

CA_Substations_Final

Identification Information:

Citation:

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Title: CA_Substations_Final

Geospatial Data Presentation Form: vector digital data

Description:

Abstract: The California Energy Commission (CEC) Electric Substation geospatial data layer has been created to display the locations of substations in California. It contains point features representing transmission substations and some distribution substations in California. These substations are fed by electric transmission lines and are used to step-up and step-down the voltage of electricity being carried by the lines, or simply to connect together various lines and maintain reliability of supply. These substations can be located on the surface within fenced enclosures, within special purpose buildings, on rooftops (in urban environments), or underground. A substation feature is also used to represent a location where one transmission line "taps" into another. When used in association with the CEC Power Plant and CEC Electric Transmission Lines geospatial data layers, viewers can analyze the geographic relationships with the substation across utilities, counties and state. The data has been gathered from two sources - internal CEC data and the Department of Homeland Security's - Homeland Infrastructure Foundation-Level Data (HIFLD). The CEC data was created from a project spanning many years and was previously updated in 2016. The data was derived from utility companies and USGS topographic map. Some of the data was rectified from GE and Platts substation geospatial data. The sources for the substation point digitizing are including sub-meter resolution of Digital Globe, Bing, Google, ESRI and NAIP aerial imageries, with scale at least 1:10,000. Occasionally, USGS Topographic map, Google Street View and Bing Bird's Eye are used to verify the precise location of a facility. The substation data, as one of the CEC's California Energy Infrastructure spatial data will be used to: 1. Support the CEC/STEP/Strategic Transmission Planning and Corridor Designation Office in corridor study and transmission line siting; 2. Support the CEC staffs' various analysis by providing general geographic reference information; 3. Enhance communication between and among government agencies on emergency management, resource management, economic development, and environmental study; 4. Provide illustration of critical infrastructure spatial data to the public or other agencies in hard copy format.

Purpose: Electric substations in California compiled from California Energy Commission and Department of Homeland Security Homeland Infrastructure Foundation-Level Data (HIFLD)

Keywords:

Theme:

Theme Keyword Thesaurus: None

Theme Keyword: Electric

Theme Keyword: CAOpenData

Theme Keyword: California Energy Commission

Theme Keyword: California Natural Resources Agency

Theme Keyword: Substation

Access Constraints: None

Use Constraints: <https://www.energy.ca.gov/conditions-of-use>

Data Set Credit: California Energy Commission - GIS Unit Department of Homeland Security HIFLD

Native Data Set Environment: Esri ArcGIS 12.8.3.29751

Spatial Data Organization Information:

Direct Spatial Reference Method: Vector

Point and Vector Object Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: Entity point

Point and Vector Object Count: 0

Entity and Attribute Information:**Detailed Description:****Entity Type:**

Entity Type Label: CA_Substations_Final

Attribute:

Attribute Label: OBJECTID

Attribute Definition: Internal feature number.

Attribute Definition Source: Esri

Attribute Domain Values:

Unrepresentable Domain: Sequential unique whole numbers that are automatically generated.

Attribute:

Attribute Label: Shape

Attribute Definition: Feature geometry.

Attribute Definition Source: Esri

Attribute Domain Values:

Unrepresentable Domain: Coordinates defining the features.

Attribute:

Attribute Label: CEC_Sub_ID

Attribute:

Attribute Label: Status

Attribute:

Attribute Label: Owner

Attribute:

Attribute Label: Source

Attribute:

Attribute Label: Type

Attribute:

Attribute Label: HIFLD_ID

Attribute:

Attribute Label: Name

Attribute:

Attribute Label: Max_Voltage

Attribute:

Attribute Label: ZIP_CODE

Attribute:

Attribute Label: COUNTY

Attribute:

Attribute Label: CITY

Metadata Reference Information:

Metadata Date: 20220202

Metadata Standard Name: FGDC Content Standard for Digital Geospatial Metadata

Metadata Standard Version: FGDC-STD-001-1998

Metadata Time Convention: local time