

新东方背诵文选80篇：42火力发电厂 Coal-fired Power Plants

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The invention of the incandescent light bulb by Thomas A. Edison in 1879 created a demand for a cheap, readily available fuel with which to generate large amounts of electric power. Coal seemed to fit the bill, and it fueled the earliest power stations (which were set up at the end of the nineteenth century by Edison himself). As more power plants were constructed throughout the country, the reliance on coal increased. Since the First World War, coal-fired power plants have accounted for about half of the electricity produced in the United States each year. In 1986 such plants had a combined generating capacity of 289, 000 megawatts and consumed 83 percent of the nearly 900 million tons of coal mined in the country that year. Given the uncertainty in the future growth of nuclear power and in the supply of oil and natural gas, coal-fired power plants could well provide up to 70 percent of the electric power in the United States by the end of the century. Yet, in spite of the fact that coal has long been a source of electricity and may remain one for many years (coal represents about 80 percent of United States fossil-fuel reserves), it has actually never been the most desirable fossil fuel for power plants. Coal contains less energy per unit of weight than natural gas or oil. It is difficult to transport, and it is associated with a host of environmental issues, among them acid rain. Since the late 1960s problems of emission control and waste disposal have sharply

reduced the appeal of coal-fired power plants. The cost of ameliorating these environmental problems along with the rising cost of building a facility as large and complex as a coal-fired power plant, have also made such plants less attractive from a purely economic perspective. Changes in the technological base of coal-fired power plants could restore their attractiveness, however. Whereas some of these changes are evolutionary and are intended mainly to increase the productivity of existing plants, completely new technologies for burning coal cleanly are also being developed. 火力发电厂托马斯爱迪生1879年发明的白炽灯导致对便宜、易得、可生产大量电能的燃料的需求。煤似乎符合这个要求，并成为第一批电厂的燃料(正是爱迪生本人在19世纪末建造了第一批电厂)。全国到处兴建电厂时，对煤的依赖加深了。自第一次世界大战以来，美国每年约有一半的电力是以煤为燃料的电厂提供的。1986年这些电厂的总发电能力达到28,900千瓦并且消耗了当年全国开采的九亿吨煤的83%。考虑到核能发展以及石油、天然气供应中的不确定因素，到本世纪末，火力发电厂仍可能为美国提供多达70%的电力。然而，尽管煤长期以来一直是电力的原料之一并且可能会继续如此(煤占美国化石燃料储量的80%)，它却不是电厂的理想燃料。煤的单位能量含量低于石油和天然气，而且会导致包括酸雨在内的一系列环境问题。从1960年以来，排放控制和垃圾处理的问题极大地削弱了燃煤电厂的魅力。由于减轻这些环境问题需要大量资金，而且建造庞大复杂的燃煤电厂的费用不断上涨，也使得这些电厂从经济角度上不具备吸引力。改变火力发电厂的基础技术却可能恢复它们的吸引力。虽然某些技术改进是渐进

的，其目的只是提高现有电厂的生产率，但人们正在开发全新的清洁燃煤的技术。 100Test 下载频道开通，各类考试题目直接下载。详细请访问 [www.100test.com](http://www.100test.com)