WOODS INSTITUTE FOR THE ENVIRONMENT
STANFORD UNIVERSITY

CALIFORNIA CLIMATE CHANGE PROJECT
BRIEF SUMMARY

Key Data Sources on California and US Climate and Energy Issues

Compiled by Jonathan G. Koomey, Ph.D., Consulting Professor, Stanford University, and Staff Scientist, Lawrence Berkeley National Laboratory http://www.koomey.com

GENERAL DATA AND POLICIES ON CLIMATE AND ENERGY ISSUES

- The single most important document for a U.S.-based researcher in virtually any quantitative field is the *Statistical Abstract of the U.S.* All libraries will have the latest one, and the data are available free on-line at <http://www.census.gov/compendia/statab/>. California also has a statistical abstract: <http://www.dof.ca.gov/HTML/FS_DATA/stat-abs/toc.htm>.
- The UN's Framework Convention on Climate Change site gives a nice list of data sources on GHG emissions and socio-economic data, a couple of which are listed below <http://unfccc.int/methods_and_science/other_methodological_issues/items/3170.php>.
- All chapters from the IPCC Third Assessment reports (1. The Scientific Basis; 2. Impacts, Adaption, and Vulnerability; 3. Mitigation, and 4. The Synthesis report) can be downloaded at <http://www.grida.no/climate/ipcc_tar/index.htm>. For graphics (PPT & JPG), go to <http://www.grida.no/climate/ipcc_tar/slides/index.htm>.
- The *California Climate Change portal* <http://www.climatechange.ca.gov> is a key resource for information about the state's climate change policies and programs. The *California Air Resources Board site on Climate change*, focusing specifically on Assembly Bill 32, is at <http://www.arb.ca.gov/cc/cc.htm>.
- The *Clean Energy Futures study* is the most detailed analysis of options for reducing greenhouse gas (GHG) emissions ever commissioned by the U.S. Government, and it includes detailed analysis by five national labs various energy options and policies: <http://www.ornl.gov/sci/eere/cef/> and <http://enduse.lbl.gov/Projects/CEF.html>.

ENERGY DATA

- The *International Energy Agency's (IEA's) Energy statistics page* gives electronic access to the data compiled by IEA <http://www.iea.org/Textbase/stats/index.asp>. Search on the IEA site for numerous reports related to energy efficiency and energy supply in IEA member countries.
- The *U.S. Department of Energy's (DOE's) Energy Information Administration (EIA) site* <http://www.eia.doe.gov> is the right place to find energy and some environmental data for the U.S., including state level consumption data, monthly production and consumption data, sectoral surveys, and end-use consumption data (summarized in the EIA's Annual Energy Outlook). The site also has limited information on certain international topics, such as nuclear power or energy use in other countries. The DOE's energy data books on transportation, biomass, buildings, and power technologies can also be extremely useful: <http://cta.ornl.gov/data/index.shtml>.
- The *Lawrence Berkeley National Laboratory's (LBNL's) Energy Analysis Department* produces numerous reports on energy use, technologies, and policies for all sectors: <http://eetd.lbl.gov/EA.html>. Key sources: 1) a detailed analysis of CA electricity consumption <http://enduse.lbl.gov/Projects/CAdata.html>; 2) a China Energy Databook which is available at: http://china.lbl.gov/china_policy-ced.html; 3) Industrial sector energy analysis <http://industrial-energy.lbl.gov/>.
- The *California Energy Commission site* <http://www.energy.ca.gov/> gives energy information, data, and reports specific to California. One key report is the "energy balance" for the year 2000 produced by LBNL: <http://www.energy.ca.gov/pier/final_project_reports/CEC-500-2005-068.html>. The CEC also conducts energy forecasting exercises and compiles those data in reports that can be helpful in assessing California's future energy choices. Search on the CEC site for other related topics.
- The *California Public Utility Commission site* <http://www.cpuc.ca.gov/> contains information about the state's electric and natural gas utilities, and the *California Independent System Operator site* <http://www.caiso.com/> describes recent developments in California's electricity markets.
- To estimate energy and emissions of a home in any climate, use LBNL's *Home Energy Saver site* <http://hes.lbl.gov/>. It allows you to enter the characteristics of a house and generate accurate calculation of energy use and recommendations for reducing it.

ENERGY EFFICIENCY POLICIES AND PROGRAMS

- Energy efficiency is one of the most important options for reducing GHG emissions, and the American Council for an Energy Efficient Economy is a key resource on that issue, creating reports and data (and organizing conferences) that are widely influential <http://www.aceee.org>.
- The U.*S. Department of Energy's energy efficiency standards* have been one of the most successful government policies affecting the energy efficiency of building equipment and appliances: <http://www.eere.energy.gov/buildings/appliance_standards/>. See also the general sites for DOE's industrial technologies <http://www1.eere.energy.gov/industry/> and building technologies <http://www.eere.energy.gov/buildings/> programs.
- The *EPA and DOE Energy Star program* labels equipment that will save consumers money and reduce emissions <http://www.energystar.gov>. That site also contains information on energy use and efficiency in the residential, commercial, and industrial sectors. The EPA and DOE's national action plan for energy efficiency can be downloaded here <http://www.epa.gov/cleanrgy/actionplan/eeactionplan.htm>.
- The CEC's energy efficiency page is at <http://www.energy.ca.gov/efficiency/index.html> and the CPUC's energy efficiency page is here <http://www.cpuc.ca.gov/static/energy/electric/energy+efficiency/index.htm>. The CA Flex Your Power site, which has been very effective at encouraging customers to reduce electricity use during recent electricity crises, is at <http://www.fypower.org>.
- The sites for the *major California utilities* contain information about energy efficiency technologies and efficiency programs (as well as energy supply options). For a complete list of utilities and associated web sites see <http://www.energy.ca.gov/electricity/utilities.html>.

RENEWABLE ENERGY DATA

- International Energy Agency reports on renewables can be downloaded at <http://www.iea.org/textbase/subjectqueries/keyresult.asp?KEYWORD_ID=4116>.
- The EIA's data on renewables and alternative fuel technologies can be found at <http://www.eia.doe.gov/fuelrenewable.html>.
- The DOE's office of Energy Efficiency and Renewable energy gives data and reports on solar, wind, geothermal, hydropower, and biomass: <http://www.eere.energy.gov/>.
- The World Alliance for Decentralized energy <http://www.localpower.org/> produces many reports on international developments in cogeneration and renewable energy technologies.
- One of the key portals to data on the solar industry is at <http://www.solarbuzz.com/>.
- The American Wind Energy Association <http://www.awea.org/> and the Solar Energy Industries Association <http://www.seia.org/> are two key trade associations for the renewables industry. Many states have comparable associations.

ENVIRONMENTAL AND EMISSIONS DATA

- *The U.S. Environmental Protection Agency's site* <http://www.epa.gov> contains environmental data, as well as access to the EPA's reports. The climate change page on that site <http://www.epa.gov/climatechange/> gives information about the science of climate change, greenhouse gas emissions, impacts, US policy, and what you can about the climate problem. EPA also has compiled a list of on-line emissions calculators: <http://yosemite.epa.gov/oar%5Cglobalwarming.nsf/content/ResourceCenterToolsCalculators.html>.
- The ORNL's *Online Trends* database from the Carbon Dioxide Information Analysis Center gives extensive data on emissions and concentrations of greenhouse gas emissions, as well as on temperature and land use. <http://cdiac.esd.ornl.gov/trends/trends.htm>
- The World Resources Institute's (WRI's) *Climate Analysis Indicators Tool* is a marvelous compilation of GHG data for different countries and regions over time. <http://www.wri.org/climate/project_description2.cfm?pid=93>. WRI also tracks a more general set of environmental indicators at their "Earthtrends" site <http://earthtrends.wri.org/>.
- The *California EPA site* <http://www.calepa.ca.gov/> focuses mainly on local air pollution, but with recent legislation the role of this agency may increase to encompass GHG emissions.
- The various Air Quality Management Districts in Los Angeles <http://www.aqmd.gov/>, the Bay Area <http://www.baaqmd.gov/>, and Sacramento <http://www.airquality.org/> focus on urban smog and transportation issues.

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This list is not comprehensive—it includes the sites that I as a working researcher in the field have found most useful. I received comments and suggestions on versions 1 and 2 of this document from Audrey Chang at NRDC, Skip Laitner at ACEEE, Rich Brown and Lynn Price of LBNL, and Julia Silvis of UC Davis. Send comments and additions to: <jgkoomey@stanford.edu>. Additional hint: talk to your local reference librarian if the sources above aren't enough. If your librarian can't find it, it probably doesn't exist. Some of the text above is adapted from Koomey, Jonathan. 2001. (3d printing, 2006) Turning Numbers into Knowledge: Mastering the Art of Problem Solving. Oakland, CA: Analytics Press. <http://www.analyticspress.com>