California is the most populous state in the nation and the world's eighth largest economy. The state depends upon energy to meet the everyday needs of consumers and power economic growth. To ensure that the state's energy is safe, affordable, reliable, and clean, California has established three governing institutions: the California Energy Commission, the California Public Utilities Commission, and the California Independent System Operator. Although these three state institutions have similar goals and often work together, their roles, responsibilities, and structures are distinct. In addition, California has 44 public owned institutions that are operated by local governments.

California Energy Commission

Established by the Warren-Alquist Act in 1974 in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy, the Energy Commission is committed to reducing energy costs and environmental impacts of energy use – such as greenhouse gas (GHG) emissions – while ensuring a safe, resilient, and reliable supply of energy. The Energy Commission is made up of five commissioners appointed by the Governor and confirmed by the state Senate. Commissioners serve staggered five-year terms. The Governor also designates a chair and vice chair as primary agency leads.

The Energy Commission serves as the state's primary policy and planning agency and has seven core responsibilities that guide the agency as it sets state energy policy.

These responsibilities include:

» Forecasting electricity and natural gas demand to ensure adequate supplies are developed.

» Promoting energy efficiency and conservation by setting the state’s appliance and building energy efficiency standards.

» Investing in energy innovation that advances energy science and technology through research, development, and demonstration projects.

» Developing renewable energy resources

» Advancing alternative and renewable transportation fuels, vehicles, and technologies.

» Certifying thermal power plants 50 megawatts and larger.

» Planning for and directing state response to energy emergencies.

The Energy Commission also has specific and limited regulatory authority over the state’s 44 publicly owned utilities (POUs) that serve approximately a quarter of the state’s electricity demand. The Energy Commission’s regulatory authority over these entities includes, for example, the requirement that the Energy Commission certify, monitor and verify eligible renewable energy resources procured by POUs for compliance with the Renewables Portfolio Standard (RPS). The Energy Commission also specifies enforcement procedures for enforcement of the RPS for the POUs.
California Public
Utilities Commission

The California Public Utilities Commission was established in 1911 by a constitutional amendment as the Railroad Commission. In 1912, the state Legislature passed the Public Utilities Act, expanding the agency’s regulatory authority to include natural gas, electricity, telecommunication, and water companies, as well as railroads and marine transportation companies. In 1946, the Railroad Commission was renamed the California Public Utilities Commission (CPUC).

The CPUC establishes policies and rules for electricity and natural gas rates and services provided by private utilities in California. These include Pacific Gas and Electric (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE) and the Southern California Gas Company (SoCalGas). PG&E, SDG&E and SCE serve approximately three quarters of California’s electricity demand.

In addition, the CPUC regulates telecommunication, water, and transportation companies. The CPUC’s regulations and policies are designed to protect consumers and ensure that private utility services and infrastructure are safe, reliable, and affordable. The CPUC also creates and implement policies aimed at deploying clean energy resources with a commitment to environmental enhancement and a healthy California economy.

The CPUC is overseen by five commissioners appointed by the Governor and confirmed by the state Senate. The Governor designates the president, and commissioners serve staggered six-year terms.

California Independent System Operator

The California Independent System Operator (California ISO) was established in 1996 by Assembly Bill 1890 and is an independent, nonprofit public benefit corporation responsible for operating the high-voltage, long-distance electric transmission lines that make up 80 percent of California’s and a small part of Nevada’s electricity system. The California ISO is also responsible for facilitating California’s multi-billion dollar wholesale electric power markets.

The California ISO is led by a five member Board of Governors. Each member is appointed by the Governor and confirmed by the state Senate after a comprehensive selection process by the Board Nominee Review Committee. Members serve staggered three-year terms.

The California ISO is regulated by the Federal Energy Regulatory Commission (FERC), an independent agency that regulates the interstate transmission of electricity, natural gas, and petroleum.

While participating transmission owners (mainly California’s private electric utilities) still own their lines, the California ISO operates the electric transmission system independently, much like a traffic controller routing electricity. This arrangement allows the California ISO to maximize the use of the electric transmission system and its electricity generation resources. The California ISO also ensures that electricity flows as intended within federal operational standards, keeps supply in balance with demand on a five-minute basis, and plans for any needed expansion or upgrade of the electric transmission system.

In addition, the California ISO matches buyers and sellers of electricity and facilitates about 28,000 market transactions every day to ensure enough electricity is available to meet demand. The California ISO has no financial interest in the wholesale electric power markets and ensures that diverse electricity generation resources have equal access to the electric transmission system.