



ENVIRONMENTAL DEFENSE FUND

TESTIMONY OF THOMAS J. GRAFF,*

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on

Hoover Dam Power Marketing

Before the Subcommittee on Water and Power

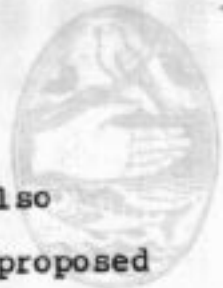
of the Committee on Interior and Insular Affairs

March 6, 1984

MR. CHAIRMAN, MEMBERS OF THE SUBCOMMITTEE, I am Thomas J. Graff. I testify here today on behalf of the Environmental Defense Fund (EDF), a national non-profit membership organization, staffed by scientists, economists, lawyers and others, which has over 45,000 members nationwide, of which approximately 10,000 reside in the Colorado River Basin states. I serve as Senior Attorney in EDF's West Coast office. For nearly two and a half years (1981-83), I also served as a public member on the Colorado River Board of California.

I testify here today in opposition to Title II of H.R. 4275 (Udall). EDF opposes H.R. 4275 because the bill's underpricing of Hoover Dam's power (capacity and energy) will lead to a waste

*David Marcus, EDF Economic Analyst, conducted the research which underlies the economic assessments in this testimony. He also prepared Tables 1 and 2.



of energy by the ultimate buyers of that resource. EDF also opposes H.R. 4275 because of the cross-subsidy which the proposed power purchasers from Hoover Dam will provide to water customers in the Colorado River Basin states. Finally, EDF opposes H.R. 4275 because it proposes a virtual giveaway of the United States' financial interest in Hoover Dam and because it irrationally excludes several potential buyers of Hoover power from being purchasers of that power, buyers who could be expected to bid substantially more for Hoover power than the allottees favored by H.R. 4275 are being asked to pay.

In a nation generally feted for its free enterprise, free competition and market economy, H.R. 4275 proposes a bureaucratic allocation of a valuable government resource for an unconscionably long period--thirty years--at an outrageously low price to a handful of favored wholesale customers. No real estimates of particular need justify this giveaway, nor even a consistent preference for public over private customers (even assuming that such a preference has any validity under modern conditions). All that justifies the terms under which H.R. 4275 proposes to sell Hoover Dam's electric power is the raw political power of the Hoover beneficiaries and their representatives.

Hoover Dam was one of America's greatest engineering achievements when it was built. Authorized during the administration of President Coolidge, following the negotiation

of the Colorado River Compact by the Basin states under the good auspices of then Secretary of Commerce Herbert Hoover, Boulder Canyon Dam, later renamed Hoover Dam, was completed in the Administration of Franklin D. Roosevelt. It first generated power in 1937 and its original contracts for water and power were signed for fifty-year terms. The terms turned out to be extraordinarily beneficial to the purchasers of the Dam's products.

The water in the Colorado River for all practical purposes the U.S. government gave away. The Metropolitan Water District of Southern California pays the U.S. 50 cents per acre foot for the water it diverts from the Colorado. The Imperial Irrigation District, which diverts over twenty percent of the river's flow in an average year, pays the U.S. nothing at all for the water it receives and a nominal charge (about \$7.50 per acre foot) to reimburse the costs of the conveyance facilities constructed by the U.S. to deliver the water to the Imperial Valley.

The energy beneficiaries received hardly less total a government gift. Over the first 45 years of Hoover's operation, the price of its energy has averaged below 1 1/2 mills per kilowatt hour. That is less than 0.15 cents per kilowatt hour. Even now (in 1983) the cost of Hoover firm energy is less than a half cent per kilowatt hour (non-firm energy is less than a quarter of a penny per kWh). By comparison, the marginal cost of firm energy purchased elsewhere in the Southwest on the open

market ranges from 2-7 cents, from 400 to 1400 per cent of Hoover's price.

What is this underpricing of Hoover's energy costing U.S. taxpayers? Just in the eight years 1980-87, the last few years of the original contract period, the cost to the U.S. is nearly a billion dollars (see Table 1). This assumes that the U.S. could have sold the power on a split-the-savings basis (half way between the cost recovery price which the U.S. actually charges and the marginal cost of energy (actual and projected) of the Southern California Edison Company, a very conservative proxy for power sold under free market conditions. A probable auction price would be higher, since it would include the capacity value of Hoover as well as the energy value.

Looking forward, for the proposed thirty-year contract period, 1987-2017, the subsidy to Hoover's beneficiaries will be even more massive and the loss to the U.S. Treasury even more dramatic. Table 2 estimates the Federal Government's largesse only for the first 10 years of the proposed contract period. The subsidy for those 10 years is nearly \$6 billion in nominal dollars, over \$3.5 billion in 1984 dollars.

The Western Area Power Administration in its 1983 General Consolidated Power Marketing Criteria justifies the subsidy on the basis that "the regulations implementing project authorities preclude the Government from making a profit on the sale of power, or from marketing the power to the highest bidder." Even if such mysterious "regulations implementing project authorities"

were binding on WAPA, however, they do not bind the Congress. Nothing in the Boulder Canyon Project Act or in its successor Adjustment Act specified the terms and conditions for the sale of power from Hoover Dam after the original contract period was over in 1987. The specification of those terms and conditions is fully within the authority of this Congress.

EDF recommends that Congress, instead of the cost recovery pricing proposed by WAPA, mandate an auction of Hoover's power, actually several auctions--of Hoover's firm capacity, summer and winter, and of firm and non-firm energy.

This was the proposal that a consortium from San Diego made in the regulatory process before WAPA and it offers by far the best hope for both a rational allocation of Hoover's resources and a decent return to U.S. taxpayers for their investment in the Dam. Those most in need of power in the Southwest (in its different forms, summer and winter peaking capacity, firm and non-firm energy) would bid the most for the resource and would get it--on the same basis that most resources in the United States are allocated--by the law of supply and demand. The resource would not be squandered, sold for far less than it is actually worth. And totally specious justifications for excluding some prospective purchasers while favoring others, like the one WAPA offered to exclude San Diego Gas and Electric Company, the utility with the highest electricity rates in the Southwest,

would no longer be necessary. WAPA states in defense of excluding SDG&E from among Hoover's beneficiaries that:

Western is mandated by reclamation law to recognize preference in the sale of Federal power. Preference is given to public bodies, cooperatives, State and Federal governments, and municipalities. If any power is left after these preference entities are served, investor owned utilities such as San Diego Gas & Electric Company, could be given an allocation. However, the preference demand for Federal power is much greater than the supply and an allocation to an investor owned utility is unlikely.

48 Fed. Reg. 20878 (May 9, 1983).

Yet other private utilities, for example Southern California Edison directly and the Nevada Power Company indirectly by virtue of its subcontracting for power sold to the State of Nevada, are given substantial allocations by WAPA. One can search far and wide through eighteen three-column small print pages in the Federal Register for WAPA's explanation of this discrepancy. None exists either in the Criteria or in fact. There is a distinction but no difference, the result of a bureaucratic allocation system run amok.

The rest of the problems with H.R. 4275 are secondary to the principal defect EDF has identified. When the government is giving away the store, those with political and economic power make sure that they are not overlooked. So, the Central Arizona Project receives a 4 1/2 mill per kilowatt hour surcharge from Arizona power customers. So, salinity control projects in the Basin get a 2 1/2 mill surcharge from California and Nevada

customers (why Nevada?), but not Arizona customers--at least until the distant future date when the CAP is fully paid off. So, the Metropolitan Water District of Southern California is freed from the restriction in its original contract which forbade it from using its power allocation for any purpose other than pumping water from the Colorado (the effect of this provision is to allow MWD to use cheap Hoover power to pump California State Water Project water over the Tehachapis to Southern California at an artificially low price, to the detriment of the San Francisco Bay/Sacramento-San Joaquin Delta estuarine complex and to Central Valley agriculture, the competitors with MWD for northern California water). So, the power purchasers from Hoover Dam are dunned each year for a contribution to the Colorado River Basin Development Fund. The water lobby thus has extracted its several pounds of flesh.

The winners are obvious. The water lobby gets a number of cross-subsidies from the power allottees. The power allottees still pay far less than the power is worth, locking in 30 more years of Depression-era prices for a 21st century resource. WAPA and the Congress are viewed with favor by both the water and power interests.

But there are losers too. The taxpayers lose. So do the environments unnecessarily despoiled by the overuse of water and power. San Diego area residents and the residents of Utah, Colorado and New Mexico, denied access to Hoover power, lose as well. There are also losers among the residents of other

California communities which got shut out from bidding on a resource that would probably be cheaper than others they find themselves tempted to exploit.

I will end this testimony by referring to a classic battle which currently is raging in California. Two public utilities, the Modesto and Turlock Irrigation Districts, propose to dam the Tuolumne River below Hetch Hetchy Dam and Yosemite National Park. The districts claim a need for additional power so that they will not be forced to purchase power from the Pacific Gas and Electric Company, their massive neighbor. Modesto has even recently bought a share in a coal-fired power plant in faraway New Mexico just to avoid reliance on PG&E.

Coincidentally, the power Modesto will buy from New Mexico will flow via a transmission corridor that runs right by Hoover Dam, yet Modesto and Turlock are forbidden from bidding for Hoover power, which would surely be cheaper than building a project astride California's most exciting whitewater river and one of its premiere wild trout streams. This result is still another no doubt unintended consequence of an allocation system that flies in the face of American economic principles.

For all the reasons stated in this testimony, EDF opposes Title II of H.R. 4275.

Thank you for allowing me to present this testimony.

TABLE 1

Extra Federal Revenue in 1980-87 From "Split-the-Savings"
Pricing of Hoover Energy

(1)	(2)	(3)	(4)	(5)
Year	Hoover price ^{b,c} (¢/kwh)	Hoover generation ^{b,c} (gwh)	SCE cost ^{a,d} (¢/kwh)	=[(4) + (2)] x (3)/2 extra revenue from "split the savings" pricing
1980	0.2142	4200	3.071	\$60.0 million
1981	0.1959	4931	3.698	86.3 "
1982	0.2401	3563	3.346	55.3 "
1983	0.4270	3647	5.3	88.9 "
1984	0.3158	7730	5.6	204.2 "
1985	0.3638	5140	5.7	119.2 "
1986	0.3509	5634	6.0	159.1 "
1987	0.3743	4767	6.4	143.6 "
				<hr/> \$917 "

^a 1980-1982 are SCE's average cost, from SCE's monthly Financial & Operating Report. 1983-87 from SCE Standard Offer #4, energy only.

^b "Boulder Canyon Project, Determination of Energy Rates. Effective June 1, 1983."

^c Operating year data.

^d Calendar year data.

TABLE 2
(continued)

Value of Hoover Output for the 10 Years From 1988-97

(all numbers in millions of dollars)

Year	O&M ^a	Energy Value ^b	Capacity Values ^c	Net Value of Hoover ^{d, e}	
1988	11	290	184	462	366
1989	12	319	184	491	367
1990	13	340	184	511	360
1991	13	361	184	531	353
1992	14	390	184	560	351
1993	15	424	184	592	351
1994	16	457	184	625	349
1995	17	495	184	662	349
1996	18	529	184	695	345
1997	19	570	184	735	345
					(in \$ 1984)
Sum (mixed \$)	\$148	\$4,175	\$1,839	<u>\$5,866 million</u>	
Sum (1984 \$)	\$89			<u>\$3,536 million</u>	
Net Present Value (mixed \$, discounted at 11%/yr assumed average T-bond rate)				<u>\$2,418 million net present value</u>	

[Note: all values rounded to nearest \$ 1 million.]

TABLE 2
TABLE 2 (continued)

^a Based on \$10.6 million in 1987, including payments to Arizona, Nevada, and the Colorado River Development Fund. Increases at 6 percent per year.

^b Based on projected annual marginal cost of energy for SCE, per SCE Standard Offer #4. Based on 40-year average energy, 1943-82, of 4195 gwh per year.

^c Based on \$127/Kw-yr, constant, per SCE Standard Offer # 4, value of capacity offered for 10 years starting in 1988. Based on 1448 MW (HR 4275, Section 205(a)(1)(A)).

^d First "net value" column is sum of energy and capacity values, minus O & M cost.

^e Second "net value" column shows 1984 dollar values, based on assumed inflation of 6 percent per year in 1984-97.

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Net Present Value	122	122	122	122	122	122	122	122	122	122	122
1984 \$	122	122	122	122	122	122	122	122	122	122	122

(Values rounded to nearest \$ million)

Net Present Value (1987 \$) 122

Net Present Value (1984 \$) 122

Net Present Value (1987 \$) 122

Net Present Value (1984 \$) 122

Net Present Value (1987 \$) 122

Net Present Value (1984 \$) 122