# Energy profile – CALIFORNIA

Overview

加州西海岸的三分之二，加利福尼亚州是全美第三大州，也是是全国人口最多的州，经济规模最大，其能源需求总量仅次于德克萨斯州。加州的广泛努力提高能源利用效率，以替代技术实施以来，已经抑制能源需求的增长。加州还拥有丰富的能源资源。国家原油供应充足，是传统水力发电的最大生产国。加利福尼亚州还通过太阳能，地热和生物质资源在全国发电。运输占主导地位加州的能耗简况。在加利福尼亚州注册的机动车比在其他任何州都多，使用时间也是最长的加州也占据了全国五分之一的喷气式燃料的消耗。，

Stretching two-thirds of the way up the West Coast, California is the nation's third-largest state，and also California is the most populated state in the nation, and, with the largest economy, its total energy demand is second only to Texas. California's extensive efforts to increase energy efficiency, along with the implementation of alternative technologies, has restrained growth in energy demand. California is also rich in energy resources. The state has an abundant supply of crude oil and is a top producer of conventional hydroelectric power. California also leads the nation in electricity generation from solar, geothermal, and biomass resources. Transportation dominates California's energy consumption profile. More motor vehicles are registered in California than in any other state, and commute times in California are among the longest in the country. The state also accounts for one-fifth of the nation's jet fuel consumption.

Petroleum

对于加利福尼亚州，石油是它最主要的能源来源，近五十年来，石油占能源总消耗上均占60%以上，但可以看出，在不断地技术革新背后，石油所占比例在总消耗中呈现微弱的下降趋势。尤其是工业部门，近几年来石油使用比例在波动中下降，与天然气呈现出互为补充的态势，随着天然气的使用的增长，石油或许会被逐步替代。但在交通运输部门，石油的使用比例接近于100%，并且未有下降趋势。而且在商业部门和居住部门，石油的使用比例都有一定程度的上升，2009年附近达到了40%和50%的使用比例。说明加利福尼亚州对于石油的依赖性是很强的，总体虽有下降趋势，但短期内不能离开石油。

For California, oil is its primary source of energy, with oil accounting for more than 60% of total energy consumption in the past 50 years. However, it can be seen that the share of oil in total consumption after constant technological innovation Showing a weak downward trend. In particular, in the industrial sector, the proportion of oil used in the past few years has dropped in volatility and has been shown to complement each other with natural gas. With the growth in the use of natural gas, oil may be gradually replaced. However, in the transportation sector, the share of oil used is close to 100% and there is no downward trend. In the commercial and residential sectors, the proportion of oil used has risen to some extent, reaching around 40% and 50% in 2009. It shows that California is very dependent on oil. Although the overall trend is declining, it can not leave the oil in the short term.

Natural gas

加州仅占美国天然气储量和产量的不到1％。在上世纪七十年代以后，加州的天然气产量在经历了三十年的逐步全面下降。从六十年代的30%，到如今在20%上下起伏。加州对于天然气的需求并没有那么强，并且从数据中分析，近些年来较为稳定，在20%左右。居住部门的天然气使用在50年间连续下降，由80%至45%左右。在商业部门中也是如此，在七十年代上升至70%后开始了连续下降，在2009达到了25%。与前面的不同，工业部门似乎把天然气认为是石油的替代品，经历了70年代的下降后，从八十年代中期在波动中上升，达到了47%的份额，并且还有继续上升的态势。

California accounts for less than 1% of total U.S. natural gas reserves and production. After the 1970s, California's natural gas production experienced a gradual and complete decline over the past 30 years. From 30% in the 1960s and now up and down at 20%. The demand for natural gas in California is not so strong, and from the data analysis, it has been relatively stable at about 20% in recent years. The use of natural gas in the dwelling sector has dropped continuously from 80% to 45% in 50 years. The same is true of the commercial sector, which started to decline continuously after rising to 70% in the 1970s and reached 25% in 2009. Contrary to the previous one, the industrial sector seems to consider natural gas as a substitute for petroleum. After a decline in the 1970s, it rose from fluctuations in the mid-1980s to a 47% share and is still on the rise.

Renewable energy

加利福尼亚州是可再生资源发电的国家之首，并从太阳能，地热能和生物质能领先全国。加利福尼亚州也是全美第三大传统水力发电厂，也是第五大风力发电厂。随着科学技术的发展，可再生能源的比列在总能源消耗中缓慢稳定的上升。这一点在居住行业和商业中体现的较为明显，五十年来不断上升。居住行业中，占比由8%上升至17%，在商业中，由12%上升至23%，但由近几年的图表显示，上升的速度在不断地下滑。而在工业中，由于石油危机导致在近五十年中再生能源的占比是最高的，而七十年代后占比不断下降，2000年至2009年略显回升态势。

California is among the top states in the nation in electricity generation from renewable **resources** and leads the nation in generation from solar, geothermal, and biomass energy. California is also the nation's third-largest producer of electricity from conventional hydroelectric power and the fifth-largest producer from wind energy. With the development of science and technology, the ratio of renewable energy sources shows a steady and steady rise in total energy consumption. This is evident in the residential and commercial sectors and has been rising for 50 years. In the residential sector, the share rose from 8% to 17% and in commerce from 12% to 23%, but the charts in recent years show that the rate of increase is declining steadily. In industry, however, the share of renewable energy in the last 50 years was the highest since the oil crisis, and the share of renewable energy declined after the 1970s, recovering slightly from 2000 to 2009.

Coal

加利福尼亚州没有任何煤炭储量或生产，并已经逐步淘汰几乎所有用于发电的煤炭。从表中得知，加州对于煤炭的需求极低，在2000~2009年甚至已经低于对可再生能源的需求。无论在商业，运输行业，居住行业还是工业，都呈现出出来接近于0的极低的占比，并且没有继续升高的的态势。

California does not have any coal reserves or production and has phased out almost all use of coal for electricity generation. As you can see from the table, California's demand for coal is extremely low, even lower than the demand for renewable energy in 2000-2009. No matter in the commercial, transportation, residential or industrial sectors, there is an extremely low proportion of those coming out to zero and there is no continuing upward trend.