# CHAPTER 4

# GAS DISTRIBUTION SECTOR

## 4.1 Introduction

As the emphasis was placed on the diversification of the energy resources, the Malaysian Government decided on the use of natural gas in the domestic market. The government appointed the Japan International Cooperation Agency (JICA) in 1985 to undertake a study on the viability of gas reticulation in the Klang Valley. The report concluded that the project was not viable mainly due to the restriction area of reticulation i.e. Klang Valley which has a high number of residential homes where usage was limited only to cooking. However, JICA suggested that the natural gas project would be profitable if it is a national project.

Subsequently, in 1989 PETRONAS, on behalf of the Government, appointed the Consumer Gas of Canada (CONGAS) to carry out a feasibility study of using natural gas on a wider scale covering the whole of Peninsular Malaysia with emphasis on the industrial and commercial customers. This project was found viable and led to the formation of a new sector in the gas industry i.e. the gas distribution sector.

This chapter discusses the development of the gas distribution sector where Gas Malaysia Sdn Bhd (GMSB) which was appointed by PETRONAS to undertake the distribution of gas to end-users. This chapter also explains the structure of GMSB, its market and the regulatory body which regulates it.

## 4.2 Privatization of the NGDS

In most countries, the public sector dominates all aspects of infrastructure services. In Malaysia, due to the public sector's failure in providing these services efficiently and effectively, many of the infrastructure services have been privatized. The infrastructure sectors that have been privatized are roads, ports, water supply, electricity, airports, telecommunications, sewerage and the Light Rail Transit System.

In June 1990, the Malaysian Government approved the NGDS project to be implemented on a privatized Build, Own and Operate (B.O.O) basis. PETRONAS Prospectus inviting[9] interested local and foreign companies to participate in this project, were issued on December 24th, 1990. Interested local and foreign companies submitted their proposals on Feb. 18, 1991. In July 1991, the Malaysia Mining Corporation/Shapadu Consortium and Tokyo Gas/Mitsui Consortium were selected as the local and foreign partners, respectively, to participate together with PETRONAS. The Letter of Intent was signed by all parties on August 20, 1991. A project task force was set up to review the CONGAS report and re-appraise the project, prior to full scale implementation. The task force feasibility study report, completed in February 1992, confirmed that the project would be viable on a long term basis.

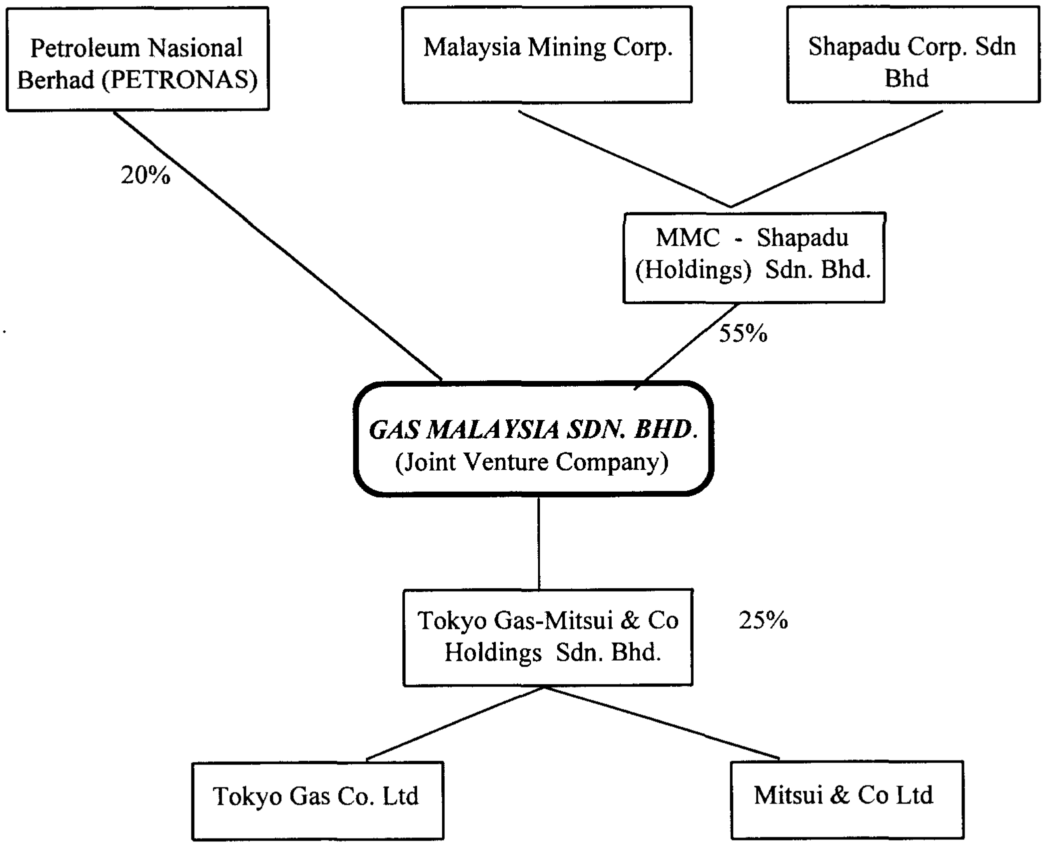
The Joint-Venture Agreement between Malaysia Mining Corporation/Shapadu Consortium, Tokyo Gas/Mitsui Consortium and PETRONAS which was signed on March 30, 1992 by all parties paved the way for the formation of

Gas Malaysia Sdn Bhd (GMSB), the first public gas utility (but privately owned) in Peninsular Malaysia, which was registered on May 16, 1992. Diagram 4.1 shows the equity distribution of the company. PETRONAS owns 20 percent, Malaysia Mining Corporation/Shapadu Consortium (MMSC) owns 55 percent and Tokyo Gas/Mitsui Consortium (TGMC) owns 25 percent of the equity distribution.

As GMSB is set-up based on the B.O.O concept, the company is responsible for financing and carrying out the investments required to meet the objectives specified in its Join-Venture Agreement. Therefore, it gives GMSB absolute ownership rights to the assets, unlike other privatization schemes like leasing and Build Own Transfer (B.O.T), where ownership of assets is transferred at the end of the concession period. As GMSB falls under the B.O.O scheme to be able GMSB to operate or provide the services, it requires an operating license, which is issued by the Department of Electricity and Gas for a period of 30 years specifying the terms and conditions.

Diagram 4.1

## Equity Structure of Gas Malaysia Sdn Bhd




## 4.3 Organization Structure

GMSB was incorporated in Malaysia on 16 May 1992, under the Companies Act 1965 with an authorized capital of RM300 million comprising of 300,000 shares of nominal value RM1,000 each, inclusive of one special "golden share"[10] of RM1,000 belonging to PETRONAS.

The GMSB shareholders have specific roles as partners in the company. The Malaysian partners are expected to provide sound financial support with efficient management and engineering backing to enable successful operation of the NGDS. As gas distribution is a new industry in Malaysia, foreign partners were invited to provide most of the technical know-hows, training and technology-transfer, and Research & Development efforts for the project in order to ensure the highest standards in project planning, implementation and commercial operations which includes safety.

PETRONAS by being a partner in GMSB, projects confidence to the public on supply reliability and at the same time, ensures that the government's privatization and national objectives are met. As owners of the golden share, PETRONAS is conferred certain rights and powers under the articles of the Joint Venture Agreement. Matters such as the alteration of the share capital of GMSB, the sale, mortgage and disposal of its undertaking or suspension of its operation or abandonment of its project, will only be effective with the written consent from PETRONAS.

Gas Malaysia's organization structure is shown in Diagram 4.2. Customers are given utmost importance in line with GMSB's mission statement to become Malaysia's premier utility company. To achieve this, GMSB has to provide excellent service to its customers. Therefore, the establishment of regional offices will help to have a closer contact with its customers.

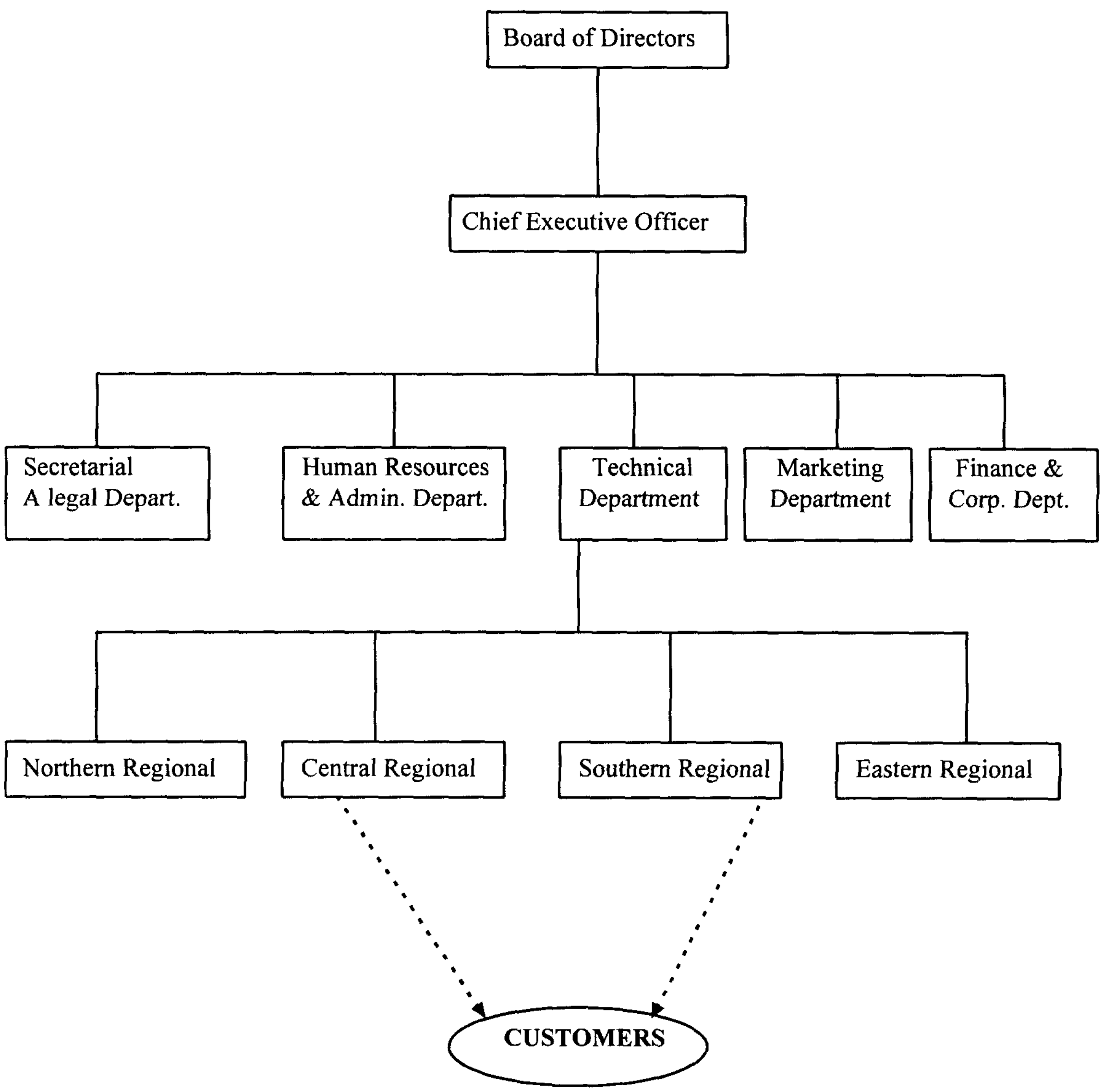
GMSB is managed by the Board of Directors consisting of 9 members of whom, 5 Directors are nominated by MMSC, 2 Directors from TGMB and 2 Directors from PETRONAS. The chairman of the Board of Directors is appointed from the persons nominated by MMCS.

The company is operated by the Head Office in Kuala Lumpur and 4 regional offices; namely Central Region in Shah Alam, Southern Region in Pasir Gudang, Eastern Region in Gebeng and Northern Region in Penang. All the regional offices are in operation and their functions are to undertake sales to potential industrial, commercial and residential customers, and oversee and monitor construction works. Branches under the Regional Office will be set-up to manage day-to-day customer business and safety services. The organization structure plays a vital role in the formulation and implementation of GMSB's business plans. This is because GMSB's business plan is to establish a solid business foundation for the company by securing the initial core of industrial estates (customers) in Peninsula Malaysia. Therefore the establishment of the regional centers help to achieve this objective.

Staffing is carried out in compliance with the government policy on employment and training. GMSB will minimize the employment of non-Malaysian personnel unless no locals are suitable for such positions because of the relevant qualifications. Currently, GMSB has a staff strength of about 200, with 4 persons seconded from Tokyo Gas, Japan. By the year 2011, manpower requirement is expected to grow to 1,554 to serve 603,249 customers[11].

Diagram 4.2

## GMSB Organization Structure




Source : GMSB

### 4.4 Regulatory Body

The PETRONAS Letter of Invitation makes it clear that the utility company will be regulated by a new Regulatory Body. This is because prior to the establishment of the gas distribution company, there wasn't a gas act. GMSB, being a private gas utility company providing essential services to the public, needs to be controlled and regulated. Therefore, the government enacted the Gas Supply Act (GSA) 1993 to regulate the supply and distribution of gas, both natural gas and LPG. At present, the Gas Supply Regulation 1997 is being drafted. Once the draft regulation is finalized, it will be submitted to parliament to be approved and subsequently enacted.

The Department of Electricity was appointed as the regulatory body because the distribution of electricity is similar to the distribution of gas. Therefore, the Director General of Electricity was appointed as the Director General of Gas and the department, renamed to be *The Department of Electricity and Gas* (JBE&G)[12]. Under the GSA, the Director General, with the approval of the Ministry In Charge of Petroleum (Prime Minister) can grant, suspend or revoke license for the supply of gas. GMSB was given the **gas utility license** to supply natural gas in Peninsular Malaysia for the duration of 30 years beginning 1993.

## 4.5 Competition

In practice, the distribution network of Gas Malaysia Sdn Bhd has no direct competition. Even though the product, natural gas, competes with other fuels like LPG, Diesel, fuel oil, coal and electricity, it does not have direct competition from any other firm. But, the license to GMSB does not state a monopoly or exclusive rights. This is because, under the GSA 1993, the Director General of Electricity & Gas Supply can grant the gas distribution license to any company that he finds fulfills all reasonable demands of gas, as stated in section 4 of the Gas Supply Act.

The monopoly of GMSB is mainly due to two factor. First, the natural gas distribution system is a natural monopoly where its investment is sunk and two NGDS is a waste of resource and is not economical. Second, the exclusivity is derived from the concession (Joint-Venture Agreement), an understanding between PETRONAS and GMSB[13]. Moreover, the government has acknowledged that there is not much scope for increasing competition with natural monopolies[14].

However, if competition is to be introduced in the distribution sector it will be by open access of the pipeline (unbundling the transport of gas from its ownership) where there will be separation between cost of transportation service and the purchased gas. This will create an alternative market where large industrial users can buy gas directly from the transmission company i.e. Petroans Gas, paying a fee for the transport of gas to GMSB. This competition will encourage competitive market price for gas.

## 4.6 Market Demarcation

Gas Malaysia's core business is to implement the NGDS throughout Peninsular Malaysia and supply gas to three targeted sectors i.e. industrial, commercial and residential. The transportation sector is excluded as it is stated in the PETRONAS project document that PETRONAS will handle the NGV sector by itself. However, PETRONAS reserves the right to use the NGDS facilities for NGV distribution, subject to appropriate compensation to GMSB. A fee in the form of a toll will be charged by GMSB for the use of its NGDS pipeline. In addition, gas supply to large volume customers consuming more than 2 mmscfd or 0.75 million mmBtu of gas per annum is excluded from the gas distribution business and supplied directly by PETRONAS "to enable effective control of the gas volume utilization"[15]. This is in line with the National Depletion Policy where a limit of 2000 mmscfd is set in gas production.

GMSB purchases its natural gas from Petronas Gas Bhd, a subsidiary of PETRONAS. Under the shareholders' Joint

Venture Agreement, PETRONAS has agreed to make available the supply of natural gas to GMSB on a long term basis, subject to terms and conditions of the agreement between Petronas Gas and GMSB. The cost rate of gas purchased by GMSB for its customers is similar to the electricity cost rate i.e. the cost of gas is pegged to the medium fuel oil (MFO) prices quoted in the Singapore petroleum market. This energy pricing formula was adopted by GMSB after the initial negotiation between PETRONAS and TNB which has agreed to peg natural gas cost to the fuel oil prices.

Overall, it can be concluded that though the government has allowed the private sector i.e. GMSB to participate in the energy market which is heavily regulated, the government still retains its control through the golden share and the gas regulation. This is because the gas infrastructure service is a natural monopoly, whereby there is potential for abuse of power by the private sector. In the next chapter, the market potential for GMSB and its development plans are discussed in detail. The emphasis is on industrial, commercial and residential sectors as they are the main customers.