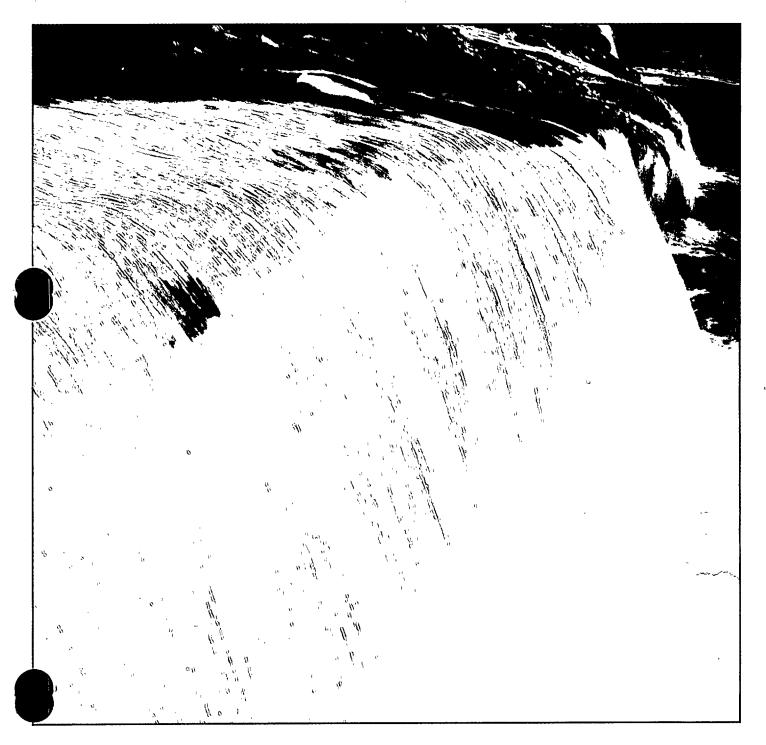
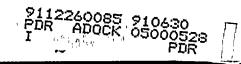


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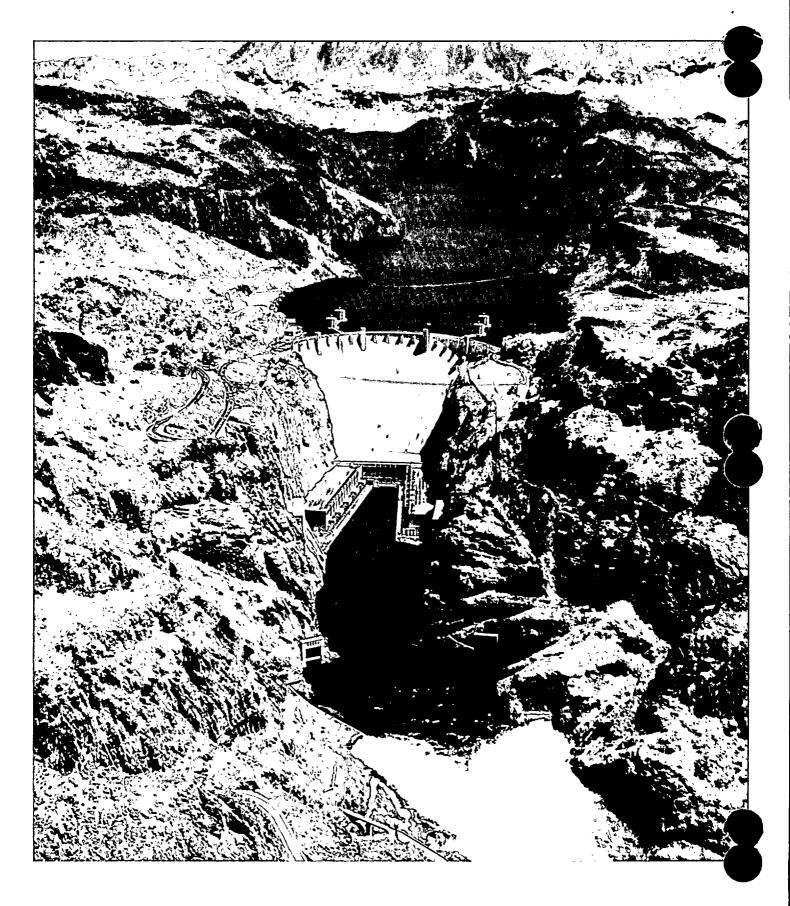
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Power Authority

P.O. BOX 6708, PHOENIX, AZ 85005 . (602) 542-4263 . 1810 W. ADAMS ST., PHOENIX, AZ 85007-2697

October 15, 1991

The Honorable Fife Symington Governor of Arizona State Capitol Ninth Floor, West Wing Phoenix, AZ 85007

Arizona

Dear Governor Symington:

The 33rd Annual Report of the Arizona Power Authority (Authority) is submitted herewith featuring its operations and activities for the fiscal year ended June 30, 1991.

The Authority staff and Commission members have made progress on several of the objectives identified in the previous report, namely:

- Moving forward with the Hoover Modification Project.
- Monitoring costs at the Hoover powerplant to keep customers' rates down.
- Representing our customers' interests through participation in Colorado River Energy Distributors Association (CREDA) activities.
- Working with the Western Area Power Administration to develop a new energy conservation program.

The Authority remains committed to its responsibility to provide dependable, low-cost power to its customers in the state of Arizona.

Sincerely,

Richard S. Walden Chairman

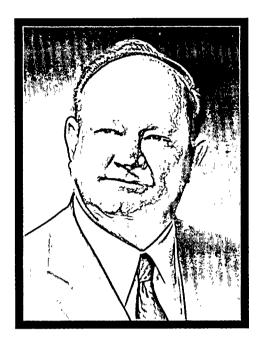


COMMISSION STAFF RICHARD WALDEN ROBERT CASILLAS DAVID O. ONSTAD RICHARD F. WILSON ASSISTANT ADMINISTRATOR 3 VICE CHAIRMAN ADMINISTRATOR CHAIRMAN J.S. FRANCIS, JR JEWELL LEWIS JAMES HENNESS RITA K. GALLANT Å SECRETARY

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IN MEMORY OF MARSHALL HUMPHREY



Marshall Humphrey, a former state Senator and cotton farmer who served as chairman of the Arizona Power Authority from 1971-82, died at his Chandler home on July 20, 1991, at the age of 62.

Mr. Humphrey served two six-year terms on the Commission. During his years with the Authority, he strongly supported the development of additional low-cost power to serve Arizona customers, including a state-financed Central Arizona Project and a partnership with the Gila River Indian Community to develop the Montezuma Pump Storage Project.

Although these projects were not developed as Mr. Humphrey envisioned them, his efforts, and those of his fellow commissioners, provided the foundation for the Authority's first successful venture into public financing: the Hoover Uprating Project. Now nearing completion, this project involves the rewinding of generators to increase electric output by 500 megawatts. A native of Phoenix, Mr. Humphrey was active in Arizona politics and served in the state House, 1959-65, and the Senate, 1967-68. In addition to his duties with the Authority, he served on numerous boards of directors, civic and community groups and church organizations. Although he was quiet, modest and unassuming, colleagues remember Mr. Humphrey as an effective and dedicated leader.

Chairman Humphrey gave unselfishly of his time and talent in order to address the activities and affairs of the Authority, exhibiting a quality of leadership seldom found in the public or private sector. He will be keenly missed by the Commission, staff and his many friends throughout the public and private electric power industry.

REPORT OF THE COMMISSION



Chairman Richard S. Walden





During the past year, the Commission and Authority staff took several steps to help ensure that Authority customers continue to make the best use of the valuable Hoover hydroelectric resource, and that the cost for Hoover power remains reasonable.

First, we retained a consultant to study power usage and to look closely at Authority power sales between 1987-90 to determine if Hoover power is being used in accordance with contractual and statutory provisions, and in accordance with Authority rules and regulations. New computer software installed at the Authority in the past few months will enable the staff to monitor power usage on a regular basis.

To keep power rates in check, we have participated, through the Hoover Engineering and Oversight Committee, in the monitoring of replacement and operations costs at Hoover dam. Until two years ago, a congressional oversight committee held responsibility for containing Bureau of Reclamation costs. That effort is now performed on a local and regional level.

In addition, the Commission has approved the Authority's energy conservation response to the Western Area Power Administration's proposed Energy Planning and Management Program. When adopted in 1993, the program will replace the existing Conservation and Renewable Energy program. In essence, both programs promote the efficient use of low-cost federal hydropower consistent with sound business principles.

And finally, we are continuing to pursue development of the Hoover Modification Project, which we see as one of the last opportunities to develop a low-cost renewable power source. The project calls for the addition of two large generators at the Hoover powerplant to produce 500 megawatts of capacity to meet peak demands in Arizona and Nevada.



Back row: Richard S. Walden and James Henness. Front row: J.S. Francis, Jr., Dr. Jewell M. Lewis and Robert Casillas.

MEMBERS OF THE COMMISSION

"Energy conservation, achieved by whatever reasonable means, extends the value of the Hoover resource to all Authority customers."

Chairman Richard S. Walden

"The Authority's program to assist its customers reduce pump station energy losses is showing results."



Vice-Chairman Robert Casillas

" Conservation of our energy sources is essential to all Arizonians."

Commissioner J. S. Francis, Jr.

"We are diligent about improving energy efficiency to stabilize customers' energy costs."

Commissioner James Henness

"Energy conservation constitutes the highest responsibility a commissioner accepts as a steward of the state's environmental future."

Commissioner Jewell M. Lewis

The Governor appoints individuals to serve on the Authority's five-member Commission, subject to confirmation by the state Senate. To provide continuity in the administration and operation of the Authority, members are appointed to staggered terms of six years each. The Commission elects from its membership a chairman and a vice-chairman who hold office for two years, beginning and ending on the first Monday in January.

The commissioners support wise use of the state's limited energy resources through their guidance and encouragement on development and implementation of the Authority's conservation programs.

RICHARD S. WALDEN is the chairman through January 1992. Appointed to the Commission by former Governor Bruce Babbitt in 1984, Chairman Walden is serving his second consecutive six-year term. Mr. Walden heads the Farmers Investment Co., a family-owned pecan and cotton production and processing firm headquartered in Sahuarita, Arizona. He is a director of the First Interstate Bank and the National Pecan Shellers Association.

ROBERT CASILLAS will serve as vice-chairman through January 1992. First appointed to the Commission in 1985, he was reappointed last year for a second term. A native of Miami, Arizona, Vice-Chairman Casillas, along with his brother, founded C.C. Foods, Inc., a tortilla manufacturing and distributing firm in Tempe, Arizona. He is a former director of the Globe Lions Club and is a member of the Globe-Miami Economic Development Committee.

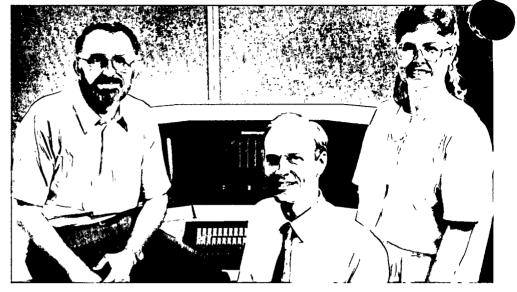
J. S. FRANCIS, JR., was appointed to the Commission in 1984 and served as its chairman from 1988-90. He is also serving a second six-year term. Mr. Francis is chairman of the board of Valley Industries, a familyowned cotton ginning company in Glendale, Arizona. He is president of the Cotton Council International, vicepresident of the National Cotton Council and serves on the boards of the Arizona Cotton Growers Association and the SuPima Association of America.

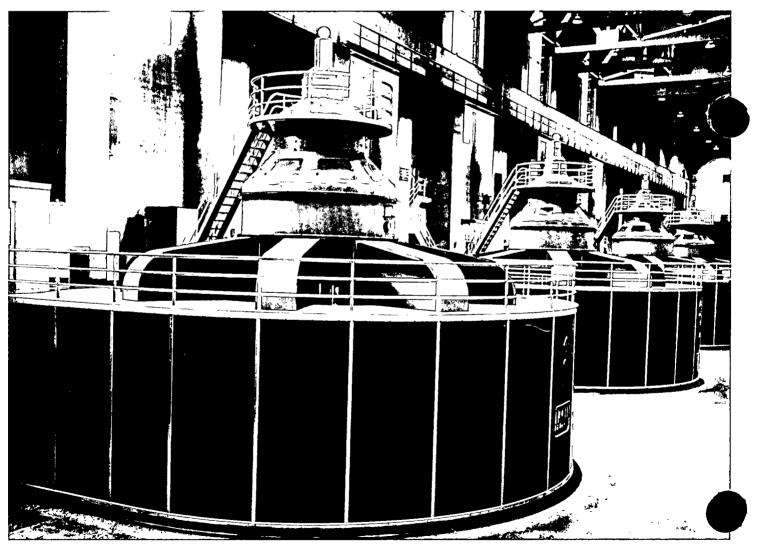
JAMES HENNESS has served on the Commission for 11 years and was chairman from 1984-86. He is currently in his second term which ends in 1994. Mr. Henness is a cotton farmer from Casa Grande, Arizona. He is active in many agribusiness, environmental and community organizations including the National Association of Conservation Districts and the Arizona Cotton Growers Association.

DR. JEWELL M. LEWIS was appointed to the Commission by Governor Babbitt in 1986. Dr. Lewis is chairman of the board of Media America Corp., which owns KTVK Channel 3, Phoenix Magazine, KESZ Radio, and Desert Production Center in Arizona. She taught in the Arizona public school system for 20 years, serving as a teacher from third grade to high school in remedial programs, and as Coolidge school system reading director. Dr. Lewis is a member of the Arizona Perinatal Board of Trustees, the University of Arizona Alumni Board, and co-chair of the Orpheum Theatre Renovation Foundation.

POWER OPERATIONS

Seated at SRP's Energy Management System console is Bill Martin, senior engineer of SRP's Power Coordination Section. He keeps in contact with Authority power scheduler Evelyn Magnusson, who relays to SRP the adjustments to customers' power schedules. Authority assistant administrator Dick Wilson represents the Authority in power sales contract negotiations with SRP.





SCHEDULING POWER TO **RELIABLY MEET DEMAND**

Banking energy during the winter months means energy will be available to Authority customers to meet their heavy pumping demands in the spring and summer.

Power demand is never entirely stable because, like the weather, forecasts of usage cannot be predicted with 100% accuracy. If rainfall is heavier than normal, less energy is needed to run irrigation pumps.

Prior to 1988, the scheduling and delivery of Hoover power to Arizona customers was straight forward. The Western Area Power Administration

estern) scheduled Hoover power to ona Power Authority customers as was generated at the powerplant. For the past three years, the Salt River Project (SRP) has handled scheduling for the Authority. Today the process offers several options that more closely match energy supply with demand.

It was Western's practice to forecast energy availability based on predicted snow melt and weather, which could be dramatically wrong. This made power dispatchers "very jittery" with the result that the energy available was constantly in flux. Power customers were never confident that supply would be there when they needed it. The frequent fluctuations in power supply required customers to make frequent mid-month revisions to their monthly energy schedules.

In addition, Western had limited ability to store (bank) energy to accommodate customers' seasonal fluctuations in usage. Water could sometimes be stored behind Glen Canyon Dam, but only for so long. Heavy rainfall meant pre water flowing down the river and ugh generating units when irrigapumping was least needed.

"SRP has taken the rough edges off our schedules," says Evelyn Magnusson, power scheduler for the Authority. "Our customers get the energy they need instead of just run of the river.'

She should know. Her responsibility for the past five years has been conveying schedule changes between customers and the scheduling agent. With SRP, there have been significantly fewer mid-month revisions. Also, customers have been able to defer winter power usage to reserve up to 80% of their Hoover power allotment for spring and summer irrigation.

To do this, SRP absorbs Authority customers' unneeded Hoover power during the winter months by decreasing generation at its own generating units. The energy SRP saves by doing this is "banked" in a "deviation account" for Authority customers to tap when they need additional energy. SRP only requires that Authority customers consume their full Hoover allotment by the end of the year.

What makes the scheduling process more compatible today are the programs the Authority and SRP have developed (to their mutual benefit) to provide the flexibility, and the reliability, the customers desire.

For example, SRP provides "replacement capacity" to make up for shortfalls in Hoover capacity caused by outages. And, if any Authority customer fails to use its allotted Hoover energy during a particular month, SRP has the capability of absorbing Hoover energy into its power system.

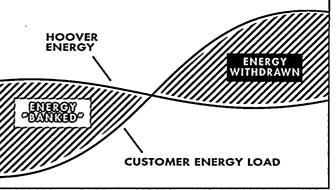
"We've automated scheduling through our Energy Management System," says SRP's Bill Martin, who is senior engineer for the Power Coordination Section. "With it, our prescheduler is able to compare Hoover preschedules against actual schedules and make adjustments so we can hit the monthly target schedule. We've added displays to the system to track capacity from Hoover on an hourly basis."

SEPTEMBER

SRP schedules Hoover electricity to five control area entities which, in turn, deliver electricity to Authority customers. The five entities include SRP and Western as well as Arizona Public Service Company, Tucson Electric Power Company and the Arizona Electric Power Cooperative. The control areas provide SRP with an hourly schedule for each day. Dispatchers make the schedule work, 24 hours a day.

"The scheduling process works like a well-oiled machine," observes Dick Wilson, the Authority's assistant administrator in charge of power operations and sales. Although SRP and the Authority have been working together under an interim contract since 1988, a more permanent agreement is within sight.

"This has been a good way to arrive at a workable contract," says Wilson. "After three years, nearly all the problems have been worked out, and we're very satisfied with SRP's responsiveness and professionalism."



OPERATING YEAR

OCTOBER

PRINCIPLES OF POWER OPERATIONS

• Electric energy transmission capacity is like a hose. You can put only so much through it. Energy is the stuff running through the hose; you can't run more energy than you have capacity.

• The maximum capacity at the Hoover Dam powerplant is currently 1,944 megawatts, which is being uprated to 2,074 megawatts. The Authority's share of the available capacity will be 377 megawatts when the uprating program is completed in 1992. As water passes through Hoover turbines, it generates low-cost hydroelectric power for use in Arizona, Nevada and California. In an average year, Arizona is allotted 858,000 megawatt-hours of Hoover energy, which it divides proportionately among its 38 customers.

• The Western Area Power Administration markets Hoover power to the Authority through a transmission system from Mead Substation to Liberty/Pinnacle Peak Substation and to the Parker-Davis Project system. Western requires Arizona to preschedule its full allotment of Hoover power a year in advance through a master schedule. The allotment must be used entirely by the end of September each year.

• Each Authority customer estimates its annual capacity and energy needs for the master schedule. This preschedule of customer capacity and energy requests is updated monthly by the Authority.

• The Salt River Project has served as the Authority's "scheduling agent" for Hoover power since 1988. It fulfills the Authority customers' capacity and energy requests using a computerized Energy Management System that provides an accurate, hour-by-hour record of Hoover capacity and energy available, prescheduled and actually used. (As one of five "control area" entities, SRP is also responsible for wheeling electricity to 10 Authority customers.)

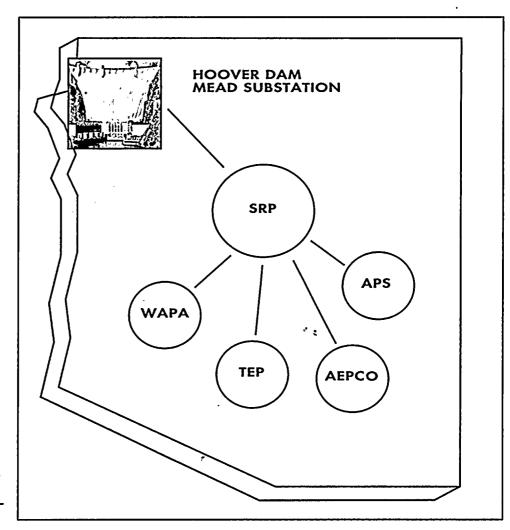
• Hoover power is delivered to Authority customers through agreements with five "control area" entities: Arizona Public Service, Salt River Project, Western Area Power Administration, Tucson Electric Power Company and Arizona Electric Power Cooperative.

• If an Authority customer does not use all the electric energy it requested for a given month, the control area entity may "bank" it for the customer's future use (capacity cannot be banked). If a customer uses more energy and capacity than it prescheduled, it may have to buy the difference from the control area entity.

• By agreement, Authority customers are required to take at least 20% of their Hoover allotment during the five winter months (October through February). SRP banks the difference. In reality, SRP uses the energy. Then, when Authoric customers need more energy to run gation pumps in the spring and summer, SRP provides "banked" power from its available resources, whatever they may be.



GLOSSARY



Hoover power is delivered to Authority customers through agreements with five control area entities: Salt River Project, Western Area Power Administration, Tucson Electric Power, Arizona Electric Power Cooperative, and Arizona Public Service.

BANK - Through an agreement with the Hoover scheduling agent, Authority customers can defer use of a specified portion of their available Hoover energy into a "deviation account" for use later in the year.

CAPACITY - Using the analogy of a water hose, with capacity being the hose size and energy the water, energy is limited by the maximum amount the hose can accommodate.

DEMAND - Rate at which electric energy is required by customers, usually expressed in kilowatts.

ECONOMY ENERGY - Supplemental energy that Authority customers can preschedule a month in advance to lock-in at an agreed-upon price.

ELECTRIC ENERGY - A flow of trically charged particles along a ductor measured in terms of the work it is capable of doing, generally designated in kilowatt-bours.

HOOVER OUTAGE - *Temporary decrease in Arizona's allotted capacity from Hoover Dam because of maintenance.*

LOAD - The amount of power needed to be delivered at a given point in time on an electric system.

MASTER SCHEDULE - A plan for year-long (October 1 - September 30) usage of the available Hoover capacity and energy. It represents Authority customers' best estimates, by the month, of their capacity and energy requirements.

RAMP - Method used to convey energy that varies at a constant rate between power grids. As receiving utility reduces its generation, sender increases generation at the same rate, resulting in a balanced delivery. REPLACEMENT CAPACITY -

Fixed-price capacity provided to Authority customers by SRP due to a Hoover outage.

SCHEDULE - The process of balancing customer energy and capacity demands with available resources; the plan of operation resulting from that process.

SUPPLEMENTAL ENERGY - Energy sources other than Hoover that most Authority customers must buy to meet their demand.

TARGET SCHEDULE - The monthly amount of capacity and energy from the master schedule with adjustments.

WHEELING - Transportation of electricity by a utility over its transmission system for another utility.

AUTOMATION: AN ONGOING JOB

The Arizona legislature formed the Authority in 1944 to enable Arizona to receive and market its share of low-cost energy generated at the Hoover hydroelectric facility. Since the first power was delivered in 1952 to an initial handful of Arizona customers, the number has grown to 38 customers who include electric irrigation, conservation and drainage districts, Indian irrigation districts, municipalities and private utilities. The Authority staff is responsible for providing power to these customers on schedules that meet their needs.

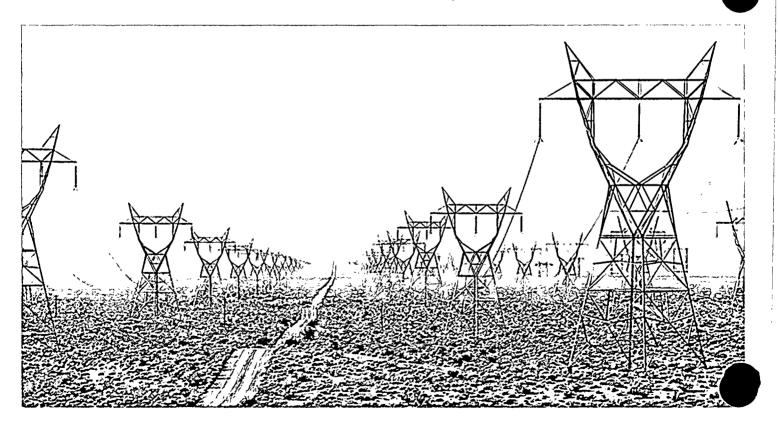
The Authority installed software several years ago enabling staff to efficiently develop and maintain power schedules for its customers. Automation of the scheduling effort allows the Authority to quickly generate historical data on power sales. For example, staff can monitor how well customer usage concurs with power allocations and make adjustments.

"Improvements in software are making our job easier, but you have to continually update. We're installing larger hardware now which should accommodate our needs for the next four years," says power manager Ted Moss.

Over the summer of 1991, two colege interns assisted computer programer Dave Southworth to install accounting software on the Authority network. The accounting software will permit finance chief Frank Bonfili and fiscal services specialist Rosemary Anhalt, for the first time, to produce annual accounting and bookkeeping reports and forecasts that previously were impossible to generate by hand.

"Now we can tie our billing into our scheduling to produce a composite ledger for Administrator Dave Onstad's review on a regular basis," says Southworth. "Multiple accounting reports are being centralized in a single database that will eliminate numerous entries." Southworth says the Authority has "incorporated security measures to prevent unauthorized tampering with payroll checks and the like."

Southworth's job of automating will never be done. He's already developing projects two and three years into the future to keep the Authority in step with new technology and information needs.





ARIZONA POWER AUTHORITY STAFF





Rita Gallant Autbority Secretary



Rosemary Anhalt Fiscal Services Specialist





Evelyn Magnusson Power Scheduler



David Onstad Administrator



James Bartlett Authority Attorney



Donna Robins Administrative Secretary



Theodore Moss Power Manager

.



Richard Wilson Assistant Administrator



Frank Bonfili Chief Accountant



Donald Esgar Customer Services and Contracts Manager



David Southworth Computer Programmer



SCHEDULE OF POWER AND ENERGY SALES

AND ENERGY SALES		YEAR E	NDING JUNE 30	D, 1991
For Period of July 1, 1990 through June 30, 1991	Average Billing <u>Demand_kW</u>	Delivered <u>kWh</u>	Amount	Mills Per <u>kWh</u>
SALE OF HYDRO POWER				
Aguila Irrigation District	4,235	13,000,000	\$ 216,040	16.62
Avra Valley Irrigation & Drainage District	1,101	2,274,000	44,588	19.61
Buckeye Water Conservation District	2.518	5,414,000	107,169	19.79
Chandler Heights Citrus Irrigation District	786	2,962,000	47,530	16.05
Central Arizona Water Conservation District*	0	_,,,,,,,,,000	0	0.00
Cortaro-Marana Irrigation District	5,441	15,949,000	277,268	17.38
Electrical District No. 2, Pinal	21,925	79,819,000	1,279,538	16.03
Electrical District No. 3, Pinal	26,786	71,208,000	1,234,372	17.33
Electrical District No. 4, Pinal	20,069	52,415,000	949,391	17.55
Electrical District No. 5, Pinal	14,227	35,339,000	659,768	18.67
Electrical District No. 5, Maricopa	296			15.89
Electrical District No. 6, Pinal	11 515	1,162,000	18,468	
Electrical District No. 0, Final Electrical District No. 7, Maricopa	11,515	38,505,000	622,352	16.16
Electrical District No. 9, Maricona	9,711	35,076,000	564,784	16.10
Electrical District No. 8, Maricopa	17,409	59,677,000	961,586	16.11
Harquahala Valley Power District	4,274	5,327,000	125,001	23.47
Maricopa County Municipal Water District	9,150	32,741,000	526,780	16.09
McMullen Valley Water Conservation & Drainage District	6,194	17,556,000	300,067	17.09
Ocotillo Water Conservation District	2,020	8,684,000	133,577	15.38
Queen Creek Irrigation District	3,052	8,569,000	148,679	17.35
Roosevelt Irrigation District	5,506	16,384,000	274,703	16.77
Roosevelt Water Conservation District	9,400	25,115,000	441,716	17.59
Salt River Project	47,181	166,498,000	2,673,977	16.06
San Tan Irrigation District	1,194	3,317,000	56,855	17.14
Silverbell Irrigation & Drainage District	600	1,382,000	23,179	16.77
Tonopah Irrigation District	2,668	7,980,000	132,784	16.64
Wellton-Mohawk Irrigation & Drainage District	5,391	16,669,000	276,414	16.58
City of Mesa	2,898	6,617,000	119,068	17.99
City of Page City of Salford	587	1,102,000	21,390	19.41
City of Safford	1,173	2,475,000	45,757	18.49
Town of Thatcher	592	1,244,000	23,178	18.63
Town of Wickenburg	1,292	2,724,000	50,560	18.56
Ak-Chin Indian Community	626	1,304,000	24,315	18.65
Arizona Electric Power Cooperative	1,934	4,284,000	77,963	18.20
Arizona Public Service Company	14,035	27,904,000	530,223	19.00
Citizens Utilities Company	1,641	3,464,000	64,353	18.58
Papago Tribal Utilities Authority	1,392	2,926,000	54,530	18.64
San Carlos Irrigation Project	1,449	3,056,000	56,800	18.59
Tucson Electric Power Company	5,424	12,346,000	222,355	
Total	265,692	792,468,000	13,387,078	<u>18.01</u> 16.89
SALE OF THERMAL POWER	20),0/2	772,100,000	19,907,070	10.07
Total Thermal Power Sales	60,715	40,764,000	1,411,743	1
OTHER ELECTRIC REVENUES			658,535	
Total Operating Revenues			\$ 15,457,356	
OTHER CHARGES				
			<u>\$21,044</u>	

YEAR ENDING JUNE 30, 1991

*Pursuant to the Resolution and Final Hoover Marketing Plan, if certain conditions are met, the Authority will recapture all or a pro rata portion of Schedule B Power for the benefit of the Central Arizona Water Conservation District.

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BRIEFS

HOOVER MODIFICATION PROJECT

The Authority plans to participate in construction of the Hoover Modification Project which would increase peak capacity at Hoover Dam by 500 megawatts.

During May 1991, the U.S. Bureau of Reclamation issued a final report on the feasibility of the Modification Project. The preferred alternative entails tunneling a powerhouse into rock downstream from the base of the dam on the Arizona side to contain new generation equipment.

The Arizona Power Authority and Nevada's Colorado River Commission are currently working with potential users of the additional capacity to identify suitable financing. Arizona's share would be 250 megawatts, and Nevada's would be 250 megawatts.

NEW RESOURCE CONSERVATION PROGRAM

The Western Area Power Administration has proposed an Energy Planning and Management Program (EPMP), beginning in 1993, to replace the current Conservation and Renewable Energy Program. The Authority will operate under the ongoing program until the new one is adopted.

In both programs, the objective is efficient use of federal hydroelectric resources. The Authority, as a marketing agency for Hoover power, cannot conserve energy because it does not consume energy. It can, however, act as a facilitator by encouraging its customers to practice sound energy management by "offering assistance to its customers" through pump testing, infrared inspection, engineering studies and energy conservation workshops.

Under EPMP, the Authority proposes to act as an umbrella agency for a group of small customers by taking responsibility for developing, implementing and maintaining an approved EPMP program and preparing reports required by Western.

The Authority's large customers presently operate within the framework of "an approved integrated resource plan" and would continue to do so. Other customers would have the option of developing a conservation program using any of three options proposed by Western.

CREDA

The Authority is a member of the Colorado River Energy Distributors Association (CREDA), an organization whose activities include working with the Bureau of Reclamation (Reclamation) and the Western Area Power Administration (Western) on issues affecting the availability and price of wholesale electric power.

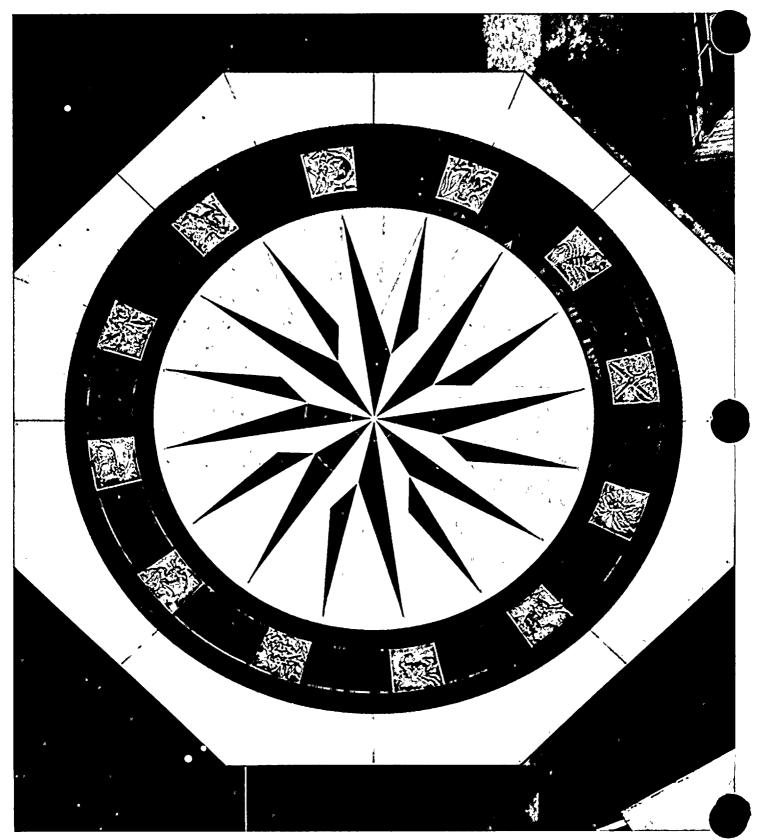
CREDA members are primarily power customers of Western's Colorado River Storage Project (CRSP). Many Authority customers purchase CRSP power to supplement the energy they receive from the Authority.

CREDA participated in the Glen Canyon environmental studies during the past year. The proposed modified flow patterns from Glen Canyon Dam would impact CRSP customers by dramatically increasing power rates and diminishing the usefulness of the electric resource.

CREDA is also monitoring operation, maintenance and replacement costs at Reclamation and Western power facilities to control costs that could adversely impact customers' power rates.

RULES AND REGULATIONS REVIEW

The Authority's enabling legislation authorized the adoption of rules and regulations to supplement the legislature's directives. Rules and regulations were first adopted by the Authority in 1952, about the time Hoover power was first delivered to Arizona customers. The rules underwent various amendments over the years but, after being required to conduct a state-mandated "five-year review," the Commission decided to thoroughly revamp and update the existing rules. After many meetings with the customers, a full revision of the rules was drafted for presentation to the Governor's Regulatory Review Council. It is expected that the newly revised rules and regulations will be offered for formal public comment and adoption prior to the end of 1991.



A view of the compass and zodiac plaques that are part of the terrazzo star map at the Hoover powerplant in Boulder Canyon.



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ARIZONA POWER AUTHORITY (An Agency of the State of Arizona)

APA GENERAL FUND, HOOVER UPRATING FUND AND COMBINED BALANCE SHEETS

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	APA General Fund	
	1991	<u>1990</u>
ASSETS		
PROPERTY, PLANT AND EQUIPMENT—Net (Note 3)	<u>\$ 605,464</u>	<u>\$ 450,839</u>
PRELIMINARY SURVEY AND INVESTIGATION COSTS (Note 4)	892,697	<u> </u>
ADVANCES FOR HOOVER UPRATING PROJECT (Notes 2 and 6)	•	
BOND ISSUANCE COSTS—Net		
INVESTMENTS (Note 7)		1,500,000
CURRENT ASSETS:	1.001.010	- (40.040
Cash (Note 5) Accounts receivable:	4,381,340	7,459,258
Customers' power purchases	252,961	434,546
Western Area Power Administration		
Due (to) from other fund	33,163	(27,699)
Interest receivable Prepaid purchased power	35,596	113,576
Total current assets	4,703,060	7,979,681
TOTAL	\$ 6,201,221	\$10,826,889
	<u>v 0,201,221</u>	\$10,020,087
FUND EQUITY AND LIABILITIES FUND EQUITY:		
Contributed capital	\$9,000	\$9,000
Retained earnings (Notes 2 and 9):		
Allocated:	(05.464	(E0.020
Investment in property, plant and equipment Property replacement reserve	605,464 495,827	450,839 499,900
Preliminary survey and investigation costs	892,697	896,369
General reserves	4,000,000	4,000,000
Unallocated	(52,600)	(46,535)
Total fund equity	5,950,388	5,809,573
BONDS PAYABLE (Note 8)		
LESS INVESTMENTS HELD BY TRUSTEE (including unamortized premium on investments of		
\$22,570 and \$144,431 in 1991 and 1990, respectively) (Note 7)		
Bonds payable—net		
CURRENT LIABILITIES:		
Accounts payable	4,071	31,673
Power contracts payable	246,762	425,291
Accrued interest payable (Note 8) Hoover credit (Note 2)		4,560,352
. Total current liabilities	250,833	5,017,316
TOTAL	\$ 6,201,221	\$10,826,889
See notes to financial statements.		



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JUNE 30, 1991 AND 1990

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Hoover Up	orating Fund	Comb	ined
<u>1991</u>	<u>1990</u>	<u>1991</u>	<u>1990</u>
		\$ 605,464	\$ 450,839
		892,697	896,369
\$30,380,697	<u>\$24,253,301</u>	30,380,697	24,253,301
2,396,437	2,492,437	2,396,437	2,492,437
2,999,800	2,999,800	2,999,800	4,499,800
6,509,225	5,397,785	10,890,565	12,857,043
1,547,361	1,439,610	1,800,322	1,874,156
413,479 (33,163)	27,699	413,479	
1,006,204	1,621,382	1,041,800	1,734,958
98,182	617,673	98,182	617,673
9,541,288	9,104,149	14,244,348	17,083,830
45,318,222	<u>\$38,849,687</u>	<u>\$51,519,443</u>	<u>\$49,676,576</u>
		¢ 0,000	¢ 0,000
	×	\$ 9,000	\$ 9,000
		605,464	450,839
		495,827	499,900
		892,697 4,000,000	896,369 4,000,000
\$ (815,391)	\$ (857,164)	(867,991)	(903,699)
(815,391)	(857,164)	5,134,997	4,952,409
89,820,000	89,820,000	89,820,000	89,820,000
	(5) 572 257)	(46 400 002)	(52,572,257)
<u>(46,488,003</u>) 43,331,997	<u>(52,573,357</u>) 37,246,643	<u>(46,488,003</u>) 43,331,997	<u>(52,573,357</u>) 37,246,643
40,001,997		<u></u>	
21,162	1,974	25,233	33,647
1,193,484 1,586,970	871,264 1,586,970	1,440,246 1,586,970	1,296,555 1,586,970
		· · · · · · · · · · · · · · · · · · ·	4,560,352
2,801,616	2,460,208	3,052,449	7,477,524
\$45,318,222	\$38,849,687	<u>\$51,519,443</u>	<u>\$49,676,576</u>

ARIZONA POWER AUTHORITY (An Agency of the State of Arizona)

APA GENERAL FUND, HOOVER UPRATING FUND AND COMBINED STATEMENTS OF OPERATIONS

	APA General Fund	
	1991	<u>1990</u>
OPERATING REVENUES	<u>\$_2,070,278</u>	<u>\$ 4,960,730</u>
OPERATING EXPENSES:		
Purchased power	1,973,464	4,862,712
Transmission	16,708	4,403
Distribution	11,158	8,805
Administrative and general	13,582	35,111
Depreciation	54,408	35,654
Allocation of depreciation	<u>(42,183</u>)	(25,176)
Total operating expenses	2,027,137	4,921,509
OPERATING INCOME (LOSS)	43,141	39,221
OTHER INCOME (DEDUCTIONS):		
Interest expense		
Interest income	259,631	441,742
Loss on sale of investments		
Amortization expense		
Bad debt expense	(73,105)	(10(125)
Other—net	(88,852)	(196,125)
Total other income (deductions)	97,674	245,617
NET INCOME (LOSS)	<u>\$ 140,815</u>	<u>\$ 284,838</u>
Fas notas to financial statements		

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See notes to financial statements.



YEARS ENDED JUNE 30, 1991 AND 1990

Hoover Uprating Fund		Combined	
<u>1991</u>	<u>1990</u>	· <u>1991</u>	<u>1990</u>
<u>\$13,387,078</u>	\$11,235,357	\$15,457,356	\$16,196,087
9,622,953 2,792,022	8,547,587 2,616,915	11,596,417 2,808,730 11,158	13,410,299 2,621,318 8,805
740,374	655,259	753,956 54,408	690,370 35,654
42,183	<u> </u>		
13,197,532	11,844,937	15,224,669	16,766,446
189,546	(609,580)	232,687	<u> (570,359</u>)
(4,322,923) 4,322,923	(5,152,701) 5,152,701	(4,322,923) 4,582,554	(5,152,701) 5,594,443
(96,000)	(175,700) (96,000)	(96,000) (73,105)	(175,700) (96,000)
<u>(51,773)</u> (147,773)	<u> </u>	<u>(140,625</u>) (50,099)	<u>(184,974</u>) (14,932)
\$ <u>41,773</u>	<u>(200,512</u>) <u>\$ (870,129</u>)	\$ <u>182,588</u>	\$ (585,29 <u>1</u>)

ARIZONA POWER AUTHORITY (An Agency of the State of Arizono)

APA GENERAL FUND, HOOVER UPRATING FUND AND COMBINED STATEMENTS OF CHANGES

	APA General Fund	
	1991	<u>1990</u>
UNALLOCATED RETAINED EARNINGS: Balance, beginning of year Net income (loss) Net transfers to allocated retained earnings Balance, end of year	\$ (46,535) 140,815 (146,880) (52,600)	\$ 375,215 284,838 (706,588) (46,535)
ALLOCATED RETAINED EARNINGS: Balance, beginning of year Net transfers from unallocated retained earnings Balance, end of year	5,847,108 <u>146,880</u> 5,993,988	5,140,520 706,588 5,847,108
CONTRIBUTED CAPITAL TOTAL FUND EQUITY	9,000 \$5,950,388	9,000 \$5,809,573

See notes to financial statements.

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IN FUND EQUITY YEARS ENDED JUNE 30, 1991 AND 1990

Hoover	Uprating Fund	Combine	ed
<u>1991</u>	<u>1990</u>	<u>1991</u>	1990
\$ (857,164) 41,773	\$ 12,965 (870,129)	\$ (903,699) 182,588 (146,880)	\$ 388,180 (585,291) (706,588)
(815,391)	(857,164)	(867,991)	(903,699)
		5,847,108 146,880	5,140,520 706,588
		5,993,988	<u>5,847,108</u>
\$ (815,391)	<u>\$ (857,164</u>)	9,000 \$ 5,134,997	9,000 \$ 4,952,409



ARIZONA POWER AUTHORITY (An Agency of the State of Arizono)

APA GENERAL FUND, HOOVER UPRATING FUND AND COMBINED STATEMENT OF CASH FLOWS

	APA Gen	eral Fund
	<u>1991</u>	1990
OPERATING ACTIVITIES:		
Net income (loss)	\$ 140,815	\$ 284,838
Adjustments to reconcile net income (loss) to		
net cash provided by (used in) operating activities:	54 400	25656
Depreciation Amortization of bond issuance costs	54,408	35,654
Amortization of premium on investments		
Changes in operating accounts:		•
Decrease (increase) in preliminary survey		
and investigation costs	3,671	(522,961)
Decrease (increase) in accounts receivable	181,585	350,429
(Increase) decrease in due to/from other funds	(60,862)	27,699
Increase in receivable from Western Area		
Power Administration Decrease (increase) in interest receivable	77 000	4,451
Decrease (increase) in prepaid purchased power	77,980	4,4)1
(Decrease) increase in accounts payable	(27,603)	31,673
(Decrease) increase in power contracts payable	(178,529)	(347,042
(Decrease) increase in Hoover credit.	(4,560,352)	4,560,352
Net cash (used in) provided by operating activities	(4,368,887)	4,425,093
INVESTING ACTIVITIES:		
Cash from trustee funds		
Proceeds from maturing certificates of deposit	1,500,000	2,000,000
Acquisition of property, plant and equipment	(209,031)	<u>(183,627</u>)
Net cash provided by investing activities	1,290,969	<u>1,816,373</u>
FINANCING ACTIVITIES—		
Increase in advances for Hoover Uprating Project		
NET (DECREASE) INCREASE IN CASH	(3,077,918)	6,241,466
CASH, BEGINNING OF YEAR	7,459,258	1,217,792
CASH, END OF YEAR	\$4,381,340	\$7,459,258
CASH PAID FOR INTEREST	\$-0-	\$.0-

See notes to financial statements.

YEARS ENDED JUNE 30, 1991 AND 1990

Hoover U	orating Fund	Comb	bined
<u>1991</u>	<u>1990</u>	<u>1991</u>	<u>1990</u>
\$ 41,773	\$ (870,129)	\$ 182,588	\$ (585,291)
96,000 121,861	96,000 324,678	54,408 96,000 121,861	35,654 96,000 324,678
(107,751) 60,862	68,521 (27,699)	3,671 73,834	(522,961) 418,950
(413,479) 615,178 519,491 19,188 322,220	(169,366) (190,486) 1,974 (57,539)	(413,479) 693,158 519,491 (8,415) 143,691 <u>(4,560,352</u>)	(164,915) (190,486) 33,647 (404,581) <u>4,560,352</u>
1,275,343	(824,046)	(3,093,544)	3,601,047
5,963,493	4,248,262 3,000,000	5,963,493 1,500,000 (209,031)	4,248,262 5,000,000 (183,627)
5 963,493	7,248,262	7,254,462	9,064,635
(6,127,396) 1,111,440 5,397,785 \$6,509,225 \$ 6,347,880	(2,922,146) 3,502,070 1,895,715 \$5,397,785 \$ 6,347,880	(6,127,396) (1,966,478) 12,857,043 \$10,890,565 \$ 6,347,880	(2,922,146) 9,743,536 3,113,507 \$12,857,043 \$ 6,347,880

NOTES TO FINANCIAL STATEMENTS/YEARS ENDED JUNE 30, 1991 AND 1990

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

System of Accounts—The accounting records of the Arizona Power Authority ("APA") are maintained in accordance with applicable provisions of the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission ("FERC").

Property and Depreciation—Property is stated at original cost. The costs of property additions and replacements are capitalized. Replacements of minor items of property are charged to expense as incurred. Costs of property retired are eliminated from plant accounts, and such costs plus removal expenses less salvage are charged to accumulated depreciation.

Depreciation is provided on the straight-line composite method based on the estimated useful lives of the property items.

Preliminary Survey and Investigation Costs—Certain preliminary costs relating to proposed major capital projects are deferred as long as completion of such projects is considered reasonably expected and capitalized as a cost of such projects when completed.

Bond Issuance Costs—Costs relating to the issuance of long-term bonds have been deferred and are being amortized over the life of the bonds. Accumulated amortization as of June 30, 1991 and 1990 was \$406,205 and \$310,205, respectively. Advances for Hoover Uprating Project—Proceeds from bonds payable are advanced by APA for uprating the Hoover Power Plant and are recorded as advances. Such advances plus interest costs incurred by APA are reimbursed in the form of credits on the monthly power bills rendered to APA by the Western Area Power Administration of the Department of Energy ("WAPA"). The credits are issued over the 30 year life of the bonds. Substantially all net interest expense on the bonds is charged to the uprating project as amounts to be recovered from future credits.

Reclassifications—Certain amounts in the 1990 financial statements have been reclassified to conform to the current year presentation.

2. FUND ACCOUNTING

Hoover Uprating Fund — The Hoover Power Plant Act of 1984 ("Hoover Act") authorized the United States Government to increase the capacity of, i.e., "uprate", existing generating equipment at the Hoover Dam Power Plant ("Uprating Project"). Instead of appropriating further federal funds for the Uprating Project, Congress implemented an advancement of funds procedure whereby prospective non-federal purchasers of the uprated Hoover capacity and associated energy contribute to the financing of the Uprating Project. APA financed a portion of the total Uprating Project by issuing bonds (see Note 8).

The Hoover Uprating Fund accounts for advances by APA' in connection with the Uprating Project. Effective June 1, 1987, APA executed new power contracts with WAPA and APA customers which expire in 2017. The revenues and expenditures applicable to the sale and transmission of ower and energy received by APA from WAPA under these pontracts are accounted for in the Hoover Uprating Fund.

APA General Fund — APA operations other than those applicable to the Hoover Uprating Fund are accounted for in the APA General Fund. The purchase of steam power and the sale and transmission of such power to APA's customers comprise the majority of this fund.

Hoover Energy Fund — The Hoover Energy Fund accounted for revenues and expenditures applicable to the sale and transmission of power and energy received by APA from WAPA under its Hoover energy contracts, which expired in 1987. During 1990, APA received a refund from WAPA in the amount of \$4,560,352 related to the Hoover energy contracts. This payment was refunded during fiscal year 1991 to Hoover energy purchasers, as defined in the purchaser's contracts.

3. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment of the APA General Fund at June 30, 1991 and 1990 are as follows:

	<u>1991</u>	<u>1990</u>
Transmission and distribution plant	\$ 439,391	\$ 440,191
General plant	661,900	510,548
Total	1,101,291	950,739
Less accumulated depreciation	495,827	499,900
Property, plant and equipment, net	<u>\$ 605,464</u>	\$ 450,839

The transmission and distribution plant is comprised of a substation and related equipment. Purchased power is delivered over transmission facilities owned by WAPA.

4. PRELIMINARY SURVEY AND INVESTIGATION COSTS

APA has signed a participation agreement with the Colorado River Commission of Nevada, Bureau of Reclamation ("Bureau") and WAPA for the planning of the Hoover Modification Project. If constructed, the project would increase the power generating capacity of the Hoover Power Plant by installing a new power plant. In May 1991, a feasibility analysis of the Hoover Modification Project was completed. The construction of the Hoover Modification Project will depend upon the signing of power purchase contracts. Several potential customers are actively evaluating the project at present. APA believes that construction of this project is reasonably expected.

As of June 30, 1991, preliminary survey and investigation expenditures totaling \$892,697 (net of reimbursement of \$134,000) relating to the planning of the proposed Hoover Modification Project have been deferred.

5. CASH

In 1990, APA transferred their cash balances to the State Treasurer for pooled investment purposes. Statutes require the State Treasurer to invest these pooled funds in obligations of the United States Government. All investments are carried at cost.

6. ADVANCES FOR HOOVER UPRATING PROJECT

Advances for the Hoover Uprating Project have been reimbursed by WAPA through credits on APA's power bills in the amounts of \$4,926,013 and \$4,527,847 for the years ended June 30, 1991 and 1990, respectively. During the years ended June 30, 1991 and 1990, interest expense on the bonds issued to finance the Uprating Project exceeded interest revenue by approximately \$2,025,000 and \$1,195,000, respectively. These amounts were charged to the Project advances as amounts to be substantially. recovered from future credits.

7. INVESTMENTS

As of June 30, 1991 and 1990, investments are insured or collateralized with securities held by APA or by its agent in APA's name. Investments are carried at their cost, which approximates their market value at June 30. Investments as of June 30 are as follows:

	<u>1991</u>	<u>1990</u>
United States government securities Certificates of deposit	\$17,196,771	\$55,537,209 1,500,000
Repurchase agreements Money market	32,252,484 38,548	35,948
Total investments	\$49,487,803	\$57,073,157

On December 18, 1990, APA entered into a master purchase agreement with Prudential-Bache Securities ic. ("PBS"), wherein APA agreed to effect a series of repurchase transactions with PBS in permitted investments. Permitted investments are defined as U.S. Treasury Securities, Government National Mortgage Association Securities, Federal Home Loan Mortgage Corporation Securities, Federal Housing Authority Securities and Student Loan Marketing Association Securities. The securities are held by The Valley National Bank of Arizona, as Trustee, for APA. If at any time the aggregate market value of all purchased securities is less than APA's aggregate margin amount (calculated using a percentage of 102%), then APA may require PBS to transfer to APA cash or additional securities, at PBS' option, so that the cash and aggregate purchased securities will equal or exceed APA's aggregate margin amount.

8. BONDS PAYABLE

APA issued \$98,425,000 in variable rate short-term revenue bonds on December 19, 1985 to obtain funding for the Hoover Uprating Project. On April 1, 1987, \$89,820,000 of these bonds were remarketed. The new bonds bear interest ranging from 5.4% to 7.2% and are due serially from 1993 through 2017 as follows:

1993	\$ 800,000
1994	880,000
1995	975,000
Thereafter	87,165,000
Total	\$ 89,820,000

9. RETAINED EARNINGS

Allocations of retained earnings for specified purposes are authorized by the Arizona Power Authority Commission ("Commission"), APA's governing board, under provisions of the Arizona Power Authority Act of 1944, as amended. The general reserves shown on the accompanying balance sheets are comprised of the following at June 30:

	<u>1991</u>	<u>1990</u>
APA General Fund Resource Development — Hoover Modification Project Operations fund Power contracts System improvement and repairs	\$ 3,500,000 200,000 100,000 200,000	\$ 3,500,000 200,000 100,000 200,000
Total	\$ 4,000,000	\$ 4,000,000

ARIZONA POWER AUTHORITY (An Agency of the State of Arizona)

STATEMENT OF OPERATIONS OF THE HOOVER UPRATING FUND-INDIVIDUAL FUNDS AND ACCOUNTS/YEAR ENDED JUNE 30, 1991

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	Revenue Fund	Operating Account	Monthly Payment Reserve Account	Construction Fund
OPERATING REVENUES	\$_13,387,078			
OPERATING EXPENSES: Purchase power Transmission Administrative and general Allocation of depreciation Total		\$ 9,622,953 2,792,022 740,374 42,183 13,197,532		
OPERATING GAIN (LOSS)	13,387,078	<u>(13,197,532</u>)		
OTHER INCOME (DEDUCTIONS): Interest income Interest expense Amortization		263,022	\$ 249,965	\$ 2,766,169 (96,000)
Other, net		(51,773)		(90,000)
Total		211,249	249,965	2,670,169
NET INCOME (LOSS) ADJUSTMENTS TO INCOME (LOSS) UNDER THE POWER RESOURCE REVENUE BOND RESOLUTION: Add:	13,387,078	(12,986,283)	249,965	2,670,169
Accrued interest income FY '90 Accrued interest expense FY '91		65,507	60,753	986,222
Amortization Allocation of depreciation		42,182		96,000
Accrued revenue FY '90	1,439,610	•		
Accrued purchased power FY '91 Deduct:		1,193,484		
Accrued interest income FY '91 Accrued interest expense FY '90 Accrued revenue FY '91	(15/7261)	(39,386)	(62,549)	(614,088)
Accrued fevenue FY 91 Accrued purchased power FY '90 Prepaid purchased power Deferred asset adjustment	(1,547,361)	(871,264) (98,182)		:
INCOME (LOSS) AS DEFINED UNDER				· · · · · · · · · · · · · · · · · · ·
THE POWER RESOURCE REVENUE BOND RESOLUTION	<u>\$ 13,279,327</u>	<u>\$(12,693,942</u>)	<u>\$248,169</u>	<u>\$_3,138,303</u>
JUNE 30, 1991 CASH AND INVESTMENTS BALANCE	\$ -0-	<u>\$ 4,273,762</u>	<u>\$ 3,633,662</u>	<u>\$ 34,907,130</u>

NOTE: The above supplemental schedule includes all funds and accounts, as defined by the APA Power Resource Revenue Bond Resolution.



SUPPLEMENTAL SCHEDULE

Debt Service Fund	Debt Service Reserve Account	Power Resource Development Fund	Monthly General Reserves Fund	Total \$ 13,387,078 9,622,953 2,792,022 740,374 42,183 13,197,532 189,546
\$ 134,163 (4,322,923)	\$ 802,811	\$ 19,995	\$ 86,798	4,322,923 (4,322,923) (96,000)
<u>(4,188,760</u>) (4,188,760)	<u>802,811</u> 802,811	<u> </u>	<u>86,798</u> 86,798	(51,773) (147,773) 41,773
242,829 1,586,970	250,416	_ 2,277	13,379	1,621,383 1,586,970 96,000 42,182 1,439,610 1,193,484
(45,537) (1,586,970)	(237,583)	(2,288)	(6,773)	(1,008,204) (1,586,970) (1,547,361) (871,264)
(2,024,957)				(98,182) (2,024,957)
<u>\$ (6,016,425</u>)	<u>\$ 815,644</u>	<u>\$ 19,984</u>	<u>\$ 93,404</u>	<u>\$ (1,115,536</u>)
<u>\$ 2,542,012</u>	<u>\$ 9,015,906</u>	<u>\$ 281,191</u>	<u>\$ 1,320,795</u>	<u>\$55,974,458</u>

INDEPENDENT AUDITORS' REPORT

The Arizona Power Authority Commission:

We have audited the accompanying combined financial statements of Arizona Power Authority ("APA") and the separate financial statements of the APA General Fund and the Hoover Uprating Fund of APA as of June 30, 1991 and 1990 and for the years then ended, listed in the Table of Contents. These financial statements are the responsibility of APA's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the combined financial position of APA and the financial positions of the APA General Fund and the Hoover Uprating Fund of APA at June 30, 1991 and 1990 and the results of their operations and their cash flows for the years then ended in conformity with generally accepted accounting principles.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule listed in the table of contents is presented for the purpose of additional analysis and is not a required part of the basic financial statements. This supplemental schedule is the responsibility of APA's management. Such supplemental schedule has been subjected to the auditing procedures applied in our audit of the basic financial statements and, in our opinion, is fairly stated in all material respects when considered in relation to the basic financial statements taken as a whole.

Velaitte 7 Touche

July 31, 1991 Phoenix, Arizona