Known Geothermal Resource Areas
- Transmission Lines
- Substations
- Federal Energy Corridors 368
- Power Plants
- Solar Footprints

Environmental

Land Use





California Energy Infrastructure Planning Analyst

Onshore Option

- Focuses on Terrestrial Data
- Utilizes a series of logic models built from the terrestrial datasets



California Energy Infrastructure Planning Analyst

Offshore Option

- Focuses on Marine Data
- Develop Marine Logic Model(s) to assist understanding combinations of data

Statistics | Data Basin | RePlan: Regional Conservation a | CEIPA

Not secure | tarsier:8000

California Energy Infrastructure Planning Analyst

Funded by the California Energy Commission

Offshore

Continue

Start Add Areas of Interest Select Sites for Analysis Filter Analyze

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Leaflet | Tiles © Esri — Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, GeoBase, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

Contact Us Disclaimer

Created by Conservation Biology Institute



Environmental Evaluation Modeling System (EEMS)

<https://eemsonline.org/>

- Methodology for visualizing multiple related datasets
- Can assign priority and weights to datasets so the model will reflect the users interests and values

The screenshot displays the EEMS Online web application interface. The browser address bar shows eemsonline.org. The page header includes navigation links for Home, About, and Contact, and a LOGIN button. The main content area is divided into two numbered steps:

- 1 Select a model:** A dropdown menu is set to "Terrestrial Landscape Inta".
- 2 Explore and modify the model below:** A "Model Description" section explains that the dataset provides an estimate of terrestrial intactness based on human impacts. Below this is a flowchart showing the model's structure: "Terrestrial Landscape Intactness" (Fuzzy Selected Union) is derived from three input datasets: "Low Permanent Development Fz" (Fuzzy And), "Low Vegetation State Impacts Fz" (Convert to Fuzzy), and "Low Natural Habitat Fragmentation WtedUnion Fz" (Fuzzy Weighted Union). Each input dataset has a gear icon for configuration.

At the bottom of the interface, there are controls for running the model (Map Quality: Low (fastest)), a "Run the model" button, and options to "Download" or "Get Link". A legend at the bottom right shows a color scale for "Terrestrial_Landscape_Intactness_Updated_Frag_Fz" ranging from 0.00 (dark purple) to 1.00 (dark green). The map on the right shows California with a green and purple overlay representing the model's output.

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Keeping Informed via CEC Webpages & Listserves

- Environmental Information for Energy Planning (Docket 17-MISC-03) (CA-EIPA)

<https://www.energy.ca.gov/programs-and-topics/topics/energy-infrastructure-and-environment/environmental-information-energy>

- Offshore Renewable Energy (Docket 17-MISC-01)

<https://www.energy.ca.gov/offshore-renewable-energy>



Informal Working Groups:

1. Enhancements to the California Energy Infrastructure Planning Analyst (CA-EIPA)
2. Work Updates on the two offshore wind research projects discussed today

Stakeholders wishing to join and participate in either or both, please email misa.werner@energy.ca.gov with your name, affiliation and email address, and indicate the working group(s) of interest.



Written Comments

- Due February 11, 2020
- E-Commenting:
<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=17-MISC-01> or go to energy.ca.gov/offshore-renewable-energy “submit comments” link on the right-hand side.
- See notice for e-mail and U.S. Mail commenting instructions.



Contact Information and Data Resources

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California Energy Commission

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California Wind Energy Gateway - <https://caoffshorewind.databasin.org/>

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