

for public benefit, and enhance overall plans for comprehensive development of water resources.

These would not be the first authorized Federal hydroelectric projects with power as their main—or only—benefit. From the 87th through the 89th Congresses, seven projects with more than 50 percent hydroelectric benefits were authorized, as follows: Asotin Dam and Reservoir, Snake River, Idaho and Washington, 99.7 percent; Bradley Lake, Cook Inlet, Alaska, 100 percent; West Point project, Chattahoochee River, Georgia, 59.2 percent; Snettisham project, Alaska, 100 percent; Lazer Creek and Lower Auchumpkee, Flint River, Georgia, 72.9 percent; New Bullards Bar, Yuba River Basin, California, 76.2 percent.

2. Private power opponents were correct when they noted that thermal generation can operate on a full-time basis, while pumped storage may operate only part of the day; however, this argument is irrelevant to whether Petit Jean and White Oak should be constructed. Although thermal plants supply baseload energy, pumped storage plants characteristically provide power needed during relatively short periods of peak demand during the day, and therefore are customarily operated for only short periods of time during the day.

Pumped storage projects actually enhance full utilization of baseload plants. Capacity that otherwise would not be used during off-peak periods of the day can be effectively used during this period to provide pumping energy for the pumped storage project.

3. Alternatives to pumped storage are available for providing peaking power; however, these alternatives by no means rule out the use of pumped storage hydroelectric power for peaking purposes. Advantages of pumped storage over alternative peaking sources include the pumped storage over alternative peaking sources include the facts that pumped storage projects have a longer life, do not incur fuel costs and do not emit air pollutants. The lower initial cost of installed capacity at alternative sources of power such as steam or gas turbine installations is offset by the fact that pumped storage plants have no direct fuel costs.

4. Power companies contend that pumped storage is inefficient because it uses three kilowatts of pumping energy to produce two kilowatts of power. Actually, pumped storage uses three kilowatts of power produced at offpeak hours from a baseload plant that otherwise would not be used during these hours, thus giving the baseload plant a higher load factor. Pumped storage projects take three kilowatts of “dump” power and use it to produce two kilowatts of power that is needed for a relatively short time during the period of greatest demand. Consequently, power from the pumped storage plant is of greater value than “dump” power.

5. It has also been contended that sufficient peaking capacity is available in the area, and consequently there is no need for the Petit Jean and White Oak projects. However, on March 12, 1968, the Federal Power Commission sent to the Army Corps of Engineers a letter confirming their letter of September 23, 1966, which stated, in part:

The staff's review of projected loads in the region, and of planned installations of new generating capacity, indicates that the output of the Petit Jean project with 500,000 kilowatts installed could be utilized during the 1970-75 period. A further installation of 500,000 kilowatts as planned at White Oak could be utilized in the regional load prior to 1980.