

DRAFT FINAL REPORT

**TRIBAL AUTHORITY PROCESS
CASE STUDIES:
THE CONVERSION OF
ON-RESERVATION ELECTRIC UTILITIES
TO TRIBAL OWNERSHIP
AND OPERATION**

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CASE STUDIES

CASE STUDY #1: AHA MACAV POWER SERVICE

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CASE STUDY #2: TOHONO O'ODHAM UTILITY AUTHORITY

Appendix B: Tohono O'odham Utility Authority Second Restated Plan of Operation

EXECUTIVE SUMMARY

Within the service territory of the Western Area Power Administration, there are approximately 145 federally recognized Indian reservations. A limited number of tribes own and operate the electric systems on their reservations and two tribes are reported on in this document. The purpose of the case studies is to allow other tribes considering the same type of enterprise to gain an overview of the processes followed by these two tribes.

Originally, the subjects of these case studies were to have been tribal utilities previously owned and operated by the U.S. Bureau of Indian Affairs (BIA). It was determined that the BIA had not transferred utility ownership and operation to any tribe for several decades. The BIA does currently own three utilities on reservations and operates two of those. As a result, the focus of the case studies was changed to tribes that had recently taken control of their own electric utilities.

There were found to be many reasons a tribe would want to consider this type of venture. These include:

- Dissatisfaction with the current electricity supplier;
- The existing electric utility is unwilling to expand service at a reasonable cost;
- The desire for self-determination and economic growth; and
- Taking advantage of legislative incentives for tribal enterprise.

The subjects of these case studies, Aha Macav Power Service (AMPS) on the Fort Mojave Reservation and Tohono O'odham Utility Authority (TOUA) serving the Tohono O'odham Nation, were both created for all the above reasons. However, the most significant reason, according to each tribe, was the desire for increased self-determination and economic growth on the reservation.

Common to both AMPS and TOUA is the fact that their operations are restricted to within the boundaries of their respective reservations. Recognized as sovereign nations, Indian reservations are not subject to the edicts of state regulatory bodies. Therefore, all regulatory duties usually carried out by state public utility commissions are, instead, the responsibility of the utility's Board of Directors. This fosters achievement of tribes' quest for increased self-determination.

AMPS was created by the Fort Mojave Indian Tribe in 1991 to improve the economic situation on the reservation and increase tribal self-determination. The first area served was a new residential development on the reservation. With the decision to begin developing their Nevada lands, the tribe began the search for a power supplier. After failing to secure power from three potential suppliers, the tribe decided to supply power to the site themselves.

Once it began providing electric service to the newly developed reservation areas, AMPS became interested in bringing electric service to the remainder of the reservation. A major obstacle is that those areas are already being served by two other utilities. AMPS has already begun overbuilding in the areas served by one of the other utilities. In addition, load forecasts show a high growth rate that may be difficult to meet. Even with experienced management, AMPS could find itself with insufficient power to meet its load or be forced to sign high priced contracts to have sufficient capacity.

TOUA was created on the Tohono O'odham Nation in 1970 to provide the tribe with electric, water, wastewater, and telephone service. The first service provided by the electric operations was an act of self-determination: wheeling power from an IOU to a mining operation on the reservation. Later, TOUA bought the on-reservation electric system of an electric cooperative and has since expanded

that to serve the entire reservation. By doing this, TOUA has been able to provide power to everyone on the reservation who wants it.

TOUA was one of the first tribally-owned and operated electric utilities in the country. Because of the lack of precedent, acquiring adequate funding was the most difficult task for TOUA's early management. At the beginning, TOUA had no assets and only the mine as a potential customer. Twenty-five years later, TOUA has grown to a mature utility, but now it faces the possibility of low growth due to insufficient economic activity. This could find TOUA holding contracts for capacity it does not need.

Since most Indian reservation are served by non-Indian utilities, there are potentially a great number of tribes that may wish to attempt utility ownership and operation. However, some of the roadblocks they will encounter include: lack of utility management experience, lack of startup capital, and the resistance by any existing utility on the reservation to the tribe's desire to appropriate or overbuild their system.

1.0. INTRODUCTION

The service territory of Western Area Power Administration (Western) encompasses approximately 145 federally recognized Indian reservations. Nearly all of the reservations are supplied power via systems owned and operated by investor-owned utilities, cooperatives, or municipal utilities. Only a few of the reservations are served by electric utilities owned and/or operated by the resident tribes.

This report provides case studies of two Indian tribes in the southwestern U.S. that have taken ownership and operative control of the electric utility operations on their reservations. The purpose of these case studies is to allow other tribes, which may be interested in the same actions, to observe the processes followed by the two tribes. From this information they may develop a plan of action for their own utility.

As originally stated in the Task Order assigned by Western's Phoenix Area Office, the purpose of this task was to develop case studies documenting the process of converting electric utilities owned and operated by the Bureau of Indian Affairs (BIA) to tribal ownership and operation. Initial research revealed that the BIA currently owns three electric utilities. Of those three it operates only two. The third is operated under contract by the tribes living on the reservation. Table 1-1 summarizes the characteristics of the BIA's three systems.

Table 1-1. Characteristics of BIA-Owned Electric Utilities

BIA-Owned Utility	Number of Customers (est.)	Area Served (sq. mi.)
Bureau of Indian Affairs/Colorado River Agency Electric System Location: Colorado River Indian Reservation, AZ Operator: BIA - Colorado River Agency, Parker, AZ	3,125	432
San Carlos Indian Irrigation Project Location: Gila River Indian Reservation, AZ/CA Operator: BIA - San Carlos Agency, Sacaton, AZ	2,000	1,200 ¹
Mission Valley Power Location: Flathead Indian Reservation, MT Operator: Tribal Council of the Confederated Salish and Kootenai Tribes. Dixon, MT	13,000	980

Note: 1) This includes land on the Gila River Indian Reservation, the San Carlos Apache Indian Reservation, and off-reservation lands in portions of Pima, Gila, and Pinal Counties.

The BIA has been undergoing a transformation to remove itself from the utility business. It has initiated this process with Mission Valley Power on the Flathead Indian Reservation in Montana. The Confederated Salish and Kootenai Tribes on the reservation are presently operating Mission Valley Power under contract from the BIA while the BIA retains ownership of the system. The purpose of this agreement is to give the tribes the opportunity to gain utility operating experience so they can eventually assume full control and ownership of the utility. Originally, the tribes were to take full control of the utility when the power plant at the 180 MW Kerr Dam within the reservation was

recently up for re-licensing. However, a federal examiner decided that the tribes lacked the technical ability to operate the power plant and market its output and they were denied full control. Eventually, the tribe will be given a full operating license after 30 years. Until that time, they will continue to operate the utility under contract to the BIA.

The two systems which the BIA still operates are the BIA/Colorado River Agency Electrical System on the reservation of the Colorado River Indian Tribe and the San Carlos Indian Irrigation Project on the Gila River Indian Reservation, both in Arizona. The Colorado River Indians have begun investigating the possibility of taking over of the BIA-owned utility on their reservation and commissioned a feasibility study of the plan.¹

The Gila River Indians went through ten years of negotiations and planning to be able to take over ownership and operation of the BIA-owned system on their reservation. However, just seven days before they would have taken control of the system, the Gila River Tribal Council decided they did not want to go through with it. The project was dropped, so the BIA maintains ownership and operation of the system.

There are no known recent examples of tribes taking over full ownership and control of BIA-owned electric utilities in the Western U.S. All currently operating tribal utilities started from either small existing systems owned by other utilities or from nothing at all. The Navajo Tribal Utility Authority serving the Navajo Reservation started with almost no distribution system. Only government buildings on the reservation had electricity. The Tohono O'odham Utility Authority (TOUA) on the Tohono O'odham Nation in Arizona took over the on-reservation system of an electric cooperative that served only the reservation's four largest villages. The Aha Macav Power Service (AMPS) on the Fort Mojave Reservation is in the process of over-building the existing on-reservation system of a nearby electric cooperative to add to the system has already built in newly developed areas of the reservation. Both TOUA and AMPS have provided electricity to areas of their respective reservations previously without power. TOUA and AMPS were chosen as subjects for these case studies because: 1) they are both completely owned and controlled by their respective tribes and 2) they are fairly new and are still growing to meet the needs of their customers and reservations.

1.1 Case Study Approach

The process of acquiring and assembling all the information for these case studies began with research into the two tribes and their reservations. The information gathered during this stage served to provide background for site visits to the two reservations. Representatives from Western and NEOS Corporation visited the two reservations to meet with utility management. Prior to the site visits, NEOS supplied utility management with an information request determined by Western and NEOS to be pertinent to the creation of the case studies. The site visits provided the opportunity for facility tours, utility management interviews, and exchange of information such as system maps, Plans of Operation, Charters, Bylaws, and other documents.

¹*Evaluation of Future Electric Utility Service*, prepared by Lee Gardner and Associates in September 1994 for the Colorado River Indian Tribes.

1.2 Purpose of Case Studies

The purpose of these case studies is to provide documentation of the processes followed by the two tribes when they took over ownership and operation of their electric utilities. Other tribes considering taking over ownership and operation of the electric utilities on their reservation may use these case studies as resources and references to determine possible courses of action for the development of their own utilities. These case studies are not intended to be used as "how-to" guides for tribal utility development. Rather, the intent is simply to document the processes followed by the two tribes.

Each case study contains the following topics:

- The Reservation;
- The People and Tribe Inhabiting the Reservation;
- Development of the Indian Utility;
- Impetus for the Development of the Electric Utility;
- Sources of Funding for the Utility's Development;
- Third Party Involvement in the Process;
- Method(s) Used to Acquire the Existing Utility Systems;
- Applications or Legal Documents Filed;
- Utility Organization;
- Utility Operations;
- The Pros and Cons of Tribal Utility Operation According to the Tribe; and
- The Future of the Utility.

2.0 TRIBAL UTILITY OWNERSHIP AND OPERATION

The ownership, management, and operation of an electric utility is expensive, complex, and entails substantial risk. Tribal utility operations are not common for two primary reasons: 1) limited access to startup capital and 2) lack of utility management experience. Those tribes have created their own utilities for several reasons, including:

- Dissatisfaction with the current electricity supplier;
- The unwillingness of the current utility to expand service to outlying areas of the reservation;
- The desire for self-determination and economic growth; and
- Taking advantage of legislative incentives for tribal enterprise.

Comparing and contrasting the operations and characteristics of several reservation electric utilities illustrates the basic differences between Indian-run and non-Indian-run utilities.

2.1 Dissatisfaction with Prior Utility Operation

There are some 285 Indian reservations in the U.S. with about 145 of these located in the service territory of Western Area Power Administration. All but a few reservations are provided electrical service by utilities not associated with the tribe. The owners and operators may operate the utility to either maximize shareholder benefits or to meet policy directives established by a governmental agency. Whatever the mission of the utility, tribal interests are probably not taken into consideration.

In the case of the Colorado River Indian Tribe (CRIT) of Parker, AZ, the tribe has been dissatisfied with the BIA's operation of the electric system on the reservation. Reasons include the CRIT's opinion that the BIA was not aggressive enough in contesting rate increases by wholesale energy suppliers on behalf of CRIT. BIA policy has been to recognize repayment obligations, often at the expense of tribal concerns. From the CRIT point-of-view, the BIA does not operate the utility in the best interest of anyone other than the BIA.

Problems of this nature may result from BIA's obligation to follow federal regulations and procedures. The planning and administration of a BIA-owned and operated electric system is the responsibility of the BIA Area Administrator. The Area Administrator appoints the Agency Superintendent to head the utility. However, few, if any, Agency Superintendents are trained to operate electric utilities. Therefore, it is common for the Superintendent to have a Power Manager with an engineering background actually run the system. This has been the case in the Colorado River Indian Reservation electric system. There has been a great deal of turnover in BIA personnel, leading to discontinuity of utility management. Another dilemma is the BIA's policy of limiting the horizon of electric utility resource planning to its fiscal year rather than the 10 to 20-year horizon common to other electric utilities. Thus, BIA power supply planning is performed one year at-a-time. Such a practice removes the opportunity to obtain longer term power supply contracts.

These actions are not deliberate, but rather the result of a non-technical federal bureau attempting to operate an electric utility. This often results in the BIA being unable to operate the utility to the satisfaction of the tribe for whom it is operated.

2.2 Existing Utility Unwilling to Expand Service

Indian reservations, particularly in the southwest, are often large and remote. For many years, most homes did not have electricity service as a result of both the vast distances between homes and the poverty status of the reservations. While most reservations had some type of electric service, it was often limited to larger towns and villages.

Prior to the Tohono O'odham Nation's development of TOUA, only four villages had electric service, leaving 27 villages without power. The existing utility was not interested in supplying power to those outlying villages. The Nation decided to buy the system from the utility in order to provide the level of service desired by the Nation.

Similarly, the Fort Mojave Reservation had considerable undeveloped acreage that was expensive to develop. In part, AMPS was formed largely because the tribe decided it wanted to supply power to those areas not served by the other local utilities.

2.3 Desire for Self-Determination and Economic Growth

Some tribes have desired to own and operate their own utilities for the purpose of increasing their sovereignty on the reservation and improving tribal member's economic situation. This is true of both the Tohono O'odham and Fort Mojave Indians. Often, because of their remote locations, Indian reservations have been unable to attract a great deal of economic development activity. Owning and operating its own electric utility gives a tribe the opportunity to improve the economic conditions on the reservation themselves. Planning and control for growth on the reservation allows for considerable exercise of power by the tribes. Furthermore, most economic benefits accrue to the tribe and its members.

2.4 Legislative Incentives for Tribal Enterprise

Three federal legislative acts have had a particular bearing on the inception and operation of electric utilities by Indians. The Indian Self-Determination and Education Assistance Act of 1975, Indian Tribal Government Tax Status Act of 1982, and Energy Policy Act of 1992, all authorized funds that could be used for the purpose of providing Indians more control over their energy resources.

2.4.1 Indian Self-Determination and Education Assistance Act of 1975

The Indian Self-Determination and Education Assistance Act authorized the Secretary of Energy to implement an "orderly transition from federal domination of programs for and service to Indians to effective and meaningful participation by Indian people in the planning, conduct, and administration of those programs and services." The Act authorized funds for grants and contracts for training Indian people to operate programs and services. The Mission Valley Power project on the Flathead Indian Reservation in Montana is an example of assistance from the 1975 legislation (See Section 2.5).

2.4.2 Indian Tribal Government Tax Status Act of 1982

It has been since only 1982 that Indian tribes have had the authority to borrow funds on a tax exempt basis.² This authority exists due to the Indian Tribal Government Tax Status Act of 1982 which allows qualifying Indian tribal governments to issue tax-exempt debt under the Internal Revenue Code similar to that of state governments, cities, counties, special districts, and other governmental agencies. Tribes are authorized to borrow tax-exempt if the proceeds, either of a loan or bond, are used to finance an essential governmental function. The Internal Revenue Service (IRS) published liberal regulations that permitted both public facilities and for-profit commercial and industrial facilities to be financed pursuant to this new authority. Since then, however, new federal law and regulations have restricted the broad authority originally granted by the initial IRS regulations. Utilities such as electricity, water, and sewer are specifically covered under the provisions of the 1982 act.

2.4.3 Energy Policy Act of 1992

The Energy Policy Act of 1992 contains two sections that specifically authorize the Secretary of Energy to grant financial assistance to Indian tribal governments for energy purposes. Section 2603 mandates energy self-sufficiency demonstration programs and loans. Section 2606 authorizes grants to encourage the adoption of energy efficiency and renewable energy programs on Indian reservations.

2.4.3.1 Section 2603

Section 2603 contains two subsections. The first subsection requires the Secretary of Energy to 1) establish and implement demonstration programs to assist Indian tribes seeking energy self-sufficiency, 2) develop programs that promote the vertical integration of energy resources on the reservation, and 3) provide technical assistance to Indian tribes. Energy self-sufficiency programs are supported by three-year grants. These programs are designed to help tribes attain the level of management and technical proficiency necessary to develop tribal energy resources. The overall purpose of these programs being to reduce tribal unemployment, provide management training for tribal members, and improve tribal technical skills.

Vertical integration of tribal energy resources means that energy resources on an Indian reservation are used or processed on the reservation. Applicable energy resources and technologies include, but are not limited to, solar and wind energy; the generation and transmission of electricity; hydroelectricity; cogeneration; natural gas distribution; and clean, innovative uses of coal. The Act directs the Secretary of Energy to provide grants not exceeding 50 percent of the project's total cost for this purpose.

The second subsection of Section 2603 provides for low interest loans for the exclusive use of tribes in promoting energy resource development and vertical integration. Appropriations of \$10 million per year for the fiscal years 1994 through 1997 are authorized for low interest loans to carry out each of the energy self-sufficiency, vertical integration, and technical assistance programs.

² Kemper Securities, *An Introduction to Tax-Exempt Financing for Indian Tribes*, Portland, OR, April 1995.

2.4.3.2 Section 2606

Section 2606 of the Energy Policy Act of 1992 authorizes the Secretary of Energy to

"...grant financial assistance to Indian tribal governments, or private sector persons working in cooperation with Indian tribal governments, to carry out projects to evaluate the feasibility of, developing options for, and encourage the adoption of energy efficiency and renewable energy projects on Indian reservations. Such grants may include the costs of technical assistance in resource assessment, feasibility analysis, technology transfer, and the resolution of other technical, financial, or management issues identified by the applicants for such grants."

Section 2606 requires the applying tribe to show evidence of coordination and cooperation with local educational institutions and local energy institutions. There is no set appropriation for this section.

2.5 Comparing On-Reservation Electric Utilities

Before summarizing the case studies it is useful to compare TOUA and AMPS with other electric utilities operating on Indian reservations. Table 2-1 contains a summary of the characteristics of six electric utilities operating on Indian reservations. The first three utilities listed (Navajo Tribal Utility Authority, TOUA, and AMPS) are owned and operated by the tribes on the reservations. The last three (Mission Valley Power, San Carlos Irrigation Project, and Colorado River Agency Electric System) are owned by the BIA. Mission Valley Power is operated under contract by the Salish and Kootenai Tribes. The San Carlos and Colorado River Agency systems are operated by the BIA itself.

As can be seen in Table 2-1, the organization of the three Indian-owned utilities is more complex than the BIA systems. The Navajo Tribal Utility Authority (NTUA) and TOUA each have been operating for at least 20 years. They both operate water, wastewater, and telephone services in addition to their electric utilities. Policy for these tribal utilities is set by a Board while policy for the BIA-operated utilities is the responsibility of the BIA Area Director³. The planning horizons for all three tribal utilities are ten years compared to the one-year planning horizon for the BIA-operated utilities.

The financial characteristics of the tribal utilities are more like private businesses than government agencies. Two of the tribal utilities, NTUA and TOUA, are Rural Electrification Administration (REA) borrowers. The ability to borrow money at low interest rates has allowed them to expand their service to most areas of their reservations.

The operating characteristics of the BIA-operated and tribal utilities are substantially different. The tribal utilities are not unionized and practice tribal hiring preferences. All six utilities develop annual operating reports but the BIA's reports do not conform to the commonly used FERC accounting and reporting standards.

The two case study utilities represent a young utility (AMPS) and a mature utility (TOUA). AMPS is still building to bring power to the entire reservation. With a great deal of expansion and development going on, it will be quite some time before AMPS' growth slows. TOUA, on the other hand, has brought power to almost all villages on the reservation and is now concentrating on upgrading its equipment and system while bringing new buildings on-line as they are built.

³According to Federal Register listing 25 CFR 175, which sets forth the operating responsibilities and methodologies for BIA-administered electric utilities on reservations.

3.0 SUMMARY OF CASE STUDIES

3.1 Aha Macav Power Service

Aha Macav Power Service (AMPS) is an electric utility wholly owned and operated by the Fort Mojave Indian Tribe. The Fort Mojave Reservation covers 22,820 acres in parts of three states (Arizona, California, and Nevada) along the Colorado River. The tribe's headquarters are in Needles, CA. (See Figure 3-1.) The tribe also co-owns the Fort Mojave Tribal Utility Authority (FMTUA), a separate entity from AMPS, that provides telephone, water, and wastewater service to the reservation. FMTUA is co-owned by an Oklahoma utility that is under contract to the tribe to operate FMTUA.

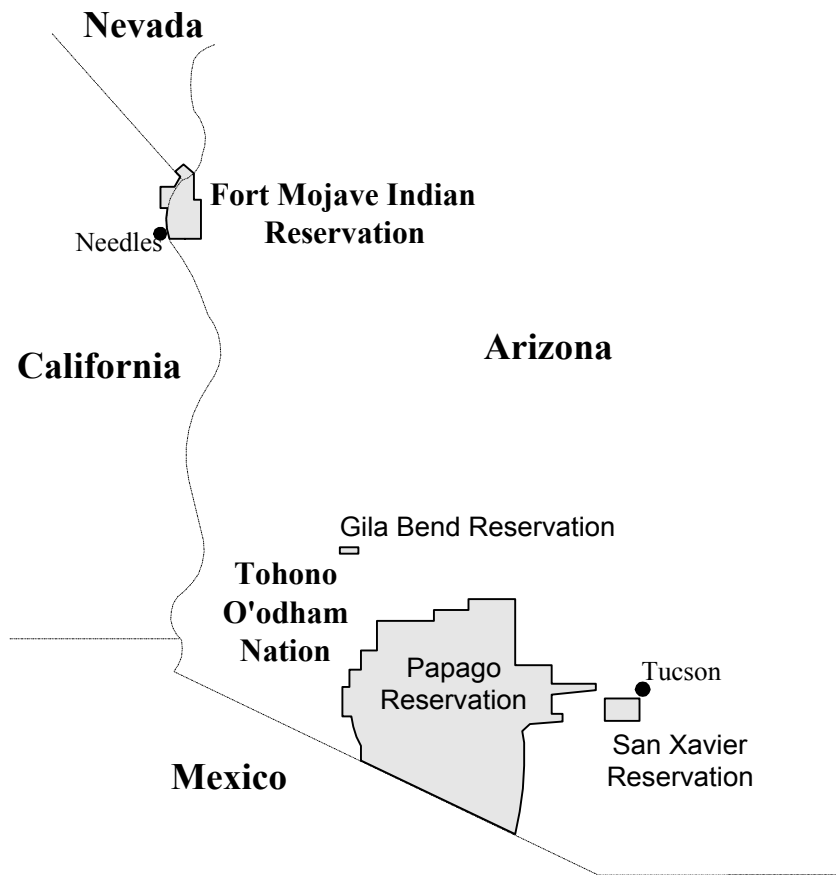


Figure 3-1. Locations of Fort Mojave Indian Reservation and Tohono O'odham Nation

AMPS was formed in 1991 because the tribe wanted to improve the economic situation on its reservation and because it wanted to provide electric service to a newly developed area on the reservation. AMPS' first connections were homes in Mesquite Creek, a new tribally-owned subdivision. The remaining residents and businesses on the reservation were already being served by two other utilities. A small tribal village and the tribal headquarters on reservation land located within the city of Needles are served by the City of Needles Department of Public Utilities while portions of the reservation in Arizona are served by Mohave Electric Cooperative. Eventually, AMPS plans to take over service to both these areas and be the sole provider of electric service on the

reservation. It has already begun the process of overbuilding distribution lines in Mohave Electric's service territory within the reservation.

In 1993, the tribe began developing 4,400 acres of tribal land in Nevada that will eventually include 40,000 residential units, shopping centers, a community center, a dozen casinos, and have a load of 120 MW in 20 years. The tribe approached Nevada Power for an estimate of the cost to provide power to the development area. Nevada Power's \$6 million estimate was determined to be too expensive. Nevada Power was also unwilling to give a written estimate or describe in detail what operations and costs the estimate covered.

The tribe then approached the City of Needles which responded with an estimate of \$600,000 to provide power to the Nevada site. However, Nevada Power negated Needles' bid pointing out that Needles, as a wholesale customer of Nevada Power, had a no resale clause in their power purchase contract. The tribe subsequently approached Mohave Electric Cooperative for an estimate. This option was turned down by Nevada business interests. The only remaining option for the tribe was to have AMPS provide power to the site. AMPS has since constructed a power line across the river to the development area where a casino and marina have already been built.

Insufficient transmission line capacity outside the reservation may prevent AMPS from receiving sufficient energy for the reservation. Currently, AMPS purchases all of its power from the Navajo/Central Arizona Project and wheels this power through Western and Citizens Power. The tribe is completing the final arrangements for the construction of a 720 MW gas combustion turbine, called the Nordic Gas Generator power plant, on the reservation. The power plant would be built, owned, and operated by Nordic Power of Michigan. Initially, AMPS would buy 6 MW as backup power from Nordic. In the future, AMPS intends to purchase as much as 25 to 30 MW from Nordic to meet the growing demands of the Nevada development. In addition, the BIA is assisting AMPS in applying for federal funding for a proposed 30 MW photovoltaic power plant to be built on the reservation.

The BIA was not actively involved in the formation of AMPS because, historically, there had been little BIA presence on the Fort Mojave Reservation. In the past, the BIA provided some resource planning, technical assistance, and lobbying that continues to the present. More recently, the BIA gave AMPS a 12-mile section of 69 kV transmission line. The line leads from the Bureau of Reclamation's Davis Dam on the Colorado River to a point about three miles north of the reservation. In the future, AMPS will connect the line to the rest of the reservation's grid. This will add a second point of service to AMPS' single existing point of service at the reservation's eastern border. The acquisition of this line was important to AMPS because it became AMPS' first major asset, with a value of \$12.5 million. Owning the transmission gave them collateral to secure additional construction funding.

AMPS' General Manager is the same consultant that helped the tribe start the utility and was hired on a contract basis. Eventually, the tribe intends to have tribal members manage the utility. However, until they have enough experience, the tribe will continue to look outside of its membership to find qualified upper management personnel. AMPS has established an apprenticeship program to train tribal members to be linemen. The first three apprentices are mid-way through the program.

A Board of Directors oversees AMPS' operations. Its seven members serve rotating terms of three years. Eligible candidates for the Board are elected by the sitting Board members to fill vacant seats. The tribe requires candidates to possess knowledge and experience in one or more areas related to utility operation such as finance, law, engineering, or management.

The biggest challenge to AMPS' management will be to accurately forecast and secure power purchases to meet the growing load on the reservation, which is being driven by the development on the Nevada land. Load at the Nevada site is anticipated to grow from 2 to 150 MW in 20 years, an average growth of 7.4 MW per year. Acquiring additional power in increments similar to growth may be difficult if the development timetable is changed. In addition, the previously mentioned lack of transmission capacity into the reservation will make resource planning difficult for AMPS.

3.2 Tohono O'odham Utility Authority

The Tohono O'odham Utility Authority is owned and operated by the Tohono O'odham Nation. The Tohono O'odham Nation covers nearly 2.9 million acres in southern Arizona and is comprised of three separate reservations: what were formerly called the Papago Reservation, the Gila Bend Reservation, and the San Xavier Reservation (See Figure 3.1 on page 9). The Nation's headquarters and BIA Agency are located in Sells, AZ. TOUA operates the electric, water, wastewater, and telephone services on the reservation.

TOUA was formed in the late 1960's when the Nation's leaders decided to try to improve economic conditions within the Nation by taking more control of economic and development activities on the reservation. Up to that point, electric service on the reservation had been provided by an electric cooperative that served only the larger villages. The cooperative's main service area, as well as its customer base, management, and staff, were located off the reservation. There were approximately 27 small, remote villages that did not have electric power.

At that same time, two large mining companies held mineral leases on reservation land. The firms required large amounts of power and Arizona Public Service (APS), a large investor-owned utility (IOU), was ready to supply it. The Nation's leaders wanted TOUA to wheel the power from APS at the reservation boundary to the mines. Neither APS nor the mine operators were willing to recognize TOUA as a legitimate utility but they were unable to circumvent it entirely because of the Nation's jurisdiction over the reservation. Simultaneously, TOUA was negotiating with the cooperative serving the reservation to purchase the cooperative's on-reservation system. As the negotiations with the cooperative continued, TOUA reached an agreement with APS for wholesale power. TOUA began wheeling the power to the mines via a transmission line built by APS and paid for by the mining interests.

After the acquisition of the cooperative's system on the reservation, TOUA was officially recognized by the REA as a utility. However, unlike AMPS, TOUA was able to secure a loan without any assets for collateral. TOUA was able to do this by using its future earnings potential as collateral. With this funding, TOUA purchased the cooperative's on-reservation distribution system. Since that time, TOUA has been able to supply power to nearly everyone on the reservation who wants it. TOUA also took over operation of the reservation water and wastewater systems that had previously been built by Indian Health Services and operated by the BIA.

TOUA currently purchases power from several sources including the Western Area Power Administration. TOUA has been approached by entrepreneurs regarding the construction of power plants on the Nation's lands, but the Nation has not allowed development to take place.

The electric operations of TOUA are directed by the Operations Manager who, in turn, reports to the General Manager. The General Manager of TOUA heads the four systems. Like AMPS, TOUA has had to look outside the tribe for qualified utility management personnel. TOUA also has a lineman apprenticeship program with three tribal members participating. TOUA has operated this program

successfully almost since the beginning of operations. Three of TOUA's current journeyman linemen are graduates of their apprentice program.

The Board of Managers, which oversees TOUA's operations, is required to have at least three tribal members on it. Four of the members must have at least ten years of business management experience and three of these members must have had such experience in the utility industry. It is hoped that one day all the Board members will be tribal members.

Unlike the case for AMPS, TOUA does not have a power supply dilemma. TOUA's problem is that future economic growth on the reservation is estimated to be slow. The only near-term known energy consumption growth for TOUA will be some additional housing and the acquisition of utility service area on the reservation. The additional housing will result from construction on the reservation funded by the federal Department of Housing and Urban Development. TOUA will get 400 more residential customers when it purchases the electric system of a cooperative that still serves part of the San Xavier Reservation. Once this is done, TOUA will be the sole electric utility on the Tohono O'odham Nation.

4.0 CONCLUSION

This report identified four reasons why an Indian tribe may decide to own and operate its own electric utility. Both the Fort Mojave Indian Tribe and the Tohono O'odham Nation formed their respective electric utilities, most notably, for the purpose of increasing self-determination and improving economic conditions on their reservations. Because of their efforts and success, both tribes have been able to bring additional employment to their reservations. The Tohono O'odham Nation has also been able to improve the quality of electric service to its reservation by being able to bring electric service to all who want it. The Fort Mojave Tribe was able to bring power to an important new development on its reservation because of the existence of AMPS.

Since most Indian reservation are served by non-Indian utilities, there are potentially a great number of tribes that may wish to attempt utility ownership and operation. However, some of the roadblocks they will encounter include: lack of utility management experience, lack of startup capital, and the resistance by any existing utility on the reservation to the tribe's desire to appropriate or overbuild their system. This report has shown how both the Fort Mojave Tribe and Tohono O'odham Nation encountered these same problems and were able to surmount them.

Others tribes might learn from the Fort Mojave Tribe and the Tohono O'odham Nation by noting what they did in reaction to or in preparation for certain situations. The names of contacts at each utility and tribe are provided for further information.

Aha Macav Power Service - Fort Mojave Indian Reservation

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CASE STUDY #1

AHA MACAV POWER SERVICE

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APPENDIX

APPENDIX A

Charter of the Aha Macav Power Service; Bylaws of the Aha Macav Power Service,
and Amendments to the Bylaws of the Aha Macav Power Service

1.0 Introduction

The Fort Mojave Indians are one of the few tribes in the U.S. that have taken the initiative to build, own, and operate their own electric utility. This case study describes the process the Fort Mojave Indians followed to bring their electric utility into operation. Other tribes wishing to achieve the same goal can use this case study as a guide, not as a how-to guide, but as a description of what one tribe set out to do, the obstacles it encountered along the way, the solutions it found to those problems, and the results of its efforts. While Fort Mojave Indians' electric utility development effort has been underway for almost five years, this case study is best presented to show each of the activities involved in the development process.

Prior to starting its electric utility, Aha Macav Power Service, the tribe already owned a portion of the telephone, water, wastewater, and cable television utility on the reservation. However, it contracted to an outside firm to manage the day-to-day operations of the utility. When making the decision to start an electric utility, the tribe made a conscious decision to not only have complete ownership of the utility, but full control as well.

Ownership of a utility is a hurdle that few tribes are able to overcome due to limited financial resources. Few tribes have assets with which to use as collateral for loans and there is often insufficient cash for startup. Even if the financial hurdle is passed, there is the matter of managing the utility. Few Native Americans have electric utility management experience. Those that do, are often under the employment of their own tribe. There is also the lack of technical experience, however there are training programs to address this problem.

This case study will describe the Fort Mojave Reservation, the people who inhabit it, and the development of the Aha Macav Power Service. Included in Appendix A for reference purposes are the Charter of the Aha Macav Power Service, the Bylaws of the Aha Macav Power Service, and the Amendments to the Bylaws of the Aha Macav Power Service.

2.0 The Fort Mojave Reservation

The Fort Mojave Reservation spans the Colorado River north of Needles, California and consists of 22,820 acres within San Bernardino County, California; Mohave County, Arizona; and Clark County, Nevada. (Refer to Figure 2-1 for a map of the Fort Mojave Indian Reservation and significant features of the Aha Macav Power Service distribution system.) The terrain within the reservation is desert, except for the floodplain in California and Arizona which is very rich and suitable for agriculture.

The reservation east of the river is entirely within Arizona. The reservation west of the river is split between California and Nevada. Geographically, the reservation lands include the following areas in the each of the three states:

Arizona The Arizona portion of the reservation extends from the Colorado River at Needles southeast to a point six miles east of the river in Arizona, then north approximately 17 miles back to the river. Most of the Arizona reservation land is characterized by a checkerboard pattern with alternating sections belonging to the tribe.

California In California the reservation consists of three separate sections. Each of the sections within California are integral. The three sections are:

1. An area of several square blocks within the city limits of Needles within which the Fort Mojave tribal headquarters and a tribal "village" are located;
2. An area of approximately one-half square mile in California along Interstate 10 located five miles northwest of Needles; and
3. An area of approximately 10 square miles in California bordering the river six miles north of Needles and two miles south of the Nevada border. This land is very productive farming land and has no developments on it.

Nevada There are approximately six square miles of scrub land bordering on the river in the extreme southern tip of the state of Nevada. Like the California lands, the Nevada land is integral. Up until two years ago, this land had never been developed. Approximately ten years ago, the Tribal Council decided it was time to develop the Nevada land. In early 1995, the Fort Mojave Tribe completed the construction of a 350-room hotel-casino next to the river on this land. Plans call for several thousand housing units, commercial establishments, and a dozen casinos on this land within the next 20 years.

The Fort Mojave Reservation was authorized by Executive Order on September 19, 1880. Subsequent orders have modified the original Executive Order resulting in the current reservation lands. The reservation land is held in trust by the federal government and tribal members own undivided shares of land. This arrangement prohibits the ownership of reservation lands by non-Indians and even individual members of the tribe.

Agency headquarters for the Fort Mojave and three other nearby reservations is in Parker, Arizona which is also the tribal headquarters for the Colorado River Indian Tribes. Parker is located 60 miles south of the Fort Mojave Reservation along the Colorado River.

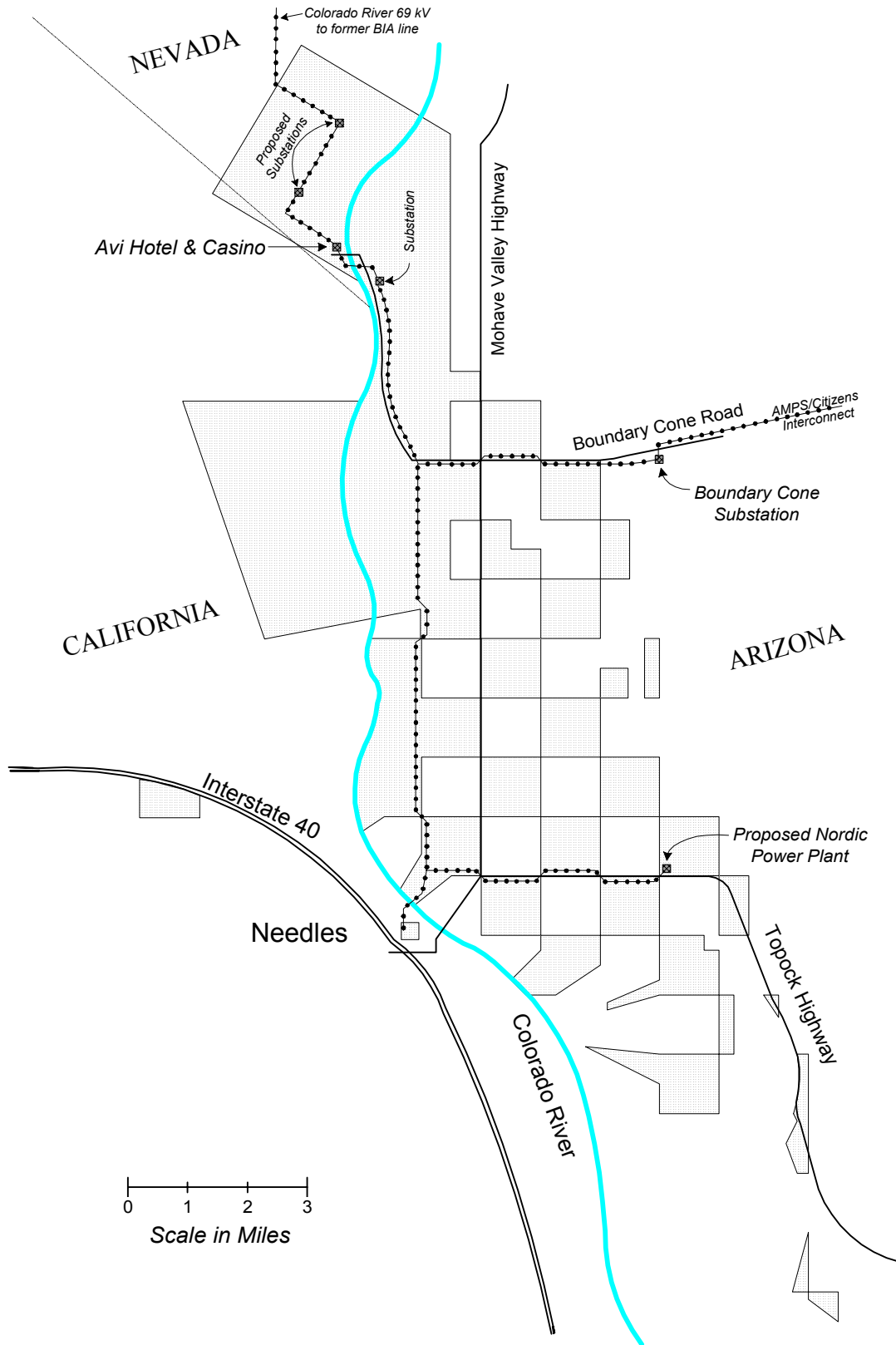


Figure 2-1. Fort Mojave Indian Reservation

3.0 The Mojave People and the Fort Mojave Indian Tribe

Mojave Indians are the primary residents of the Fort Mojave Reservation and members of the Fort Mojave Indian Tribe. The tribe currently has a membership of approximately 1,100 with nearly 770 living on the reservation. The on-reservation tribal members live in Arizona and in a "village" in Needles, CA. There are presently no permanent residents in the Nevada reservation land.

The Mojave people historically led a rancheria life style that entailed living in scattered dwellings forming loose settlements on farmlands along the length of the Colorado River between what are now Arizona and California. The Mojave subsisted on small-scale agriculture, gathering of edible wild plants such as mesquite beans, trapping beaver, hunting, and fishing. Crop irrigation was accomplished by allowing the river to flood the fields each spring. Crops grown included corn, melon, pumpkins, and herbs.

The river has since been contained within a rock lined channel. Coupled with the construction of Davis Dam 29 miles upriver of Needles, natural flooding of the river has been eliminated. Crops are irrigated by pumping water from the river into canals for distribution to the farming lands within the Arizona and California portions of the reservation. Unlike in the past, tribal members perform little farming. Most farming in the reservation is performed by non-Indian growers who lease the land from the tribe. These long-term leases provide a great deal of income for the tribe.

The opening of the new casino in the Nevada portion of the reservation has had a very positive impact on the members of the Tribe, according to tribal leadership. Unemployment, a chronic problem on almost every reservation, has begun to decrease and pride and optimism among tribal members have grown as well. These are the fruits of self-sufficiency and self-determination, according to tribal leaders.

4.0 Development of Aha Macav Power Service

This section describes the impetus to AMPS' development, the process followed by the leaders of the Fort Mojave Tribe in developing AMPS, the results of its work, and the pros and cons of tribal utility operation from the tribe's perspective.

4.1 Impetus for the Fort Mojave Tribe's Development of the Aha Macav Power Service

The impetus for the development of the Aha Macav Power Service (AMPS) was the Fort Mojave Tribe's desire to have more control over economic development on its reservation. This included creating jobs and job training programs for tribal members and keeping business on the reservation to benefit the tribe and its members.

The Fort Mojave Indian Tribe already owned a majority of the Fort Mojave Tribal Utility Authority (FMTUA) that provides water, wastewater, telephone, and cable television services on the reservation. An Oklahoma utility owns the minority share and manages FMTUA under contract to the tribe.

4.1.1 Utility Situation on the Reservation

The electric utility situation on the reservation is complex due to the reservation covering parts of three states. Electrical service is provided by two utilities besides AMPS: Mohave Electric Cooperative in Arizona, which serves the reservation east of the river and the City of Needles Department of Public Utilities which serves the reservation west of the river. Prior to AMPS, no service was available in the Nevada portion of the reservation.

Mohave Electric Cooperative (MEC) presently serves approximately 20,000 customers in Arizona along the Colorado River from Bullhead City south to Mohave Valley. MEC's average residential rate is approximately 9.2¢/kWh. MEC serves approximately 110 residential and several dozen commercial customers on the reservation.

The City of Needles Department of Public Utilities (Needles) presently serves approximately 2,900 customers in and around the City of Needles, California. Currently, Needles serves two areas of the reservation. The first is the small area encompassing the tribal headquarters and a tribal village within the city limits of Needles and the second is the large agricultural area located along the California side of the river six miles north of the City. Needles' average electric rate is 8.0¢/kWh.

4.1.2 Decision to Form a Tribally-Operated Electric Utility

In the late 1980's the tribe commissioned a utility management consultant to study the feasibility of starting a tribal utility. The consultant determined that the tribe could start its own utility for roughly \$2.5 to \$3 million. Based on this information and the tribe's available financial resources, the Tribal Council made the decision to proceed with formation of a tribally-operated electric utility.

The name given to the new utility, Aha Macav, translates to "People Along the River." AMPS was formally chartered in 1991 to provide electric service to the residents and businesses within the Fort Mojave Reservation. Under its tribal charter, AMPS would remain separate from FMTUA. The utility management consultant that conducted the initial feasibility study was invited by the tribe to manage the new utility.

Two opportunities for the development and maturation of the utility presented themselves to the tribe soon after the chartering of AMPS: the start of construction of a large residential development in Arizona and the initiation of the tribe's master plan for the development of the Nevada reservation land.

4.1.3 Residential Development in Arizona

The tribe began construction of a major residential development called Mesquite Creek on the reservation in 1991. Mesquite Creek is owned by the tribe and is located along Boundary Cone Road in Arizona (refer to Figure 2-1 on page 3). The first phase of Mesquite Creek will be completed in the late 1990's and consist of about 600 single family homes covering an area of approximately 425 acres. As of mid-1995, about 90 homes have been completed. This became the first area of the reservation to have electric service provided by AMPS.

The developer of Mesquite Creek agreed to pay for the installation of all the electrical distribution lines and associated equipment within the development. The developer was given three years from the time of completion to have all the meters on line. Also under this agreement, AMPS will buy the distribution facilities from the developer over a 20-year period. This development is expected to increase the number of residential electric customers on the reservation by 650 percent when it is completed in the late 1990's. Eventually, Mesquite Creek is anticipated to add a load of at least 1 MW to the AMPS system.

4.1.4 Nevada Lands Master Plan

As long as forty years ago, the Fort Mojave Tribal Council knew the existing tribal land in Nevada was destined for gaming. Unsuitable for agriculture, the land was set aside for development at a latter time. In the early 1980's the Tribal Council decided that the time had come to develop the land so it commissioned the creation of a development Master Plan. The entire 4,400 acre area was still completely undeveloped, had no utility services, and limited physical access.

The resulting Master Plan calls for the construction of 40,000 residential units, shopping centers, a community center, and a dozen casinos over a 20-year development horizon. Besides providing jobs for thousands of people and housing for thousands more, the Master Plan would eventually result in a base electrical load of 150 MW, all of which would be provided by AMPS.

The first phase of the Master Plan development was finished in February 1995, with the opening of the 350-room Avi Hotel and Casino on the Colorado River. The casino has created an electric load of nearly 2 MW, and the load will grow with further development. The opening of the casino and the planned development on the Tribe's Nevada land are proving to be the largest influences on the growth of AMPS' system, although, at first, the Tribe did not plan to provide power to the Nevada development.

4.1.5 Initial Nevada Power Supply Studies

Since there was no existing power to the Nevada reservation land and AMPS' existing power supply contracts couldn't meet the anticipated load, the tribe had to find a way to supply the projected 150 MW energy needs for the site. The tribe found there were two principal options available to them: self-generation and franchise the operation to one of the other local utilities.

4.1.5.1 Self-Generation Option

The draft Master Plan included self-generation resources to meet part of the load forecasted for the project. Potential resources included natural gas-fired steam/combustion turbines and photovoltaic (PV) power. An early cost-effectiveness study of cost/benefit and economic analysis by the tribe's consultant concluded that neither option was cost-effective.

4.1.5.2 Franchise Option

The second option was to franchise the electric service to one of the three local electric utilities. The first utility approached was Nevada Power, an investor-owned utility providing service to southern Nevada. Mohave Station power plant, partially owned by Nevada Power, is located six miles north of the reservation. A 69 kV Nevada Power transmission line passes within one mile of the reservation boundary and could have been tapped for power. The verbal estimate provided by Nevada Power to supply the site with power was \$6 million, considered by the tribe to be too costly.

The tribe next approached the City of Needles which appeared to be able to provide power since it had one 69 kV transmission line passing within a mile of the reservation. Needles said it could provide power to the site at an estimated cost of \$600,000. This proposal was blocked by Nevada Power which sells power to Needles. Because Needles' power purchase contract with Nevada Power prohibits it from reselling the power.

The last potential local source of purchased power was MEC. However, the regional political ramifications were such that MEC crossing into Nevada was determined to be undesirable. Therefore, this option was not pursued.

Without other power supply options, the tribe began investigating serving the Nevada land itself and with the construction of Mesquite Creek, the tribe now had a point from which to serve it. This brought up the next obstacle, funding the expansion of AMPS to provide the needed service.

4.2 Funding the Development of AMPS

The tribe was fortunate in that it had funds sufficient for most of its start-up needs. As described earlier, the range of cost estimates to provide power to the site of the Nevada development was quite large. While the initial utility construction was self-funded, the tribe had to secure a loan from a private lender to construct the Avi Hotel and Casino with a 5 percent down payment.

4.2.1 Cost of Developing AMPS

The tribe's consultant estimated costs to the tribe for self-power to be \$2.5 to 3 million. This estimate included providing service to the entire reservation over a period of several years. These costs would include the construction of distribution lines from existing substations served by other utilities to the Nevada site and constructing other substations as necessary.

4.2.2 Sources of Funds

A majority of the funds required for the development of AMPS and construction of required distribution equipment was supplied by the tribe from its own cash reserves. Other sources of funds for construction included fees paid by developers to AMPS for the establishment of service within the new subdivision in Arizona. AMPS' profits, if any, from operations will go back into the tribe's general fund. Future capital requirements will be met by general funds disbursement.

4.3 Third Party Involvement in the Development of AMPS

In addition to the tribe and the surrounding utilities, there were other parties involved in the development of AMPS. These included the tribe's consultant and several regulatory agencies at both the state and federal levels.

Early in the planning process the tribe contracted with a utility management consultant to help them determine how to acquire the power needed on the Nevada development site. This same consultant was retained by the tribe to conduct cost-effectiveness analyses throughout the process. Once it decided to establish AMPS, the Tribal Council decided that the best to manage it was the person who knew the most about it: the same consultant. He is currently employed to manage AMPS on a contract basis similar to the arrangement used by the Tohono O'odham Utility Authority on the Tohono O'odham Nation.

4.3.1 State Governments

One of the General Manager's first actions was to send letters to the Public Utility Commissions of Arizona, California, and Nevada informing them of AMPS' intentions and asking them to determine whether or not they would have jurisdiction over AMPS' operations. In all three cases, the Commission responded that as AMPS' remained a tribally-owned and -operated entity operating within the reservation, the state Commissions have no regulatory authority over AMPS' actions. Thus, the roles of ensuring fair rates and protection of the public interest commonly assumed by the Commission were left to the tribe.

4.3.2 Federal Government

Three federal agencies were directly involved in the development of AMPS and continue to have roles to the present. They are the Federal Energy Regulatory Commission, the BIA, and the Western Area Power Administration. In addition to these three agencies, other federal agencies whose

regulation AMPS must follow include OSHA (the Occupational Safety and Health Administration) and the EPA (Environmental Protection Agency).

The Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) has jurisdiction over the sale of resale electricity. This applies to the wheeling of purchased power into the reservation and would also be applicable if the tribe were to resell power produced by the proposed Nordic and PV power plants. AMPS filed copies of its power purchase and wheeling contracts with the FERC and they were approved. AMPS has chosen to use the FERC accounting system and methodologies. This is a standard accounting methodology for electric utilities.

The Bureau of Indian Affairs

With respect to its normal day-to-day operations, the tribe has been trying to assume some of the responsibilities now held by the BIA. These responsibilities have dealt mainly with tribal land and include real estate management, land leases, and land ownership and title oversight. The BIA had no prior involvement in the operation of the electric utility on the reservation.

During the formation of AMPS, the BIA supplied a great deal of technical assistance. The BIA helped AMPS considerably when it gave AMPS a 12-mile section of the abandoned 69 kV transmission line from Davis Dam. Currently, the BIA supplies technical assistance when needed and lobbying efforts on behalf of AMPS.

Western Area Power Administration

The Western Area Power Administration (Western) wheels power to AMPS which gives Western some regulatory jurisdiction over AMPS. This is mostly limited to resource planning such as the requirement of all long-term power customers to submit integrated resource plans (IRP) beginning in 1996.

4.4 Inventorying and Acquiring Equipment from Existing Utilities

The completion of the Master Plan necessitated a complete geographic survey of the reservation, particularly the Nevada portion. To accomplish this task the tribe established its own Geographic Information Systems (GIS) Service Center. The GIS Service Center is currently inventorying the entire electrical system on the reservation including the assets of MEC and Needles. The GIS Service Center is using the system of global positioning satellites to accurately determine the position of poles, substations, roads, rights of way, etc. The tribe is also using an AM/FM (automated mapping/facilities management) system to develop a SCADA (supervisory control and data acquisition) system for AMPS. In addition to its utility uses, the tribe uses its GIS Service Center to map existing tribal land uses so as to supervise the long-term leases the tribe holds on its developed agricultural reservation land.

So far, AMPS has not acquired any existing equipment on the reservation belonging to other utilities. Negotiations and discussions are underway to determine how to continue but it appears that AMPS

will build into the areas now served by MEC as funds become available. This would give the customers in those areas the choice between AMPS and MEC as their electric utility. AMPS is confident that with its lower rates and fact that the areas are tribal villages, most customers would opt to go with AMPS.

4.5 Applications or Legal Documents Filed

The creation and establishment of AMPS as a legal entity required filing several applications and other legal documents with various federal agencies. The majority of the government dealings were with and continue to be with agencies of the federal government. Contact with the states was mostly for the purpose of formally pronouncing what was already understood.

AMPS holds a contract for the purchase of hydroelectric power from Western. Any energy resale and wheeling contracts must be filed with and approved by the FERC. Currently, AMPS is not producing or wheeling any power.

4.6 AMPS Organization

In many respects, the design of AMPS' organization is borrowed from other tribal electric utilities. The Charter, Bylaws, and organization were all inspired by those of the Navajo Tribal Utility Authority and the Tohono O'odham Utility Authority.

4.6.1 Charter and Bylaws

AMPS was incorporated under a Tribal Charter originally authorized by the Tribal Council in July 1991. The Charter enumerates the purpose and power of AMPS, its assets, and the make up of the Board of Directors. The Bylaws enumerate the Board's duties, qualifications, and its general composition and responsibilities. The Bylaws also specifies the duties of the Chairperson, Vice Chairperson, Secretary, and Treasurer of the Board. The Charter and Bylaw were amended in 1992 to provide for a Tribal Council member to sit on the AMPS Board and to provide for alternate members to the Board. (Refer to Appendix A for the Charter of the Aha Macav Power Service, Bylaws of the Aha Macav Power Service, and Aha Macav Power Service Resolution No. 9-21-91-1.)

4.6.2 Board of Directors

The AMPS Board of Directors, as established by the Bylaws, is responsible for managing the business activities of AMPS. The Bylaws state that the Board consist of seven members. The membership of the initial Board was chosen by the Tribal Council. Thereafter, members have been elected by the Board itself for a term of three years with no more than three seats up for re-election in any year. Non-members of the tribe may sit on the Board but no more than three at any one time. The Bylaws were amended to require the tribe to have at least one Tribal Council member sit on the AMPS Board of Directors with the voting powers of regular Board members. The same amendment allowed the Board to have alternate members who would vote in place of missing regular members.

The Bylaws state that to be eligible for election to the Board of Directors, nominees must possess knowledge and experience in one or more of the following areas:

- Financial management;
- Human and natural resources protection and development;
- Corporate management;
- Economic development;
- Law;
- Housing and utilities; and/or
- Health.

Board meetings must be held at least twice a year but special meetings may be called by as few as two Directors. AMPS Board Officers are appointed once a year by the Board. Four directors are needed for a quorum.

The Board of Directors has the power necessary to carry out the purposes of AMPS and controls and manages AMPS' business activities. The general purpose of AMPS is to provide electric power to everyone within the Fort Mojave Indian Reservation and any other utility projects that benefit the tribe. More specifically, the purpose of AMPS is to do everything necessary, proper, advisable, and convenient for the accomplishment of the following:

- To develop, operate, and manage the provision of electric power to all users on the reservation;
- To provide training and employment opportunities for members of the tribe in the construction, management, and operation of the utility;
- To facilitate economic development on the reservation and surrounding communities;
- To enhance and protect the health and welfare of tribal members and customers of AMPS; and,
- To manage electric utility endeavors owned or operated by AMPS in a prudent, efficient, and economic manner in accordance with tribal law.

4.6.3 The Role of the Fort Mojave Tribal Council in the Operation of AMPS

According to the AMPS Charter, the Tribal Council acts as an advisory board to the AMPS Board of Directors. The Tribal Council's purpose is to provide information to and advise the Board regarding political, cultural, and social issues that concern the tribe and its members with regards to the operation of AMPS. Thus, the Tribal Council acts as a form of public utilities commission. Changes in electric rates must be approved by the Tribal Council. Before changes in rates are instituted, the Tribal Council will hear any comments by tribal members. This gives everyone an opportunity to comment on rate changes before a non-partisan third party.

4.6.4 AMPS Management

The management of AMPS consists of a General Manager assisted by an Operations Manager and an Office Manager. Figure 4-1 shows the current organizational structure of AMPS management. The Operations Manager is in charge of the physical operation of AMPS, such as engineering, construction, and purchasing and the staff connected to these activities. The Office Manager also serves as an Administrative Assistant to the General Manager and is in charge of the administrative workings of AMPS, such as customer service, billing , and accounting.

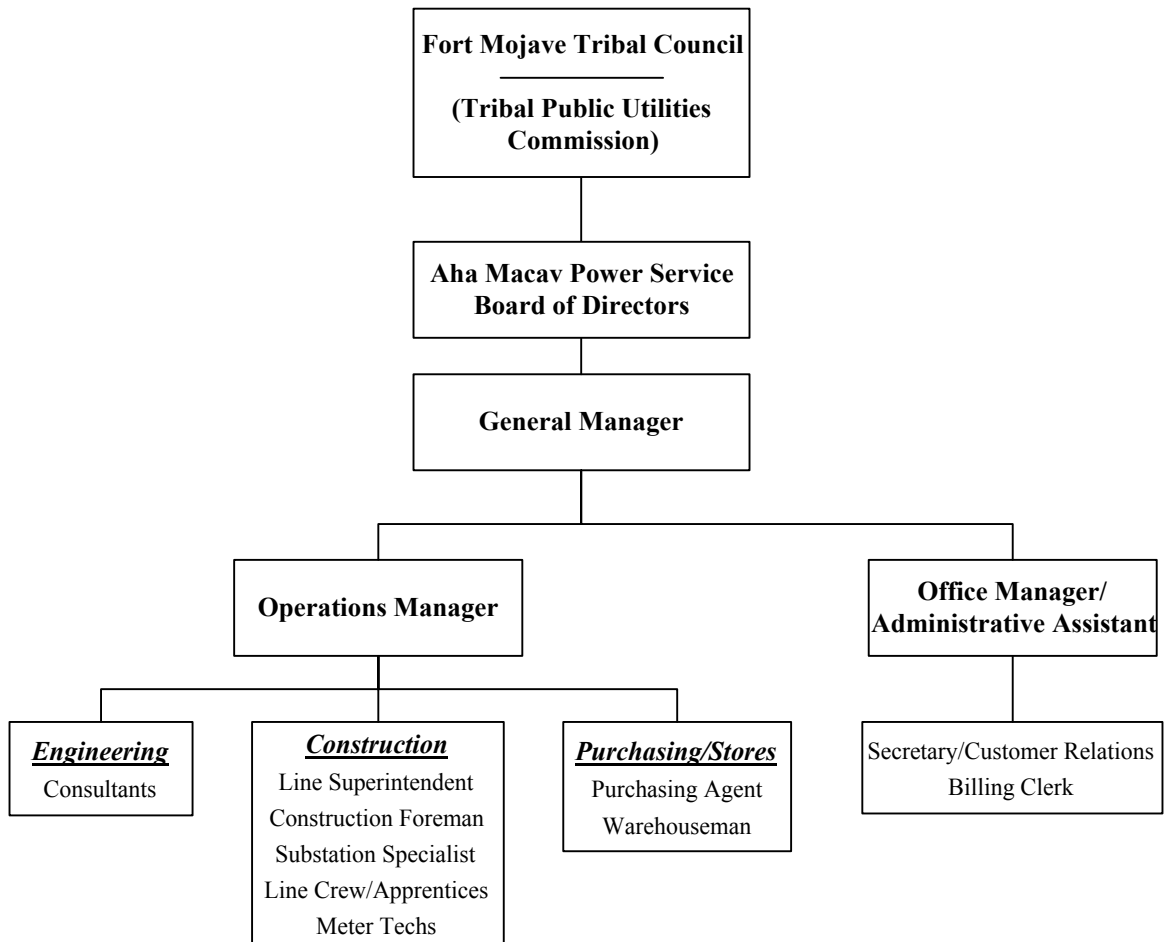


Figure 4-1. Organizational Structure of Aha Macav Power Service

4.7 AMPS' Current Operations

This section describes AMPS' operations including power suppliers, both current and future, operations planning, and personnel characteristics.

4.7.1 Current Power Supply

According to AMPS' management, what will limit AMPS' ability to acquire adequate power supplies for the future is not the lack of power available to purchase, but the lack of transmission capacity to get it to the reservation. AMPS currently purchases its power from the Navajo/Central Arizona Project (Navajo/CAP). To distribute the power throughout the reservation, AMPS has begun acquiring and constructing power lines. At this point in time there is one point of service with plans for two additional points of service in the future.

4.7.1.1 Salt River Project

In 1994 AMPS purchased approximately 8,800 MWh from Navajo/CAP. AMPS' currently has a five year power purchase contract for Navajo/CAP power. The reason AMPS chose to go with a short duration contract was to allow enough time for the management at AMPS to develop five years worth of operating statistics, such as demand and energy sales, before committing to longer term power contracts. Being a new utility, AMPS had no billing or other operating records with which to prudently negotiate a long-term power contract.

4.7.1.2 Western Area Power Administration and Citizens Utilities

Both Western and Citizens Utilities, in turn, wheel AMPS' power from Navajo/CAP to the reservation. AMPS paid Western and Citizens together an average of 1.1¢/kWh for wheeling services. AMPS contractual rate of delivery from Western is 1,970 kW in summer and 1,200 kW in winter. Western takes delivery of the power at McCulloch, AZ and delivers it to Citizens at Hilltop, AZ. Citizens then delivers it to AMPS' Boundary Cone Substation. Citizens is an investor-owned utility serving the City of Kingman and Lake Havasu City in Arizona.

4.7.1.3 Tribally-Owned Transmission Lines

Currently, the tribe owns two transmission lines. The first is the single circuit 69 kV "AMPS" line that interconnects with Citizens Electric starting at the Boundary Cone Substation, the delivery point for Navajo/CAP power. The "AMPS" line runs west from the Boundary Cone Substation for three miles before turning north along the river to the substation in Arizona which serves the Aví Hotel and Casino. The Boundary Cone Substation was built especially to handle the load from the Mesquite Creek development. It will also be the delivery point for energy from the proposed PV power plant.

The tribe's second transmission line is the "Davis/AMPS" line, the 12-mile section of single circuit 69 kV line that runs southwest towards the reservation from the Davis Dam generating station. The previously abandoned line was given to AMPS by the BIA and Bureau of Reclamation. The line terminates three miles outside the reservation. AMPS has plans to connect the reservation to the transmission line in the summer of 1995 via a nine-mile double circuit 69 kV line. This line, the "Colorado River" line, will serve two proposed substations in the Nevada portion of the reservation before crossing the Colorado River to connect with the existing substation across the river from the Aví Hotel and Casino. The "Davis/AMPS" line will become a double circuit when the "Colorado River" line is completed.

Another proposed AMPS transmission line is a 69 kV single circuit line connecting the AMPS transmission line with the tribal village in Needles and the proposed Nordic power plant. The AMPS to Needles segment will be built in 1996 and the Needles to Nordic segment will be built in 1997. The construction of these lines is favored by the City of Needles despite the fact that AMPS will be taking part of its load. This is because the City of Needles will have an additional service point. Historically, the City of Needles has had problems due to undependable power supply. With the new transmission lines, Needles will be able to receive power through AMPS' when its needed and available.

4.7.2 Potential Future Power Supplies

AMPS has two potential sources of future energy located on the reservation: a non-utility generator and a photovoltaic power plant.

4.7.2.1 Proposed Nordic Generating Plant

The Nordic Power Company of Ann Arbor, MI has begun development of the 720 MW Nordic Gas Generator Plant (Nordic) on the reservation. Nordic Power will also operate the combustion gas turbine power plant after its estimated start of operations in June 1997. The environmental impact statement (EIS) for Nordic is currently being drafted. Construction is scheduled to begin in early 1996. AMPS is currently negotiating for energy from Nordic. Initially, AMPS would like to rely on Nordic for backup capacity of approximately 6 MW. In the future, AMPS may need as much as 25 to 30 MW from the plant to meet its forecasted load growth.

4.7.2.2 Proposed Tribal Photovoltaic Power Plant

The BIA is aiding AMPS in the pursuit of funding for the development of a 30 MW fixed plate PV power plant on the reservation. Funding for the proposed power plant is being sought through the provisions of Section 2606 "Tribal Government Energy Assistance Program" (25 U.S.C. 3506) of the Energy Policy Act of 1992. The PV power plant, as proposed by the BIA, would ultimately cover 320 acres adjacent to the Mesquite Creek residential development. The fixed plate panels would be installed in annual increments of 5 MW beginning in 1995 until the total capacity of 30 MW is reached in the year 2000. The project would be located on a one-half section (320 acres) area of the reservation southeast of and adjacent to the Mesquite Creek development. The power generated would be transmitted through the existing Boundary Cone Substation one mile north of the power plant site.

4.7.3 Utility Planning

Much of AMPS' energy use and demand forecasting and power supply planning is currently performed by AMPS with assistance from the BIA. However, as AMPS' management gains more experience, its goal is to take over all of the forecasting and planning. This may occur once AMPS completes its first IRP for Western.

4.7.4 Personnel

The staff of AMPS is still quite small even after four years of existence. Beginning with six persons at its inception in 1991, AMPS currently has eight staff members. Staffing levels will increase with the growth in the number of customers and load brought about by the continuing development of the Master Plan and Mesquite Creek. Like other similar, small utilities, AMPS has a core of highly technical staff supported by non-technical personnel. The highly technical personnel tend to be non-tribal members while the non-technical personnel are tribal members. AMPS' management expects the personnel distribution to change over time as tribal members gain training and experience as these types of opportunities are opened to them.

4.7.4.1 Personnel Skills Required and Source of Trained Personnel at the Start of Operations

The tribe, recognizing that they needed someone familiar with the reservation and the existing electrical system and with experience in the area of utility management, hired its own utility consultant to manage AMPS at the start. The remaining staff were obtained through the tribe, personal contacts, and classified advertisements in professional journals.

4.7.4.2 Existing AMPS Personnel

In general, AMPS has been and continues to be willing to employ non-tribal members to fill the highly technical positions when no tribal members have the necessary qualifications. AMPS advertises its employment openings in relevant professional journals. Positions for non-technical personnel are filled through the tribal government.

At the present time, AMPS has on its staff three apprentice linemen who are tribal members. The program which AMPS' apprentices are a part of is one of several nationally recognized non-union apprenticeship programs. These programs provide training for the participants that will enable them to become journeyman linemen after four years of on-the-job training concurrent with four years of self-study. After completing the four years and passing 41 exams, they are eligible for lineman jobs with any type of electric utility.

4.8 AMPS' Experience With Utility Operations

Overall, the staff and management of AMPS are proud of their accomplishments and would recommend that other tribes follow their lead based on the improvements the transition has brought to the tribe and reservation.

4.8.1 Fort Mojave Indian Tribe's Advantages and Disadvantages of Running Its Own Utility

AMPS and the tribal council have observed several advantages related to operating the utility service. The foremost consideration is that the tribe is realizing direct economic savings as a result of AMPS providing less costly power than alternative sources. The primary provider of power on the reservation, MEC, offers residential and irrigation rates that are 20 and 15 percent higher than AMPS rates, respectively. Although true monetary savings are low at present because there are relatively few AMPS customers, the monetary gain may become substantial as the number of connections grows.

Another advantage for the Fort Mojave Tribe is AMPS' tribal hiring preferences. Tribal members are offered employment opportunities that would not be available if AMPS did not exist. At present there are six tribal AMPS employees and the number of employees should grow as the utility expands to meet increased power demand.

Disadvantages include rates that may change in the future because AMPS does not currently have a long-term power purchase contract. Power contracts with a relatively short duration, such as AMPS' current five-year deal, are more expensive than long-term contracts. While the rates are low now, they may not remain that way. With the high rate of load growth expected due to the development on the Nevada land, AMPS could be in trouble if it is unable to secure sufficient future capacity. The inability to secure sufficient future capacity may delay or halt the Nevada development which could hinder the tribe's progress.

4.8.2 Would the Tribe Do It Again?

Despite the struggles and the red tape encountered along the way, tribal leaders admit they would probably do it again. Tribal unemployment has decreased from 80 percent to 34 percent. There has also been an increase in tribal pride. Although it appears that the decrease in unemployment and the growth in tribal pride are due more to the opening of the Avi Hotel and Casino than the formation of AMPS, there have been marked effects on tribal unemployment and pride from AMPS' operations.

4.8.3 Advice the Fort Mojave Indian Tribe Would Give to Other Tribes Considering Starting Their Own Electric Utility

The tribe has some suggestions for other tribes considering starting their own electric utilities. All are related to finances. All are suggestions based on what the tribe would do differently if they had the chance to do it again. They suggest:

- Take sufficient time to make the transition to tribal operations. However, the management at AMPS does admit that if they had more money to begin with, they could have completed the transition in less time.
- Give sufficient thought to the financial end of the transition. AMPS situation was unique in that most of the financial assistance sought was for the purpose of constructing the Avi Hotel and Casino. But the casino construction loan was not approved until the lender saw evidence of the ability to provide electrical power to the casino site.
- Do not use a significant proportion of the tribe's financial reserves in the transition.

4.9 The Future of AMPS

AMPS faces many challenges in the next decade. The execution of the tribe's ambitious Master Plan will lead to considerable increases in power demand. The rate at which the Master Plan is implemented will be a function of economic cycles, demand for the various elements of the Plan, and the ability of the tribe to meet market requirements related to real estate development. The provision of power will be a central element in the execution of the Master Plan and the power requirements must be carefully forecasted and planned. AMPS will need to acquire additional resources to meet the system demand and energy requirements. The rate at which these acquisitions are made will mark a fine line between the ability of the system to pay for the resources and the rate of development of the Master Plan.

An on-going issue is the resolution of the status of MEC service and property on the Fort Mojave Reservation. MEC has a long history of provision of electrical service to the reservation. AMPS has stated that it intends to buy out the MEC equipment and become the sole provider of electricity service on the reservation. The process by which AMPS and MEC achieve an equitable understanding will be long and uncertain.

Acronyms:

AM/FM..... Automated Mapping/Facilities Management
AMPS Aha Macav Power Service
BIA Bureau of Indian Affairs
FERC Federal Energy Regulatory Commission
GIS Geographic Information System
IRP Integrated Resource Plan
kV KiloVolt
MEC Mohave Electric Cooperative
MW MegaWatt
MWh MegaWatt Hour

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APPENDIX A

**CHARTER OF THE AHA MACAV POWER SERVICE;
BYLAWS OF THE AHA MACAV POWER SERVICE; and
AMENDMENTS TO THE BYLAWS OF THE AHA MACAV POWER SERVICE**

(Retyped from the original document for easier readability)

**CHARTER OF THE
AHA MACAV POWER SERVICES**

ARTICLE I

Name

The Fort Mojave Indian Tribe, acting through the Council of the Fort Mojave Tribe and the Fort Mojave Constitution and Bylaws, hereby authorizes this Charter under Article IV of the Constitution of the Fort Mojave Tribe as amended. The name of this tribally chartered authority is the Aha Macav Power Services (AMPS). The Fort Mojave Tribe confers on AMPS all of the Tribe's rights, privileges and immunities as if it engaged in the activities undertaken by AMPS, including, but not limited to, the Tribe's rights of eminent domain, taxation and sovereign immunity.

ARTICLE II

Duration

The period of existence of AMPS shall be perpetual, except that AMPS may have this charter amended or restated or AMPS may be dissolved in accordance with the Fort Mojave Tribal Constitution, as amended.

ARTICLE III

Purposes and Powers

A. General. The purposes for which AMPS is organized are to provide electric power to all users of such power within the Fort Mojave Indian Reservation and any other utility projects which would benefit the Tribe and that are approved by the Fort Mojave Tribal Council. The Fort Mojave Tribal Council hereby finds and declares that the creation of AMPS is necessary and desirable in order to promote the development of the Tribe's resources, to promote the prudent economic vitality of the Reservation and surrounding communities, to protect the health and welfare of tribal members and to provide employment and training opportunities for tribal members.

B. Enumerated Purposes. The purposes for which AMPS is organized are as follows:

1. To develop, operate and manage the provision of electric powers to all users of electricity within and/or on the Fort Mojave Indian Reservation or owned by AMPS unless the Fort Mojave Tribal Council specifically excludes a specific electricity user from AMPS control.

2. To develop, manage and control all other utilities operated within the Fort Mojave Indian Reservation when so requested by resolution or ordinance of the Fort Mojave Tribal Council.

3. To provide training and employment opportunities for members of the Tribe in the construction, management and operation of providing electric power to the users of electricity within the Fort Mojave Indian Reservation.

4. To facilitate economic development on the Reservation and in surrounding communities.

5. To enhance and protect the health and welfare of tribal members and the electric utility customers of AMPS.

6. To manage all electric utility enterprises owned or operated by AMPS in a prudent, efficient and economic manner in accordance with Tribal law.

C. Ancillary. To do everything necessary, proper, advisable or convenient for the accomplishment of the purposes hereinabove set forth, and do all things incidental thereto or connected therewith, which are not forbidden by law.

D. Enumerated Powers. AMPS shall have the following enumerated powers:

1. To sue and be sued in courts of competent jurisdiction.

2. To enter into contracts and agreements affecting the affairs of AMPS's service area and to accept all funds resulting therefrom.

3. To contract with private persons, associations, or corporations for the provision of any service within or without its boundaries and to accept all funds and obligations resulting therefrom.

4. To borrow money and incur indebtedness and other obligations and evidence the same by certificates, notes or debentures and issue general obligation or revenue bonds, or any combinations thereof.

5. To refund any bonded or other indebtedness or special obligations of AMPS without an election.

6. To acquire, dispose of and encumber real or personal property, including, without limitation, rights and interests in property, including leases and easements necessary to accomplish the purposes of AMPS.

7. To acquire, construct, equip, operate and maintain facilities to accomplish the purposes of AMPS.

8. To manage, control and supervise all the business affairs and properties of AMPS.

9. To adopt, by resolution, rules and regulations consistent with federal, state and tribal law which are necessary, appropriate or incidental to any authorized services provided by AMPS.

10. To delegate the management of the day-to-day operation of AMPS to others, and in exercising its authority hereunder, may rely on its officers and other experts. AMPS shall establish policies and retain responsibility for the ultimate direction and affairs of AMPS but may give usual and essential latitude to AMPS Manager and his delegated employees.

11. To fix and collect taxes, rates, fees, tolls and other service charges pertaining to the services of AMPS, including, without limitation, minimum charges and charges for availability of the facilities or services relating thereto.

12. To construct, establish, and maintain works and facilities; (a) in, across, or along any easement dedicated to a public use, or any public street, road or highway; (b) in, upon, or over any vacant public lands; and (c) in, across, or along any stream or water course.

13. To plan for the development within the service area served by AMPS including, but not limited to, review of all comprehensive plans of tribal government located within AMPS's service area, and review of all capital construction of other federally funded projects proposed by any governmental entity within the boundaries of AMPS's service area for which review is required by federal, state or tribal law.

14. To require all commercial and residential units within the Reservation to connect to the electric service provided that said unit is within AMPS's designated service area.

15. To have and exercise all powers necessary, convenient or incidental to the express powers identified above.

E. Exercise of AMPS's Powers. AMPS shall exercise its authorized powers in good faith and in a manner which it believes to be in the best interests of the Fort Mojave Indian Tribe and the interests of those within AMPS's service area.

F. Interpretation. The purpose specified herein shall be construed as both purposes and powers.

ARTICLE IV

Ownership

To enable AMPS to carry out its purposes, the Fort Mojave Tribal Council may, from time to time at the request of the Board of Directors of AMPS, vest AMPS with the power to exercise all of the Fort Mojave Tribe's powers with respect to designated tribal properties, both, real and personal, in accordance with the purposes and powers under Article III of this Charter. Such properties transferred to AMPS shall not be revocable by the Fort Mojave Tribal Council during the period AMPS is authorized to exercise control and possession of the transferred properties.

ARTICLE VI

Assets

Subject to such contractual rights of others, including the Fort Mojave Tribe, AMPS shall have as its assets, and the authority to acquire, manage, own, use, pledge, encumber, or otherwise dispose of the following:

A. Tribal Property. Tribal properties of a real or personal nature subject to any conditions set out in the Tribal Council's resolution authorizing the transfer of such properties to AMPS.

B. Funds. All funds which AMPS may acquire by grant, gift, loan or other means.

C. Other Real and Personal Property. All interests in real and personal property whether of a tangible or intangible nature, AMPS may acquire by grant, gift, loan, purchase, lease or other means.

D. Other assets. All earnings, interest, dividends, accumulations, contract rights, claims and other proceeds arising from the above listed assets.

ARTICLE VII

Control of Assets

All cash assets shall be deposited, invested, re-invested or paid out pursuant to the contractual obligations of AMPS and in accordance with the standards of prudent business practices so as to ensure the continued existence, integrity and viability of AMPS. Such decisions are reserved exclusively to the Board of Directors of AMPS.

ARTICLE VIII

Asset Distribution/Dissolution

AMPS shall determine in its sole discretion as to when a payment is to be issued and the amount of any such payment. Upon dissolution of AMPS, the remaining assets, after payment of all debts and liabilities, shall be returned to the Tribe. In no event shall the Fort Mojave Tribe be liable for any debts or liabilities of AMPS.

ARTICLE IX

Board of Directors

The Board of Directors of AMPS shall consist of seven (7) members and is hereby vested with all powers necessary to carry out the purposes of AMPS. The initial members shall be selected by the Fort Mojave Tribal Council. There are no prohibitions against the Fort Mojave Tribal Council serving as the Board of Directors. Members of the Board need not be enrolled members of the Fort Mojave Tribe. However, no more than three (3) Board members of AMPS may be non-members of the Fort Mojave Indian Tribe. The Board members' term of office and their qualifications shall be specified in the Bylaws.

ARTICLE X

Registered Office and Registered Agent

The address of AMPS's registered office is Office of the Chairperson of AMPS, Fort Mojave Indian Reservation, 500 Merriman Avenue, Needles, California 92363, and the registered agent at this address is the Chairperson of AMPS.

ARTICLE XI

Advisory Board

The Tribal Council of the Fort Mojave Tribe shall act as the Advisory Board to the Board of Directors of AMPS for the purpose of providing information and advice to the Board regarding political, cultural and social issues that concern the Tribe and its members.

ARTICLE XII

Trustee

AMPS is the trustee of all assets owned or controlled by AMPS on behalf of the Fort Mojave Indian Tribe.

ARTICLE XIII

Litigation

The Fort Mojave Tribe reserves the right to challenge in whatever forum all matters involving AMPS which, in the opinion of the Fort Mojave Tribe, affect its rights, privileges and immunities as a sovereign government. Before initiating or entering an appearance in any such litigation or administrative proceeding, AMPS shall give at least thirty (30) days, or such time as the court rules allow, prior written notice to the Chairperson of the Fort Mojave Tribe.

ARTICLE XIV

Waiver of Immunity

The acts or omissions of AMPS, whether pursuant to the powers enumerated in Article III or otherwise, shall not create any liability, obligation or indebtedness either of the Fort Mojave Indian Tribe or payable out of assets, revenues or income of the Tribe, and only the assets, revenues and income held by or in the name of AMPS shall be subject to, to the extent otherwise permitted herein and by law, to the debts, obligations or other liabilities created or incurred by AMPS. Any waiver of immunity of or by AMPS shall not be construed to waive any immunity of the Fort Mojave Indian Tribe or any other covered persons and entities or extend any liability to any assets, revenues or income of the Fort Mojave Indian Tribe.

RESOLUTION

BE IT RESOLVED, that the foregoing Charter of the Aha Macav Power Service, be and the same is hereby adopted, as amended. Upon adoption of the amended Bylaws of the Aha Macav Power Service by the Board of Directors, two signed duplicate originals shall be delivered to the office of the Tribal Secretary of the Fort Mojave Tribal Council.

BE IT FURTHER RESOLVED, that the Chairperson and the Secretary of the Fort Mojave Tribe are authorized and instructed to sign this resolution for and on behalf of the Fort Mojave Tribal Council.

Certification

We, the undersigned, Chairperson and Secretary of the Fort Mojave Tribal Council, hereby certify that the Fort Mojave Tribal Council met on this day and by a vote of 6 in favor and 0 opposed in a duly called and convened meeting of the Council, adopted the foregoing resolution.

Dated this 13th day of July, 1991.

(signature)
Chairperson
Fort Mojave Tribal Council

ATTEST:

(signature)
Secretary
Fort Mojave Tribal Council

CASE STUDY #2

TOHONO O'ODHAM UTILITY AUTHORITY

CASE STUDY #2:

TOHONO O'ODHAM UTILITY AUTHORITY

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Tohono O'odham Utility Authority Second Restated Plan of Operation

1.0 INTRODUCTION

The Tohono O'odham Nation is one of the few tribes in the U.S. that have taken the initiative to build, own, and operate their own electric utility. This case study describes the process the Tohono O'odham Nation followed to bring its electric utility to operation and continued growth. It is presented to show each of the activities involved in the development process that began over twenty-five years ago.

Prior to starting its own electric utility, the Nation already had electric service provided by an outside utility but only to the larger villages and the water and wastewater systems on the reservation were in poor condition. The Nation decided to try to improve conditions on the reservation by taking control of these systems and operating them to the benefit of the reservation's residents. Thus, the Tohono O'odham Utility Authority was created to operate these three utilities. Since then, telephone service has been added to its operations.

Ownership of a utility is a hurdle that few tribes are able to overcome due to limited financial resources. Few tribes have assets for loan collateral and there is often insufficient cash for startup as well. Even if the financial hurdle is passed, there is the matter of managing the utility. Few Native Americans have electric utility management experience. Those that do, are often under the employment of their own tribe. There is also the lack of technical experience, however there are training programs to address this problem.

This case study will describe the Tohono O'odham Nation, its people, and the development of the Electric Operations Division of the Tohono O'odham Utility Authority. Included in Appendix B for reference purposes is the Tohono O'odham Utility Authority Second Restated Plan of Operation.

2.0 THE TOHONO O'ODHAM NATION

The Tohono O'odham Nation (Nation) occupies a total of 2,855,980 acres in southern Arizona. The Nation consists of three separate reservations upon which the Papago people reside. The three reservations are the Papago (or Sells) Reservation with 2,774,370 acres; the Gila Bend Reservation with 10,409 acres; and the San Xavier Reservation with 71,201 acres.

The Papago Reservation is the main reservation and is the seat of the Nation's government (see Figure 2-1). It stretches from the Mexican border north to within ten miles of the city of Casa Grande, Arizona, and is 90 miles from east to west. The San Xavier Reservation was established near the city of Tucson in 1874. The Gila Bend Reservation was created in 1882 near the town of Gila Bend, Arizona. Through a number of executive and congressional acts over the period of 1911 to 1940, the Papago Reservation was created from a patchwork of Indian lands. Papago tribal members ratified the tribal constitution and bylaws in 1936. In 1991, the three reservations together became known as the Tohono O'odham Nation.

The Nation is divided into eleven political districts: one for Gila Bend and San Xavier and nine for the Papago Reservation. Each district has its own council with no less than five members. Each district also elects two persons to sit on the Tohono O'odham Tribal Council.

Most of the Nation's inhabitants live in one of four population centers: Sells, Chuichu, Santa Rosa, and San Xavier. The remaining inhabitants live in approximately 40 settlements spread across the Nation. Sells is the largest community with a population of approximately 2,750 and is the center of government within the Nation. Sells is also the location of the Bureau of Indian Affairs (BIA) agency and the Indian Health Services (IHS) complex for the Nation.

The terrain within the Nation is Sonoran desert with short but jagged mountain ranges rising up to 1,500 feet above the surrounding flat alluvial plains and valleys. Natural vegetation is typical of Sonoran desert, with ocotillo, mesquite, saguaro cacti, creosote, paloverde, and dry grasses in abundance. Rainfall is sparse with totals ranging from four to twelve inches annually. There are two periods of rain during the year: the winter and summer.

Long ago, the summer rain allowed only undependable small-scale farming. Without any permanent streams or lakes within the Nation, and only widely separated springs, all irrigation water must be supplied by wells. The groundwater supply is abundant enough to allow large-scale farming. Within the Nation, 7,000 acres are irrigated with about 1,200 of these in the San Xavier District. Wells are also the sole source of domestic water for the Nation's water systems.

There is some small business in the Nation, most in a business park in the San Xavier District. Because of the vast size of the Papago Reservation, there is little small business besides the basic businesses serving the inhabitants of the reservation. The only industry within the Nation is a large copper mine in the northern area of the Papago Reservation.

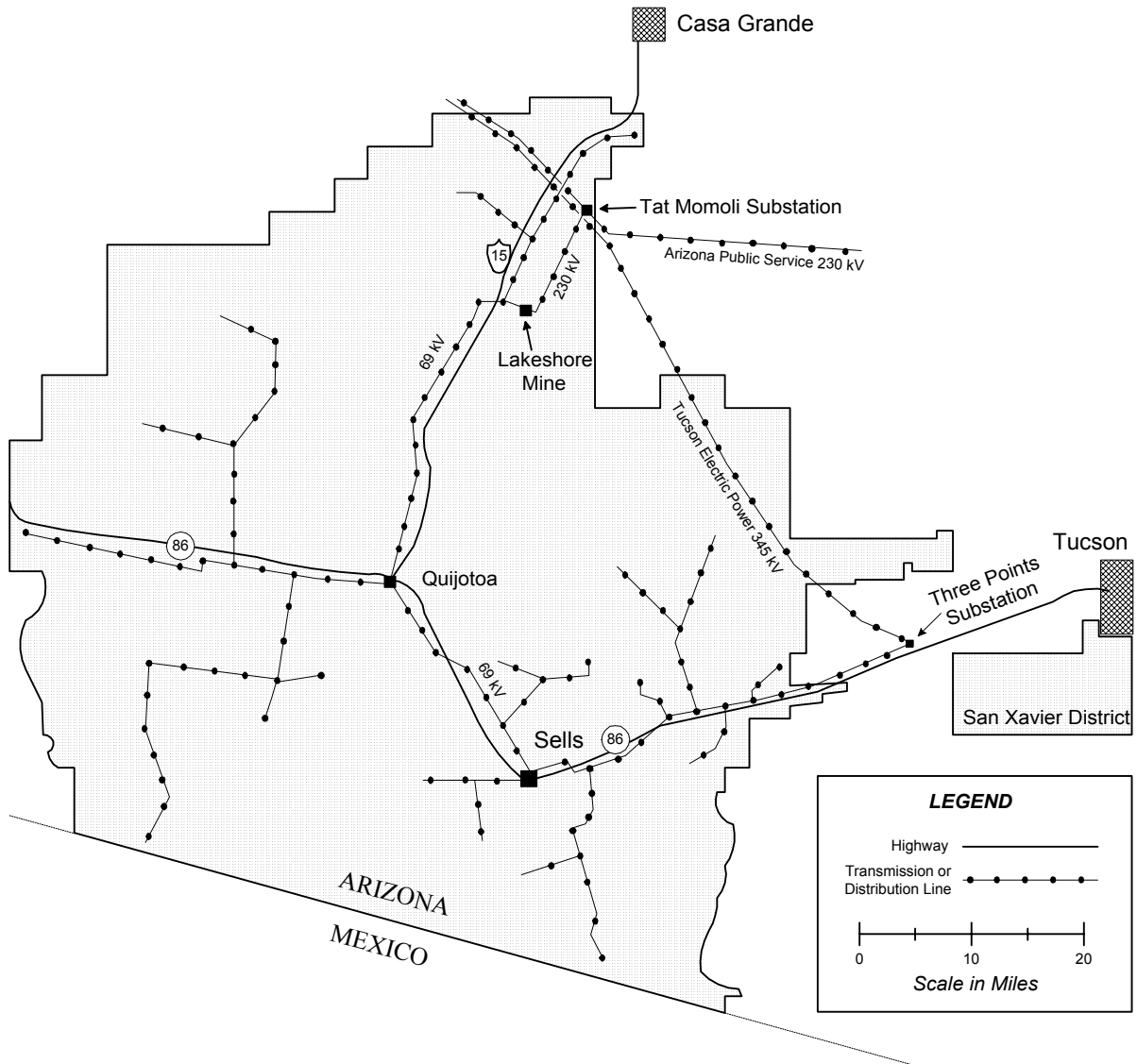


Figure 2-1. Tohono O'odham Nation Service Area of Tohono O'odham Utility Authority

3.0 THE TOHONO O'ODHAM PEOPLE

The name Tohono O'odham means "desert people." The Tohono O'odham are still commonly referred to as Papago. They are found on each of the three reservations that make up the Tohono O'odham Nation. In 1990, a little over half of the approximately 18,000 registered Tohono O'odham Indians lived within the Nation's lands. About 8,400 lived on the Papago Reservation; about 300 on the Gila Bend Reservation; and 1,200 lived on the San Xavier Reservation. These numbers fluctuate as economic conditions and job openings change.

Historically, the Tohono O'odham people practiced some farming but did not rely on it since rainfall could be limited. They did hunt for small game and gathered food as they traveled. Travel was often necessary just to find water. The summer rains allowed them to move from their permanent villages in the hills to the plains where they would farm and collect food. Crops grown included maize, beans, pumpkins, gourds, and cotton.

The remote location and desolate nature of their lands limited contact with Europeans. Before the Gadsden Purchase in 1853, the aboriginal lands of the Tohono O'odham were in Mexico. After the Gadsden Purchase, their lands became part of what is now Arizona and were considered available for non-Indian settlement. The land around natural springs and grazing areas were soon claimed and settled by ranchers. At the time there were no programs to protect the land of the Tohono O'odham. Such programs were not effective until the twentieth century when the pressures from increasing numbers of cattle ranchers and miners made the creation of a reservation a necessity.

Since then, the Tohono O'odham have launched their own cattle operations. At first, the operations were plagued with difficulties due to lack of experience, water, and proper funding. With help, the cattle operations have become a source of income for the Nation. In addition, a copper mine in the northern part of the Nation has provided employment for several hundred tribal members. Because other economic opportunities are scarce on the reservation, some tribal members leave the Nation to find better opportunities. This emigration has dampened overall growth and placed a burden on the public utilities on the reservation as they attempt to pay back loans with static revenues.

4.0 DEVELOPMENT OF TOHONO O'ODHAM UTILITY AUTHORITY

The public utility serving the needs of the residents of the Tohono O'odham Nation began its existence in 1970 as the Papago Tribal Utility Authority. Since then, it has progressed and grown and in 1991 the utility's name was changed to the Tohono O'odham Utility Authority. (For the purposes of this case study, the name Tohono O'odham Utility Authority (TOUA) will be used to refer to the present operation as well as its predecessor the Papago Tribal Utility Authority.)

This section describes the impetus to TOUA's development, the process followed by the Nation's leaders in developing the TOUA, the results of its work, and its views of the pros and cons of tribal utility operation. While TOUA's responsibilities currently include the provision of electric, water, sewer, and telephone service, this case study will concentrate on TOUA's electric system.

4.1 Impetus for the Tohono O'odham Nation's Development of the Tohono O'odham Utility Authority

In the late 1960's the leaders of the Tohono O'odham Nation desired to improve the conditions in which the reservation community lived. The existing electric power system within the Nation was inadequate, the water systems were antiquated, and the sewer systems were virtually nonexistent. The majority of the water and wastewater systems were under the management of the BIA and few residents received electric service. In 1970, with the goal of building an organization that would provide utility services throughout the reservation community, the Tribal Council passed Council Resolution 8-70 which created TOUA (then called the Papago Tribal Utility Authority). Figure 2-1 on page 3 shows the Papago, or main, reservation and the San Xavier District next to Tucson. While this figure does not show the entire Tohono O'odham Nation, it does show the portion of the Nation served by TOUA.

4.1.1 Utility Situation Within the Nation

At the time of TOUA's formation the existing electrical system within the Tohono O'odham Nation was owned and operated by Trico Electric Cooperative (Trico) in Tucson. Trico served only the larger villages on the Papago Reservation leaving approximately 27 villages within the reservation without utility electric service. Trico had little interest in expanding service to remote villages within the reservation because providing service to these far-flung customers would be too expensive due to the great distances between villages and the small number of residents in each village. If those customers on the reservation that wanted electric service were asked to pay for the cost of providing their own service, few could afford it. Also, Trico did not have the infrastructure or desire to provide service to all the residents of the reservation.

The Tribal Council hoped to rectify this situation through the formation of TOUA. It was anticipated that, with proper and adequate funding, TOUA could provide electric service to all the reservation's residents. To do this would be in the best interest of the reservation's residents. It would provide them with a necessary service, it would provide jobs, and it would increase the self-sufficiency of the reservation as a whole.

4.1.2 *Decision to Form a Tribally-Operated Electric Utility*

In the late 1960's, the Tribal Council commissioned several studies on the feasibility of developing a tribally-operated utility. Only one study, by a national consulting firm, was determined to be reliable. This resulted in the decision by the Tribal Council to form the tribally-operated utility.

At its inception in 1970, TOUA operated the electric, water, and wastewater utilities on the reservation. Since then, TOUA has taken over operation of the telephone service as well. None of these systems were under Indian control until TOUA took them over. The goal was simply to provide utility services throughout the reservation to whoever desired them.

4.1.3 *The Beginning of Operations*

At the beginning of operations in 1970, there were two companies interested in developing mineral deposits on the reservation. Hecla Mining Company and Newmont Mining Company both held leases for potentially large copper mines. Both needed large amounts of power, anticipating 50 MW loads from their operations. One of the first actions of the new utility was to attempt to negotiate the purchase of wholesale power for resale to the two mining operations. Arizona Public Service (APS) in Phoenix had the closest transmission lines to the proposed mining sites. TOUA desired to purchase the power from APS then resell it to the mines even though it did not own any transmission lines. The only rights TOUA could claim to be able to do this was the jurisdiction it held on the reservation.

Neither APS nor the two mines were willing to recognize TOUA as a viable and legitimate utility because of management's lack of experience and lack of assets. APS insisted on power purchase guarantees from the two mines before it would recognize TOUA. At this point, Newmont dropped out, deciding not to develop its claim on the reservation.

TOUA realized that it would not be recognized as a viable and legitimate utility unless it had transmission facilities. To meet this objective, TOUA began negotiating for the purchase of Trico's transmission and distribution facilities on the reservation and searching for financing. At the same time, TOUA was negotiating with Tucson Electric Power for transmission rights of way across the reservation. TOUA took a major step toward official recognition when it reached an agreement on price with Trico for its on-reservation system. With this agreement came official recognition from the Rural Electrification Administration (REA).

In 1972, TOUA began electric service to the Hecla mine through a new 230 kV transmission line paid for by Hecla and built by APS. The same year, TOUA completed its first resource plan and submitted a loan application to REA for the purchase of the Trico system. Two-and-a-half years later, REA funded the loan and TOUA was able to purchase the Trico system. From there, TOUA has expanded service to the 27 villages without power and to anyone else within the Nation who wants power.

4.2 *Funding the Development of TOUA*

In its first ten years of existence, TOUA borrowed over \$3.8 million from the REA and \$100,000 from the Tohono O'odham Tribal Council. The funds borrowed from the REA were for the sole purpose of expanding and improving the existing electrical system on the reservation. The funds provided by the Council were for start up and general operating expenses.

Upon its creation, TOUA was given a \$75,000 appropriation from the Tribal Council in 1970. The Nation was unable to provide additional funding for TOUA to purchase any assets. As a result, TOUA had no offices, no cash, no credit rating, and no assets with which to secure loans or other funding. This hindered TOUA's ability to acquire loans during its first few years of existence.

In 1972 REA officially recognized TOUA after it successfully negotiated the purchase of Trico's on-reservation system. With this recognition, TOUA was able to apply for an REA loan in 1973. TOUA sought \$1.15 million to acquire Trico's facilities and \$1.32 million to construct the "backbone" 69 kV transmission line, related substations, and village extensions. Initial approval of the loan by the REA came in 1974. However, final approval was withheld after the REA determined that it could not hold a mortgage on tribal land. This dilemma was not overcome until 1975 when TOUA guaranteed its future electric revenues as loan collateral.

In the meantime, TOUA was again running out of money. The continued delay of the loan approval by the REA put the utility in danger of collapse. To stay solvent, TOUA asked for and received a \$25,000 loan from the Tribal Council.

In March 1975, two years after TOUA's initial application for loan, the REA approved the loan for the full amount. Four months later, TOUA took possession of Trico's on-reservation facilities. The remaining money went towards the construction of the backbone transmission line. In 1976, it became evident to TOUA that the initial REA loan would not be sufficient to cover the costs of completing the backbone transmission line. Consequently, \$834,000 in additional funds from REA were applied for and received in 1977. With these funds, TOUA was able to complete the transmission line construction. Another REA loan in 1979, this time for \$503,000, paid for the installation of new feeder lines and protective equipment to allow TOUA to expand service to more villages.

TOUA no longer qualifies for 100 percent REA loans. The REA reserves 100 percent funding loans for cooperatives operating under conditions of extreme hardship such as having electric rates that are 20 to 25 percent higher than neighboring utilities. Currently, TOUA can borrow 70 percent from the REA. Therefore, it has to look elsewhere for supplemental funds. Another source of funding for TOUA has been the National Rural Utilities Cooperative Finance Corporation (CFC). The CFC was formed by the National Rural Electric Cooperative Association (NRECA) in 1969 to provide a source of needed additional funding for the rural electrification program. The CFC is the primary source of private market financing to the program and supplements financing provided by the REA.

4.3 Third Party Involvement

There have been several other parties involved in the development of TOUA. These have included consultants performing feasibility studies, contractors constructing transmission lines and substations, and several government agencies with various duties. Due to the nature of the reservation system and the concept of a reservation being recognized as a sovereign nation, state regulatory agencies have no jurisdiction in the operation of utilities operating within a reservation. However, some federal regulation does apply to TOUA. Other federal government entities involved with TOUA include the Federal Energy Regulatory Commission, the Bureau of Indian Affairs, the Rural Electrification Administration, and the Western Area Power Administration.

4.3.1 Consultants

In the late 1960's and early 1970's, before the Nation formed TOUA, several consultants were called upon to study the feasibility of tribal operation of the reservation's utilities. Since the Nation was interested in the operation of all the existing utilities (water and wastewater in addition to electricity), the commissioned reports all dealt with the multiple utility perspective of tribal operation. Only one of the studies proved to be reliable and useful to the tribe in the long-run. However, even this study was not sufficient for the REA when TOUA applied for loans. For the REA loan application, the TOUA had to complete and submit its own feasibility study.

4.3.2 Contractors

Since its inception, TOUA has used construction contractors numerous times for transmission and distribution system work. Contractor-performed projects have included the construction of the 42-mile backbone 69 kV transmission line from the Lakeshore Mine to the Sells Substation, the reconductor of the Sells feeder, and distribution line construction on the San Xavier District.

4.3.3 State Governments

It is unknown if there was any formal declaration by the State of Arizona regarding the regulatory relationship between it and the Tohono O'odham Nation. It is well known and widely recognized that Indian Tribes conducting business wholly within their reservations are not subject to state regulation. This includes TOUA and its operations. Thus, the state has no jurisdiction in TOUA's operation. The functions usually performed by the state, such as approval of rate increases, are performed by the Board of Directors. TOUA's Plan of Operations has a provision whereby any disputes over rate increases may be settled by a review panel consisting of an independent party hired by the tribe.

4.3.4 Federal Government

Three federal agencies were directly involved in the development of TOUA: 1) the Federal Energy Regulatory Commission, 2) the Bureau of Indian Affairs, and 3) the Rural Electrification Administration. All three agencies also have roles in the continuing operation of TOUA as does the Western Area Power Administration. TOUA is also subject to OSHA (the Occupational Safety and Health Administration) and EPA (Environmental Protection Agency) regulations.

The Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) has jurisdiction over the resale of electricity. This applies to the wheeling of purchased power into the reservation. TOUA files its power purchase contracts with the FERC for approval. TOUA also complies with FERC accounting systems and methodologies.

The Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) was not directly involved in electric utility operations on the Tohono O'odham Reservation. The only requirement from the BIA was that TOUA's Plan of Operation was submitted to the Secretary of the Interior when TOUA was formed. The BIA was involved mostly in developing the water and wastewater facilities on the reservation in conjunction with Indian Health Services.

Rural Electrification Administration

The REA has been TOUA's greatest source of funding. The REA officially recognized TOUA when Trico and TOUA agreed on a price for Trico's on-reservation system. With TOUA's recognition came the ability to borrow money from the REA. The REA's initial \$2.5 million loan was TOUA's only source of funds for development and expansion of the electric system on the reservation. To date, TOUA has borrowed approximately \$7 million from the REA.

Western Area Power Administration

The Western Area Power Administration (Western) markets and transmits power from 54 federal hydroelectric power plants and markets the federal government's 547 MW entitlement from the Navajo Generating Station in northern Arizona. TOUA purchases wholesale power from Western (See Section 4.7.1.1 for additional information) which gives Western some regulatory control over TOUA. All of Western's long-term firm power service customers, including TOUA, will be required to submit integrated resource plans (IRP) in the future. Customers that fail to submit IRPs may lose a portion of their power allotment or be subjected to rate surcharges.

4.4 Acquiring Electric System from Trico Electric Cooperative

TOUA realized early that they would have difficulty being recognized as a legitimate utility without transmission facilities. The only existing transmission facilities on the reservation were owned and operated by Trico Electric Cooperative. In 1971, TOUA first approached Trico about purchasing its facilities. In 1972, after difficult negotiations, TOUA and Trico reached an agreement on the purchase price. Later that same year frictions arose due to Trico's unwillingness to build service extensions and to adequately maintain the facilities to be sold. Finally, TOUA acquired the on-reservation facilities by assuming Trico's note on the equipment in 1975.

By the end of 1995, TOUA will have acquired Trico's remaining service territory on the San Xavier District. This will give TOUA ownership and control of the entire electric system on the Tohono O'odham Nation.

4.5 Applications or Legal Documents Filed

The creation and establishment of TOUA as a legal entity required filing several applications and other legal documents with various federal agencies. The majority of the government dealings were with and continue to be with agencies of the federal government.

TOUA has filed power purchase contracts for approval by FERC. TOUA's first Plan of Operations was approved by the Secretary of the Interior. Subsequent Plans of Operations have been filed with the Department of the Interior through the BIA but TOUA management is unclear as to whether future revisions of the Plan of Operations must be approved by the Secretary of the Interior or by the Secretary of Energy.

4.6 TOUA Organization

TOUA's Plan of Operation and organizational structure are modelled closely upon those of the Navajo Tribal Utility Authority (NTUA). The NTUA has long been a model for tribal utility operation because it is recognized as being the first tribally-operated utility system in the country as well as the largest.

4.6.1 Plan of Operation

TOUA's Plan of Operation was created before the Tribal Council even created TOUA. Upon creating TOUA, the Tribal Council appointed the first Management Board and presented its members with the Plan of Operation and \$75,000 to get started. The Plan enumerates TOUA's purpose and organization; purpose, duties, and powers of the Management Board as a whole; the qualifications necessary to serve on the Board; and the powers and duties of individual Board members. (Refer to Appendix B for the Tohono O'odham Utility Authority Second Restated Plan of Operation.)

4.6.2 TOUA Directors

The TOUA Plan of Operation specifies that operation and management of TOUA be the responsibility of the Management Board. The Plan of Operation also designates an Executive Committee that consists of members of the Management Board. The Executive Committee may act in the place of the Management Board in the interval between meetings of the Board.

4.6.2.1 TOUA Management Board

The TOUA Plan of Operation states that a Management Board comparable to a Board of Directors will have control of and operate the utility. The TOUA Management Board (Board) is authorized to direct the operations to fulfill the purpose of TOUA as stated in the Plan of Operation. This includes setting rates. If there are disputes regarding rates, the Board sets up a review panel to hear grievances.

Members of the Board are called Directors and serve terms of three years. The Board consists of seven Directors, all of whom are appointed by the Chairman of the Tohono O'odham Nation and approved of by the Council as a whole. No employee of the BIA or member of the Tribal Council

may be a Director. Three of the Directors must be tribal members who have sufficient education and experience to qualify them for learning the utility business and the operation of the utility. Four Directors must be persons who have at least ten years of business management experience. Of these four Directors, three must have had such experience in the utility industry. The tribe hopes that one day, all the Directors will be tribal members.

Meetings are held at least quarterly with an annual meeting in July. Special meetings may be called by the Chairman, or Secretary, or any three Directors. To avoid holding meetings in the absence of tribal members, a quorum is designated as five Directors.

4.6.2.2 TOUA Executive Committee

Also designated by the Plan of Operation is the Executive Committee. However, its exact purpose is not spelled out. The Management Board may appoint four Directors to serve as the Executive Committee, two of which must be tribal members. The Board may also increase the size of the Executive Committee at any time. The Chairman of the Executive Committee may also be the Chairman of the Board and is elected by the Board from among the members of the Executive Committee. Three Executive Committee members constitutes a quorum.

4.6.2.3 Principal Officers of the Management Board and Executive Committee

Both bodies, the Management Board and Executive Committee, have the following principal officers: Chairman, Secretary, and Treasurer. The Chairman may hold the same office in both bodies. Neither the Secretary nor the Treasurer needs to be a member of either body. The General Manager is a principal officer of TOUA but is not a member of the Board.

If the Board wishes, there may also be a Vice-Chairman, Assistant Secretary, and Assistant Treasurer. Each officer's term of office is one year beginning at the Board's annual meeting. The Chairman of the Board is required to make a formal report to the Chairman of the Tohono O'odham Nation and the Tohono O'odham Council annually.

4.6.3 The Role of the Tohono O'odham Tribal Council in the Operation of TOUA

Besides appointing the Directors to the Management Board, the Tribal Council has no explicit role in the operation of TOUA. In fact, the TOUA Plan of Operations prohibits members of the Tohono O'odham Council from being members of the TOUA Management Board. This is in contrast to the Fort Mojave Tribal Council which acts as an advisory board to the Aha Macav Power Service Board of Directors and attempts to have at least one Council member sit on the Board of Directors.

4.6.4 Management

The management of TOUA consists of a General Manager and an Operations Manager for each of the four utilities: electricity, water, wastewater, and telephone. While each of the Operations Managers is in charge of the day-to-day operations of their utility the General Manager is in charge of all four utilities. Table 4-1 illustrates the current organizational structure of TOUA's management.

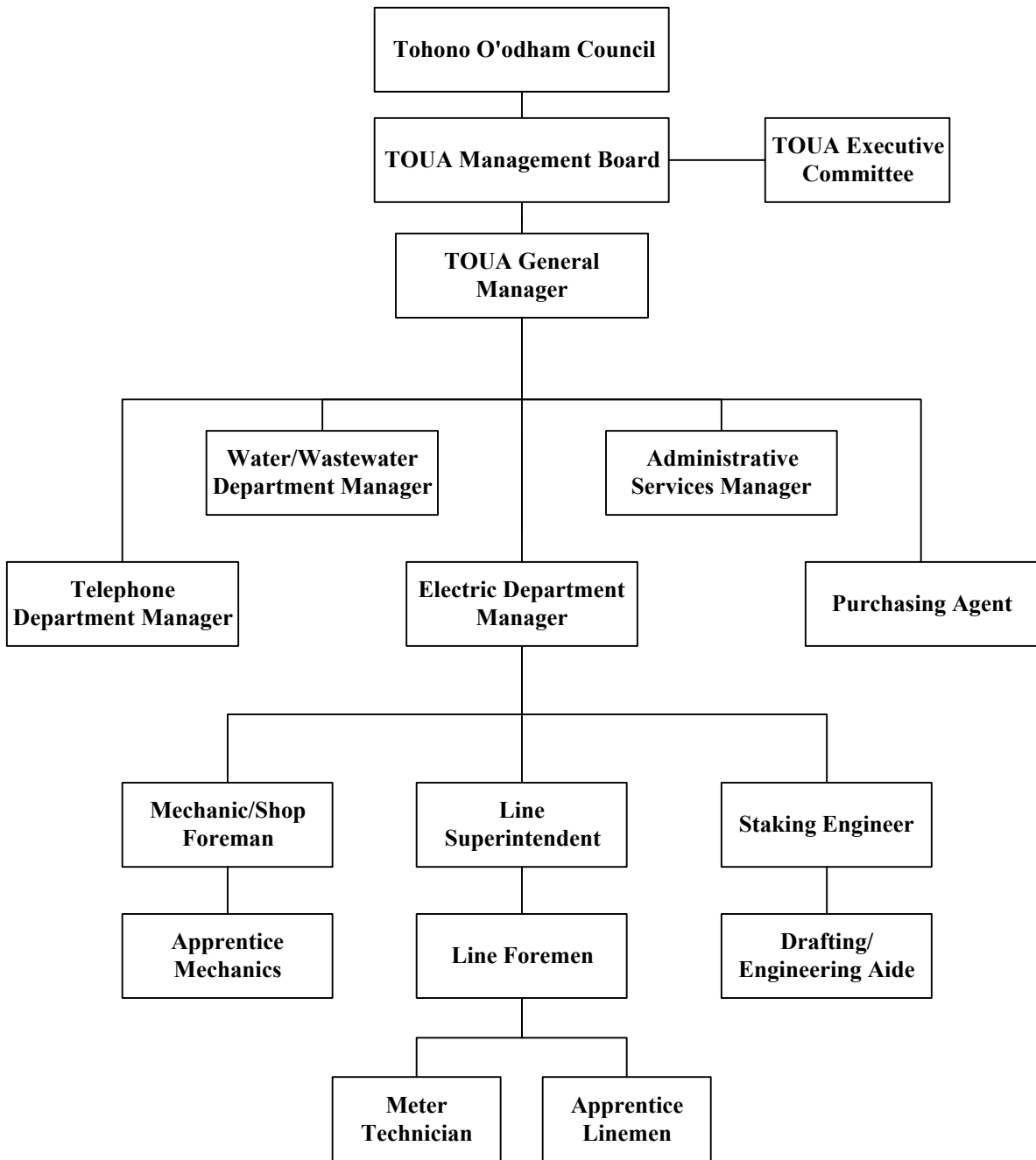


Table 4-1. Organizational Structure of Tohono O'odham Utility Authority and Electric Department

The General Manager of TOUA is appointed by and reports to the Board as the principal operating executive. The General Manager is employed under contract. The Plan of Operation states that the General Manager cannot be a member of the Management Board. Long-term operations of the electrical system are directed by the General Manager. These operations include securing power supplies, forecasting and planning, and personnel issues.

4.7 TOUA Electric Operations

Day-to-day operations of the TOUA electrical system are managed by the Manager of Electric Operations who has a staff of approximately ten. He is assisted in his work by TOUA's new SCADA (Supervisory Control and Data Acquisition) System. So far, TOUA has data acquisition capabilities but not supervisory control capabilities. This allows TOUA to see real-time and historical energy use and demand characteristics of each of its substations.

4.7.1 Power Supplies

The electrical systems on the Papago and San Xavier reservations are not physically connected and have different suppliers. As of mid-1995, TOUA purchased power from four suppliers: Western, Trico, Arizona Power Authority, and APS. By the end of 1995, TOUA will end power purchases from Trico and add Tucson Electric Power as a supplier.

4.7.1.1 Western Area Power Administration

TOUA began purchasing power from Western in 1987. Western's rates are significantly lower than TOUA's other suppliers. In 1994, TOUA purchased 13,941 MWh of electricity from Western at a total cost of \$152,517 or an average cost of 1.1¢/kWh. TOUA's contractual rate of delivery is 2,887 kW in Summer and 2,353 in Winter. Power from Western is delivered through APS to TOUA's Tat Momoli Substation in the northern region of the Nation.

4.7.1.2 Trico Electric Cooperative

Currently, half of the San Xavier Reservation is served by TOUA with power purchased from Trico. The winter and summer peak loads on the San Xavier District are 1,200 and 500 kW, respectively. The unusual winter peak is due to the large number of customers using electricity for heating. Conversely, the summer cooling load is low due to the use of evaporative coolers rather than air conditioning. In 1994, TOUA purchased 2,017 MWh from Trico at an average cost of 10.4¢/kWh. This cost includes wheeling charges for power purchased by TOUA from Arizona Power Authority (APA). TOUA will serve the remainder of the San Xavier Reservation once it purchases Trico's remaining system there by the end of 1995. When this happens, Trico will cease to be a supplier for TOUA.

The current load on TOUA's system within the San Xavier Reservation is mostly electric residential heating. When TOUA takes over Trico's system on the reservation, the load will level out since the Trico service area is more commercial in nature.

4.7.1.3 Arizona Power Authority

Arizona Power Authority is a wholesale utility providing Hoover Dam power to TOUA through Trico. In 1994, TOUA purchased 1,304 MWh from APA at an average cost of 3.44¢/kWh.

4.7.1.4 Arizona Public Service

Arizona Public Service became TOUA's first power supplier in 1972 when TOUA began selling power purchased from APS to the Hecla Mine. Today, APS remains TOUA's largest power supplier. TOUA currently contracts for approximately 7.5 MW of capacity from APS. In 1994, TOUA purchased 73,268 MWh at an average cost of 7.64¢/kWh. TOUA recently renegotiated its contract with APS and will be receiving a refund from APS. By mid-1995, TOUA's average cost of power from APS was 5.1¢/kWh. APS's point of delivery for power to TOUA is the Tat Momoli Substation.

4.7.1.5 Tucson Electric Power

TEP will replace Trico as a power supplier to TOUA by the end of 1995. Power purchases from TEP will cover those loads that are currently supplied by Trico on the east side of the San Xavier District near the Tucson Airport. As of mid-1995 no details of the contractual rate of delivery or price were available.

4.7.1.6 Self Generation

In the late 1970's and early 1980's, TOUA produced some of its own power through a small experimental photovoltaic (PV) system in the village of Schuchuli (Gunsight). Schuchuli is at the western edge of the reservation nearly 40 miles from TOUA's backbone transmission line. This 12-volt, 3.5 kW PV system was designed by TOUA in 1978 and built to REA specifications and financed by Indian Health Services (IHS) and NASA. It was the first PV system in the world to power an entire village. The system powered water pumps, lights, refrigerators, and sewing and washing machines for the village's 95 residents until the early 1980's when Schuchuli was connected with the grid.

Since that time, TOUA has had no interest in getting back into self-generation. Several developers have approached TOUA proposing closed system waste-to-energy plants that would be built within the Nation but the Tribal Council has not been interested.

4.7.2 Electric Utility Planning

At various times, TOUA has prepared both short- (2-year) and long-range (10-year) action plans. Early on, these plans were prepared by consulting engineers. Now TOUA has the resources to develop these plans itself. TOUA has also prepared long-range financial forecasts, which were especially important for securing REA loans.

Unlike Aha Macav Power Service on the Fort Mojave Reservation, TOUA does not currently have a geographic information system (GIS). Therefore, TOUA contracts out to an engineering firm to assist with circuit diagrams and design. Due to the benefits of GIS and the fact that TOUA operates four separate utilities, TOUA is considering purchasing a GIS system.

Since 30 to 35 percent of TOUA's non-mine load is due to federal government projects (i.e., Housing and Urban Development housing developments and IHS clinics), government spending dictates the level of growth. There is very little private capital within the Nation. The only recent government spending has been Housing and Urban Development (HUD) projects but there have been no new grants recently. The long-term growth rate for TOUA's power sales is estimated to be 5 percent.

However, due to spending cuts, growth each of the last two years was 3 percent. Two new HUD projects will begin construction in late 1995, but they are the only known federal development within the Nation for the next couple of years.

4.7.3 Personnel

The staff at TOUA is complex since it manages the operation of four separate utilities: electricity, water, wastewater, and telephone. The General Manager oversees the operation of the four utilities with the assistance of an Operations Manager for each utility. A single administrative staff supports all four utilities.

4.7.3.1 Personnel Skills Required and Source of Trained Personnel at the Start of Operations

TOUA's had two basic personnel requirements when starting operations: 1) people with experience in managing and operating an electric utility, particularly a rural electric cooperative, and 2) people who were interested in starting up a new utility. There were no tribal members experienced in utility operation so TOUA had to look for experienced workers off the reservation. The city nearest the reservation is Tucson which is an hour from Sells, the location of TOUA's headquarters. In addition, the new utility could offer no benefits to its employees. Thus, TOUA had a difficult time finding experienced people who were interested in a one hour commute each way and no benefits.

TOUA's first General Manager was hired in 1972. He had several years experience in successfully managing electric utilities, especially those requiring REA financing. The General Manager's experience combined with the support of a progressive Tribal Chairman created a rich environment for growth and expansion for TOUA.

4.7.3.2 Existing TOUA Personnel

TOUA has found it necessary to hire non-tribal members to fill the highly technical positions such as General Manager and the Department Managers since no tribal members are presently qualified. TOUA located qualified personnel by placing advertisements in trade journals and national publications. This strategy was successful at the beginning of operations and continues to be today because of TOUA's unique situation and needs.

Additionally, TOUA operates an apprentice lineman program. Two apprentices are supervised by three journeymen. Both the apprentices are tribal members. There are several recognized apprenticeship programs for linemen. Some programs are affiliated with electricians unions. The program which TOUA's apprentices are a part of is one of several nationally recognized non-union apprenticeship programs. These programs provide training for the participants that will enable them to become journeyman linemen in four years. At that point, they can get jobs with any type of electric utility.

4.8 TOUA's Experience With Utility Operations

Overall, the staff and management of TOUA is proud of their accomplishments and would recommend that other tribes follow their lead based on the improvements the transition has brought to the Tohono O'odham Nation.

4.8.1 Tohono O'odham Nation's Advantages and Disadvantages of Running Its Own Utility

The management at TOUA is most proud of providing training and employment for tribal members, being able to secure the best employees whether they are tribal members or not, and having an excellent service record which has earned TOUA the respect and support of its customers. TOUA provides employment for approximately 25 people, about 15 of which are tribal members. TOUA's excellent service record was proven in 1994 when a tornado knocked down six power poles carrying power to the water pumps for the town of Sells late one evening. TOUA's crews responded so quickly that by dawn the next morning, all but one pole had been replaced. Having the electric utility owned and operated by the Tohono O'odham Nation ensures that TOUA is operated in the best interest of the tribe. For example, since electric operations began in 1975, TOUA has raised its rates only twice.

On the negative side, TOUA would like the tribe to be less dependent upon the federal government for economic growth. With such a large reservation and few natural resources besides scattered mineral deposits, there aren't many opportunities for economic development apart from the enterprises typically associated with reservations: casinos and waste processing.

4.8.2 Would the Nation Do It Again?

The management of TOUA, including one of the founding managers of the utility, agreed that they would do it again if given the opportunity. They felt TOUA's customers would agree. Service has been provided to almost everyone and it has been improved as well.

4.8.3 Advice the Tohono O'odham Nation Would Give to Other Tribes Considering Starting Its Own Electric Utility

The management of TOUA had these suggestions for a tribe setting up its own utility:

- Set up a genuine Board of Directors with members who have outside experience in utility operation and/or business. This is reflected in the requirements for candidates to the Management Board that are stated in TOUA's Plan of Operations.
- Stay out of tribal politics. TOUA does not allow Tribal Council members or BIA employees on the Management Board. This serves to separate the political end of tribal operations from the service end as provided by TOUA.
- Don't run the utility like a typical tribal business — don't play favorites with customers. This suggestion is closely related to the previous suggestion to stay out of tribal politics. TOUA has even shut off service to Management Board members who haven't paid their bills. This instills the trust of the tribal membership as a whole.

4.9 The Future of TOUA

TOUA is a mature utility. It was one of the first tribally-owned and -operated electric utilities in the nation. Its phase of rapid growth due to the rush to provide service to all customers is over. Now growth must come as a result of new customers rather than existing customers who never had electricity. Until recently, growth of energy consumption on the Tohono O'odham Nation had been 5 percent annually. For the last two years, growth has been only 3 percent per year. With the purchase of Trico's remaining service area in the San Xavier District, 400 mobile homes will be added to the load. Other than that, the only known development within the two reservations are developments for more housing by HUD. Besides providing service to the HUD developments, TOUA has no plans for additional construction on its electrical system. The Hecla Mine is not operating at capacity because of a change in the method of extraction from block caving to open pit mining. This will continue for another couple of years until the copper ore is reached. Then ore processing will begin and the mine's load should return to normal levels.

TOUA will survive even with a low load growth rate. After 25 years, the tribe and the management of TOUA have learned how to handle almost any situation. It is an excellent example of how a tribe can benefit itself and its members by taking control of its resources.

Acronyms:

AM/FM..... Automated Mapping/Facilities Management
BIA Bureau of Indian Affairs
FERC Federal Energy Regulatory Commission
GIS Geographic Information System
GM General Manager
kV KiloVolt
MW..... MegaWatt
SCADA Supervisory Control and Data Acquisition
TOUA..... Tohono O'odham Utility Authority

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APPENDIX B

**TOHONO O'ODHAM UTILITY AUTHORITY
SECOND RESTATED PLAN OF OPERATION**

(Retyped from the original document for easier readability)

TOHONO O'ODHAM UTILITY AUTHORITY
SECOND RESTATED PLAN OF OPERATION

Section 1: **Name, Location and Place of Business**

- A. Name.** The name of the Authority shall be Tohono O'odham Utility Authority, formerly known as Papago Tribal Utility Authority.
- B. Location.** The principal place of business and the office of the Authority shall be at Sells, Arizona, and the post office address of the principal office is P.O. Box 816, Sells, Arizona 85634.
- C. Place of business.** The Authority may also have offices at such other places as the Management Board may from time to time authorize.

Section 2: **Seal**

The seal of the Authority is described as follows:

Seal shall be in the form of a circle and shall bear the full name, "TOHONO O'ODHAM UTILITY AUTHORITY" and the word "ARIZONA" and the figure "1970."

Section 3: **Duration**

The duration of the Authority is perpetual.

Section 4: **Purposes**

- A. General.** The purposes for which the Authority is organized are as follows:
1. To plan for, provide and furnish utility services to all areas within the Tohono O'odham Nation, where such services are determined to be feasible and economic.
 2. To promote the use of utility services where available in order to improve the health and welfare of the residents of the Tohono O'odham Nation.
 3. To acquire, construct, operate, maintain, promote and expand utility systems furnishing electric, gas, water, sewer and telephone services within the Tohono O'odham Nation.
 4. To initiate, acquire, operate, maintain, provide and provide, alone or in conjunction with others, cellular radio services and facilities both within and beyond the boundaries of the Tohono O'odham Nation.

5. To provide utility service to the Tohono O'odham at the lowest possible cost consistent with prudent fiscal responsibility
6. To use the revenues of the Authority for the following purposes, which are listed below in the order of the priority of use:
 - a. To pay the costs of operations and maintenance.
 - b. To amortize the loans of the Authority.
 - c. To fund an adequate Renewal and Replacement fund.
 - d. To educate the Tohono O'odham in the proper, efficient and economical use of all utilities.
 - e. To accelerate the retirement of long term debt.
 - f. To provide a fair return to the Nation on its investment.

B. Ancillary. To do everything necessary, proper, advisable, or convenient for the accomplishment of the purposes herein above set forth, and to do all things incidental thereto or connected therewith, which are not forbidden by law, this Plan of Operation for the Authority or the Constitution of the Tohono O'odham Nation.

Section 5: Easement Franchises and Grants of Use

A. Easement Franchises. The authority shall have, and is hereby granted, subject to any prior valid existing right or adverse claim, the franchise, right, permit, easement and privilege of placing, erecting, constructing, repairing, removing, replacing, maintaining, using and operating public utility systems, lines and facilities for the furnishing of electric, gas, water, sewer, telephone and cellular radio services, and necessary or useful adjuncts thereto, whether laid thereon or therein, together with the right of ingress and egress when necessary for such purposes, on, over, under and across unallotted lands of the Tohono O'odham Nation which are useful or convenient for the construction, maintenance, operation and repair of such utility systems, lines or facilities, provided, that in placing, erecting or constructing any new lines or facilities the Authority shall comply (a) with all applicable federal laws and the laws of the Tohono O'odham Nation and (b) with the provisions of any applicable land use plan adopted by a District Council which was duly approved by the Tohono O'odham Council and, provided further, that before placing, erecting or constructing any new transmission or distribution lines or facilities (excluding service lines as defined in 25 C.F.R. § 169.22) on, over, under or across unallotted lands of the Nation, the Authority shall first obtain (a) the prior review and approval of the Tohono O'odham Legislative council and (b) the prior written consent of the District Council of the District in which such lands are located, which consent shall not be unreasonably withheld. The Authority shall furnish to be Superintendent of the Sells Indian Agency copies of plats or maps delineating the utility systems, lines and facilities located on, over, under and across such lands in sufficient detail and number to permit recording in the Southwest Title Plant of the Bureau of Indian Affairs, Albuquerque, New Mexico.

- B. Grant of Easement Use.** The Authority shall have, and is hereby granted, subject to all applicable federal laws and the laws of the Tohono O'odham Nation, as the agent or permittee of the Tohono O'odham Nation, the right to use any franchise, right, permit, privilege, easement or right of way standing in the name of or granted to the Nation in connection with the construction, maintenance, operation or repair of public utility systems, lines or facilities furnishing electric, gas, water, sewer, telephone or cellular radio services.

Section 6: Control of Operations

It is intended that control and operation of the Authority shall be patterned as closely as is feasible on the lines of a chartered public service corporation of similar magnitude with a Management Board comparable to a Board of Directors of such a corporation.

Section 7: Management Board; Purpose; Duties and Powers

- A. Direction of purpose and exercise of powers by Management Board.** Subject to applicable laws and regulations of the Tohono O'odham Nation or the United States, the Management Board shall direct the purposes and exercise the following powers and duties:
1. The Management Board of the Authority is delegated authority and responsibility for the management and operation of the Authority.
 2. The Management Board is authorized to direct the operations to accomplish the purposes set forth in Section 4 above and to exercise the powers set forth in subsection B below without previous authorization or subsequent approval and all parties dealing with the Authority shall have the right to rely upon any action taken by the Management Board pursuant to such authorization.
 3. The Management Board shall exercise full power and shall be responsible for the custody and management, operation, inventory and maintenance of all utilities and facilities; the planning, construction and operating of all new facilities; and for the taking of any and all usual, necessary and convenient actions incidental thereto including, should it be deemed advisable or desirable, the borrowing of funds, and the making of contracts or commitments necessary to the functioning of the organization.
 4. The Management Board shall function in much the same capacity as an elected Board of Directors of a chartered public service corporation, and shall be responsible for making investment decisions, subject to the limitations contained herein or in any advance of funds; for the establishment and maintenance of effective operating policies; the selection of management personnel; and for continuous supervision of performance.
 5. The Management Board shall exercise its authorized powers in the best interests of the Tohono O'odham Nation, with the limits of responsible business judgment and with the stipulation that it shall not incur contract obligations in excess of the ability of the Authority to make payment on due date.

6. It shall select from its own membership a Chairman of the Board and other officers; and it shall adopt such rules as it may determine necessary for the orderly conduct of its business.
7. Copies of the minutes of each meeting of the Board shall be kept on file in the office of the Authority and shall be available for inspection at all reasonable times by authorized representatives of the Tohono O'odham Nation and, upon notice to the Chairman of the Tohono O'odham Nation, by representatives of the Secretary of the Interior.
8. Members shall be reimbursed for expenses incurred in attending meetings and performing directorship duties and the Board may, at its discretion, set a reasonable fee to be paid to its members on a per-meeting-attended or other basis. Any such fee may be changed from time to time as conditions dictate.
9. The Chairman of the Board shall make a formal report to the Chairman of the Tohono O'odham Nation and to the Tohono O'odham Council not less often than annually and in such report shall include a summary of the budget which the Management Board has approved for the coming fiscal year.
10. The Management Board shall establish purchasing policies and procedures, giving usual and essential latitude to the General Manager and his delegated employees, but establishing limitations on amounts which may be expended without specific approval of the Board.
11. No contract or other transaction between the Authority and any one of the members of the Management Board, or between the Authority and any corporation, partnership, firm or other legal entity in which one or more of the Management Board has an interest, directly or indirectly, shall be valid for any purpose, unless the entire interest of the Director or Directors in such corporation, firm or other legal entity is fully disclosed to the board and the proposed contract or transaction shall be approved, ratified or confirmed by the affirmative vote of at least a majority of the entire Management Board who are not so interested.
12. The Management Board, in its discretion, may submit any such contract or act for approval or ratification at any regularly called or noticed meeting of the Tohono O'odham Council; and any contract or act that shall be approved or ratified by the vote of the majority of the Council shall be valid and binding upon the parties.
13. The Management Board shall submit any contract or act wherein a public officer or employee of the Tohono O'odham Nation may have an interest, directly or indirectly, in the matter or transaction to any regularly called or noticed meeting of the Tohono O'odham Council for approval. Any contract or act that shall be approved or ratified by the vote of the majority of the Council shall be valid and binding upon the parties.

B. Enumerated powers. Subject to approval by the Tohono O'odham Council where required and to all applicable laws and regulations of the Tohono O'odham Nation and the United States, and solely in furtherance of the limited purposes set forth in Section 4 above, the Management Board shall have the following powers:

1. **Facilities.** The Management Board shall exercise full authority and shall be responsible for the custody, management and operation of all utility property and facilities, including easements and rights-of-way granted therefor, owned and operated by the Tohono O'odham Nation, including such expansions and enlargements thereof as shall be authorized; for the planning, construction and operation of additional utility facilities, including the negotiation and execution of engineering and construction contracts; and for taking of any and all usual, necessary and convenient actions incident thereto.
2. **Capacity to act.** To have the capacity to act and direct the officers of the Authority to act in the same capacity as that of natural persons, but to have authority to perform only such acts as are necessary, convenient or expedient to accomplish the purposes set forth in Section 4 above, and such as are not repugnant to laws and regulations applicable to the Authority.
3. **To appoint officers and agents.** To elect or appoint officers, agents, engineers, auditors, and such professional consultants as in the opinion of the Board may be needed from time to time, and to define their duties and fix their compensation. The Management Board, at Authority expense, shall require the bonding of all officers, agents or employees responsible for the handling or safeguarding of funds, property or other assets of the Authority.
4. **To act as agent.** To act in any state, territory, district, or possession of the United States, or in any foreign country for and on behalf of the Authority.
5. **To deal in real property.** To negotiate the acquisition of (by purchase, exchange, lease, hire or otherwise), utilize, improve, manage, operate, and to negotiate the sale, lease, or mortgage of, either alone or in conjunction with others, real estate of every kind, character and description and any interest therein, necessary or incidental to the purposes set forth in Section 4 above, except as prohibited by law. Title to all such real property shall be taken in the name of the Tohono O'odham Nation and title to all trust or restricted real property shall be and remain in its trust or restricted status.
6. **To deal in personal property, generally.** To acquire (by purchase, exchange, lease, hire or otherwise), hold, own, manage, operate, mortgage, pledge, hypothecate, exchange, sell, deal in, and dispose of, either alone or in conjunction with others, personal property and interests therein, and commodities of every kind, character and description necessary or incidental to the purposes set forth in Section 4 above.
7. **To deal in inventions, copyrights, and trademarks.** To acquire (by application, assignment, purchase, exchange, lease, hire or otherwise), to hold, own, use, license, lease, and sell, either alone or in conjunction with others, the absolute or any partial or qualified interest in and to inventions, improvements, letters patent and applications therefor, licenses, formulas, privileges, processes, copyrights and applications therefor, trademarks and applications therefor, and trade names, provided that title of all such acquisitions shall be taken in the name of the Tohono O'odham Nation.
8. **To execute guaranties.** To make any guaranty respecting indebtedness, interest, contracts or other obligations lawfully entered into by or on behalf of the Authority,

to the extent that such guaranty is made in pursuance of the purposes et forth in Section 4 above, provided, that no such guaranty shall be made without the prior written approval of the Tohono O'odham Council if the current aggregate indebtedness of the Authority, including such guaranty, shall exceed the sum of twenty-five million dollars (\$25,000,000).

9. **Depository.** To designate and approve all depositories used for the deposit of funds of the Authority.
 10. **To make contracts.** To enter into, make, perform and carry out or cancel and rescind, contracts for any lawful purpose pertaining to its business necessary or incidental to the purposes set forth in Section 4 above, including the negotiation of contracts subject to R.S. §2103, 25 U.S.C. §81 (1964), which shall, as therein provided, become effective only upon the approval of the Secretary of the Interior.
 11. **To approve budgets.** To give initial approval to annual Authority budgets, and to take final approval action with reference to the use of funds under the exclusive control of the Authority for operating and capital addition purposes.
- C. **Ancillary powers.** To have and exercise all powers necessary or convenient to effect any or all of the purposes for which the Authority is organized.
- D. **No construction of powers as purposes.** The powers enumerated herein shall not be construed as purposes but the Authority shall have and exercise such powers solely in furtherance of, but not in addition to, the limited purpose set forth in Section 4 above.

**Section 8: Indemnification of Officers, Employees and Members
of the Management Board**

The Authority shall indemnify any officer, employee or member of the Management Board or former officer, employee or member of the Management Board of the Authority, or any person who may have served at its request as an officer, employee or member of the Management Board, against reasonable expenses actually and necessarily incurred by him in connection with the defense of any action, suit or proceeding in which he is made a party by reason of being, or having been such officer, employee or member of the Management Board except in relation to matters as to which he shall be adjudged in such action, suit or proceeding to be liable for negligence or misconduct in the performance of duty, or except in relation to matters in which such employee was acting beyond the scope of his employment. The Authority shall also reimburse to any officer, employee or member of the Management Board reasonable costs of settlements of any such action, suit or proceeding if it shall be found by a majority of the Management Board, other than Directors involved in the matter of controversy (whether or not a quorum exists), that it is in the best interest of the Authority and the Tohono O'odham Nation that such settlement be made and that such officer, employee or member of the Management Board was not guilty of negligence or misconduct. Such rights of indemnification and reimbursement shall not be deemed exclusive of any other rights which such officer, employee or member of the Management Board may be entitled to receive.

Section 9: Membership on Board; Qualification; Term of Office

- A. Number.** The Management Board shall consist of seven persons, all of whom shall be appointed by the Chairman of the Tohono O'odham Nation with the approval of the Tohono O'odham Council.
- B. Qualification.** The members of the Management Board shall be called Directors, and shall have the following qualifications:
1. Three of the Directors shall be members of the Tohono O'odham Nation who have sufficient education and experience to qualify them for learning utility business, practices and procedures, to participate in Management Board meetings and functions, and to make sound judgments.
 2. Four Directors shall be persons having not less than ten years experience in business management of substantial character, and at least three of such persons shall have had such experience in the management and operation of a utility business.
 3. No employee of the Bureau of Indian Affairs or member of the Tohono O'odham Council shall be a member of the Board.
- C. Term of Office.** Directors shall be appointed for the following terms of office and shall hold office until the qualification and selection of their successors:
1. The initial Management Board shall be appointed for a period of one year or until their successors have been appointed and qualified.
 2. Beginning the second year, the Directors shall be appointed in three groups, the first group of three to serve one year, the second group of two to serve for two years, and the third group of two to serve for three years. Thereafter, all terms shall be for three years, starting on the first day of July of the year of their respective appointments. Directors shall be eligible for reappointment. They shall hold their offices until their successors have been appointed and qualified or until their death, resignation or removal in the manner provided herein.

Section 10: Removal

Any member of the Management Board may be removed by the Chairman of the Tohono O'odham Nation after a majority of the Management Board recommends such removal where, in the Board's best judgment, the best interests of the Authority shall be served by such removal.

Section 11: Resignation and Vacancies

Any member of the Management Board may resign at any time by giving written notice to the Chairman and Secretary of the Board and to the Chairman of the Tohono O'odham Nation. Resignations shall become effective at the time specified in said notice and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective. Any Director who fails to attend three consecutive properly called and noticed meetings of the Board or who fails to attend two-thirds (2/3) of all Board meetings properly noticed in any calendar year shall, unless excused from attendance for a justifiable cause, be considered to have resigned his directorship. The Chairman of the Nation shall be so notified and the Director shall be reappointed or replaced as set forth in this Section. Any vacancy on the Board because of death, resignation, removal, or any other cause shall be filled for the unexpired portion of the term by the Chairman of the Tohono O'odham Nation with the approval of the Tohono O'odham Council.

Section 12: Meetings of the Board

- A. Annual meeting.** The annual meeting of the Management Board shall be held each year in the month of July at such time and place as the Board shall fix.
- B. Regular meetings.** The Management Board shall meet at least quarterly upon notice fixing the time and place.
- C. Special Meetings.** Special meetings of the Board may be held upon notice given by the Chairman, or Secretary, or by any three members of the Board, at such time and place as the Board shall direct or as shall be fixed by the notice.
- D. Notice.**
 - 1. Notice of all meetings of the Board, stating the time and place, shall be given in writing by letter, telegram or radiogram properly addressed to each member according to the latest available Authority records, not later than five days nor more than thirty days immediately preceding the meeting, excluding the day of the meeting.
 - 2. Notice may be waived in writing signed by the member or members entitled to such notices, whether before or after the time stated therein, and such waiver shall be deemed equivalent to the giving of such notice. Attendance of any member at a meeting shall constitute a waiver of notice.
- E. Quorum.** Five members of the Management Board shall constitute a quorum for the transaction of any business. The act of the majority of the members present and voting at a meeting at which a quorum is present shall be the act of the Board.

Section 13: Executive Committee

- A. Designation of committee.** The Management Board, by resolution duly adopted, may designate four members of the Board, two of whom shall be members of the Tohono O'odham Nation, to constitute an Executive Committee. The designation of such Executive Committee and the delegation of the authority herein granted, shall not operate to relieve the

Management Board or members thereof of any responsibility imposed upon it or them by law or this Plan of Operation. No member of the Executive Committee shall continue to be a member thereof after he ceases to be a member of the Management Board. The Management Board shall have the power at any time to increase the number of members of the Executive Committee, to fill vacancies thereon, to change any member thereof, and to change the functions or to terminate the existence thereof.

- B. Powers of the Executive Committee.** During the intervals between meetings of the Management Board, and subject to such limitations as may be required by resolution of the Management Board, the Executive Committee shall have and may exercise such authority as may be delegated by the Board.

All minutes of meetings of the Executive Committee shall be submitted to the next succeeding meeting of the Management Board for approval, but failure to submit the same or to receive the approval thereof shall not invalidate any completed or uncompleted action taken by the Authority upon authorization of the Executive Committee prior to the time at which the same was submitted as above provided.

- C. Procedure, meetings.** A Chairman of the Executive Committee shall be elected by the Management Board from among the members of the Executive Committee and shall preside at meetings of the Executive Committee and perform all duties incident to the office of the Chairman of the Executive Committee, and such other duties as, from time to time, may be assigned to him by the Management Board or the Executive Committee. The Secretary of the Authority shall keep a record of the acts of the Executive Committee and its proceedings. In the absence of the Secretary, the Chairman of the Management Board shall designate a person to act in said capacity.
- D. No individual authority.** The members of the Executive Committee shall act only as a committee, and the individual members shall have no power as individuals.
- E. Notice.** Notices of all meetings of the Executive Committee shall be given by the Chairman, the Secretary, or any member thereof, in the manner provided in Section 12D, and may be waived as therein provided.
- F. Quorum.** The presence of not less than three members shall be necessary to constitute a quorum for the transaction of business and the act of the majority of the members present and voting at a meeting at which a quorum is present shall be the act of the Committee.

Section 14: Officers: Powers and Duties

The principal officers of the Authority shall consist of the following:

- A. Chairman.** The Chairman of the Management Board and Chairman of the Executive Committee, which positions may be, but need not be, held by the same person, shall be members of the Management Board. The Chairman shall:
1. preside at all meetings of the Board at which he is present;

2. sign, with the Secretary, any instruments which have been authorized by the Board to be executed on behalf of the Authority, except in cases in which the signing and execution thereof shall be expressly delegated by the Board or this Plan of Operation to some other officer or agent of the Authority, or shall be required by law to be otherwise signed or executed; and
3. in general, perform all duties incident to the office of Chairman and such other duties as may be prescribed by the Board from time to time.

B. Secretary. The Secretary may, but need not be, a member of the Management Board or of the Executive Committee. The Secretary shall be responsible for:

1. keeping the minutes of the meetings of the Management Board and the Executive Committee in books provided for that purpose;
2. seeing that all notices are duly given in accordance with the provisions of this Plan of Operation;
3. the safekeeping of the books and records and the seal of the Authority, and affixing the seal of the Authority to all documents, the execution of which on behalf of the Authority under its seal is duly authorized in accordance with the provisions of this Plan of Operation;
4. keeping on file at all times complete copy of this Plan of Operation of the Authority containing all amendments thereto; and
5. in general, performing all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him by the Board.

C. Treasurer. The Treasurer may, but need not be, a member of the Management Board or of the Executive Committee. The Treasurer shall be responsible for:

1. custody of all funds and securities of the Authority;
2. the receipt of and issuance of receipts for all monies due and payable to the Authority, and for the deposit of all such monies in the name of the Authority in such bank or banks as shall be selected in accordance with the provisions of this Plan of Operation; and
3. in general, performing all duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him by the Board.

D. Other officers. in the discretion of the Management Board, there may be a Vice Chairman of the Board, Assistant Secretary, and Assistant Treasurer. Any two of these positions may be held by the same person. A Vice Chairman shall be a member of the Management Board and may, but need not, be a member of the Executive Committee. An Assistant Secretary or Assistant Treasurer may, but need not be, a member of the Management Board or of the Executive Committee. If a Vice Chairman is elected he shall, in the absence of the Chairman or in the event of his inability or refusal to act, perform the duties of the Chairman, and when so acting shall have all the powers and be subject to all the restrictions upon the Chairman.

Such officers shall perform such duties as from time to time may be assigned to them by the Board.

- E. General Manager.** The General Manager shall not be a member of the Management Board. He shall be the principal operating executive of the Authority and shall have direction of all parts of actual operations. He shall be responsible to the Board as a principal operating executive of a public service corporation normally would be. He shall render reports to the Board and perform all other functions and duties specified for the General Manager in Section 19 below.

Section 15: Election; Term of Office; Qualification

The officers, with the exception of the General Manager, shall be chosen annually by the Management Board at its annual meeting, or as soon after such annual meeting as newly appointed Directors shall have qualified. Each officer shall hold office until his successor is chosen and qualified, or until his death, or until he shall have resigned, or shall have been removed in the manner provided herein.

Section 16: Removal

Any officer or agent elected or appointed by the Management Board may be removed by the Board whenever, in its judgment, the best interest of the Authority will be served thereby, but in the absence of dereliction in duty, negligence or malfeasance in office, or any other good cause shown, such removal shall be without prejudice to the contract rights, if any, of the persons who are removed, provided, however, the General Manager may be removed only pursuant to any approved contract provisions.

Section 17: Resignations; Vacancies

Any officer may resign at any time by giving written notice to the Management Board, or to the Chairman, or Secretary. Such resignation shall take effect at the time specified therein, and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective. Any vacancy in any office because of death, resignation, removal, or any other cause shall be filled for the unexpired portion of the term in the manner prescribed herein for election or appointment to such office.

Section 18: Other Officers and Agents

The Management Board may appoint such other officers and agents as it deems necessary or expedient, and may determine the duties of them as well as the terms of their holding office.

Section 19: General Manager; Functions; Duties

- A. The General Manager shall be employed under a written employment contract and shall be responsible to the Management Board.
- B. The function of a General Manager shall be analogous to that of the president of a public service corporation. He shall, among other things, execute the general policies formulated by the Management Board and organize the operation of the Authority into departments, each with its own specific duties and responsibilities.
- C. He shall exercise his best judgment in the determination of the ways and means by which general policy set forth by the Management Board is to be effectuated.
- D. He shall be the active, operating executive of the Authority and shall prepare plans and annual budgets; and make suggestions as to policies and any proposals for improvements.
- E. He shall have the full authority and control over all employees of the Authority and shall be responsible for all department heads or other executives carrying out their assignments.
- F. He shall be responsible for the general supervision of the performance of staff in respect to all such matters as conformance to approved budgets and to policies and procedures approved by the Management Board relating to standards, programs inspections, cost control, employee relations and in-service training.
- G. He shall render regular reports to the Board and perform all other functions and duties specified in the Plan of Operations for the General Manager.
- H. He shall be furnished with ample transportation and shall be reimbursed for any personal expenses he may incur in carrying out his responsibilities.
- I. The General Manager shall employ competent department heads for the usual functional responsibilities for each department.

Section 20: Financial Transactions; Miscellaneous

- A. **Contracts.** Except as otherwise provided in this Plan of Operation, the Management Board may authorize any officer or officers, or any agent or agents, to enter into any contract or execute and deliver any instrument in the name and on behalf of the Authority, and such authority may be general or confined to specified instances.
- B. **Checks; drafts; etc.** All checks, drafts, or other orders for the payment of money, and all notes, bonds, or other evidences of indebtedness issued in the name of the Authority shall be signed by such officer or officers, agent or agents, or employee or employees of the Authority and in such manner as shall from time to time be determined by resolution of the Management Board.
- C. **Deposits.** All funds, except petty cash, of the Authority shall be deposited from time to time to the credit of the Authority in such bank or banks as the Management Board may select.

- D. Accounting.** A modern accounting system shall be established and installed by a reputable consulting firm in conformity with accounting principles generally accepted in the utility operation field. The accounting system shall insure the availability of information as may be necessary to comply with all applicable regulatory requirements.
- E. Records; inspection; audits.** The books, records and property of the Authority, including current financial and operating statements, shall be kept on file in the office of the Authority and shall be available for inspection at all reasonable times by authorized representatives of the Tohono O'odham Nation and, upon notice to the Chairman of the Tohono O'odham Nation, by representatives of the Secretary of the Interior. The accounts and records of the Authority shall be audited by an independent Certified Public Accountant at the close of each fiscal year. The results of such audit shall be included in the reports by the Chairman of the Management Board to the Chairman of the Tohono O'odham Nation and the Tohono O'odham Council required by subsection 7A (9) above.
- F. Fiscal year.** The fiscal year of the Authority shall be the same as the fiscal year of the Tohono O'odham Nation.
- G. Insurance.** Insurance, including liability insurance, adequate and sufficient to protect the interests of the Authority and the Tohono O'odham Nation from losses by fire or other disaster shall be carried on all property of the Authority.
- H. Policies; rules and regulations.** The Management Board shall have the power to make and adopt such policies, rules and regulations, not inconsistent with law and this Plan of Operation, as it may deem advisable for the management of the business and affairs of the Authority.

Section 21: Rates and Charges

- A.** The Management Board shall adopt all rates and charges for utility services which, when adopted, shall become effective at such time as the Board shall determine. Upon a petition being filed by five percent (5%) of the affected customers, the Authority shall, after giving such notice as the Board may determine to be adequate, hold a formal public hearing to review such rates and charges.
- B.** Procedures shall be established by the Tohono O'odham Council to provide for appeals of rate decisions following a public hearing by the Authority to an impartial review board composed of specialists on utility rates.
- C.** The Management Board may, in its sole discretion, negotiate with large users of a particular utility service for special rates and charges, provided, however, that such negotiated rates shall be demonstrated to be fair and equitable to all other customers or users of the services of the Authority.