

Methods Documentation: California

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1. Table of Contents

This document details our methods for collecting and estimating amounts from those taxes, royalties, fees and payments that are **distributed to the local level** in California.

San Bernardino County Property Taxes

Property taxes on oil and gas production properties, natural gas electric generation facilities, solar electric generation facilities, and electric transmission properties.

Los Angeles County Property Taxes

Property taxes on oil and gas production properties, natural gas electric generation facilities, and oil refineries.

Kern County Property Taxes

Property taxes on oil and gas production, refining, and pipeline properties; natural gas, wind, and solar electric generation infrastructure; natural gas distribution infrastructure, and all grid infrastructure.

2. San Bernardino County Property Tax

2.1. Policy

All energy-related tax revenue that is received by counties is from property taxes. The State Board of Equalization is responsible for assessing publicly held utilities, which is normally inclusive of natural gas electric generating facilities. However, the counties are most often responsible for assessing solar electric generating facilities.

Additionally, under Proposition 13, passed in 1978, California assesses properties based on the value of the property at the time of acquisition. The assessed value of a property is updated only when a property changes ownership, when there is new construction, or with inflation. However, the assessed value of a property cannot increase more than two percent each year. Proposition 13 also limited the property tax rate to no more than 1% of a property's total value.

Utilities including electric generating plants and pipelines, assessed by the Board of Equalization are not subject to the valuation rules of Proposition 13 and are taxed at their current market value (CA_8). In Los Angeles, some electric generating facilities are owned by LA DWP, and are not subject to taxation.

2.2. Data Inputs

Unique ID	Source	Data Name, Shorthand	Description
CA_1	San Bernardino County Assessor-County-Clerk	Annual Secured Roll	Includes property tax data including land use type, TRA, land value, and improvement value from 2014-2021.
CA_2	San Bernardino County Assessor-Recorder-County Clerk Parcel Map	County Parcel Map	Parcel data available with geographic information.
CA_3	County of San Bernardino Property Information Management System	County Property Management System	Property details (assessed value, land-use codes, ownership history, etc.) available with parcel number.

2.3. Calculations and Assumptions

1) Download and Convert Property Tax Data

We downloaded the .txt file of the Annual Secured Tax Roll from the County Assessor and converted the file to a .csv file using the instructions on the assessor website. We added the relevant property data to a spreadsheet (Roll Year, Land Use Code, TRA, Land Value, and Improvement Value).

2) Download and Convert TRA Rate Data

We downloaded the PDF files of the TRA rates from the County Auditor-Controller/Treasurer/Tax Collector and converted the documents to .csv files.

3) Sort Property Tax for Relevant Land Use Codes

We sorted the property tax data for the following land use codes: 142 (Oil and Gas Production), 160 (Electric Power Transmission), 161 (Electric Power Plant), 162, and 163 (Co-Generation Solar). We could not verify the energy sources from land use code 162 (Electric Co-Generation) and the values were determined to be *de minimus*, so those values were omitted.

4) Match and Apply TRA Rates to TRAs of Relevant Properties

We matched the TRAs from the property tax data to the associate TRA rates and multiplied the rate of each associated TRA by the total value of each property (sum of land value and improvement value).

5) Verify Electric Generation Production Source

We downloaded EIA 860-m data on electric generators and electric generating plants in San Bernardino County to get an energy source and address for each plant. We used the EIA's Energy Infrastructure Map to find the location of the plant to identify the property on the San Bernardino Assessor's parcel map. We verified that the property was the generating plant's property by using the satellite images provided by the parcel map and matching the owner's name with the utility's name provided from the EIA data. The parcel map provided a parcel number which we used to lookup property details on San Bernardino's Assessor's property information management system. This site provided information on land-use code which allowed us to verify that all solar generating facilities are coded as Solar Cogeneration, Hydropower is coded as vacant/other, and wind is not utility-scale, so is coded as light industrial

or commercial. Additionally, it allowed us to verify that natural gas electric generating facilities are coded as electric power plants. Based on this information, we assumed that all properties on the tax roll that are identified as electric power plants (land use code 161) are natural gas electric generating facilities.

6) Sum Up Property Tax Types

We summed up all the taxes levied for each land use code to estimate the total property taxes collected at the county level for each property tax type (oil and gas production, natural gas electric generation, solar electric generation, and electric transmission).

7) Estimate property tax allocation

To estimate how these revenues are allocated across local government types, we assume that county-wide revenues are shared between local government types in equal proportion to total property tax collections in the county in each year. See the “post-UM research” folder, “CA” folder, “San Bernardino property tax calculation” Excel document.

2.4. Output

Property tax revenue from oil and gas production, natural gas electric generation, solar electric generation, and electric transmission properties.

3. Los Angeles County Property Tax

3.1. Policy

All energy-related tax revenue that is received by counties is from property taxes. California counties do not directly receive revenue from severance taxes or royalties. The State Board of Equalization is responsible for assessing publicly held utilities, which is normally inclusive of natural gas electric generating facilities. However, the counties are most often responsible for assessing solar electric generating facilities.

Additionally, under Proposition 13, passed in 1978, California assesses properties based on the value of the property at the time of acquisition. The assessed value of a property is updated only when a property changes ownership, when there is new construction, or with inflation. However, the assessed value of a property cannot increase more than two percent each year. Proposition 13 also limited the property tax rate to no more than 1% of a property’s total value, thus limiting the ability of counties to significantly raise revenues with increased rates (CA_8).

3.2. Data Inputs

Unique ID	Source	Data Name, Shorthand	Description
CA_4	Los Angeles County Assessor	Property Lookup Portal	Includes property tax data including assessed value, TRA, land value, and improvement value for 2022.
CA_5	Los Angeles County Auditor	Tax Rate Area Lookup	Includes TRA rates at county and sub-county level.

3.3. Calculations and Assumptions

1) Estimate oil and gas property revenues

Gathered assessed oil and gas property values from CA Board of Equalization. Applied local property tax rates to estimate county-wide oil and gas property tax revenues by local government type.

2) To estimate oil refineries property tax revenues, we carried out manual searches on the LA Assessor’s website to gather property values for all parcels that include six oil refineries operating in LA County. We then applied local property tax rates to estimate county-wide revenues for each local government type.

3) For Los Angeles solar properties, we did a manual search of the LA Assessor’s website to identify all large solar installations, most of which were found in the northeastern portion of the County. We cross referenced this manual search with the names of all large solar PV facilities listed in the EIA 860 reports. Note that most of the property values for solar are land only, with little to no valuation for improvements such as solar installations. This is consistent with our approach for other power generation and refining infrastructure, where we include property taxes paid by energy companies on both and improvements.

4) For natural gas power plant properties, we again carried out manual searches on the LA Assessor’s website to gather property values for all parcels that include seven natural gas fired power plants operating in LA County. We then applied local property tax rates to estimate county-wide revenues for each local government type.

3.4. Output

Oil and gas property tax data based on top taxpayers in the Kenai Peninsula and North Slope boroughs.

4. Kern County Property Tax

4.1. Policy

All energy-related tax revenue that is received by counties is from property taxes. California counties do not directly receive revenue from severance taxes or royalties. The State Board of Equalization is responsible for assessing publicly held utilities, which is normally inclusive of natural gas electric generating facilities. However, the counties are most often responsible for assessing solar electric generating facilities.

Additionally, under Proposition 13, passed in 1978, California assesses properties based on the value of the property at the time of acquisition. The assessed value of a property is updated only when a property changes ownership, when there is new construction, or with inflation. However, the assessed value of a property cannot increase more than two percent each year. Proposition 13 also limited the property tax rate to no more than 1% of a property's total value, thus limiting the ability of counties to significantly raise revenues with increased rates.

Utilities including electric generating plants and pipelines, assessed by the Board of Equalization are not subject to the valuation rules of Proposition 13 and are taxed at their current market value (CA_8).

4.2. Data Inputs

Unique ID	Source	Data Name, Shorthand	Description
	Kern County Assessor-County-Clerk	Annual Secured Roll	Includes property tax data including land use type, land value, improvement value, exemption values, and total net values from for 2021. Data provided via CD-ROM.

4.3. Calculations and Assumptions

1) Purchase and Receive Property Tax Data

We received the data on CD-ROM in May, 2023 after purchasing the data in December, 2022 for \$220.

2) Sort Property Tax for Relevant Properties

The data were provided in three categories:

- R2:
 - 8201: Productive Mineral Rights & Associated Equipment
 - 8202: Reserve Mineral Rights/Non-Producing Mineral Rights
 - 3968: Co-Generation Plant - Natural Gas Fired
 - 3984: Co-Generation Plant - Coal-Fired - Oil Related

- R3:
 - 6500: Public utility property
- R1: All other property

All R2 property were sorted to distinguish between oil and gas minerals and other minerals based on internet searches of property owner names. All R3 property were sorted to identify energy-related utilities and exclude non-energy utilities such as rail and water infrastructure. R1 data were sorted to include any property where the owner is clearly a business with the word “Solar”, “Wind”, “Renewable,” “Energy,” or “Resources.” Where energy type was not obvious from company name, internet search and cross-references with EIA 860 (2022 annual report) was used to ID energy type and phase. We also ignored any owners where net value was <\$1M.

4) Apply average county-wide tax rate

1.26% in Kern County (source: CA Equalization Board. Property Tax Allocations table 14, 15).

5) Apportion estimated revenue to different local governments

Share to cities	Share to counties	Share to schools	Share to other
5%	23%	58%	14%

Source: CA Equalization Board. Property Tax Allocations table 14, 15

4.4. Output

Property tax revenue from oil and gas production, refining, and pipelines; natural gas electric generation, solar electric generation, wind generation; and electric transmission properties.

Sources

Unique ID	Source	Data Name	Description	Accessibility	Type	Years	Original Source link
CA_1	San Bernardino County Assessor-County-Clerk	Annual Secured Roll	Property tax data including land use type, TRA, land value, and improvement value from 2014-2021.	Public	Property Tax	2014-2021	https://arc.sbcounty.gov/property-information/
CA_2	San Bernardino County Assessor-Recorder-County Clerk Parcel Map	County Parcel Map	Parcel data available with geographic information.	Public	Property Tax	2021	https://arcpropertyinfo.sbcounty.gov/
CA_3	County of San Bernardino Property Information Management System	County Property Management System	Property details (assessed value, land-use codes, ownership history, etc.) available with parcel number.	Public	Property Tax	varies	http://www.sbcounty.gov/assessor/pims/PIMSINTERFACE.ASPX
CA_4	Los Angeles County Assessor	Property Lookup Portal	Property tax data including assessed value, TRA, land value, and improvement value for 2022.	Public	Property Tax	2022	https://portal.assessor.lacounty.gov/
CA_5	Los Angeles County Auditor	TRA Rate Area Lookup	TRA rates at county and sub-county level	Public	Property Tax	2021-2023	https://auditor.lacounty.gov/tax-rate-area-lookup/
CA_6	San Bernardino County Auditor/Controller/Treasurer/Tax Collector	Tax Rate Area Tax Rates	Tax Rate Area Rates	Public	Property Tax	2014-2021	https://www.sbcounty.gov/ATC/Services/Documents
CA_7	San Bernardino County Assessor-County-Clerk	Parcel Land Use Code Description	Descriptions of land use codes from tax roll	Public	Property Tax	2003	https://dts.edatatrace.com/dts3/content/doc/whelp/mergedProjects/dts2tt/mergedProjects/dts2ttcs/parcel_use_codes_sanbern.htm
CA_8	California Board of Equalization	California Property Tax: An Overview	Description of property tax policies in California including assessment and distribution information	Public	Property Tax	2018	https://www.boe.ca.gov/proptaxes/pdf/pub29.pdf

