# Arizona’s Palo Verde Nuclear Generating Station is the nation’s largest nuclear power plant and is second only to the Grand Coulee Dam in total electricity generating capacity. It is Arizona’s largest power plant. The Navajo Generating Station is the second-largest power plant in the state and the largest coal-fired facility. *Almost three-fourths of the natural gas consumed in Arizona is used for electric power generation*

# Energy profile –ARIZONA

Overview

亚利桑那州以其标志性的景观而闻名，从北部的大峡谷到南部的萨瓜罗沙漠。该州的化石燃料资源很少，但具有丰富的太阳能和地热能潜力。亚利桑那州的海拔不同，从北部高达12,000英尺高的山峰到下部沙漠到西南部的近海平面。充足的阳光给整个国家一些国家最大的太阳能潜力。由于亚利桑那州的主要经济活动不是能源密集型的，国家的人均能源消耗是全国最低的。运输部门是亚利桑那州最大的终端能源消费国，其次是住宅市场。亚利桑那州的主要能源消耗是石油.

Arizona is known for its iconic vistas from the Grand Canyon in the north to the Saguaro deserts in the south. The state has few fossil fuel resources, but it does have abundant solar and geothermal energy potential. Elevations in Arizona vary from peaks more than 12,000 feet high in the north to nearly sea level in the lower deserts to the southwest. And abundant sunshine gives the entire state some of the nation’s greatest solar power potential. Because the main economic activity in Arizona is not energy-intensive, the country's per capita energy consumption is the lowest in the country. The transportation sector is the largest consumer of terminal energy in Arizona, followed by the residential market. The main energy source in Arizona is oil.

## *.* Petroleum

亚利桑那州没有任何炼油厂。汽油和其他石油产品由南加州和得克萨斯的管道供应。最依赖石油的是运输部门，从六十年代开始占比一直上涨至2005年左右，从82%几乎上涨至95%，从2005年起由于可再生能源和天然气的上涨略有下降趋势。根据计算，几乎十桶油有九桶会用于交通部门，而剩下的有基本会用于工业部门。石油的使用在工业部门整体呈上升趋势，由27%上升至了65%，并且仍然有上升的态势。在住宅部门和商业部门中，石油的占比也是上升的，住宅部门中，由16%上升至50%，并趋于平稳，在商业部门中，由30%趋于52%。整体上说，亚利桑那州对石油的依赖性越来越大。

Arizona does not have any refinery. Gasoline and other petroleum products are supplied by pipelines in Southern California and Texas. The transportation sector, which is the most dependent on oil, has risen to about 2005 from the 1960s, rising almost from 82% to 95%. Since 2005, the share of renewables and natural gas has slightly declined. According to calculations, nearly ten barrels of oil will be used for the transport sector and the rest will be basically used in the industrial sector. The use of oil in the industrial sector as a whole is on the rise, rising from 27% to 65% and is still on the rise. In the residential and commercial sectors, the share of oil also increased, with the residential sector rising from 16% to 50% and stabilizing, with 30% of the commercial sector turning 52%. On the whole, Arizona is getting more and more dependent on oil.

Natural gas

亚利桑那州没有重要的天然气储量。天然气从六十年代到九十年代的占比是一直下降的，直至九十年代末才表现出上升的趋势。在四个重要部门中，总体上讲，天然气的使用都是呈下降台式的。商业部门中由57%降至20%并似乎仍有下降态势，工业部门中，从六十年代到九十年代，天然气占比由64%迅速降至10%以下，后来恢复至15%左右，并且在九十年代到二十一世纪初期在15%上下波动。在住宅部门中，天然气所占的比例是一直下降的，由70%下降至15%，后期下降比前期下降由平缓一些。在交通部门中由22%下降至了5%左右，并且在2009年由上涨的趋势。天然气曾经是亚利桑那州最主要的能源之一，但是随着其他能源使用上成本降低，天然气对于亚利桑那州不再那么重要。

Arizona has no significant gas reserves. The share of natural gas from the 1960s to the 1990s has been declining until it showed an upward trend in the late 1990s. In all four key sectors, the use of natural gas, in general, has been declining. In the commercial sector, the share of natural gas dropped rapidly from 64% to below 10% from 60% to 20% in the industrial sector and seems to be still on the decline. In the industrial sector, from the 1960s to the 1990s, the proportion of natural gas dropped rapidly to below 10% and then to 15% And fluctuated around 15% in the 1990s and early twenty-first centuries. In the residential sector, the share of natural gas has been declining, from 70% to 15%, and the post-term decline has been softer than the previous decline. In the transport sector from 22% dropped to about 5%, and in 2009 by the rising trend. Natural gas was once one of the main sources of energy in Arizona, but natural gas is no longer as important for Arizona as the cost of other energy uses goes down.

Coal

亚利桑那州有两个煤田 - 黑色梅萨，纳瓦霍河和霍皮保留区东北部，亚利桑那州中南部的派恩代尔。这些领域在生产矿山保持全国煤炭储量的1％左右。该州唯一经营的煤矿位于Black Mesa油田，是全国30个最大的煤矿之一。亚利桑那州从七十年代开始使用煤炭，到八十年代迅速成为占比12%的重要能源，到九十年代初期开始缓慢下降至8%（2009年），并保持平稳。工业用煤在七十年代中期至八十年代末期增长迅猛，一度到达20%，于九十年代初期迅速回落至8%并保持稳定。除工业部门的三个部门，基本不直接使用煤炭。

Renewable energy Arizona has two coalfields - Black Mesa, the Navajo River and the Northeast Hippo Reservation, Pinedale, south-central Arizona. These areas maintain around 1% of the country's coal reserves in producing mines. The only coal mine operating in the state is located in the Black Mesa field, one of the 30 largest coal mines in the country. Arizona started to use coal from the 1970s and quickly became a significant 12% energy source in the 1980s. It began to slowly decline to 8% (2009) in the early 1990's and remained stable. Industrial coal, which grew rapidly from the mid-1970s to the late 1980s, reached 20% at one point and quickly dropped to 8% in the early 1990s and remained stable. In addition to the three departments in the industrial sector, coal is basically not used directly.

Renewable Energy

亚利桑那州的可再生能源标准要求投资者拥有的电力公用事业和零售电力供应商从可再生资源中获得越来越多的电力。可再生能源一直是亚利桑那州的重要能源之一，六十年代到八十年代二十年之间，它的占比一直接近于10%，1980~1985年所占比例迅速增加，最高接近15%，后来有所回落。从2001年，可再生能源的占比有缓慢的上升，并有继续上升的趋势。工业中可再生能源的占比连续30年走高，最高可达20%，九十年代起略有下降，但从21世纪七，有继续上升的态势。在居住部门中可再生能源一直是上升的，50年来从10%上升至25%,能源结构有了很大的变化。商业部门和运输部门基本不使用可再生能源。

Arizona's renewable energy standards require that investors in the power utilities and retail power providers receive more and more electricity from renewable sources. Renewable energy has been one of Arizona's major energy sources and its share has been close to 10% between the 1960s and the 1980s, with a sharp increase of nearly 15% between 1980 and 1985 , Then retreated. Since 2001, the share of renewable energy has risen slowly and has continued to rise. The share of renewable energy in the industry has been rising for 30 consecutive years, up to 20% and a slight decrease since the 1990s. However, the proportion of renewable energy in the industry has been on a rising trend since the 21st century. Renewable energy in the residential sector has been on the rise, rising from 10% to 25% in 50 years and the energy mix has changed dramatically. Commercial and transportation sectors basically do not use renewable energy.