



Name of Plant: Vulcan Street Plant in Appleton Wisconsin

Year in Service: Since 1882-*THE FIRST HYDRO PLANT*

Horsepower of Turbine: 12.5 kilowatts

Equipment Used: The Edison Type "K" dynamo generator

According to the [American Society of Mechanical Engineers](#), the Vulcan Street plant is considered to be "the first hydroelectric central station to serve a system of private and commercial customers in North America." [5] It is now a [National Historic Engineering Landmark](#). [1][4][6][7]

Annual Energy Gen. enough to light 250 bulbs of 50 watts each, but at night it lighted only Rogers' house, ([Hearthstone](#)) making it the first residential dwelling in the world to get electric service from a central station.

Water Conditions: Fox River in Appleton, Wisconsin

Bearings Used: Lignum-Vitae was and still is the bearing of choice

Longevity of Bearing: Lignum-Vitae used for decades

Information of Note:

The first [Edison](#) hydroelectric power plant, the [Vulcan Street Plant](#), began operating September 30, 1882, in [Appleton, Wisconsin](#), with an output of about 12.5 kilowatts.[6] By 1886 there were 45 hydroelectric power plants in the U.S. and Canada. By 1889 there were 200 in the U.S. alone.[3] At the beginning of the 20th century, many small hydroelectric power plants were being constructed by commercial companies in mountains near metropolitan areas.

By 1920 as 40% of the power produced in the United States was hydroelectric, the [Federal Power Act](#) was enacted into law.

The Act created the [Federal Power Commission](#) to regulate hydroelectric power plants on federal land and water. As the power plants became larger, their associated dams developed additional purposes to include [flood control](#), [irrigation](#) and [navigation](#).

The Vulcan Street Plant was housed in the Appleton Paper and Pulp Company building, which burned to the ground in 1891.^[7] A replica of the Vulcan Street Plant was later built on South Oneida Street.^[3]

Origin

The Vulcan street plant was conceptualized by H.J. Rogers – who was the president of the Appleton Paper and Pulp Co. and of the Appleton Gas Light Co. during this time.^[1] According to the Institute of Electrical and Electronics Engineering, H. J. Rogers first came up with the idea for a hydro-electric central station after talking with a friend of his, H.E. Jacobs, while they were on a fishing trip.^[6]

Official name	Vulcan Street Plant
Location	Appleton, Outagamie County, Wisconsin, USA
Dam and spillways	
Impounds	Fox River
Power station	
Turbines	1
Installed capacity	12.5 kW