

# DEVELOPMENT IN NEIGHBORHOOD OF NIAGRA IS CITED EXAMPLE

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Hoover Dam Probably  
Will Attract Industry  
To Southwest.

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## MINERAL PLENTIFUL

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Flood Control, Water and  
Electricity Production  
Purposes of Project.

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By

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The Boulder Canyon project on the Colorado river is unquestionably the greatest engineering undertaking of its kind in the world today. Its purposes are three-fold. First, it will provide flood control, and thereby remove the serious and ever increasing flood menace that has for years threatened the Imperial, Yuma, Palo Verde and other communities along the lower reaches of the Colorado river; second, it will conserve and regulate the water supply of this great system and thereby provide additional water for both domestic and irrigation purposes; and third, it will make available over 60,000 horsepower of firm continuous power and approximately 200,000 horsepower of secondary or intermittent power.

While the production of power is subordinate to flood control and conservation of water, nevertheless the power feature is the financial burden-bearer of the project, including interest, within a 50-year period.

The states of Arizona and Nevada have each been allocated 18 percent of the firm energy, or approximately \$14.75 per horsepower year, the price depending somewhat upon the load factor at which the power will be utilized.

This price for power includes the government charge for the use of falling water at the dam which has been fixed at 1.63 mills per kilowatt-hour and the cost of operating and maintaining the power plant and amortization of the cost of the generating equipment installed therein. The cost of the power at the power plant will be exceptionally low compared with the cost of power elsewhere in the United States.

**THE HOOVER DAM** is situated in the center of an area which is wonderfully rich in natural mineral resources and the combination of abundant cheap hydro-electric power and extensive known deposits of raw materials presents an unusual opportunity for industrial developments. Certain industries require large amounts of electric power in their processes and quite naturally they seek localities where cheap power is obtainable.

The industrial development near Niagra Falls is an outstanding example in this country, showing how certain types of industries are attracted by cheap power. The increasing usage of power in the vicinity of Niagra Falls has gradually raised the price of power, and this in turn has forced some of the industries which were originally located there to turn elsewhere for cheaper sources of power, as evidenced by the large hydro-electric power developments

made in recent years by American capital in Canada and Norway.

**APPROXIMATELY** 70 per cent of the copper produced in the United States comes from the Pacific southwest. The introduction of modern selective flotation and leaching processes has opened up vast new reserves of copper ore and made possible the working of ore containing less than 1 per cent of copper, as well as the recovery of valuable by-products in the form of gold, silver, lead and zinc. Practically all the copper produced in the Pacific southwest is now shipped to the eastern seaboard for refining. Power plays an important part in the electrolytic refining of copper and with low priced power available at Hoover Dam it should be economically feasible to build and operate electrolytic refineries in the producing area instead of shipping the concentrates to distant refineries as at present.

The combination of low priced power and availability of raw materials should be conducive to the establishment of electro-metallurgical industries in this area.

**DIRECT ELECTRIC** smelting of iron ore is possible and extensive iron deposits are known to exist in Southern California, Utah and Nevada. Tungsten is available in central Nevada, while vanadium, molybdenum, manganese and silicon ores are reported to be available in the immediate vicinity of the damsite. Ferro-alloys of these materials are much in demand for the production of special high grade steels and these valuable alloys could be produced in electric furnaces utilizing Hoover power and the local raw materials.

Low priced power is a requisite for certain electro-chemical industries. An immense quantity of raw materials, such as borax, gypsum limestone, sulphur, sodium sulphate, salt, etc., which could be utilized in various electro-chemical processes are available in southern Nevada, Southern California and Western Arizona, within reasonable shipping distances of the damsite.

**SODIUM HYDRATE** and chlorine can be produced by the electrolytic dissociation of salt in solution, and immense deposits of pure rock salt are available in the near vicinity of the damsite. Synthetic ammonia can be produced by direct combination of hydrogen and nitrogen under pressure and in conjunction with a suitable catalytic agent. Hydrogen can be obtained by the electrolysis of water and nitrogen can be obtained from the air by means of the liquid air process, and both of these processes require considerable amounts of electrical power. The synthetic ammonia can in turn be used in the production of commercial fertilizers and explosives, offering still further possibilities for the utilization of low-priced power.

The low priced power which will be made available by the Hoover dam for the use of the states of Arizona and Nevada in increments as may be required as their industries develop, offers great opportunity for new industrial enterprises which will doubtless be an important factor in the future development of the Pacific Southwest.