



**Republic of Palau**  
*Office of the President*

Tommy E. Remengesau, Jr.  
*President*

PO Box 6051, Palau, PW 96940  
tel (680) 488-2403/2828, fax (680) 488-2424/1662  
email-IN:rop.president@palaunet.com

August 15, 2005  
Serial No. 05-233

**The Honorable Naotake Yamashita**  
Charge d' Affaires  
Embassy of Japan in the Republic of Palau  
P. O. Box 6050  
Koror, Republic of Palau 96940

Subject: **Requests for Development Study Program JFY 2006**

Dear Mr. Yamashita:

The Government of Palau is continuing its effort to upgrade, improve and expand its important socio-economic infrastructures with an ambitious goal of becoming economically self-reliant by the end of this decade. The proposed projects which are in the main field of Energy, Water Supply and Sewer System have been identified as high priority and urgently needed in order to realize this national vision.

Along these lines, I submit herewith applications for the JFY 2006 development studies for the proposed projects, in the following order of priority:

- ① **The Study for the Upgrading of Electric Power Supply In the Republic of Palau.**
  - **The Study for the Development of Augmentation Water Source for Koror-Airai Water Supply System.**
  - **The Study for the Upgrade of Koror Wastewater System.**
  - **The Study for the Development of Airai Wastewater System.**

As you may already know, the need to upgrade the electric power supply in the Republic has suddenly become an urgent and highest priority in the array of projects normally reserved for Japan ODA Grant Aid Scheme, primarily due to the fact that Palau was not able to secure financial assistance for the necessary improvements through another source. Consequently, an Application Form for Japan's Grant Aid General, entitled **The Project for the Upgrading of Electric Power Supply In the Republic of Palau**, was

配付先	国内部 <input type="checkbox"/>	国際協力人材部 <input type="checkbox"/>
	無償部 <input type="checkbox"/>	社会開発部 <input type="checkbox"/>
	人間開発部 <input type="checkbox"/>	JOCV <input type="checkbox"/>
	地球環境部 <input type="checkbox"/>	
	農村開発部 <input type="checkbox"/>	経済開発部 <input checked="" type="checkbox"/>

submitted to the Government of Japan in July of this year (2005) with a combined request for **Technical Assistance, Feasibility Study and Capital Grant**. In consideration of the need for feasibility and technical examination of the project as well as the present projects already “on-track” for ODA funding up to JFY 2007, the application as submitted is hereby amended to be a request for **Development Study** for the purpose of upgrading the Electric Power Supply in the Republic of Palau. Accordingly, the project title has been revised to read as follows: **The Study for the Upgrading of Electric Power Supply in the Republic of Palau.** The study schedule and anticipated implementation of the project are discussed in further details in the following paragraphs.

The Development Study applications reflect the clear understanding of the requirement for basic data gathering and assessment, preparation of preliminary engineering reports and assessment of the economic and financial viability for each of the projects. In addition, the studies will aim to clarify and confirm the nature, scope and extent of the proposed projects. As a result, the government will also benefit tremendously from the studies’ output as they will be used by Palau in JFY 2008 and beyond for the purpose of projects formulation and to secure financial and other technical means to implement the projects.

On a similar note and in reference to Embassy of Japan (E o J) Diplomatic Note Verbal No. 70/05, I wish to express my sincere appreciation for the Government of Japan’s favorable response on last year’s requests for the following projects:

- **The Project for the Improvement of Urban and Rural Roads in Koror and Airai.**
- **The Project for the Development of Southern Outlying State of Peleliu.**

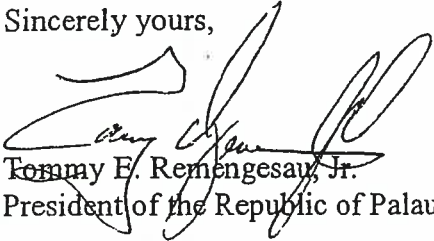
This being the case, the Government of Palau is immensely receptive to the fact that two separate JICA Study teams are currently in the country for the purpose of undertaking Site Surveys in connection with the Preparatory Study and Basic Design for the projects, respectively. I am particularly encouraged by this latest development as I am informed that the conclusion of such missions’ survey normally leads to the successful implementation of these important socio-economic infrastructure projects. The Government of Palau is thoughtful of the importance of the missions’ tasks to the success of these projects and will do whatever it can possibly do to ensure that the missions will be able to effectively and successfully achieve their objectives.

Taking these facts into consideration, the logical schedules for implementation (construction) of the projects still to be defined and confirmed in the referenced above Development Studies, are anticipated to commence in JFY 2008 and beyond, as indicated in the applications for the respective development studies. Purposely, this time line was devised to ensure that the 2005 ODA Grant Requests that have been approved and referred to in the E o J Diplomatic Note Verbal 70/05, will be implemented in accordance with the time frame indicated in the same Note Verbal, without any hindrance and or cause for postponement.

Once again, I take this opportunity to renew my sincere appreciation for your esteemed Government's generous support in the past and the willingness to participate and commit further resources toward the social and economic development of our nation and the general welfare of its citizens. Of particular significance and because of such past supports, Palau, in the recent years, has been able to realize substantial development in the tourism industry as well as increased economic activities, in spite of the difficulties in the regional and international environment. Within this context, the Applications for Development Study Program being submitted for your appraisal and favorable consideration, are projected to bring about the same positive outcome and more progress in these areas.

Your cooperation and assistance on the enclosed requests will be appreciated very much.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Tommy E. Remengesau, Jr.', written over a printed name and title.

Tommy E. Remengesau, Jr.  
President of the Republic of Palau

Attachments.

APPLICATION FOR DEVELOPMENT STUDY  
OF THE  
UPGRADING OF ELECTRICITY POWER SUPPLY  
IN THE  
REPUBLIC OF PALAU

AUGUST 2005

PREPARED  
BY  
THE OFFICE OF THE PRESIDENT

REPUBLIC OF PALAU

配付先	国内部 <input type="checkbox"/>	国際協力人材部 <input type="checkbox"/>
	無償部 <input type="checkbox"/>	社会開発部 <input type="checkbox"/> JOCV <input type="checkbox"/>
	人間開発部 <input type="checkbox"/>	地球環境部 <input type="checkbox"/>
	農村開発部 <input type="checkbox"/>	経済開発部 <input checked="" type="checkbox"/>

コピー 9/8

**APPLICATION FORM FOR JAPAN'S DEVELOPMENT STUDY PROGRAM**

**Date of entry:** AUGUST 15, 2005

**Applicant:** the Government of the Republic of Palau, Ministry of Resources and Development

**1. Project Digest:**

(1) **Project Title:** **The Study for the Upgrading of Electricity Power Supply in the Republic of Palau**

(2) **Location (province/county name):** Koror and Babeldaop

(City/town/village name): Koror, Ameliik and Melekeok

From the metropolis: about 1 hour drive (Aimeliik and Melekeok)

**(3) Implementing Agency:**

**Name of the Agency:** Ministry of Resources and Development (MRD)

Fritz Koshiba, Minister

P.O. Box 100

Koror, Republic of Palau 96940

Telephone: ~~(680)-488-2701~~, Fax ~~(680)-488-3380~~

Email: [mrd@palaunet.com](mailto:mrd@palaunet.com)

**Name of Implementing Sector:** Palau Public Utilities Corporation

Dorotheo Nagata, Chairman, Board of Directors

P.O. Box 1372

Koror, Republic of Palau 96940

Telephone: (680) 488-3872, Fax: (680) 488-4499

Email: [bod@ppuc.com](mailto:bod@ppuc.com)

**Number of Staff of the Agency:**

There's total of 125 personnel employed at Palau Public Utilities Corporation (PPUC). Please see Attachment 1, for complete Organizational Chart and number of personnel in each department of PPUC.

Budget allocated to the Agency: The PPUC has an Annual Budget of about \$13 million.

**(4) Justification of the Project:**

**Current Situation of the Sector:**

Currently, there are five (5) Diesel generators located in Aimeliik, Malakal Area (Koror), and outlying state of Peleliu, Angaur, and Kayangel. The Aimeliik and Malakal Area power plants are interconnected and serve Metropolitan Koror and Babeldaop (Big Island) which consist of the heavily populated 11 of the 16 States of the Republic of Palau. The Malakal Power Plant was funded by Japan's OPD Grant in 1998. The maximum available peak load capacity as described in the Oceanic Companies (Marshalls), Inc. study conducted in 2003 is about 10.8MW for the Malakal Plant. Additionally, the Wartsila Generators in Malakal Plant are high speed unit designed as emergency back-up systems and are not geared to provide 24 hours electrical generation; therefore causing reduced capacity output and shortening the life span of the equipment. As for the generators in Aimeliik Plant which are nearly 20 years old are encountering a serious problem due to lack of replacement parts and the company that installed the generators is no longer in business, forcing PPUC to miss scheduled maintenance and engine overhaul (see, attachment 5-7).

Tables below show current power generation capacity from both Aimeliik and Malakal Power Plants:

<b>Malakal Power Station (Generator Type)</b>	<b>RPM</b>	<b>Manufacturer</b>	<b>Plate Capacity (kW)</b>	<b>Installation Year</b>
Wartsila 1	1200	Wartsila	2000	1998
Wartsila 2	1200	Wartsila	2000	1998
Wartsila 3	1200	Wartsila	2000	1998
Mitsubishi 1	720	Mitsubishi	720	1998
Mitsubishi 2	720	Mitsubishi	720	1998

Aimeliik Power Station (Generator Type)	RPM	Manufacturer	Plate Capacity (kW)	Installation Year
Crossley Pielstick No.1	450	Crossley Pielstick	3270	1987
Crossley Pielstick No.2	450	Crossley Pielstick	3270	1987
Crossley Pielstick No.3	450	Crossley Pielstick	3270	1987
Crossley Pielstick No. 4	450	Crossley Pielstick	3270	1987

Koror State which account for nearly 12,000 residents and where the seat of the government, commerce, all hotels and tourists the visiting Palau are located, consume nearly 86% of the electrical output from both Aimeliik and Malakal Plants combines. Electrical demand breakdown by sector is as follow: Residential 22%, Government 28% and Commercial Sector accounts for 36%. According to PPUC, annual consumption rate has increased by 4% during the last eight (8) years and during the same period unbillable power (generation loss, etc.) accounts between 19.5%-26.4%, as depicted below on the table. Unbillable power or generation loss could be attributed to several factors such old equipment, inappropriate utilization of power generation equipment (Malakal Plant), lack of proper or skipped maintenance schedule due to lack of spare parts, illegal connections, and other power diversions.

Electrical Consumption and Generation Chart in kilowatt-hours (1997-2004)

Year	Consumption (kWh)	Generation (kWh)	Unbillable Power (%)
1997	64,705,659	82,354,361	21.4%
1998	64,490,828	87,291,793	26.4%
1999	70,510,814	94,036,529	25.1%
2000	76,727,497	100,423,783	23.6%
2001	81,922,427	102,212,753	20.1%
2002	81,668,427	101,395,301	19.5%

2003	82,491,079	104,069,345	20.8%
2004	109,205,035	136,534,739	20.1%

Source: Palau Public Utilities Corporation (PPUC)

Unprecedented growth in the tourism sector and construction of several new hotels such as the Palau Royal Resort (Nikko Corp.), Rose Garden Resort, North Beach Cottage in Babeldaop, Malakal Marina Village, VIP Hotel (Ngermid) and Sea Passion Hotel (Malakal) to accommodate increasing number of visitors to Palau from Japan, Europe, USA, Canada, and Taiwan. Coupled with increased number of Special Events Venue such as the South Pacific Festival of Arts (July 2004), the 7<sup>th</sup> Pacific Mini Games (July 2005) and other high level meetings and conferences that utilize facilities such as the Ngara Amayong Cultural Center, the Asahi Baseball Field, Palau Track and Field and All Elementary Schools and Palau High School to House participants definitely have caused an increase in electrical usage demand between 3-6% during the last few years.

The Table below identifies an upward trend in usage demand (1997-2004).

YEAR	PEAK LOAD (kW)	AVERAGE LOAD (kW)
1997	12,880	9,401
1998	14,200	9,965
1999	14,620	10,735
2000	15,540	11,464
2001	15,845	11,668
2002	15,800	11,575
2003	17,763	12,465
2004	22,210	15,586

Source: PPUC

The government sector infrastructure development is in the upswing with several facilities that have been completed during the last three years; such as the Palau International Airport (Japan ODA), Japan-Palau



Friendship Bridge (Japan ODA), Palau National Museum, Ngara Amayong Cultural Center, and the Track and Field spectator venue. Future projects slated to be completed within the next year and beyond, are the New Capitol Building (Melekeok State), Sewer System in Melekeok State, and the recently proposed \$400million multi-phased Golf and Resort Development in several areas of Melekeok State.

The Table below identifies Government and Commercial Projects and estimated power requirements (kW) and estimated increase during 2005-2008.

<b>Government Project</b>	<b>Peak Load</b>	<b>Avg. Load</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
National Museum	350	246	246			
New Capitol Building	1500	1056	2113			
Airport Terminal upgrade	300	270		300		
Expansion of Malakal Port	150	106		106		
Solid Waste Facilities (Aimeliik)	200	160			200	
Solid Waste Facilities (Koror)	200	160			200	
Water Supply Facilities (Airai-Koror)	150	120			150	
Sewer System (Melekeok)	110	75		110		
Ngardmau Free Trade Port	50	35		35		
Melekeok Development Project	1000	800				1000
<b>Sub-Total</b>			<b>2359</b>	<b>551</b>	<b>550</b>	<b>1000</b>
<b>Commercial Sector Project</b>						
Palau Royal Resort (Nikko Corp.)	750	528	176	352		
Malakal Marina Village	250	200		250		

Rose Garden Resort (Meyuns)	120	96	120			
VIP Hotel (Ngermid)	70	45	75			
Quest Resort (Ngerur)	160	120			200	
Palau Aimeliik Golf Course	800	500			500	500
PMIC Commercial Complex	120	90		75	75	
Sea Passion Hotel (Malakal)	270	200				330
<b>Sub-Total</b>			<b>371</b>	<b>677</b>	<b>775</b>	<b>830</b>
<b>(Gov. + Comm.) Total</b>			<b>2730</b>	<b>1228</b>	<b>1325</b>	<b>1830</b>

Sources: PPUC & Oceanic Companies (Marshalls) Inc.

Third sector that needs to be addressed is the Residential Sector; this sector includes homes and non-commercial activities. Population increases, increased consumerism, electronic appliances in homes, and new multi-story buildings using air conditioners and refrigeration.

Population growth is projected at 2.04% annually (2001 Palau Statistical Yearbook). In addition, the unit consumption (kwh per person) is predicted to increase at an annual rate of 1.5% and the residential growth is expected at 2.52%, which is estimated on the conservative side.

YEAR	PEAK LOAD(kW)	AVERAGE LOAD (kW)
2005	22,600	15,900
2006	24,370	17,100
2007	25,590	17,960
2008	26,130	18,340
2009	26,690	18,730
2010	27,260	19,130

2011	27,830	19,530
2012	28,430	19,950

Source: 2003, Oceanic Companies (Marshalls) Inc. & PPUC

In summary, the information set forth contains historical and projected Average and Peak Loads between 2005 and 2012 are results of power demand from all sectors (Commercial, Government and Residential) and unbillable losses; would represent a peak load of 24,370kW which surpasses maximum generation capacity of all existing electrical generation equipment currently online. Coupled with lack of spare parts and proposed phase-out schedule of Crossley Pielstick Engines in Aimeliik Power Station (see, 2003, Oceanic Companies (Marshalls) Inc., Study), will drastically worsen the ever increasing power demand. An immediate Development Study and data collection is warranted by FY2006 to determine the proper course to remedy this impending power shortage.

**-Sectoral development policy of the national/local government:**

During the 6<sup>th</sup> Olbiil Era Kelulau, a Joint Resolution was adopted on May 1 and 2, 2003 by both Houses of OEK (Congress) endorsing the adoption of “The Public Sector Investment Program 2003-2007 (PSIP)” and “Study for Promotion of Economic Development in Republic of Palau-Final Report (“A JICA Report, Oct 2000)” to Supplement the “The Palau 2020, Master Development Plan. Aside from the National Government Development Plan; The Palau Public Utilities Corporation (PPUC) published a Strategic Plan for 2003-2008 which calls for an upgrade and improvement of power generating capacities in order to provide for a cost effective and improved consumer service.

The 2020 MDP identifies the Republic of Palau as one of the highest consumers of electrical energy in the Pacific Island Nations and West Pacific and identifies the diesel engine in operation as one of the major cost component in the economy of the Republic. On the onset, it set policies to provide for a strategy to replace and upgrade the existing electrical generation equipment.

Improved air transportation sector; some of the most modern conference facilities and new hotels ranging from Five Star Resort to family owned lodging in Western Pacific. Has caused increase in visitors to Palau which in turn placed ever increasing demand for electricity; has created an accelerated need for equipment modernization and thus the Republic of Palau presents this request for Development Study and Data Collection.

**-Problems to be solved in the sector:**

The information set forth contains historical and projected average and peak loads between 2005 and 2012 are results of power demand from all sectors (Commercial, Government and Residential) and unbillable losses; would

represent a peak load of 24,370kW which surpasses maximum generation capacity of all existing electrical generation equipment currently online. Coupled with lack of spare parts and proposed phase-out schedule of Crossley Pielstick Engines in Aimeliik Power Station (see, 2003, Oceanic Companies (Marshalls) Inc., Study), drastically worsen the ever increasing power demand. An immediate Development Study and data collection is warranted by FY2006 to determine the proper course to remedy this impending power shortage.

**-Outline of the Project:**

This Development Study/Data Collection and Design Proposal requests for construction of a new power plant which will be adjacent to the existing power plant and the fuel storage farm, installation of additional switchgear, equipment upgrade of existing Aimeliik Substation, and construct new Koror and Melekeok Substations, to include transmission interconnectivity to the main power source. The proposed outline addresses the following issues, anticipated electrical generation shortfall in FY2007; growing population and expanding infrastructure being developed; and anticipated development of tourism infrastructure and population growth Melekeok State and Babeldaop in the years to come, see attachment.

**-Purpose (short-term objective) of the Project:**

To immediately address the shortage of demanded electricity to support tourism operation (hotels, etc.), increasing population, increased electrical consumerism to support bigger buildings, and replacement of old and costly power generating system in operation at Aimeliik and Malakal Stations; and design facilities to provide adequate power transmission to new capitol building and tourism development planned for sections of Babeldaop.

**-Goal (long-term objective) of the Project:**

The long term goal of the proposed project is as follow:

1. Improve power generation efficiencies at all levels of operations and meet future demand.
2. Increase reliability and handling of increased loads in transmission, distribution and substations.
3. Identifying of power growth demand by sector and establishing strategies and options to control and management options.
4. Develop funding to provide for capital improvement needs.
5. Improve operational efficiencies, management information systems, staffing and training.
6. Implement utility rates that can fully recover all PPUC's cost to continue sustainable

operations, viability of the project and eliminate the need for government subsidy.

7. Improve PPUC's benefits from its invested assets.

8. Address safety, legal liability, and reduce PPUC's exposure to social and financial implications.

**-Prospective beneficiaries:**

The Palau Public Utilities Corporation (PPUC) is the sole provider of electrical generation inter-connectivity to 11 of the 16 States of the Republic of Palau. This area consists of Koror to the south which is the heart of commerce and government operations of the Republic and Ngarchelong to the North, a location recommended by "The Study for Promotion of Economic Development in the Republic of Palau, Oct 2000" (JICA Report) as a future Tourism Base Development Project. The proposed project will benefit approximately 90% (18,000+) of the population occupying the serviced areas and 100% of visitors (tourists) from Japan, USA, Europe, Taiwan and other countries; residing in hotels and other lodging arrangement located in Koror before engaging in any activities in Palau.

Improvements of power generation capacity to the 11 State of the Republic of Palau and as Babeldaop Road (Compact Road) nears its completion and development of commercial, governmental and residential areas expands to the undeveloped Babeldaop areas. Economic and social benefits unrealized will be created to offer better earning and living standards to those communities that are currently experiencing employment shortages and otherwise offer alternative employments to the traditional means of earning to the citizens of Palau. Finally, PPUC will benefit by providing a stable base load power, cost effective and efficient operations and providing a better service at a reasonable rate to people of the Republic of Palau.

**-the Project's priority in the National Development Plan / Public Investment Program:**

During the 6<sup>th</sup> Olbiil Era Kelulau, a Joint Resolution was adopted on May 1&2, 2003 by both Houses of OEK (Congress) endorsing the adoption of "The Public Sector Investment Program 2003-2007 (PSIP)" and "Study for Promotion of Economic Development in Republic of Palau-Final Report ("A JICA Report, Oct 2000)" to Supplement the "The Palau 2020, Master Development Plan. Aside from the National Government Development Plan; The Palau Public Utilities Corporation (PPUC) published a Strategic Plan for 2003-2008 which calls for an upgrade and improvement of power generating capacities in order to provide for a cost effective and improved consumer service.

The 2020 MDP identifies the Republic of Palau as one of the highest consumers of electrical energy in the Pacific Island Nations and West Pacific and identifies the diesel engine in operation as one of the major cost component

in the economy of the Republic. On the onset, it set policies to provide for a strategy to replace and upgrade the existing electrical generation equipment. Highest priority for Development Study , see Office of the President, Republic of Palau, Letter Serial No. 05-23, Addressed to Hon. Naotake Yamashita, Charge d' Affaires, Embassy of Japan, republic of Palau.

**(5) Desirable or Scheduled time of the commencement of the Project:**

We request that the study should commence on JPFY 2006.

**(6) Expected funding source and/or assistance (including external origin) for the Project:**

We submit the study proposal in anticipation that once the necessary study and survey steps are implemented and upon conclusion, we can obtain a recommendation for a viable project and viable source of funding recommendation, to include grant aid assistance and other funding sources.

**(7) Other relevant Projects, if any.**

Currently Republic of Palau does not have any other relevant project application submitted to the Government of Japan.

**(8 ) Any relevant information of the project from gender perspective.**

None, the project benefits the whole population of the Republic of Palau and particular gender perspective issue is none existent, in relation to this project

**2. Terms of Reference of the proposed Study:**

There has been several studies commissioned in relation to power generation projects in Palau; name the Malakal Power Plant in 1998 (ODA Funding and Power Line improvement for Koror and Aimeliik). This will be the first time that Palau requests for Development Study relating to improvement of power generation in both Aimeliik and Malakal Power Stations and construction of substations in Koror and Melekeok States.

**(1) Necessity/Justification of the Study:**

Within the next 2 years Palau will most likely reach its electrical generation capacity, it is anticipated that the study will yield detailed information on the concrete need of this sector and how to best resolve the impending electrical shortfall. Failure to conduct his study could yield detrimental economic affect to the Republic of Palau; especially when such shortfall of electrical generation can impact on 11 of the 16 States in the Republic and its residents, areas that will most likely experience severe impact will be Koror and Melekeok States which happen

to be the seat of the government and main hub for all commerce in Palau. Koror will suffer the most impact, as such; it is the hub of all tourism activity and where majority of hotels and main commercial activities are located.

**(2) Necessity/Justification of the Japanese Technical Cooperation:**

As stated previously, the impending shortage of electricity would directly impact residential, commercial, and government infrastructure. Possible closure of schools, hospitals, stoppage of water supply and interruption or failure of waste-water treatment facilities and other life sustaining program could be realized if such shortage of electricity occurs.

It is anticipated that the study and the Technical Cooperation will yield detailed information on the concrete need of this sector and how to best resolve the impending electrical shortfall. Failure to conduct his study could yield detrimental economic affect to the Republic of Palau; especially when such shortfall of electrical generation can impact on 11 of the 16 States in the Republic and its residents, areas that will most likely experience severe impact will be Koror and Melekeok States which happen to be the seat of the government and main hub for all commerce in Palau. Koror will suffer the most impact, as such; it is the hub of all tourism activity and where majority of hotels and main commercial activities are located.

**(3) Objectives of the Study:**

The Palau Public Utilities Corporation (PPUC) is the sole provider of electrical generation inter-connectivity to 11 of the 16 States of the Republic of Palau. This area consists of Koror to the south which is the heart of commerce and government operations of the Republic and Ngarchelong to the North, a location recommended by "The Study for Promotion of Economic Development in the Republic of Palau, Oct 2000" (JICA Report) as a future Tourism Base Development Project. The proposed project will benefit approximately 90% (18,000+) of the population occupying the serviced areas and 100% of visitors (tourists) from Japan, USA, Europe, Taiwan and other countries; reside in hotels and other lodging arrangement located in Koror before engaging in any activities in Palau.

The goal/objectives of the proposed study are the following:

1. Improve power generation efficiencies at all levels of operations and meet future demand.
2. Increase reliability and handling of increased loads in transmission, distribution and substations.
3. Identifying of power growth demand by sector and establishing strategies and options to control and management options.

4. Develop Preliminary Design and Preliminary Engineering Study
5. Develop recommendation for funding sources.
6. Recommend solutions for operational efficiencies, management information systems, staffing and training.
7. Recommend utility rates that can fully recover all PPUC's cost to continue sustainable operations, viability of the project and eliminate the need for government subsidy.
8. Recommend facilities design to needed improvements of power generation capacity to the 11 State of the Republic of Palau and as Babeldaop Road (Compact Road) nears its completion and development of commercial, governmental and residential areas expands to the undeveloped Babeldaop areas.

**(4) Area to be covered by the Study:**

This Development Study/Data Collection proposal requests for construction of a new power plant adjacent to the existing power plant and the oil storage farm, installation of additional switchgear, new power generation equipment, equipment upgrade of existing Aimeliik Substation, and construct new Koror and Melekeok Substations and interconnectivity of the new substations to the main power source . The proposed outline addresses the following issues, anticipated electrical generation shortfall in FY2007; growing population and expanding infrastructure being developed; and anticipated development of tourism infrastructure and population growth in Melekeok State and Babeldaop in the years to come (see attachment 2-3 )

**(5) Scope of the Study:**

We propose the study/data collection to encompass the following scope:

- Analysis of operability and condition of existing electrical generation equipment and facilities Aimeliik and Malakal Power Stations.
- Site survey for proposed location of the new power plant and electrical generation equipment in Aimeliik.
- Site survey for Koror and Melekeok Substations, to include transmission line interconnectivity with main electrical generation facilities.
- Site survey for Aimeliik substation's upgrade and inspection of existing equipment.
- Analysis and determination of long term needs for electrification requirement of the serviced areas



(Koror and Babeldaop).

- Preliminary Design and Preliminary Engineering Study of facilities and equipment.
  
- Determination of schedule and level of personnel training for recommended equipment and facilities.
  
- Survey and analyze level of expertise needed in order to effectively implement and maintain the project.
  
- Identify utility rates that can fully recover all PPUC's cost to continue sustainable operations, viability of the project and elimination of the need for government subsidy.

**(6) Study Schedule:**

We request for the study/data collection to commence around May-June 2006.

**(7) Expected Major Outputs of the Study:**

The study is expected to yield the following:

- Recommendation of short and long term electrical generation capacity/demand to meet population growth, infrastructure development, commercial development in support of all tourism activities and development and increasing residential expansion for Koror and Babeldaop.
  
- Analysis and recommendation on design and implementation of electrical generation equipment ~~and facilities to yield optimum utilization and maximize its operational cycle for a viable project.~~
  
- Recommendation on implementation of technical expertise in support of electrical equipment installation, operational, maintenance and related training upkeep.
  
- Recommend viable funding sources, to include grant aid assistance.

**(8) Possibility to be implemented /expected funding resources:**

We submit the study proposal in anticipation that once the necessary study and survey steps are implemented and upon conclusion, we can obtain a recommendation for a viable project and viable source of funding recommendation, to include grant aid assistance and other funding sources.

**(9) Environmental and Social Considerations:**

Please see attached Environmental Screening Sheet.

**(10) Request of the Study to other donor agencies, if any:**

None. There has been several studies commissioned in relation to power generation projects in Palau; namely the Malakal Power Plant in 1998 (ODA Funding and Power Line improvement for Koror and Aimeliik). This will be the first time that Palau requests for Japan Development Study relating to improvement of power generation in both Aimeliik and Malakal Power Stations and construction of substations in Koror and Melekeok States.

**(11) Other relevant information:**

- Palau 2020, National Master Development Plan
- Republic of Palau Public Sector Investment Program (PSIP), 2003-2007
- The Study for Promotion of Economic Development in the Republic of Palau, October 2000 (JICA Report)
- Palau Public Utilities Corporation Strategic Plan for 2003-2008

**3. Facilities and information for the Study:**

The counterpart for the study is the Chairman of the Board of Directors. Brief information on the Chairman is listed below: see attachment 4 for complete Bio-Data.

**Doroteo NAGATA, Chairman, Board of Directors (Member since 1998-Present)**

P.O. Box 1372

Koror, Republic of Palau 96940

Telephone: (680) 488-3872, Fax: (680) 488-4499

Email: [bod@ppuc.com](mailto:bod@ppuc.com)

**(2) Available data, information, documents, maps, etc. related to the Study:**

Please, refer to list of attachment in the back.

**(3) Information on the security conditions in the Study Area:**

Republic of Palau does not have issue with facilities and personnel security. However, Palau Government and PPUC representatives will be accompanying personnel dispatched for this study. Additionally, all existing facilities are manned 24 hours, with gated entrance.

#### **4. Global Issues (Gender, Poverty, etc.)**

We believe that all citizens of Palau will benefit from such project. Improvements of power generation capacity to the 11 State of the Republic of Palau and as Babeldaop Road (Compact Road) nears its completion and development of commercial, governmental and residential areas expands to the undeveloped Babeldaop areas. Economic and social benefits unrealized will be created to offer better earning and living standards to those communities that are currently experiencing employment shortages and otherwise offer alternative employments to the traditional means of earning to the citizens of Palau. Finally, PPUC will benefit by providing a stable base load power, cost effective and efficient operations and providing a better service at a reasonable rate to people of the Republic of Palau.

#### **(5) Any constraints against the low-income people caused by the Project.**

None, The Study to improve the electrical power system will benefit all citizens and visitors of the Republic. One of the goals of the study is to recommend solutions to the shortage of electricity and proper utility pricing to the consumers.

#### **5. Undertaking of the Republic of Palau**

(1) To facilitate the smooth conduct of the Study; the Government of the Republic of Palau shall take necessary measures:

- 1) To permit the members of the Team to enter, leave and sojourn in the Republic of Palau for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
- 2) To exempt the members of the Team from taxes, duties and any other charges on equipment, machinery and other material brought into the Republic of Palau for the implementation of the Study;
- 3) To exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowance paid to the members of the team for their services in connection with the implementation of the Study;
- 4) To provide necessary facilities to the Team for the remittance as well as utilization of the funds introduced into (the recipient country) from Japan in connection with the implementation of the Study;

(2) The Government of (the recipient country) shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the team.

(3) The Ministry of Resources and Development shall act as counterpart agency to the Japanese Study Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

(4) The Ministry of Resources and Development and Palau Public Utilities Corporation shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:

- 1) Security-related information on as well as measures to ensure the safety of the Team;
- 2) Information on as well as support in obtaining medical service;
- 3) Available data and information related to the Study;
- 4) Counterpart personnel;
- 5) Suitable office space with necessary office equipment and furniture;
- 6) Credentials or identification cards; and
- 7) Vehicles with drivers.

(5) The Ministry of Resources and Development will, as the executing agency of the project, take responsibilities that may arise from the products of the Study.

The Government of the Republic of Palau assures that the matters referred to in this form will be ensured for the smooth conduct of the Development Study by the Japanese Study Team.

Signed:  \_\_\_\_\_

Title: MINISTER, MINISTRY OF RES. & DEV.

On behalf of the Government of the Republic of Palau.

Date: 8.15.05

**Screening Format for Environmental and Social Impact Assessment**

**Name of the Project:** The Study for the Upgrading of Electrical Power Supply in the Republic of Palau

**Implementing Agency:** Ministry of Resources and Development

Minister Fritz Koshiba

P.O. Box 100

Koror, Republic of Palau 96940

Telephone: (680) 488-2701, Fax: (680) 488-3380

Email: [mrd@palaunet.com](mailto:mrd@palaunet.com)

**Implementing Sector:** Palau Public Utilities Corporation (PPUC)

Drotheo Nagata, Chairman, Board of Directors

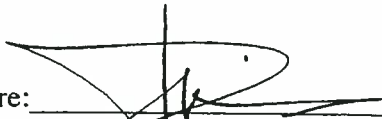
P.O. Box 1372

Koror, Republic of Palau 96940

Telephone: (680) 488-3872, Fax: (680) 488-4499

Email: [boc@ppuc.com](mailto:boc@ppuc.com)

Signature: \_\_\_\_\_



Date: \_\_\_\_\_

8.15.05



2-3 Description of the Project:  
(Scale and/or Basic Information)

Phase 1

- Supply of New Diesel Generators (2 x 3.5MW)
- Installation work for New Diesel Generators
- Supply of Spare Parts
- Construction of New Power House (882 sq.m)
- Supply and installation of Electrical facilities including Service Transformer

Phase 2

- Supply of New Diesel Generators (2 x 3.5MW)
- Installation work for New Diesel Generators
- Supply of Spare Parts
- Upgrade of Existing Aimeliik Substation
- Construction of New Koror Substation
- Construction of New Melekeok Substation and 34.5kV Transmission Line

Phase 3

- Supply of New Diesel Generators (3 x 3.5MW)
- Installation work for New Diesel Generators
- Supply of Spare Parts
- Extension of Power House (378 sq.m)

2-4 Is the project consistent with the higher program/policy?

- Yes: Please describe the higher program/policy.  
( National Master Development Plan )

No

2-5 Did the proponent consider alternatives before this request?

- Yes: Please describe outline of the alternatives  
( Malakal Power Station expansion project )

No

2-6 Did the proponent have meetings with related stakeholders before this request?

- Yes       No

If yes, please mark the corresponding stakeholders.

- Administrative body

Bureau of Land Survey, Ministry of Finance, Bureau of Public Works, Division of Parks & Tourism , Office of Marine & Coastal Protection, Environmental Quality Protection Board (EQPB).

- Local residents
- NGO
- Others (

Question 3

Is the project a new one or an on-going one? In case of an on-going one, have you received strong complaints, etc., from local residents?

- New       On-going (there are complaints)       On-going (there are no complaints)  
 Others

Question 4 Name (s) of laws or guidelines:

Environmental Quality Protection Board (EQPB) Environmental regulations

Is Environmental Impact Assessment (EIA) including Initial Environmental Examination (IEE) required for the project according to the laws or guidelines in the host country?

- Yes       No

If yes, please mark corresponding items.

- Required only IEE      ( Implemented,  on going,  planning)  
 Required both IEE and EIA      ( Implemented,  on going,  planning)  
 Required only EIA      ( Implemented,  on going,  planning)

Others:

According to EQPB Environmental regulations the following permits are to be obtained;

- 1) Earthmoving Permit
- 2) Air pollution Permit

Question 5

In the case when EIA steps were taken, was the EIA approved by the relevant laws in the host country? If yes, please mark date of approval and the competent authority.

(Date of approval: \_\_\_\_\_ Competent authority: \_\_\_\_\_ )

Not yet, started an appraisal process

Others : ( \_\_\_\_\_ )

Question 6

If the project requires a certificate pertaining to the environment and society other than the EIA, please indicate the title of that certificate.

- Already certified       Required a certificate but not yet done

Title of the certificate : ( \_\_\_\_\_ )

Not required

Others



Question 7

Are any of the following areas located inside or around the project site?

Yes                             No                             Not identified

If yes, please mark corresponding items.

- National parks, protected area designated by the government (coast line, wetlands, reserved area for ethnic or indigenous people, cultural heritage), and areas being considered for national parks or protected areas
- Virgin forests, tropical forests
- Ecological important habitat areas (coral reef, mangrove wetland, tidal flats)
- Habitat of valuable species protected by domestic laws or international treaties
- Likely salts cumulus or soil erosion areas on a massive scale
- Remarkable desertification trend areas
- Archeological, historical or cultural valuable areas
- Living areas of ethnic, indigenous people or nomads who have a traditional lifestyle or special socially valuable areas

Question 8

Does the project have adverse impacts on the environment and local communities?

Yes                             No                             Not identified

Reason:

- The Government owns the site. Land in Palau, due to the traditional system, is very hard to obtain and may required generations of families to agree to any transfers.
- The site is already in use as a power station with all facilities such as fuel storage, sewage water separators, security fencing. There is surplus land available within existing boundaries.
- There is an existing trained workforce who would not be dislocated from their existing positions and no economic hardships will be incurred.
- The site is not near to any populated areas.
- The Plant construction will not impact upon any general condition of local residents or others.
- Fuel is readily available from properly constructed and maintained onsite storage facilities.
- No historical or cultural artifacts have been found or located within the site boundaries.
- There are no reported endangered species habitats within the site boundaries and surroundings.

### Question 9

Please mark related environmental and social impacts, and describe their outlines.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Air pollution       | <input type="checkbox"/> Involuntary resettlement   |
| <input checked="" type="checkbox"/> Water pollution     | <input type="checkbox"/> Local economy such as employment and livelihood etc.                                     |
| <input type="checkbox"/> Soil pollution                 | <input type="checkbox"/> Land use and utilization of local resources  |
| <input type="checkbox"/> Waste                          | <input type="checkbox"/> Social institutions such as social infrastructure and local decision-making institutions |
| <input checked="" type="checkbox"/> Noise and vibration | <input type="checkbox"/> Existing social infrastructures and services   |
| <input type="checkbox"/> Ground subsidence              | <input type="checkbox"/> The poor, indigenous of ethnic people  |
| <input type="checkbox"/> Offensive odors                | <input type="checkbox"/> Misdistribution of benefit and damage  |
| <input type="checkbox"/> Geographical features          | <input type="checkbox"/> Local conflict of interests  |
| <input type="checkbox"/> Bottom sediment                | <input type="checkbox"/> Gender   |
| <input type="checkbox"/> Bio and ecosystem              | <input type="checkbox"/> Children's rights  |
| <input type="checkbox"/> Water usage                    | <input type="checkbox"/> Cultural heritage  |
| <input type="checkbox"/> Accidents                      | <input type="checkbox"/> Infectious diseases such as HIV/AIDS etc.  |
| <input type="checkbox"/> Global warming                 | <input type="checkbox"/> Others ( )   |

#### Outline of related impacts:

##### Air pollution

Pollution in the form of NO<sub>x</sub>, SO<sub>x</sub> and Carbonic gases, and dust coming from combustion of diesel fuel (Bunker A) in engines.

##### Water pollution

Pollution of the shoreline due to sewage water including oily water residues coming from the power plant.

##### Noise and vibration

Permanent noise and vibration derived from the operation of the generation units inside the plant.

### Question 10

#### Information disclosure and meetings with stakeholders

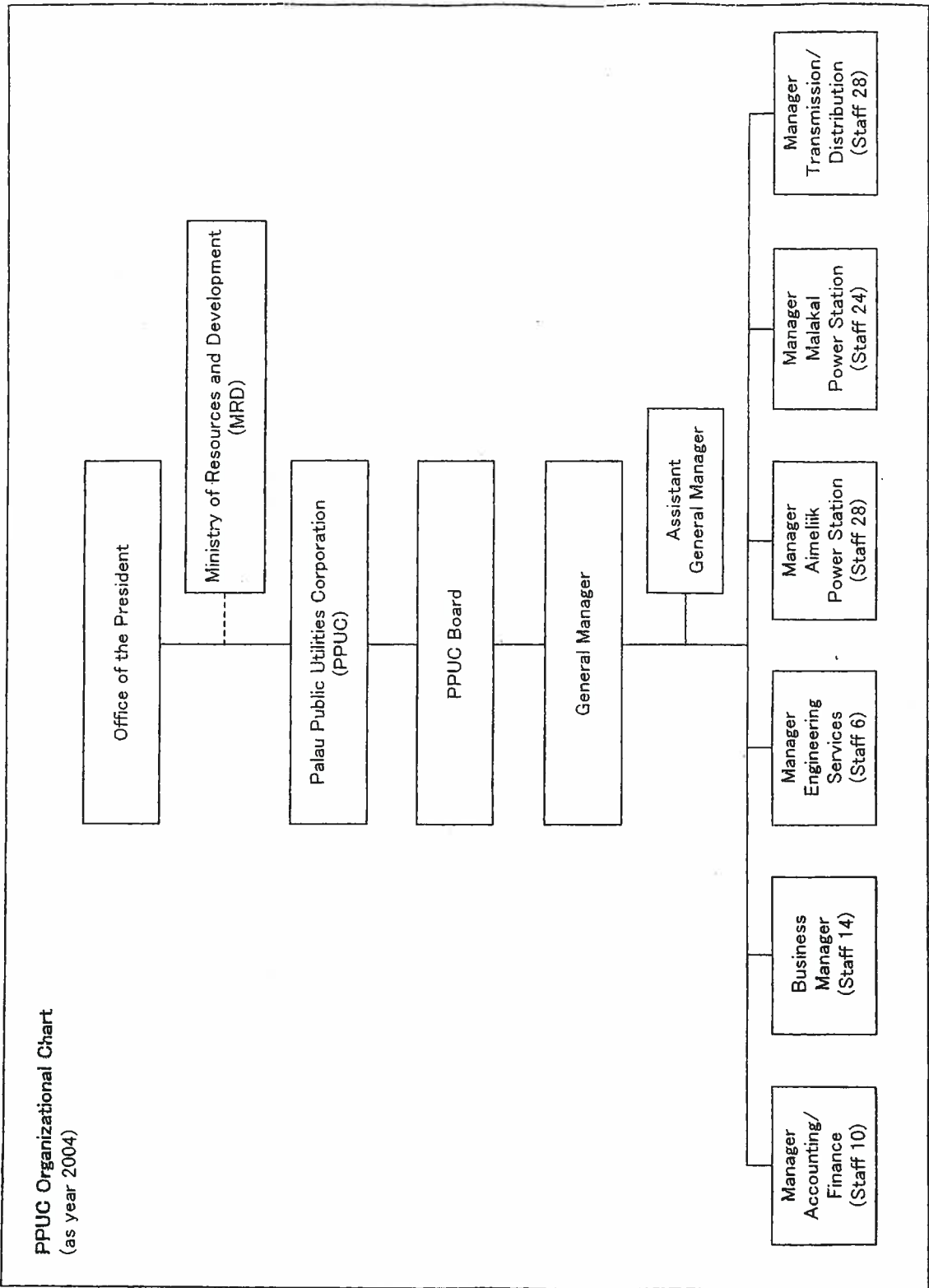
10-1 If environmental and social considerations are required, does the proponent agree on information disclosure and meetings with stakeholders in accordance with JICA Guidelines for Environmental and Social Considerations?

- Yes                       No

10-2 If no, please describe reasons below.

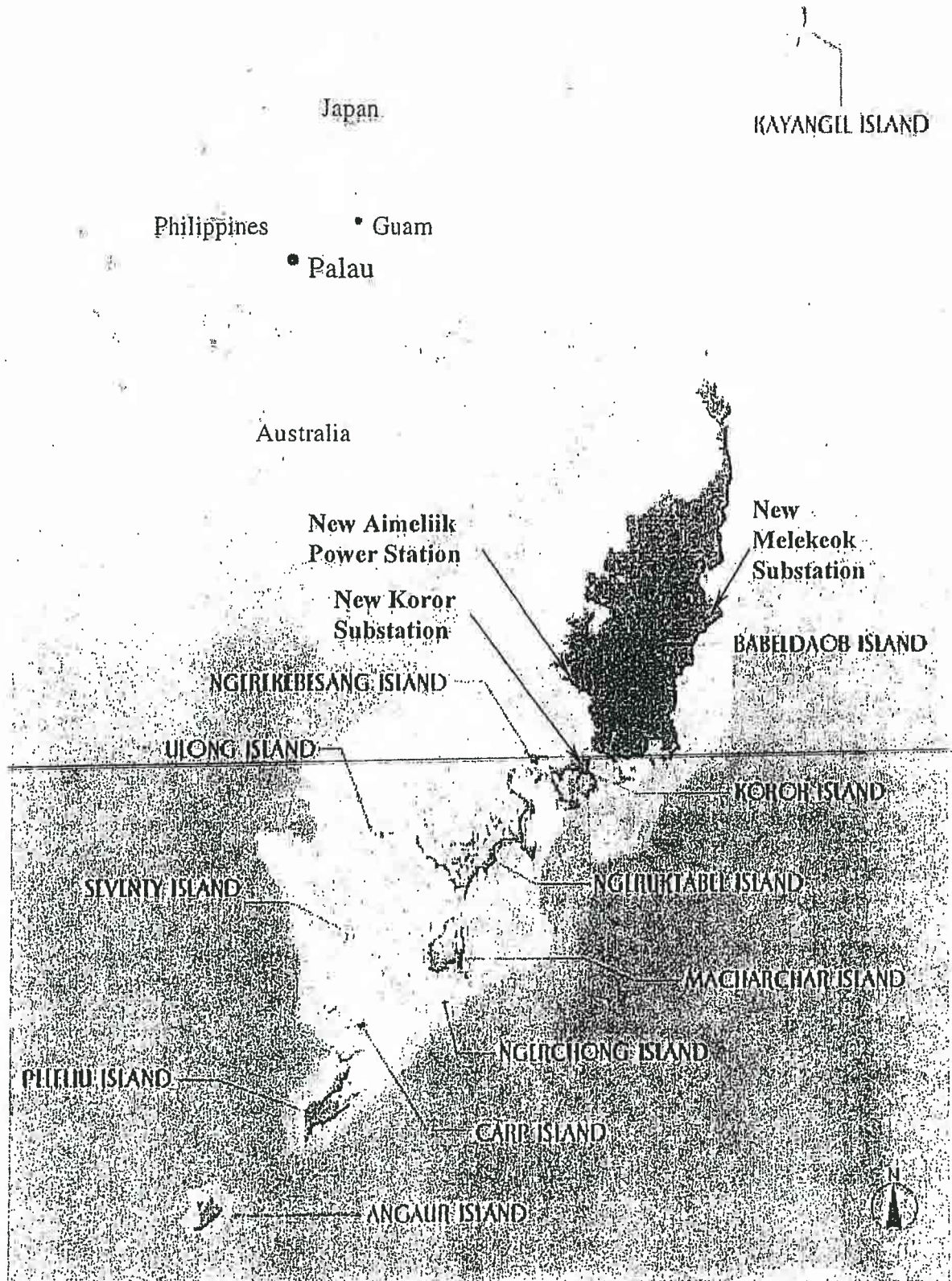
### List of Attachments

1. PPUC Organization Chart
2. General Project Location Map
3. PPUC Palau Power Network Map
4. Bio-Data for Doroteo NAGATA, Chairman, Board of Director
5. Proposed New Plant Location
- 6-7. Pictures of existing Equipment and Substations

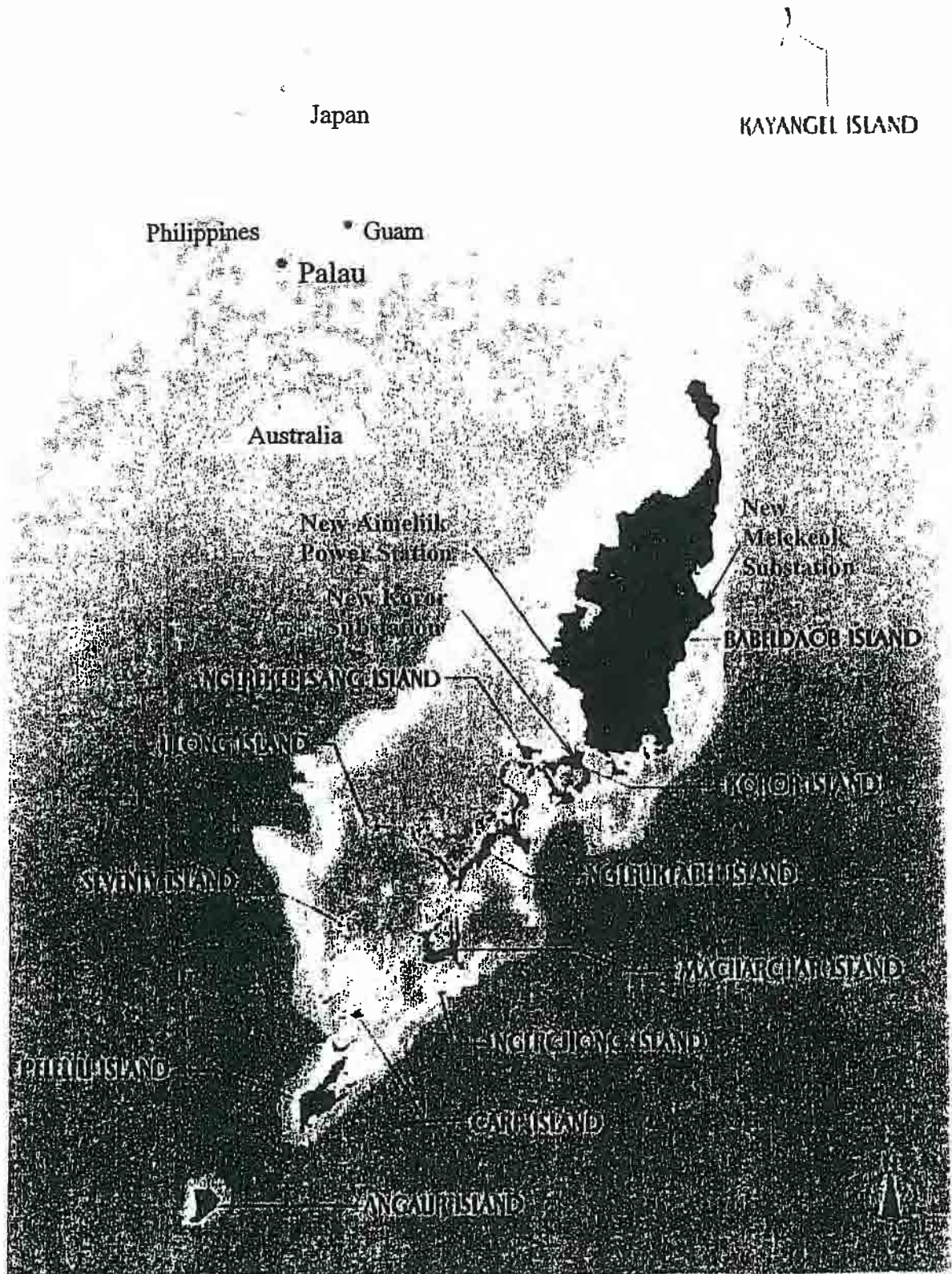


ATTACHMEN 1

# Project Location Map

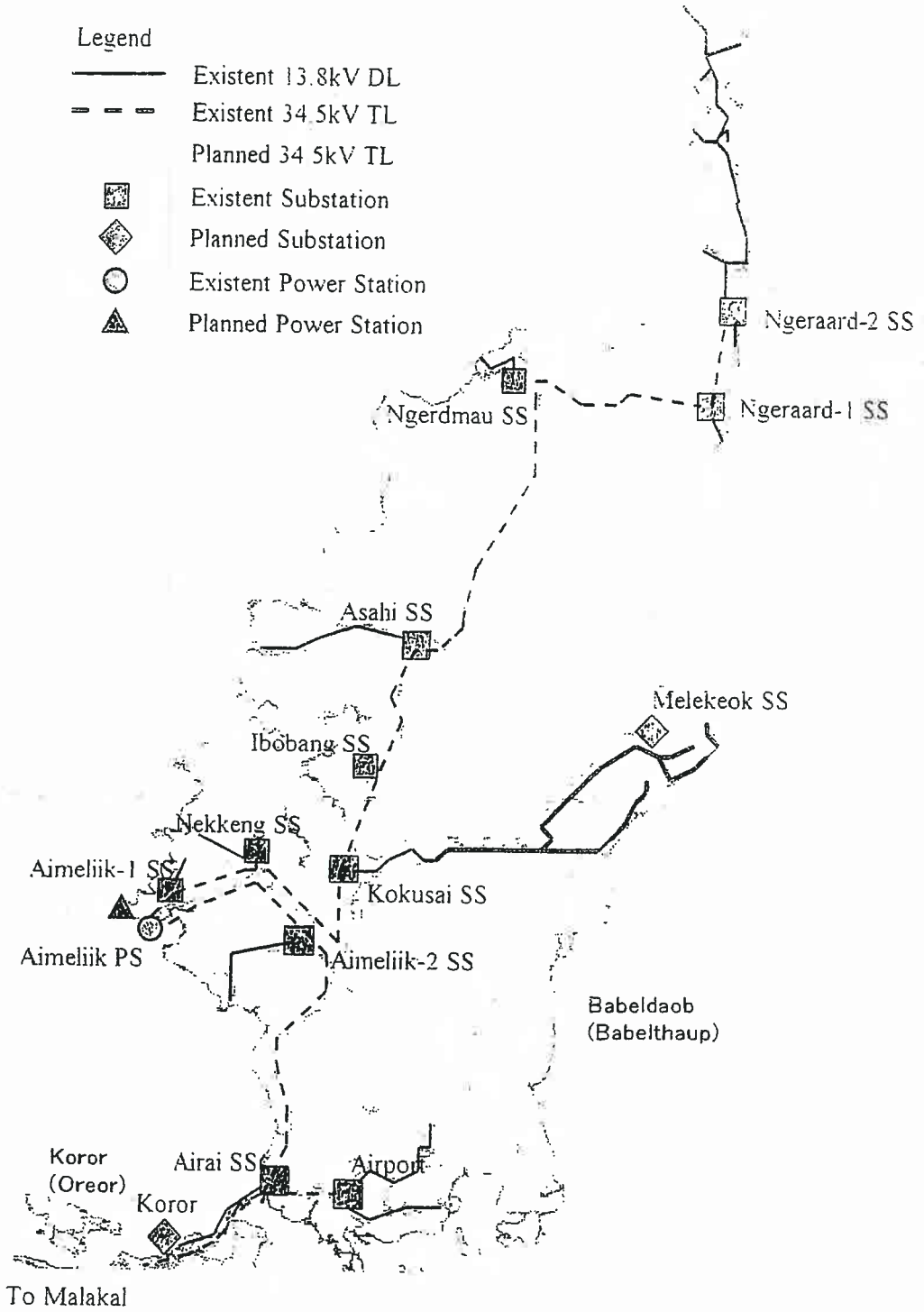


# Project Location Map



ATTACHMENT 2

# Palau Power Network



ATTACHMENT 3

## RESUME

Doroteo Nagata  
P.O Box 1335  
Koror, Republic of Palau 96940

### Education:

University of Hawaii at Manoa  
Graduated 12/80, Master of Education, Educational Administration  
Graduated 8/77, Bachelor of Education - Secondary Education

Maui Community College  
Graduated 5/74, Associate in Liberal Arts and Associate in Science, Automotive  
Technology

Pohnpei Agriculture and Trade School (PATS)  
Graduated - 1972 - Diploma

### Experiences:

10/84 - Present

Executive Director, Palau Community Action Agency. Responsible for the whole administration and operation of Palau CAA. Responsible for the development and growth and maintenance of the organization including providing leadership, vision, and innovation in the development and implementation of the long and short range goals in support of the strategic plan. This includes draft and finalize programs and make recommendations to the Board concerning programs, fiscal policies and regarding the most effective use of available funds. Responsible for communications and public relations with local agencies, governments and all funding sources. Write and develop grant proposals.

8/84-9/84

Deputy Director, Palau Community Action Agency. Assisted the Executive Director with planning, coordination and supervision of Palau CAA Office.

10/81-7/84

Media Director for Palau CAA. Coordinated and supervised Palau CAA Media Component. Organized the production of television and radio Programs. Handled all necessary promotion and publicity. Assisted Community Education Director with planning, coordinating, directing and supervision of the Agency Community Education Component supervised newsletter staff. Wrote and edited articles for Palau CAA Newsletter.

ATTACHMEN 4



**2/81-8/81**

**Extension Services Coordinator for College of Micronesia. Selected and recruited extension course instructors, recruited, placed and counseled students. Assisted in the assessment of needs and desires of the Community for Continuing Education. Prepared classes and examinations schedules.**

**8/77-8/79**

**Education Specialist for Micronesia Occupational College. Assisted the Dean of Instruction with planning, coordination and supervision of Instructional Services Department. Prepared classes and examinations schedules. Prepared for approval and acceptance course offerings and programs description for inclusion in the MOC catalogue. Assisted in the development of curriculum, materials and courses of studies and selection of text book.**

**5/74-8/77**

**Classroom Instructor, Micronesia Occupational College. Taught Mathematics and drive education classes.**

**Special Trainings and Workshops attended:**

**April 2005 – Head Start Issues, Building Davis Bacon, In-kind Board and Policy Councils and Regulations updated.**

**June 2004 – Indepth Review of OMB Circulars**

**Aug. 2003 – Head Start PRISM Training at Honolulu.**

**Jan. 2002- Head Start PRISM Training at Honolulu.**

**Nov. 2001- Integrated Strategic & Finance Planning , Phonpei, FSM.**

**Nov. 2001- CAA Strategic Planning Workshop at Honolulu Hawaii.**

**July 2001- 2<sup>nd</sup> Grant Funded Program Management Nevada.**

**July 2000- Grant Funded Program Management Nevada.**

**1999- NACAA Winter Training “CAA new Initiative “ San Diego California.**

**1998- Pacific Power Association Conference.**

**1997- Development of Country Framework for Informal Employment and Sustainable.**

**1996- Outer Pacific Head Start Grantee Training at San Francisco California.**

- Sept. 1995-Principle of Management and Program Analysis Virginia.**
- 1995- Principles of Management and Program Analysis.**
- 1995- Neighborhood Reinvestment Training Institute at Atlanta Georgia.**
- 1994- Tips, Tools, and Techniques for strengthening you agency.**
- 1993- Child Outcome and neglect- Sponsored by University of Guam Pacific Basin and Maternal Child Health Program.**
- Nov. 1992 - National Fiscal and Administrative roundup - Regulation update, Correcting Agency Problems in Regard to Federal Wage and Hour Law.**
- Oct. 1992 - National execution of UNDP Funded Projects.**
- Oct. 1992 - Strategic Planning Workshop.**
- May 1992 - Financial Management for Non-Fiscal Administrators: "What You Really Need to Know".**
- Nov. 1991 - Child Care Development Plan Training.**
- Oct. 1991 - Headstart Fiscal and Administrative Management Seminar.**
- May 1991 - Quality Management Abuse and Neglect Prevention Services.**
- June 1990 - CAA Executive Development Institute, 2nd year.**
- April 1990 - National Youth Professionals' Institute.**
- Jan. 1990 - Runaways and Drugs: Reclaiming our youth in the 90's through improved training for services.**
- Dec. 1989 - Grantsmanship Training.**
- Dec. 1989 - Health & Drug Abuse Issue Conference: Helping people to help themselves.**
- May 1989 - CAA Executive Development Institute - Leadership Development, Motivating, Employees and Decision Making and Strategy, Northeast Missouri State University.**
- Feb. 1989 - Western Pacific Substance Abuse Prevention Institute University of Guam.**

**Dec. 1987- Grants Proposal Writing Workshop, Honolulu, Hawaii Communication.**

**Oct. 1987 - Management & Leadership Course, Koror, Palau.**

**Jan. 1987 - Fiscal Management Training.**

**June 1986 - Youth Development Training.**

**Oct. 1985 - Master Executive Training Institute, Texas Tech. University.**

**1979-1980- EWC Scholarship, East-West Center Grant.**

**Grants/Awards/Membership in Organization:**

**May 2005 – Present-Chairman, Board of Directors, Palau Public Utility Corporation.**

**2004 – Present – Member GEF SGP Sub Regional Steering Committee.**

**2004 – Present – Member Project Oversight Committee, Capacity Development for National Planning and Monitoring Programme.**

**2001-Present- Committee on Alternative**

**2000- Member, Sustainable Tourism Task Force**

**1999-Present- Board of Directors, Workforce Investment Act.**

**1999-1999 – Member, Agriculture Task Force.**

**1998-Present- Member, Board of Directors, Palau Public Utility Corporation.**

**1996-1997- Member, Committee on Population**

**1994-1998- Member, JTPA Board of Directors.**

**1993-2000 – Member, Palau Vocational Rehabilitation Board.**

**1992-1994- Member, Rural Health Outreach Task Force.**

**1991 - 1992 – Member, Palau Cultural Exposure Committee**

**1989 - 1990 - Member, Palau Parent Network For Special Children**

**1988 - 1990 - Vice President - Guam/Micronesia Youth Network**

**1986 - 1990 - Member, Palau Art Festival Organization.**

**1985 -1986 - Co Chairperson, National Coordinating Committee for youth**

**1984 – 1986-President, Micronesian Community Action Directors Organization**

**1982-1986 - Chairperson, Belau Amateur Basketball Associate**

**1979-1980-President, Pan Pacific Club, East-West Center, Hawaii**

**1978-1979-Member, Right to Read Task Force**

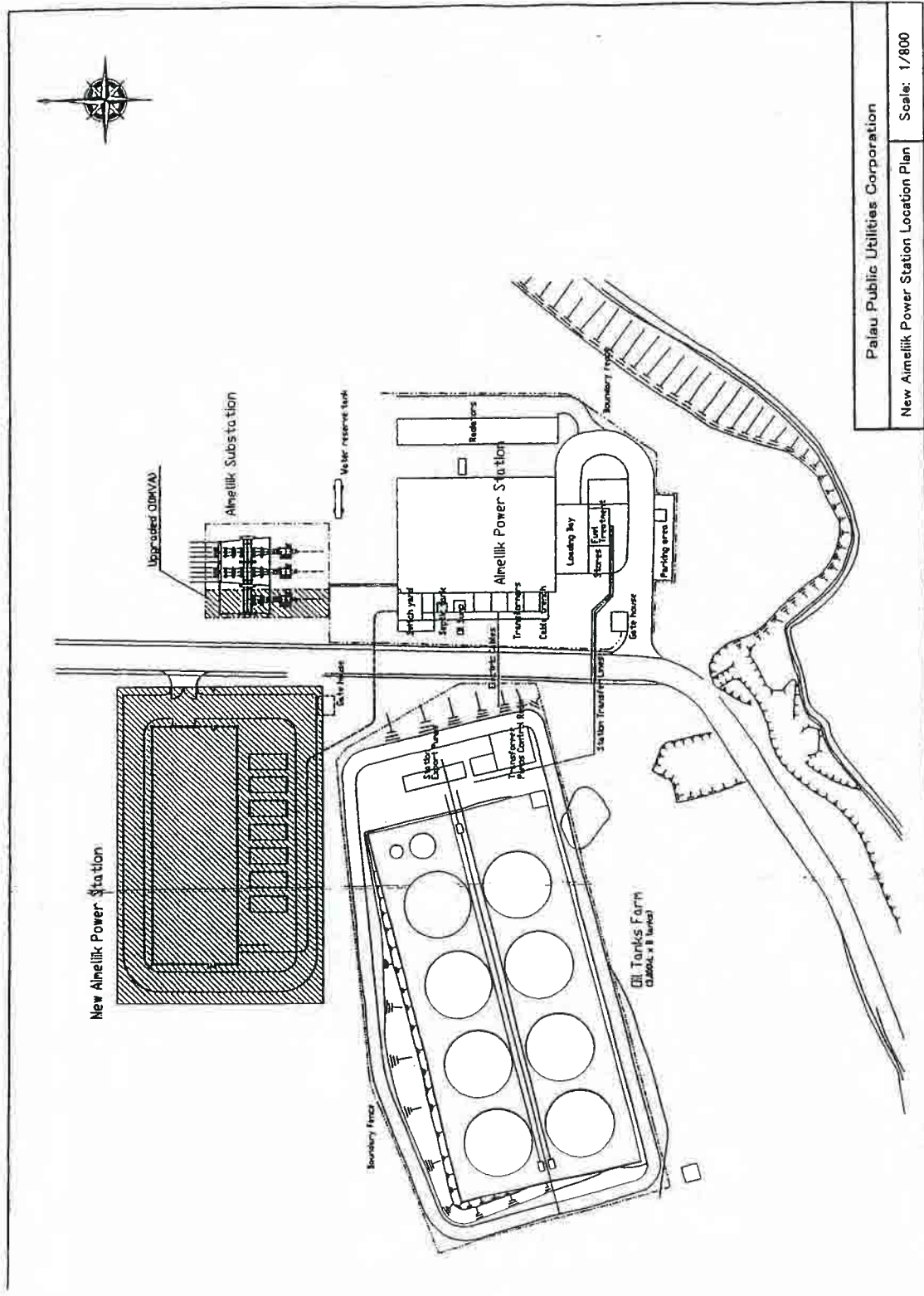
**1976-1977 - EPDA Scholarship Educational Professional Development Art Grant**

**1972-1976 - TTPI Scholarship Trust Territory of the Pacific Island Scholarship**

**1972-1974 - President, Micronesian Club, Maui, Hawaii**

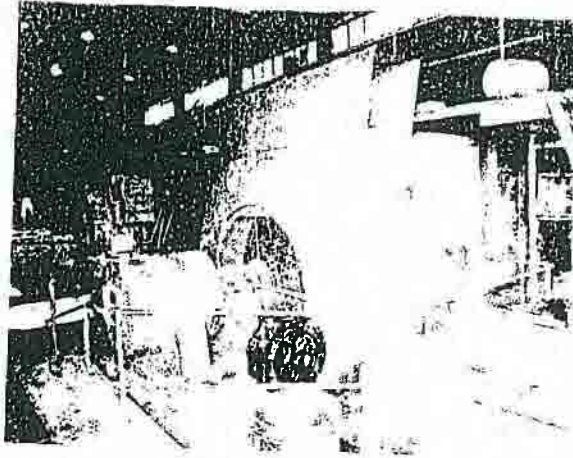
**References:**

**Furnished upon requested.**

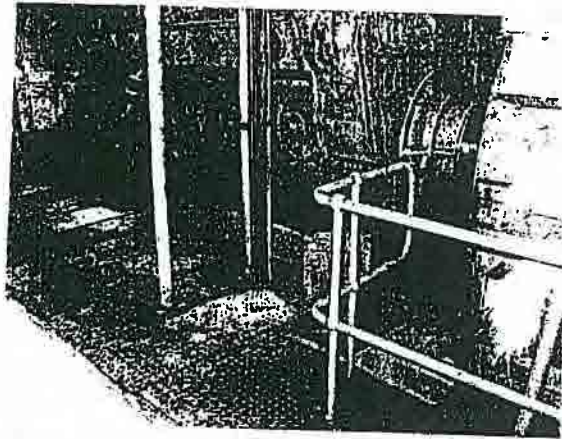


Palau Public Utilities Corporation  
 New Aimeilik Power Station Location Plan  
 Scale: 1/800

ATTACHMENT 5



Picture 1  
Existing Amelik Power Station  
generator unit #2)

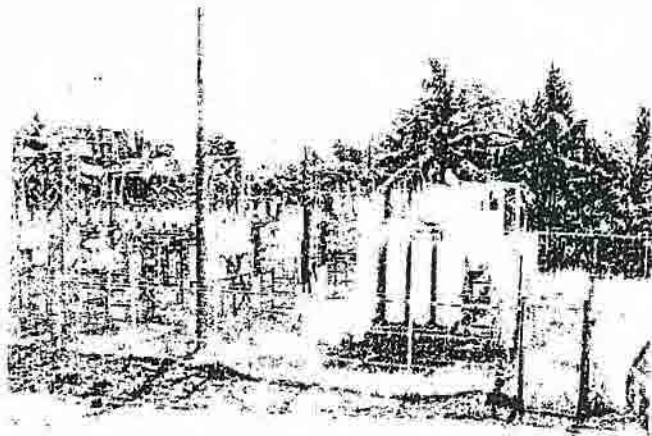


Picture 2  
Existing Amelik Power Station  
(engine unit #4)

AMELIK POWER PLANT STATISTICS	
PERIOD COVERED OCTOBER 1985 TO	
TOTAL KW HRS. PRODUCED:	1000
TOTAL NO. OF HRS.	1000
TOTAL NO. OF HRS.	1000
FUEL TO KW HRS.	1000
AVE. FUEL OIL CON.	1000
AVE. L.O. CONSUMPTION/DAY	1000
TOTAL FUEL CONSUMPTION	1000
TOTAL FUEL WASTE	1000
TOTAL FUEL RECYCLED	582,245 Gal.
TOTAL FUEL	1000

Picture 3  
Statistics of Plant  
from Jan 31 to May 9  
downtime: 20 hrs 06 min  
fuel consumption: 0.286L/kWh

ATTACHMENT 6



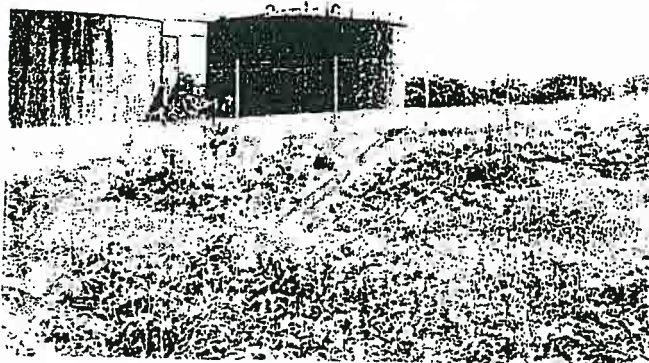
Picture 4

Existing Aimelik Substation



Picture 5

New Aimelik Power  
Station Site



Picture 6

New Aimelik Power  
Station Site  
(Oil tank farm)

*ATTACHMENT 7*

## 7. 収集資料リスト

No.	タイトル、著者及び内容	使用言語	入手先	入手日	備考
A	政策一般及び組織				
A-1	Public sector investment program (PSIP) 2003 – 2008	English	JICA/パラオ事務所	10/31/06	コピー
A-2	PPUC organization chart	English	PPUC	10/31/06	コピー
A-3	Bureau of Public Works, MRD organization chart	English	MRD	10/31/06	コピー
B	PPUC資料				
B-1	Public Utilities Corporation Financial statements and independent auditors` report, years ended September 30, 2005 and 2004	English	PPUC	10/31/06	冊子
B-2	Approved schedule of electricity service rates for fiscal year 2005 effective October 01, 2004	English	PPUC	10/26/06	コピー
B-3	PPUC power plant annual report for 2004, 2005 and 2006	English	PPUC	10/26/06	コピー(2006) 電子ファイル(2004及び2005)
B-4	Substations & Power lines, Substations Capacity, Plants, Substations, Power	English	PPUC	10/31/06	コピー(地図)
B-5	Genset capacity for big establishment	English	PPUC	10/31/06	コピー
C	再生可能エネルギー				
C-1	Pacific Islands Energy Policy and Strategic Action Planning Annual report	English	MRD	10/31/06	冊子
C-2	Pacific regional energy assessment 2004, Palau national report volume 9	English	MRD	10/31/06	冊子
C-3	Draft Sonsorol and Tobi states solar home system rehabilitation project	English	MRD	10/31/06	電子ファイル
D	環境保全				
D-1	Environmental Quality Protection Board Regulations	English	EQPB	10/30/06	コピー
D-2	Palau EQPB permit application/review process and environmental impact statement process	English	EQPB	10/30/06	コピー
D-3	Guide to environmental impact assessme	English	EQPB	10/30/06	コピー
D-4	EQPB permit application, Application for historic clearance, Earthmoving application checklist and earthmoving permit application	English	EQPB	10/30/06	コピー