Source: Bureau of Reclamation

Hydropower and Glen Canyon Dam

THE VALUE OF HYDROPOWER IN A RENEWABLE ENERGY WORLD

HYDROPOWER IS AN ESSENTIAL COMPONENT OF OUR ENERGY SUPPLY

Hydropower is the largest source of renewable electricity generation in the U.S. Hydropower provides a wide range of benefits to the country. Hydropower is a clean, low-cost source of energy that can be relied upon for long-term, stable production of domestic energy. Hydropower provides approximately 7 percent of U.S. electricity generation.

Hydropower avoids 225 million metric tons of carbon emissions a year. The hydropower currently produced each year in the U.S. is equivalent to nearly 500 million barrels of oil. Hydropower is not a contributor to atmospheric emissions. The current operational regime of Glen Canyon Dam offsets approximately 6.7 billion pounds of carbon annually.

Hydropower is the most efficient way to produce energy. Each kilowatt-hour of hydropower is produced at an efficiency more than twice that of any competing energy resource.

Hydropower is uniquely able to meet the fluctuating demands for electricity. Hydropower can increase or decrease the amount of power it is supplying to the system almost instantly to meet shifting demand. This means that hydropower has critically important load-following capability, peaking capacity and voltage stability attributes.

Source: Douglas Milligan

GLEN CANYON DAM IS AN IMPORTANT RESOURCE TO THE WEST

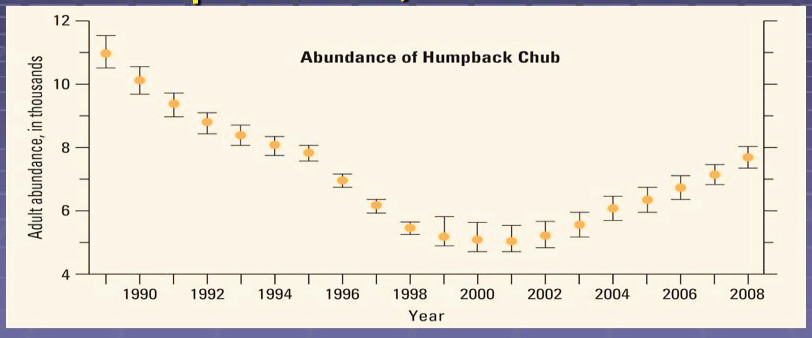
As part of the Nation's critical infrastructure, the water stored by Glen Canyon Dam is vital to the growing water needs of the western United States. Over 30 million people depend on the water stored behind the dam for drinking, irrigation, and other municipal and industrial uses.

Glen Canyon Dam provides clean energy to people in the Colorado River basin states. Federal law provides that federal power (such as produced by Glen Canyon Dam) be offered for sale at cost, and without any markup or profit to all non-profit entities. "The Bureau of Reclamation, as the operator of the Dam, has a complex set of interests it must balance in operating the Dam. Those interests include not only the endangered species below the Dam, but also tribes in the region, the seven Colorado River basin states, large municipalities that depend on water and power from Glen Canyon Dam, agricultural, Grand Canyon National Park and national energy needs at a time when clean energy production is becoming increasingly important." The utilities that purchase hydropower from Glen Canyon Dam have an obligation to provide a reliable source of electricity to their customers, which means that they must have the ability to rely on the availability of Glen Canyon hydropower.

Revenues from Glen Canyon Dam provide funding for important environmental programs. Glen Canyon Dam provides approximately $20 million annually to the Colorado River Salinity Control Program, the Glen Canyon Dam Adaptive Management Program, and the Upper Colorado River and San Juan River Endangered Fish Recovery Programs.

Current hydropower operations at Glen Canyon Dam appear to be providing significant benefit to the endangered humpback chub population. Analysis of recently collected data indicates that the number of these Grand Canyon adult fish increased approximately 50 percent between 2001 and 2008.

Grand Canyon Humpback Chub Population, 1989-2008



Source:
USGS Fact Sheet:
2009-3035

Hydropower operations at Glen Canyon Dam support important recreational resources. As a blue ribbon trout destination for anglers throughout the U.S., the Colorado River below Glen Canyon Dam is "chock full of all sizes of fish." In addition, the number of recreational river runners below Glen Canyon Dam has grown from approximately 1,100 in 1963 to 26,317 in 2007. River rafting below Glen Canyon Dam generates about $83 million annually in the regional economy, and generates about 600 jobs in the local community. This resource also generates significant revenue for the Hualapai Tribe.

Glen Canyon Dam has already lost about one-third of its capacity as the result of restrictions on operations. Although the Dam's generators are capable of providing power to approximately 1,320,000 residential customers, since the mid-1990's operations have been restricted in an attempt to "balance competing interests and to meet statutory responsibilities for protecting downstream resources and producing hydropower." The economic impact of these restricted operations since 1996 has been over $511 million. *Further* restricting Glen Canyon generation could result in an economic impact of $175 million dollars over a 10-year period. This number is very conservative compared to a recent study by National Renewable Energy Laboratory.

ACCORDING TO NREL, " IF HYDRO OPERATIONS [AT GLEN CANYON DAM] WERE SEVERELY CONSTRAINED, SUCH AS A REQUIREMENT TO MAINTAIN CONSTANT RIVER FLOW…THE WECC OPERATING COSTS WOULD INCREASE BY UP TO $1 BILLION PER YEAR"

HYDROPOWER PRODUCTION FROM GLEN CANYON DAM SHOULD BE ENHANCED

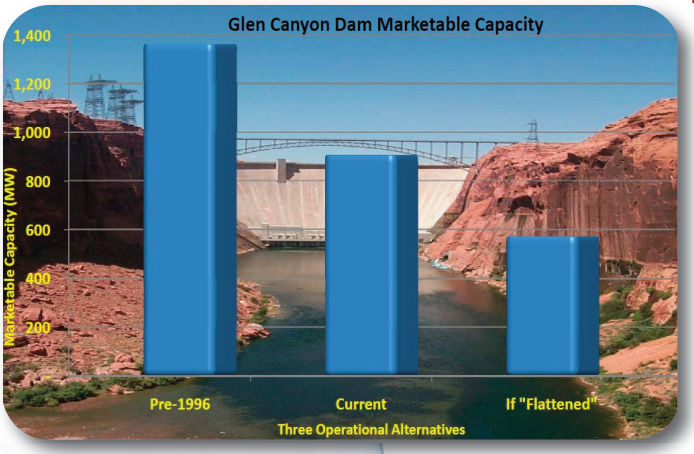
The Colorado River Storage Project Act of 1956 requires that the power plants be operated "so as to produce the greatest practicable amount of power and energy..".

Enhanced hydropower production at Glen Canyon Dam would reduce the amount of energy purchases from non-renewable resources required to meet the electricity needs of the non-profit customers of this resource.

Enhanced hydropower production could avoid significant impacts resulting from "flattening" or further restricting Glen Canyon hydropower generation.

GLEN CANYON DAM HYDROPOWER IS AN IMPORTANT RESOURCE THAT MUST BE PROTECTED

Hydropower produced by Glen Canyon Dam helps meet regional energy needs with a clean, renewable resource. The revenue created by the sale of the energy produced by Glen Canyon Dam ensures the repayment of Federal water and power investment and provides funding for important environmental programs.



Source: Western Area Power Administration


Source: Navajo Tribal Utility Authority

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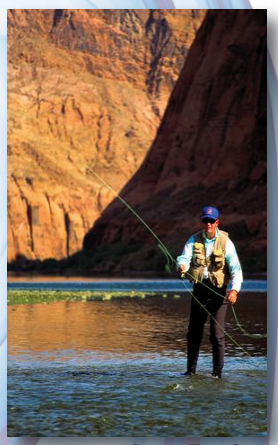
Source: Terry Gunn

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