

Data Sources for the California Renewable Energy Transmission Initiative

Category	Source	Title	Description	URL
General	WGA	Clean and Diversified Energy Advisory Committee reports		http://www.westgov.org/wga/initiatives/cdeac/index.htm
General	CEC	Renewable Energy and Electric Transmission Strategic Integration and Planning	Interstate Generation and Delivery of Renewable Resources Into California From WECC States	http://www.energy.ca.gov/2005_energypolicy/documents/reports_pub_number.html
General	B&V	Arizona Renewable Energy Assessment	Assessment of all renewables in Arizona	http://www.bv.com/resources/energy_brochures/renewables/rsrc_AZ_RenewableEnergyAssessment.pdf
General	IID	Study on Renewables	Quantifies the renewable resources within IID and identifies the transmission requirements, similar to what we're doing on a state wide basis. Study to be released soon.	www.iid.com
General	CEC	GIS shape files	Shows military installations and air space in CA. Includes military installations, airspace, and other assets that could be impacted by transmissions and other energy infrastructure	http://www.energy.ca.gov/
General	NV PUC	Proposed Generation Plants in Nevada	List of plant name, owner, MW, type, location, county, announcement date, permit status, construction status, proposed online date, and website for proposed generation plants in NV	http://pucweb1.state.nv.us/PUCN/Electric/ProposedGen.aspx?AspxAutoDetectCookieSupport=1
Biomass	CEC	Biomass strategic value analysis	Detailed biomass assessment including plant locations with forest fire reduction and unemployment analysis. Also, has some landfill gas and other biogas analysis	http://www.energy.ca.gov/2005publications/CEC-500-2005-109/CEC-500-2005-109-SD.PDF
Biomass	UC Davis	Biomass assessment	Breaks down available biomass estimations by county for agriculture, forestry, and municipal waste	http://biomass.ucdavis.edu/pages/reports/Preliminary05ResourceUpdate.pdf
Biomass	WGA	Biomass Task Force Report	Claimed 15,000 MW of biomass available in West. Short on specific data	http://www.westgov.org/wga/initiatives/cdeac/Biomass-full.pdf
Landfill Gas	EPA	LMOP database		http://www.epa.gov/lmop/proj/xls/lmopdataca.xls
Geothermal	CEC	Geothermal strategic value analysis	Brief overview of all CA geothermal sites including detailed environmental impacts	http://www.energy.ca.gov/2005publications/CEC-500-2005-105/CEC-500-2005-105-SD.PDF
Geothermal	GeothermEx	New geothermal site identification and qualification	Consultant report for the PIER program	http://www.energy.ca.gov/pier/final_project_reports/500-04-051.html
Geothermal	Div CA Oil, Gas, and Geo	Map of geothermal resources		ftp://ftp.consrv.ca.gov/pub/oil/maps/Geothermal/MapS-11.pdf
Geothermal	MIT	The future of geothermal energy	Impact of enhanced geothermal systems on the US in the 21st century	http://geothermal.inel.gov
Geothermal	WGA	Geothermal task force report		http://www.westgov.org/wga/initiatives/cdeac/Geothermal-full.pdf
Hydro	ID Nat Lab			http://hydropower.inl.gov/resourceassessment/pdfs/states/ca.pdf
Hydro	Navigant	Statewide small hydropower resource assessment	Small hydroelectric facilities that do not require a new or increased appropriation or diversion of water including inline and run-of-river hydro	http://www.energy.ca.gov/2006publications/CEC-500-2006-065/CEC-500-2006-065.PDF
Hydro	PIER	CA small hydropower and ocean wave energy resources	Base report for Navigant natural water courses and in-conduit hydropower study, first half of report deals with small hydropower	http://www.energy.ca.gov/2005publications/CEC-500-2005-074/CEC-500-2005-074.PDF

Hydro		British Columbia hydro atlas		http://www.small-hydro.com/index.cfm?fuseaction=countries.generalReport&country_ID=13
Hydro	FERC			http://www.ferc.gov/industries/hydropower.asp#skipnavsub
Hydro	Canada (REN)			http://www.canren.gc.ca/resou_asse/index.asp?CaID=54&PgID=274
Hydro	Mexico (CFE)			http://www.cfe.gob.mx/en/LaEmpresa/generacionelectricidad/hidroelectrica/
Ocean	B&V	Carbon Trust Tidal Stream Resource and Technology Summary Report, and Resource Assessment Report		http://www.lunarenergy.co.uk/Userimages/PhaseII tidalStreamResourceReport.pdf
Ocean	EPRI	CA wave power	Overview report of all developable wave energy resources in CA including technology overview of current wave energy devices	http://www.epri.com/oceanenergy/attachments/wave/reports/Phase_15_CA_Report_031407.pdf
Ocean	EPRI	Tidal in-stream power plant	System level design, performance, cost and economic assessment for golden gate	http://www.epri.com/oceanenergy/attachments/streamenergy/reports/006_CA_06-10_-06.pdf
Ocean	EPRI	San Francisco Pelamis plant	Detailed estimate using most commercially mature wave energy device from UK	http://www.epri.com/oceanenergy/attachments/wave/reports/006_San_Francisco_Pelamis_Conceptual_Design_12-11-04.pdf
Ocean	EPRI	San Francisco WEC plant	Same report as above using an oscillating water column device	http://www.epri.com/oceanenergy/attachments/wave/reports/006_San_Francisco_Energetech_Conceptual_Design_RB_12-20-04.pdf
Ocean	PIER	CA small hydropower and ocean wave energy resources	second half of report deals with ocean power	http://www.energy.ca.gov/2005publications/CEC-500-2005-074/CEC-500-2005-074.PDF
Solar PV	CEC	California Solar Resources	Draft Staff Paper	http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2005-072-D
Solar PV	Navigant	CA rooftop photovoltaic resource assessment and growth potential by county		http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2007-048
Solar PV	CA PUC	CSI information		http://www.cpuc.ca.gov/PUC/energy/Solar/
Solar PV	NREL	Satellite Resource Data		http://www.nrel.gov/rredc/
Solar Thermal	NREL	Cal CSP master plan	An overview of concentration solar power's success in CA, including market trends and benefits, general size and location estimates of CSP in southern CA	http://www.nrel.gov/csp/pdfs/2007/aringhoff_cal_csp_masterplan.pdf
Solar Thermal	NREL	CSP CA map	Direct normal solar radiation maps, filtered by solar resource and land availability. Identify the most economically suitable lands available for the development of large-scale concentration solar power plants in CA	http://www.nrel.gov/csp/downloads/csp_ca_nrel.jpg
Solar Thermal	B&V	Study on SCP in CA		http://www.nrel.gov/csp/news_california.html
Solar Thermal	NSRDB	Updated 1991-2005 National Solar Radiation Database	Holds solar and meteorological data for 1,454 locations in the US	http://rredc.nrel.gov/solar/old_data/nsrdb/1991-2005/
Solar Thermal	Solargenix	Economic, energy, and environmental benefits of solar thermal development	Includes general transmission barriers	http://www.solargenix.com/pdf/CSPCalifornia.pdf
Transmission	WECC	Western Interconnection 2006 Congestion Assessment study		http://www.wecc.biz/documents/library/WCATF/Report_to_DOE_050806_2008and2015_Presentation_ver2.ppt#359,1,Western Interconnection 2006 Congestion Assessment Study

Transmission		Transmission Ranking Cost Report of Pacific Gas & Electric Company (U39-E) for Renewable Portfolio Standard		https://www.pge.com/regulation/RenewablePortfolioStdsOIR-II/Other-Docs/PGE/2007/RenewablePortfolioStdsOIR-II_Other-Doc_PGE_20070907-01.pdf
Transmission		Transmission Ranking Cost Report of Southern California Edison Company (U338-E) for Renewable Portfolio Standard		Not yet posted
Transmission		Transmission Ranking Cost Report of San Diego Gas & Electric (U902E) for Renewable Portfolio Standard		Not yet posted
Transmission		Integration of Renewable Resources, CA Independent System Operator		http://www.caiso.com/1ca5/1ca5a7a026270.pdf
Transmission		2007 Strategic Transmission Investment Plan	Final Commission Report, CEC	www.energy.ca.gov/2007publications/CEC-700-2007-018/CEC-700-2007-018-CMF.PDF
Transmission	NW power pool	Assessment of Load Service Capability of the NW Transmission System		http://www.nwpp.org/pdf/2006%20rants%20report%20final%20draft.pdf
Transmission	NREL	Frontier Line & TransWest Express Project		http://www.nrel.gov/analysis/seminar/docs/2007/ea_seminar_jan_4_wtep.ppt#261,5,Frontier Line
Transmission	BLM	District renewable applications	For example, CA Desert District. We would also look at S. NV, N. NV, AZ, N. CA, etc. This would give us info on Wind, Solar, and geothermal applications.	www.ca.blm.gov/cdd
Wind	CEC	High resolution wind maps	30, 50, 70, and 100 m	http://www.energy.ca.gov/maps/wind.html
Wind		Seasonal wind speed maps	50 m	
Wind	CEC	Intermittency Analysis Project	Characterizing new wind resources in California, including hourly wind generation profiles and combined rated capacities at 14 good wind sites	http://www.energy.ca.gov/2007publications/CEC-500-2007-014/CEC-500-2007-014.PDF
Wind	CEC	Intermittency Analysis Project	2010 Tehachapi case, including general transmission analysis	http://www.energy.ca.gov/2007publications/CEC-500-2007-009/CEC-500-2007-009.PDF
Wind	CEC	Wind performance report summary 2002-2003	Includes detailed maps of CA's wind pass areas	http://www.energy.ca.gov/2006publications/CEC-500-2006-060/CEC-500-2006-060.PDF
Wind	CEC	Strategic value analysis	Somewhat dated economic information, but some maps of detailed wind resource hotspots with power line overlays.	http://www.energy.ca.gov/2005publications/CEC-500-2005-107/CEC-500-2005-107-SD.PDF
Wind	CEC	Wind turbine technologies effect on transmission system operations and performance		http://www.energy.ca.gov/pier/final_project_reports/CEC-500-2007-081.html
Wind	CEC	CA wind energy resource modeling and measurement		http://www.energy.ca.gov/pier/final_project_reports/CEC-500-2006-062.html