

**Application
For
Generation Licence**

Laverton North Power Complex

Laverton North Power Pty Ltd
(ACN 094 248 156)

Contents

CONTENTS	2
1. INTRODUCTION	3
2. APPLICANT'S DETAILS	3
2.1 THE APPLICANT	3
2.2 REGISTERED OFFICE	3
2.3 DIRECTORS	4
2.4 COMPANY STRUCTURE AND MAJOR SHAREHOLDERS	4
3. BUSINESS ACTIVITIES OF THE APPLICANT AND ITS PARENT GROUP	4
3.1 INTRODUCTION	4
3.2 MAJOR ACTIVITIES OF SINGAPORE POWER	5
4. FINANCIAL, TECHNICAL AND HUMAN RESOURCES AVAILABLE TO THE APPLICANT ..	5
4.1 FINANCIAL RESOURCES OF SP	5
4.2 OPERATIONAL EXPERIENCE OF SP AND SPI	6
4.3 DEVELOPMENT AND CONSTRUCTION EXPERIENCE OF SP AND SPI	6
4.4 EXPERIENCE OF SPI MANAGEMENT	6
4.5 EXPERIENCE OF LNP DIRECTORS	6
5. DETAILS OF THE PROPOSED FACILITY	7
5.1 MANAGEMENT STRUCTURE	7
5.2 PROPOSED GENERATION FACILITY	8
5.3 CURRENT STATUS	9
5.4 DETAILS OF PROPOSED CONNECTION TO NETWORK	9
6. APPLICATION	9
6.1 CROSS-OWNERSHIP	9
7. GENERAL OBJECTIVES	9
7.1 BENEFITS TO THE ELECTRICITY NETWORK	9
7.2 ADDITIONAL BENEFITS TO VICTORIA	11
ATTACHMENT 1: CERTIFICATE OF REGISTRATION ON CHANGE OF NAME	12
ATTACHMENT 2: SINGAPORE POWER INTERNATIONAL EXPERIENCE	13
ATTACHMENT 3: MAP OF SITE LOCATION	14
ATTACHMENT 4: EQUIPMENT CONFIGURATIONS	15

1. Introduction

Singapore Power International Pte Ltd, through its subsidiary Laverton North Power Pty Ltd (ACN 094 248 156) (the Applicant), proposes to develop Laverton North Power Complex which will produce up to 270 MW of simple-cycle, natural gas fired generation capacity for export into the national wholesale electricity market. A site has been selected and the required Works Approvals Applications have been lodged with the Environmental Protection Authority and Wyndham City Council. As required by Section 18 of the Electricity Industry Act 2000 (the Act), this document is submitted to the Office of the Regulator General ("ORG") in application for a licence to generate electricity for supply and sale.

2. Applicant's Details

2.1 The Applicant

Laverton North Power Pty Ltd ("LNP"), was incorporated in Victoria as SPI Auswire Holdings Pty Ltd on 23 August 2000. A copy of the Certificate of Registration on Change of Name is included as Attachment 1.

2.2 Registered Office

The registered office of LNP is:

Minter Ellison
Rialto Towers
525 Collins Street
Melbourne VIC 3000
Australia

Contact Details for LNP are:

Laverton North Power Pty Ltd
PO Box 222
Collins Street West
Melbourne
Victoria 8007
Australia
Attention: Mr Edward Douglas
Telephone: +61(0)3 9658 6333
Fax +61 (0)3 9658 6303

2.3 Directors

The directors of LNP are:

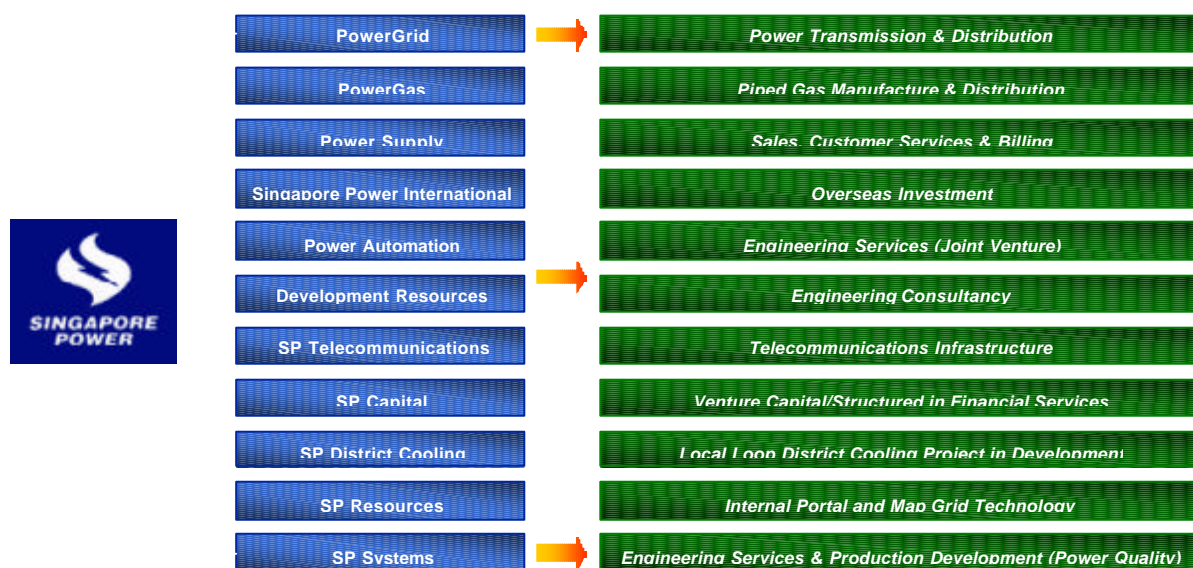
- a) Mr John Christopher Brown
- b) Ms Lim Cheng Cheng
- c) Mr Koh Boon Chye
- d) Mr John Mackintosh Walter*

*Will step down 31 December 2001

2.4 Company Structure and Major Shareholders

LNP is a wholly owned subsidiary of Singapore Power International Pte Ltd ("SPI"), the international development and investment arm of Singapore Power Ltd ("SP").

Figure 1: Organisation structure of SP and its various subsidiaries including SPI is set out below.



3. Business Activities of the Applicant and its Parent Group

3.1 Introduction

The Applicant's sole business will be to develop, construct, own and operate a simple-cycle, gas-fired power generation facility with a capacity of up to 270 MW at Laverton North, Melbourne.

3.2 Major Activities of Singapore Power

3.2.1 Introduction

LNP's parent company, Singapore Power International Pte Ltd ("SPI"), is the overseas energy arm of Singapore Power Ltd ("SP") and is responsible for all of SP's investment in energy and energy related projects in the international market. SP is one of the largest corporations in Singapore and one of the largest electric and gas utilities in Asia.

The table below highlights SP's key statistics for the financial year 2000/2001.

Key Financial Statistics US\$ m¹	2000/01	Key Operating Statistics	2000/01
Revenues	2,852	Electricity Sales (GWh)	29,000
Operating Profit	759	Gas Sales (million units)	1,364
Net Income	743	Installed Generation Capacity	
Total Assets	8,809	- Power Senoko ²	2,670 MW
Total Debt	2,854	- Power Seraya ²	2,290 MW
Shareholder Equity	5,726	- SPI (Net ownership)	866 MW
		Electricity Transmission & Distribution	29,400 km
		SPI PowerNet Transmission Network	6,000 km

¹Assumed Exchange Rate US Dollar/Singapore Dollar = 1.8

²Power Senoko and Power Seraya were divested in April 2001

SP is a vertically integrated electric and gas utility supplying energy to the Singapore market. In its core utility business, SP has extensive experience in generating and supplying electricity and importing and distributing natural gas to residential, commercial and industrial customers. SPI is one of the largest developers of independent power projects in Asia. SPI, backed by the collective resources of SP, has assembled a strong and competent team to undertake the development and implementation of any type of energy project in the global energy market.

3.2.2 SPI Assets

SPI owns 100% interest in SPI PowerNet, the regulated transmission service provider in Victoria. In addition, SPI has investments in generation and co-generation assets totaling more than 2,700 MW of which SPI's share is 866 MW.

4. Financial, Technical and Human Resources Available to the Applicant

4.1 Financial Resources of SP

SP is one of Singapore's largest companies with assets totaling US\$8.8 billion*. SP is able to fund its investments from its strong operating cash flow.

In 2000/01, SP recorded an annual turnover of about US\$2.85 billion and a net profit after tax of about US\$740 million. A financial summary of SP and its group of companies for the last 5 years is as follows:

As of 31 March	2001	2000	1999	1998	1997
Total Assets S\$bn	15.86	13.72	12.01	11.70	10.9
Net Operating Cash Flow S\$bn	0.95	1.66	2.09	1.85	1.71
Gearing (Net Debt/Total Assets)	32%	16%	15%	10%	17%
Net Operating Margin	24%	29%	38%	37%	29%

The Singapore Power Group is 99.99% owned by Temasek Holdings Ltd., the holding company of the Government in Singapore, with the balance of one special share owned by the Ministry of Finance in Singapore. The Singapore Power Group is currently rated “AAA” by Standard & Poor’s with stable outlook.

* Assumed Exchange Rate US Dollar/Singapore Dollar = 1.8

4.2 Operational Experience of SP and SPI

SP has extensive experience in operating efficient and reliable power generation facilities. As the corporatised successor of the Public Utilities Board, it inherited the latter’s 95 years of experience and expertise in a fully integrated power business including generation, transmission, distribution as well as the related engineering strength. Until 1 April 2001, SP was the owner of Power Senoko and Power Seraya which are the owners and operators of 5641 MW of oil-fired, gas-fired and combined cycle power plants in Singapore.

SPI owns a portfolio of generation and industrial co-generation facilities in Asia amounting to 866 MW of net generation capacity and more than 5440 t/h of steam production. Details of selected generation facilities are given in Attachment 2.

4.3 Development and Construction Experience of SP and SPI

SP and SPI have extensive experience in the development and construction of more than 5900 MW of power generation capacity. Details of some selected projects are given in Attachment 2.

4.4 Experience of SPI Management

SPI controls and operates 11 generation plants with a gross capacity of 2700 MW including one of the largest portfolios of industrial co-generation facilities in Asia. SPI employs 50 local staff in its corporate head office in Singapore and more than 1300 employees in the 6 countries in which it has operations. SPI, with the collective resources of the SP Group, brings to its overseas projects and investments, the following strengths;

- ◆ SP’s experience as a vertically integrated energy business
- ◆ A proven track record of operating efficiency and reliability in the electricity generation, transmission and distribution business
- ◆ SP’s AAA credit rating from Standard & Poor’s

4.5 Experience of LNP Directors

Mr John Christopher Brown

Mr Christopher Brown is Senior Vice President of Singapore Power and Managing Director of Singapore Power International. He leads SPI’s team of professionals in developing, financing, constructing and operating SPI’s overseas energy projects.

Mr Brown is a Fulbright Scholar in Economics and Finance. He holds a Law degree from Villanova University in Pennsylvania, USA, and an Honours degree from the University of Delaware, USA.

Prior to joining Singapore Power, Mr Brown was a Director for three years with Entergy Corporation in its Hong Kong office. His distinguished career also includes appointments as Business Development Manager and Counsel to Baltimore Gas and Electric (BGE) affiliate Constellation Holdings in the USA; and as an Attorney at the international law firm of Schnader Harrison Segal & Lewis in the USA.

Under Mr Brown's leadership, SPI has invested over S\$ 1.7 Bn of equity and owned a total of 17 power plants with a gross capacity of 2,700 MWs, a 33,370 M/T per hour water treatment plant and a transmission network in the state of Victoria, Australia.

Presently, SPI owns assets in Australia, China, Taiwan, Korea, Indonesia, Philippines, Thailand, and Korea.

Ms Lim Cheng Cheng

Ms Lim joined Singapore Power International Pte Ltd ("SPI") in August 1996 as a Financial Analyst. Two years later, in August 1998, she was promoted to Manager of Finance, and most recently to Finance Director in July 2000. She leads a competent team of finance managers, accountants, and financial analysts whose role is to spearhead potential investments and to manage the diversified investments of SPI.

Prior to her appointment in SPI, she was a Supervisor in the Audit and Business Advisory Department in Price Waterhouse (currently known as Price Waterhouse Coopers).

Ms Lim graduated from the Nanyang Technological University with a Bachelor of Accountancy in 1993. She is currently a non-practicing member of the Institute of Certified Public Accountants of Singapore.

She was recently awarded the CFO Asia Best Practice Award 2000 under the Mergers and Acquisition category by CFO Asia Magazine.

Mr Koh Boon Chye

Mr Koh joined Singapore Power International Pte Ltd ("SPI") in 1998. He was promoted to Finance Manager in July 2000 and leads a team of financial analysts in valuation and structuring of SPI overseas investments.

Prior to his appointment in SPI, he was a Supervisor in the Audit and Business Advisory Department at Price Waterhouse (currently known as PriceWaterhouseCoopers).

Mr Koh graduated from the Nanyang Technological University with a Bachelor of Accountancy in 1995. He is currently a Chartered Financial Analyst under the Association for Investment Management and Research.

5. Details of the Proposed Facility

5.1 Management Structure

As part of SPI's continued investment in generation businesses in the region, the LNP facility will be operated as a stand-alone business unit under the direct management of SPI in Singapore. LNP will be managed by a newly appointed Operations Manager, based in Melbourne, who will report directly to the Asset Management Director, SPI, Singapore. The appointee will be suitably experienced in all areas of power generation management and will also have the expertise to manage LNP's regulatory compliance obligations. He will be responsible for all operational, commercial and regulatory matters concerning the facility.

The facility is designed to operate as a peaking generation plant and will therefore operate with a very low capacity factor. In line with common operating practice, the plant will be

designed to operate as an unmanned facility and will be dispatched remotely via an off-site control system. The Operations Director will directly manage all aspects of remote operation, in particular the bidding of the facility's capacity to NEMMCO, the wholesale market operator. It is intended that the facility will generate its revenues almost exclusively from the sale of wholesale electricity to the national electricity market ("NEM").

A technician will be based at the plant during conventional day shift hours and will carry out all routine maintenance as well as co-operate with specialist maintenance contractors to provide support during planned outages and vacations. The technician will also provide 24/7 on-call service coverage allowing out of hours response to alarms raised by the operator.

All LNP staff will be suitably trained and accredited in power plant operations by professional power plant instructors.

The plant will be a market scheduled generator in the National Electricity Market ("NEM").

5.2 Proposed Generation Facility

Due to narrowing reserve margins and increases in peak demand levels, a gap now exists in the mid-merit and peaking portions of the Victoria/South Australia bid stack. The Laverton North Power Complex, which LNP plans to construct, own and operate, will produce up to 270 MW of open-cycle, natural gas-fired generation capacity for export into the national wholesale electricity market.

Construction of the complex is expected to begin no later than Q4 2002. Progressive commissioning of the units is scheduled to begin Q1 2003 and commercial operation is planned to commence in February 2003.

The complex is to be located in the Laverton North industrial estate on a 2 hectare site between Cherry Lane and Maria Street, Melbourne. A map detailing the proposed site of the complex is given in Attachment 3.

In order to provide commercial flexibility in the purchasing of plant equipment and to avoid price and delivery constraints caused by current market conditions for new gas turbines, the exact equipment type and configuration have not yet been finalised. However, six alternative configurations have been specified in LNP's submission to the Environmental Protection Authority and these form the basis of the project's Works Approval Applications. The six configurations and the corresponding gas turbine models are given in Attachment 4.

All configurations share the following common attributes:

- ◆ The plant will have dual fuel capability. The plant's main fuel, natural gas, will be delivered via a 1 km spur from the GPU GasNet, Brooklyn to Corio 350 mm pipeline near Laverton City Gate. Dry Low NOx combustion systems will be fitted to the gas turbines to ensure compliance with the requirements of the State Environment Protection Policy (Air Quality Management). A reserve tank capable of holding sufficient liquid fuel supply for 10 hours continuous running will be maintained by the Applicant as back-up supply in the event that gas supply is interrupted.
- ◆ The units have "quick start" capability allowing a 'cold start' to 'full load' sequence to be achieved in a few minutes.
- ◆ Power from the plant will be exported to the 220 kV transmission system via connection to the adjacent HV Altona Terminal Station.

5.3 Current Status

At the date of this application the project status is as follows:

- ◆ A Planning Permit Application was lodged with Wyndham City Council on 18 September 2001, and is under consideration.
- ◆ A Works Approval Application was lodged with the Environmental Planning Authority on 18 September 2001, and is under consideration.
- ◆ LNP plans to register with NEMMCO as an *Intending Participant* of the National Electricity Code under clause 2.7 upon receipt of the Generation Licence and Works Approvals and will subsequently seek registration with NEMMCO under clause 2.2 of the National Electricity Code as a market generator prior to commissioning of the plant.
- ◆ LNP plans to commission the operation of up to 270 MW of capacity by 31 January 2003.

5.4 Details of Proposed Connection to Network

The Laverton North plant will connect to the 220kV transmission system. The connection agreement with SPI PowerNet will cover:

- ◆ Provision of an interconnection to the Laverton North site
- ◆ Operation and Maintenance of the interconnection

In addition to the connection agreement, LNP will enter into a network support agreement with SPI PowerNet for LNP to provide energy to the transmission system at times when SPI PowerNet's supply points are constrained.

6. Application

6.1 Cross-Ownership

The Electricity Industry Act 2000 contains provisions prohibiting cross ownership of transmission and generation assets. However, Section 68(8A) provides specific exemption relating to the development of 'green fields' generating capacity. LNP requests a determination from the ORG that this exemption applies to the new facility on the basis that (a) LNP is proposing to establish a new facility for the generation of electricity for supply or sale, (b) SPI has held the interest in LNP and will continue to hold the interest in LNP from the time that the licence for the facility is issued, and (c) LNP will only be licensed to generate electricity for supply or sale at the facility.

7. General Objectives

7.1 Benefits to the Electricity Network

Current reserve margins in Victoria are below the guidelines set by NEMMCO (See Figure 2 below) and therefore insufficient generation capacity is available to ensure security of supply at all times. The proposed project will add quick-start, dual-fuel, peaking generation to the NEM helping to maintain the reliability of power supply at levels set by the Reliability Panel.

In addition, and due in large part to the increasing use of air conditioning and reverse cycle heating systems, *peak demand growth* has far exceeded the overall growth in energy consumption. The result of this is that Victoria exhibits an exaggerated demand profile whereby maximum demand levels are required on only a few days in each year. Natural gas fired generation offers the cleanest and most cost effective means of providing the capacity additions required to meet these peak demands.

The proposed LNP facility will employ leading-edge gas turbine and DLN emission control technologies thereby providing clean and efficient peaking generation capacity to the Victorian electricity market at a cost likely to minimise the cost of energy to electricity consumers.

The units will operate in peaking mode and the long run capacity factor will vary between 3 and 5% depending on system conditions. Factors contributing to eventual capacity factors are temperature patterns; supply/demand balance; and, system outage rates.

In summary, the Laverton North Power Complex will provide power during peak demand periods in Victoria and will:

- ◆ Improve supply reliability
- ◆ Increase reserve margins
- ◆ Increase competition
- ◆ Help minimise the cost of energy to consumers

Summer Reserve Margins in Combined Victoria-South Australia Region

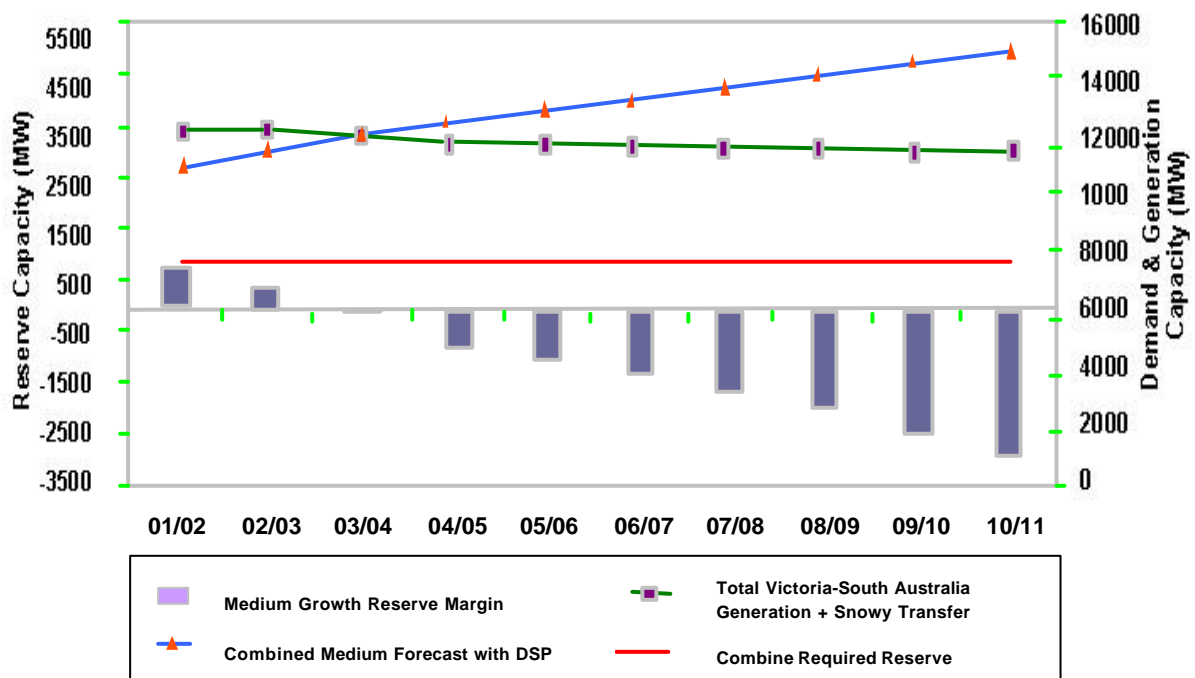


Figure 2: Ten Year Outlook for the Combined Victoria and South Australia Summer Supply/Demand Balance. Source: NEMMCO 2001 Statement of Opportunities – 30 March 2001.

7.2 Additional Benefits to Victoria

LNP also provides the following benefits;

- ◆ The Laverton North site is in an industrial area of Melbourne already designated for industrial development. The site is located adjacent to a transmission substation and it requires minimal construction of network infrastructure. Power generated near the load center negates the requirement for transmission augmentation and provides for lower transmission losses than would be the case if generation produced in the Latrobe Valley, was transmitted over already heavily loaded lines. The site also offers advantages from a voltage control perspective, and may defer the need for additional capacitor banks in the metropolitan area.
- ◆ The proximity of the plant to large industrial power and steam users offers excellent potential for the future development of co-generation facilities. Increases in efficiency and the economies of scale provided by a commercial co-generation facility should contribute to lower overall emissions levels in the Laverton North industrial area.
- ◆ The facility will create between forty and fifty local employment positions during the construction phase and between one and two direct full-time jobs in operations and routine maintenance following commissioning.

Attachment 1: Certificate of Registration on Change of Name

Copy is available for viewing at the Office of the Regulator-General,
Level 1, 35 Spring St Melbourne Vic 3000.

Attachment 2: Singapore Power International Experience

Operational Experience

SPI owns and operates a portfolio of generation and industrial co-generation facilities throughout Asia amounting to 866 MW of net generation capacity and more than 5440 t/h of steam production. A selection of these facilities is given below:

Project and SPI Equity Ownership	Country	Gross Capacity	Status
Hefei Power Plant, Anhui (16%)	China	700 MW	In commercial operation
Ever Power Combined Cycle Power Station (25%)	Taiwan	920 MW	In commercial operation
Samsung General Chemicals Co-Generation Plant (100%)	Korea	92 MW	In commercial operation
Dagang Industrial Co-Generation Plant, Jiangsu (51%)	China	222 MW	In commercial operation
Cixi Diesel Power Plant	China	30 MW	In commercial operation
Suzhou 115MW Industrial Co-Generation Plant (51%)	China	115 MW	In commercial operation
Ningbo Industrial Co-Generation Plant, Zhejiang (51%)	China	78 MW	In commercial operation
Serang Industrial Co-Generation Plant (95%)	Indonesia	175 MW	In commercial operation
Karawang Industrial Co-Generation Plant (95%)	Indonesia	94 MW	In commercial operation
Tangerang Industrial Co-Generation Plant (95%)	Indonesia	22 MW	In commercial operation
Pare-Pare Diesel Power Plant (95%)	Indonesia	62 MW	In commercial operation

Construction Experience

SP and SPI have extensive experience in the development and construction of more than 5900 MW of power generation capacity.

Project	Country	Capacity	Status
Hefei Power Plant, Anhui	China	700 MW	In commercial operation, June 2001
Ever Power Combined Cycle Power Station	Taiwan	920 MW	In commercial operation. Oct 2001
Senoko Power Station Development Stages II and III	Singapore	1250 MW	In commercial operation. Stage II 1979, Stage III 1983.
Seraya Power Station Development Stages I, II, III	Singapore	2250 MW	In commercial operation. Stage I 1979, II 1983, III 1983.
Senoko Combined Cycle Power Station Development	Singapore	850 MW	In commercial operation. Jan 1997.

Attachment 3: Map of Site Location

Provided as a separate file document.

Attachment 4: Equipment Configurations

Summary of Equipment Configurations and Layout Options

Option	No units, nom. MW	Unit Layout	Make and Model
1	2 x 125	Longitudinal	General Electric, Frame 9E
2a	2 x 45	Longitudinal	General Electric, Frame 6B
2b	2 x 45	Longitudinal	Alstom, GTX 100
4a	2 x 45	Parallel	General Electric, Frame 6B
4b	2 x 45	Parallel	Alstom, GTX 100
5	2 x 125	Parallel	General Electric, Frame 9E
6	2 x 125	Parallel	General Electric, Frame 9E
8	4 x 68	Parallel	Siemens V64.3