

Chapter 7

Transport, Communications and Utilities

Key Points

- Strategically vital parts of the economy are operated by state-owned enterprises. The corporate governance of these companies is of great importance to the overall equity and competitiveness of the economy.
- International air links have recently improved, and international sea freight services are generally regarded as satisfactory—both are provided by overseas commercial operators.⁴⁹
- Domestic air services by Air Marshall Islands (AMI) are handicapped by years of financial weakness, poor maintenance, and chronic under-investment in operating infrastructure. The airline's organization, staffing, and finances are currently under review.
- Domestic shipping has also been handicapped by under-investment in vessels and atoll ports, and by inadequate monitoring and management of privatized inter-island services.

⁴⁹ Apart from a weekly Majuro-Tarawa (Kiribati)-Majuro service by AMI.

- Maintenance of infrastructure assets out of operating income has been ignored in favor of buying "new" assets with external financing.
- Commercial and technical upgrading of the National Telecommunications Authority (NTA) may be best achieved by selling a substantial shareholding to an international telecommunications company.
- Huge disparities exist between urban and rural standards of roads, telecommunications, water, and electricity.
- The Marshalls Energy Company's (MEC's) profitability is boosted by sales of diesel fuel to foreign fishing vessels.
- Solar power offers good prospects for rural electrification provided technical support is assured.

Air Transport

International air services

Three scheduled passenger carriers—Continental Micronesia, Aloha Airlines, and AMI—provide international air access to the Marshall Islands. Continental Micronesia provides three inbound flights per week from Honolulu, with flights continuing on to the Federated States of Micronesia and terminating in Guam. Continental Micronesia also provides three inbound flights from Guam that continue on and terminate in Honolulu. Aloha Airlines provides one inbound and one outbound flight per week to and from Honolulu. AMI, a state-owned enterprise, provides one roundtrip flight per week between Majuro and Tarawa (Kiribati) using a Dornier 228 aircraft.

In August 2000, Continental Micronesia replaced its Boeing 727-200s with Boeing 737-800s, increasing payload capacity as well as enabling direct flights between Majuro and Honolulu. The upgrading of the Continental Micronesia service and the recent entry of Aloha Airlines using B737-200 aircraft have greatly improved international air services between the RMI and Honolulu. The service between the RMI and Guam

has remained the same. The service between the RMI and points to the south, provided by AMI, has substantially decreased.⁵⁰

Since the 1990s, the governments of the Marshall Islands, Kiribati, Tuvalu, and Nauru have periodically discussed arrangements for subregional air services. These discussions led to a Memorandum of Understanding signed by the heads of state of the four countries in May 1995. Discussions are continuing.

Domestic air services

AMI presently uses two Dornier 228 aircraft and a BN2A Islander aircraft for its domestic air services to the atolls, flying at least once week to all its domestic destinations. Busier destinations such as Jaluit and Kili have flights five times a week and there are six roundtrip flights a week between Majuro and Kwajalein. Sixteen of the 28 domestic airports were closed for lack of maintenance in the last few years. Almost all have now been re-opened after rehabilitation by the Ministry of Public Works, using equipment purchased with funds donated by Taipei, China.

In addition to AMI, Continental Micronesia provides three flights per week between Majuro and Kwajalein on its B737-800 service. Aloha Airlines provides one weekly flight from Majuro to Kwajalein and one from Kwajalein to Majuro on its B737-200 service.

Domestic air services provided by AMI have been drastically affected by the absence of proper maintenance facilities. AMI has not had a hangar facility for over 3 years. This has affected its ability to maintain its aircraft and this, compounded by the poor condition of many of the outer island airstrips, has

⁵⁰ AMI's involvement in international air services, which was losing a great deal of money at public expense, has been considerably reduced as the result of the Public Sector Reform Program (PSRP) carried out since 1995. Before the PSRP, AMI operated thrice weekly services between Majuro and Honolulu using a leased DC8 combi aircraft, and between Majuro and Fiji (Nadi, Suva), with service to Tarawa (Kiribati) and Funafuti (Tuvalu) using a SAAB 2000 high speed turbo-prop aircraft, which replaced the BAe 748 aircraft previously used. Like the BAe 748 aircraft, the SAAB aircraft was purchased and owned by the RMI Government and leased to AMI.

resulted in breakdowns. The resulting disruption in schedules has severely hampered the fledgling tourist industry.

Under pressure from the Government as owner, AMI is undergoing a review that is expected to lead to marked improvements in its operations and financial performance. Taking further the changes that began under the PSRP, the airline is looking to increase the frequency and reliability of its flights, while reducing overhead—particularly staff costs—and strengthening maintenance, marketing and financial controls. Pilot training will be stepped up to reduce reliance on overseas personnel.

One of the policy issues concerning AMI has been the level of subsidy provided by the Government to support AMI's international and domestic air operations. The government subsidy averaged \$4-6 million annually during 1990-1994. One of the policy requirements of the PSRP was termination of the government subsidy to AMI. The current review of AMI may identify the need for additional capital to put the enterprise on a sound financial footing. If so, the Government will need to consider in what form such capital should be provided, possibly including some degree of privatization.

The Marshall Islands Airports Authority (MIAA), a statutory corporation established in late 1999, took over the management of the Amata Kabua International Airport. Previously, the Directorate of Civil Aviation, the civil aviation regulatory body in the RMI, was responsible for all oversight and management of the airport. Since its establishment, MIAA has made immediate improvements in the management, operation, and maintenance of the country's principal airport. Issues of corporate governance, particularly financial economy, accountability, and care of public assets, arise in the exercise of autonomy by MIAA and the Marshall Islands Port Authority (MIPA) (see below).

Sea Transport

International shipping services

Scheduled international shipping services serving Majuro and Ebeye are provided on a regular basis. The international service

links the US West Coast, Hawaii, the Marshall Islands, Federated States of Micronesia (FSM), and the Southeast Asia with service frequency of 3–4 weeks between vessel arrivals. The PM&O Line provides a direct service from the US West Coast to Majuro and Ebeye with its vessels traveling westward continuing on to FSM, Saipan and Palau, and Southeast Asia. Matson Line provides services between Honolulu and Majuro. These services to the Marshall Islands are judged by users to be reliable and competitive. There is no scheduled international passenger shipping to the Marshall Islands.

Domestic shipping services

Inter-atoll and intra-atoll shipping services have been provided by the Government, private companies, and individuals. The main means of providing shipping services to the communities in the outer atolls and islands has been the Field Trip services operated by the Ministry of Transport and Communications directly or on its behalf by third parties. In addition, private companies and individuals provide shipping services between the atolls and within atolls, but these are small scale and often irregular.

Following reviews of the domestic shipping services during 1998 and 1999, the Government decided on a strategy of contracting private operators, using their own ships, to provide guaranteed levels of service at specified freight rates and passenger fares in return for a subsidy. The Government also decided that the MV Ribuuk Ae would be available on commercial charter terms to the operators. Under the scheme, the Government also established three contract service areas (Northern Service Area, Central and Western Service Area, and Southern Service Area),⁵¹ but excluded islands that can be served by the private sector on a commercial basis.

⁵¹ The Northern Service Area includes the atolls of Aur, Maloelap, Wotje, Likiep, Uirik and Ailuk, and the island of Mejit; the Central and Western Service Area includes the atolls of Ailinglaplap, Ebeye/Kwajalein, Namu, Lae, Ujae, Wotho, and Enewetak, and the islands of Jabwot and Lib; the Southern Service Area includes the atolls of Jaluit, Ebon, and Namorik, and the island of Kili.

The three service areas were tendered out and the contracts for domestic shipping services were awarded to two private operators in June 1999. One operator provides shipping services to the Northern Service Area and the other operates in the other two service areas. The contract for the Northern Service Area specified that the contractor will operate its own ship, while the contractor for the other two service areas will charter the Ribuuk Ae.

Those arrangements have only recently come into operation, but further improvements are planned. The Government now intends to introduce a five-sector route-scheduling framework for inter-atoll services to be operated by private sector firms under contract to the Government. Using grant funds from Taipei,China, the Government has purchased and refurbished two more passenger/cargo vessels and a small tanker, which are to be chartered to commercial operators. Operation of the tanker is intended to transform the supply of petrol, diesel and kerosene in all outer islands, improving the quality of life and supporting development projects that require a reliable supply of petroleum fuel. The tanker will deliver to storage tanks on larger islands and refill drums at smaller ports.

Outer island wharves and cargo storage facilities are to be improved in 2002–2003 under a proposed ADB loan project to be designed later in 2001. At the same time, the Government plans to use Taipei,China grant funds to build a number of 11–12 meter fiberglass boats for lagoon service in the main atolls.⁵² Taken together—and provided the well-known problems of operating cost finance, maintenance, and service reliability can be overcome—these improvements should make a marked difference to outer island welfare and potential for economic activity. The Government will need to consider carefully how the new lagoon boats are to be operated. It will be important not to undermine existing private sector services where these are meeting the community's needs.

⁵² This plan provides an opening for private enterprise to invest in fiberglass construction of vessels, water tanks, eskies, bathroom units, etc., with an initial base load of government contracts.

Apart from government-sponsored operations, private companies and individuals also provide shipping services using a variety of vessels ranging from 40 ton to 2–3 ton diesel crafts ("boom boom" boats) that operate within lagoons and between nearby atolls, e.g., between Majuro and Arno.

Among the larger boats used for transportation of cargo are ex-fishing vessels from an abortive long-line fishing project implemented by the Marshall Islands Development Authority. These fishing vessels remained with the private operators to whom they were originally allocated under the project. A number of these boats are not in service.

MIPA, a statutory body established in 1996, is responsible for managing international ports of entry in the RMI. Presently, it manages two of the international ports, Majuro and Jaluit, while KADA manages the port at Ebeye. Since its establishment, MIPA has been financing its operations without subsidy from the Government, but this has been, in part at least, at the expense of prudent maintenance, and MIPA's principal assets—like many others in the public sector—have been deteriorating as a result.

Road Transport

The road network in the Marshall Islands consists of about 40 miles of sealed roads and 37 miles of unsealed roads. Majuro accounts for about 35 miles of roads and most of the 2,575 vehicles registered in 1999. Ebeye, including Gugeegue causeway, has about 7 miles of road. The sealed roads are found only on Majuro and Ebeye. The rest of roads on the other atolls are mainly unformed tracks.

Here again the main issue is locally-funded asset maintenance versus externally-funded asset replacement. Proposals have been made in the past, and most recently in 1998, for the establishment of a roads trust fund to provide for the maintenance of roads. The revenues for the fund would come from annual vehicle registration fees, road use charges to be levied on gasoline imports and road damage charges to be levied on heavy vehicles based on their laden axle weights. These recom-

mentations have been considered but unsurprisingly do not seem to find favor with road users and have yet to be implemented. The issue of road maintenance and dedicated taxes should be referred to the review of taxation recommended in Chapter 2.

Communications

NTA enjoys a monopoly on the provision of telecommunications services for the Marshall Islands. It provides domestic and international telephone (voice, facsimile and data) service and local cellular telephone service. Since the introduction of cellular phones, there has been high demand requiring installation of a new system. NTA also provides access to Internet services, currently regarded by users as badly in need of improvement.

NTA was established in 1987 as a wholly government-owned entity, and funded by a loan of \$18.8 million, later increased to \$22.8 million, from the US Department of Commerce. It was privatized in 1991 in the simplest possible way by legislation, which declared it a private company. Of the authorized capital, 75% of the shares (270,000) were offered to Marshall Islands citizens while the Government purchased 25% (90,000 shares). At the close of the share offer in 1992, the public had purchased 35,575 shares. The Government has since injected additional capital to increase the equity base of NTA, further diluting the small public shareholding. At present, the law prevents the acquisition of shares in NTA by non-Marshallese investors.

Majuro and Ebeye have telephone services and direct dialing access to international destinations. In 1999, NTA installed a Standard "A" satellite dish on Majuro to improve international capacity. Domestically, the Ebeye telephone system has been expanded to Gugeegu Island as well as access to Kwajalein Island. Apart from direct telephone connections, NTA has installed public pay phones on Majuro and Ebeye as well as introduced debit phone cards which can be used from locations in US for calls to the Marshall Islands.

Communication with rural areas is still done mainly by high-frequency radios, but NTA is moving towards a mini-satellite system for communications in the outer islands. These are presently in use on Jaluit and Kili. Generally, telecommunications with the outer atolls and islands are regarded as unsatisfactory and in need of a coordinated plan of improvement. The Government is considering a new high-frequency-based network using solar power and laptop computers that would be available to health centers, banks, AMI, distance education, and local governments. The possible development of such a system and its relationship to other improvements is being considered by NTA, and should form part of the studies for the Outer Island Development Program.

In the last 2 years, NTA has been operating at a loss. This has arisen mainly because of the introduction of e-mail services, which have largely replaced high-earning facsimile services, as well as rising costs, the high level of accounts receivable, and bad debts arising mainly from international reverse calls from the US. In 2000, NTA took steps to address the situation, including a revised tariff structure and active policy on the management of accounts receivable. This should return the carrier to profitability.

Beyond that, NTA will need access to substantial amounts of capital to keep up with technological progress. One way of doing this—and beefing up the technical and commercial management where necessary—is to sell a substantial shareholding in NTA to a reputable and cash-rich telecommunications company. As noted above, this would require a change in the law on NTA shareholdings, and the Government is preparing to take the necessary amending legislation to the *Nitijela*. If this is done, and—after an appropriately transparent process—control of the corporation effectively passes to a private investor, there will be a need to monitor the price and quality performance of NTA in the public interest (see also on electricity and water, below).

Utilities – Power, Water Supply, and Sanitation

Power

Electric power is available on Majuro, Ebeye, Jaluit, and Kili. MEC, a wholly government-owned corporation, supplies Majuro and Jaluit power. Electric power on Ebeye is supplied by the Kwajalein Atoll Joint Resources Utilities, Inc., which is a wholly-owned subsidiary of the Kwajalein Development Authority. The Kili Local Government provides power supply on Kili. Households on other atolls and islands use kerosene lamps and solar power for lighting. The Majuro power station was enlarged in 1998 by the construction of a new 12.8 MW plant, funded by a commercial loan of \$12.5 million.

The MEC imports diesel fuel for its power stations. It also supplies fuel to overseas fishing vessels and to government boats. The MEC also owns an LPG company, formerly a joint venture with Boral Gas Australia, supplying bottled gas to households and businesses. The profits from these subsidiary operations subsidize power generation and distribution. Government subsidies to MEC ceased in 1993, when MEC began to operate profitably.

On the face of it, MEC is a candidate for privatization. This should be examined carefully so as to protect the public interest in competitive utility pricing (see comments on the overall competitiveness of the RMI's bundle of operating costs in Chapter 2) while seeking to attract private capital and management support into the corporation. Such a study should examine how the price and quality aspects of privatized 'natural monopolies' such as power, water, telecommunications and domestic air services can be monitored. The aim is that they should act *as if* they were competing for customers in a commercial marketplace with competent alternative suppliers.

The Government has recently requested MEC to assist with setting up power generation on Wotje Atoll, and Majuro Atoll Local Government has requested MEC assistance on Rong Rong Island and Anil Islands on Majuro Atoll. The arrangements for this assistance are still under consideration. It is likely that these operations will require subsidization.

The Kwajalein Atoll Joint Utility Resources, Inc. was established to manage power generation and distribution as well as the water supply system on Ebeye. However, due to lack of maintenance, the power plant has been deteriorating and unable to supply adequate power to Ebeye. The lack of continuous power generation also affected the water supply and sewerage systems. To address the situation, the Government in 1999 tendered and awarded a management contract to the American Samoa Power Association to manage the power plant with a loan financed by the ADB to improve power generation and distribution.

On the other atolls, households use mainly kerosene, and solar energy in some areas, for lighting. In 1994, the Government adopted an outer island energy policy and plan to carry out rural electrification using solar energy. Under the electrification policy and plan, about 428 photovoltaic (PV) lighting systems have been installed, of which 65% are for individual households. Other installations of PV system in rural areas were for fish bases, radios, telephones, schools, and community halls.

As part of the policy, the Government established the Marshall Islands Alternative Energy Company (MAEC), modeled on the MEC, to install and operate PV lighting systems in the outer islands. The MAEC is presently dormant. In providing PV systems to rural households, ownership and responsibility for the systems by the households and their communities are critical factors in the sustainable operation of the systems. Technical advice and re-supply of expendable equipment, batteries, etc., have to be reliably available to the owner-users of the installed systems. The Ministry of Resources and Development is currently reviving the solar program for the outer islands with external assistance. It is important to address these issues of technical sustainability in the light of MAEC's earlier lack of success.

Water supply and sanitation

Despite recent ADB-funded investment in storage and distribution networks, the capacity of the Majuro water supply system to meet dry-weather demand is inadequate and its technical and

commercial viability remain problematic. Household rainwater tanks have been widely installed, reducing demand for the piped (and chargeable) supply during rainy periods, and undermining the finances of the water supply operation, which is now burdened with debt service costs.

Further growth in the urban population and economic activities will increase the load on the available water supply and highlight the need to have greater access to the groundwater reserves in Laura, which was denied in the recent expansion project.

The Majuro sewer system uses saltwater mains in the DUD area, while the remaining areas use septic tanks. The saltwater system is used except in the area between the airport and Laura, where freshwater from the Laura pumping stations is used. Untreated sewerage water is disposed of through an ocean outfall 80 feet deep on the ocean side of Delap. In the area between the airport and Laura, septic tanks are used, including many located uncomfortably close to the Laura wells.

The Kwajalein Atoll Joint Utilities Resources has been responsible for the potable water system on Ebeye, while the Ebeye Local Government is responsible for the saltwater sewerage system, including the wastewater treatment plant. The source for the freshwater is an artificially constructed area dedicated to collecting rainwater. Given the low rainfall on Ebeye, freshwater is supplemented by desalination of saltwater. The waste heat from the diesel engines of the power station produces heat for the desalination plant. Therefore, the availability of water on Ebeye depends on the availability of power. In 1997, the desalination plant broke down and water had to be ferried from Kwajalein USAKA. The piped sewer system uses saltwater. The sewer system and the treatment plant depend on the availability of power. These systems are now functioning as a result of the improvement in power supply under a management contract with an overseas contractor.

Most households on the outer islands, including those on Majuro and Ebeye, use mainly rainwater catchments for drinking water. Another source of drinking water for households is wells. With regard to sanitation facilities, the 1999 census reported that 61% of all households used flush toilets and 25%

used pit latrines or have no toilet facilities. This included 327 households on Majuro or 20% of those using pit latrines or no toilet facilities. Proper sanitation is an issue to be addressed in both the urban (Majuro and Ebeye) and rural areas.