In supporting the international and local economic development, energy has become an inevitable factor. Despite the priority to gain more energy supply, in this paper’s concern – the petroleum, there is another priority which should not be neglected; that is policing it. This is to ensure its sustenance for both today and tomorrow generation as well as the environment. This paper seeks to analyse the existing Malaysian petroleum legislations and other relevant laws which promotes sustainability of petroleum and environmental conservation.

Key words: Sustainability- Petroleum law- Environment- Legislation

Introduction

The petroleum industry, like many other countries, is subject to direct government concern considering the vital role it plays in the country’s economy. There has been a heavy dependence on this conventional source of energy over the years that its depletion had forced nations to surge in finding more of it at the sea notwithstanding the high cost and technology deepwater petroleum exploration may incur. In the meantime, calls have been spread across the world to explore and consume renewable energy at considerable levels as well as concerns as to environmental demands and degradations that may result from petroleum and gas activities.

Malaysian Petroleum Legislations and Policies on Sustainability and Conservation of the Environment

Petroleum Legislations

Legislations regulating petroleum and natural gas exploration and production can be divided into two stages of development; prior to 1974 and post 1974. Before 1974, there were a number of acts passed to suit the necessity of petroleum and gas industry. The Continental Shelf Act 1966, Petroleum Mining Act 1966, Petroleum Income tax 1967 and Petroleum Mining Rules 1968 were the results of the research done by Walter J.Levy who was appointed by the Malaysian government to review the Malaysian petroleum policy in 1964.

In 1974, the parliament had passed the Petroleum Development Act 1974 which established a national oil company, the PETRONAS to have the entire ownership of petroleum and the exclusive right to undertake both upstream and downstream operations. This is seen as a better position from the traditional concession system to private companies, especially foreign owned companies to production sharing contracts hosted by PETRONAS. Several amendments were made to the

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2 Walter J. Levy was a consultant to the petroleum industry and governments. Refer Levy,Walter J.Malaysian Policies on Petroleum.1964. Source: PETRONAS.
existing laws in order to improve the regulatory regime of the petroleum industry, such as the Petroleum Income Tax Amendment Act 1977 in order to create a uniform taxation code.

Environmental Concerns

The upstream activities (exploration, development and production of crude oil or natural gas) and downstream activities (tankers, pipelines, retailers and consumers) are two important activities in the petroleum industry. In discussing the environmental concerns, the activities address different issues. At the upstream level, since most of the productions of petroleum and gas are from continental shelf and deepwater, the environmental concern is more on the marine pollution. Whereas, at the downstream level, the environmental issues are such as the emission of gas, transportation, storage and utilisation of petroleum and gas.

The Environmental Quality Act 1974 (EQA 1974) is the primary legislation on all aspects of environmental management in Malaysia. This act is seen to be the most comprehensive legislation covering pollutions on soil, water and air so as to suit the national’s objective in preserving the quality of environment in the country. Section 27 and 28 are the relevant sections dealing with vessel source pollution:

Section 27. Prohibition of discharge of oil into Malaysian waters

1. No person shall, unless licensed, discharge or spill any oil or mixture containing oil into Malaysian waters in contravention of the acceptable conditions specified under section 21.

(Section 21 provides that the Minister, after consultation with the Council, may by regulations, specify the acceptable conditions for the emission, discharge or deposit of environmentally hazardous substances, pollutants or wastes or the emission of noise into any area, segment or element of the environment and may set aside any area, segment or element of the environment within which such emission, discharge or deposit is prohibited or restricted)

2. Any person who contravenes subsection (1) shall be guilty of an offence and shall be liable to a fine exceeding five hundred thousand ringgit or to imprisonment for a period not exceeding five years or both.

The punishment has been amended from ‘not less than one thousand dollars’ and maximum ‘twenty-five thousand dollars’ to ‘five hundred thousand ringgit’.

One of the most devastating oil spill event was the one occurred in 19th September 1992 when the Liberian – registered tanker Nagasaki Spirit collided with container Ocean Blessing in the Malacca Straits spilling some 12,000 tonnes of crude oil into the sea. Due to that, in 1994 the Merchant Shipping (Oil Pollution) Act 1994

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3 Act 127
4 Section 28 outlines the special defenses of such discharge or spillage, inter alia for the purpose of securing the safety of the vessel, saving human life, the result of damage of the vessel of which all reasonable steps has been taken to stop or reduce the leakage or the result of an effluent produced by operation for the refining of oil, and that all reasonable steps had been take to eliminate oil from the effluent and that it was not reasonably practicable to dispose of the effluent otherwise than by discharging or spilling it into the Malaysian waters.
5 Environmental Quality (Amendment) Act 1996. Am. Act A953: s14
was passed which effectively ratifies the International Convention on Civil Liability for Oil Pollution Damage 1969 (CLC) and the International Convention on the establishment of an International Fund for Compensation for Oil Pollution Damage 1971 and 1976 Protocol (Fund Convention), a convention supplementary to the CLC, which provides for compensation for damages not compensated by CLC). The CLC provides for the liability of a ship owner for all pollution damage caused in the territory or in the territorial waters of another contracting state by oil which has escaped or has been discharged from his ship.

Apart from the conventions above, there are also other efforts which have been done to address the problem of marine pollution at the international level for instance the 1982 United Nations Convention on the Law of The Sea which provides countries with a legal framework of managing the sea and the MARPOL 73/78 – 1973 International Convention for the Prevention of Pollution from Ships and its 1978 Protocol, which is a comprehensive tool for the prevention of pollution from vessels and covers pollutants such as oil.

Notwithstanding the various provisions in the EQA 1974, Merchant Shipping (Oil Pollution ) Act 1994 and other international instruments relating to environmental control, the petroleum legislations have to some extent list down the rules serving the same end even though it does not directly expresses so. The Petroleum (Safety Measures) Act 1984 consolidate laws relating to safety in transportation, storage and utilisation of petroleum and other matters relating thereto. There are a two regulations made thereunder, namely the Petroleum (Safety Measures)(Transportation of Petroleum by Pipelines) Regulations 1985 and Petroleum (Safety Measures)(Transportation of Petroleum by Water) Regulations 1985.

Among the provisions in the act and regulations are on loading, unloading and discharging of petroleum, entry into ports of vessels carrying petroleum, authorisation of pipeline works, petroleum storage and petroleum handling license, permission for installation of pipelines, announcement of dangerous petroleum anchorages, prohibited areas, dangerous and non-dangerous areas of ports, provisions relating to wire hawsers and ropes, prohibition of escape of petroleum in the form of liquid or vapour and prohibitions when inflammable liquid is on board any boat or similar craft.

In these legislations, the role of the minister charged with the responsibility for petroleum is very important for instance, to make regulations in special circumstances, granting permissions and licenses and conducting inquiries to ensure the safety of the industry of which a slight negligence may cause devastating effects to the people and environment. The Ministry of International Trade and Industry (MITI) as well as the Domestic Trade and Consumer Affairs (MDTCA), through the Petroleum Regulations of 1974 (amended in 1975 and 1981), are vested with powers to regulate all downstream activities. MITI is responsible for the issuance of licences for the processing and refining of petroleum and the manufacture of petrochemical products, whilst MDTCA issue licences for the marketing and distribution of petroleum products.
**Sustainability of Oil**

The 1992 UN Conference on Environment and Development in Rio De Jeneiro has made the world to commit with sustainability of its resources.\(^7\) Sustainability is about respecting the process at work, in our ecosystem so as to ensure, or at least prolong our survival as species, and concerns our level of connectedness with future generations.\(^8\) As part of energy regulation, the Malaysian government has formulated a number of policies to ensure the sustainability of petroleum in the country.

**National Policies**

A trace of the Malaysia Plans several decades back will indicate the government’s concern of the importance of conserving and the sustainability of the energy sources and the environment. Many policies have been initiated by the government to meet the ends. The National Energy Policy Objectives 1979 for instance aims to have an efficient, secure and environmentally sustainable supply of energy in the future as well as to have an efficient and clean utilisation of energy. Embedded in the National Energy policy are the three-pronged policy objectives: the supply objective, utilization objective and the environmental objective. Realizing that the oil reserves was depleting, the government had then introduced the National Depletion Policy 1980 as a strategy to safeguard the reserves. The policy, aimed at major oil fields of over 400 million barrels of oil initially in place (OIIP), restricted their productions to 1.75 per cent of OIIP. However, in 1985, the ceiling was revised to 3 per cent in view of the fact that 1.75 per cent was on the conservative side. Presently, the total production of crude oil is limited to about 650,000 barrels per day.\(^9\) Thus, the National Depletion Policy has been designed so as to act as a braking system in the production of crude which is adjustable to the prevailing situation.

To reduce heavy reliance on oil as the source of energy, the government introduced the Four Fuel Strategy in the year 1981 which aims for a supply of mix of oil, gas, hydropower and coal in energy use. As far as the environment is concerned, all major energy development projects are subjected to the mandatory environmental impact assessment requirement. Environmental consequences, such as emissions, discharges and noise are subjected to the environmental quality standards like air quality and emission standards.

For the Ninth Plan period, the energy sector will continue to focus on sustainable development in line with the thrust of the National Mission to improve the standard and sustainability of the quality of life which will emphasize on efficient production and utilisation while meeting environmental objectives. The Ninth plan underlines the following strategies:

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\(^8\) Stallworthy, Mark, Sustainability, Land Use and environment: A Legal Analysisi. Cavendish Publishing Ltd.2002.UK

- ensuring sufficiency, security, reliability, quality and cost-effectiveness of energy supply
- improving the productivity and efficiency of energy suppliers and promoting market-based approach in determining energy prices
- reducing high dependence on petroleum products by increasing the use of alternative fuels
- promoting greater use of renewable energy for power generation and by industries
- intensifying energy efficiency initiatives in the industrial, transport and commercial sectors as well as in government buildings
- expanding rural electricity coverages, particularly in Sabah and Sarawak and
- developing new sources of growth in the energy sector including participation of local companies in energy related industries and services abroad.

Alternative fuel : RE, by 2010, RE is expected to contribute to 350 MW to total energy supply. To ensure sustainable supply of oil and gas, appraisal wells will continue to be drilled in small oil fields offshore and deepwater areas (more than 200m) and ultra deepwater of more than one kilometre especially in Sabah and Sarawak. The government is expected to continue collaborations with oil companies by making attractive contractual agreements. Apart from that, incentives will be reviewed to encourage transport operators to convert their vehicles to NGV.

International Standards

Having the legislations laid, it is however not at all extraordinary that the legislations may be outworn in no time looking at the rapid development of the industry. Today, Malaysia has embarked itself in deepwater petroleum productions which requires a step change in engineering design in inter alia the pipeline stability due to potential problems escalating in deepwater. Other considerations are like the regulatory framework on the safety of workers in deepwater due to temperature and pressure problem at such depth and the transportation of it.

This was perhaps the reason the Malaysian petroleum legislations have adopted general provisions such as ; ‘shall use generally accepted standards’ and ‘proper receptacles’. These generally accepted standards or proper ways are however remained undefined.

The complexity of the oil and gas industry has raised calls internationally for companies to adopt ‘best practice’ for the protection of environment. The idleness of one single authority to determine the best interpretation to the term has cause the industry to resort to the guidelines issued by influential and generally accepted forums in the world oil and gas industry. The bodies, though not exhaustive, could be listed as the followings:

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International Association of Oil and Gas Producers (OGP) (Formerly known as the Oil Industry International Exploration and Production Forum)

The OGP is an international association of oil and gas producers of which members constitute more than half of the world’s oil and about one third of its gas. The association was formed in 1974 to develop effective communications between the upstream industry and the increasingly complex network of international regulators. Petronas Carigali Sendirian Berhad has acquired membership.

The American Petroleum Institute (API)
API represents America’s oil and gas industry and has been a very strong influence through the history of dominance of US oil companies in the international oil industry.

World Conservation Union (IUCN)
The Union brings together 82 States, 111 government agencies, more than 800 non-governmental organizations (NGOs), and some 10,000 scientists and experts from 181 countries in a unique worldwide partnership. The Union’s mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

United Nations Environmental Programme (UNEP)
The mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

Other international organizations which are influential to the petroleum industry are the World Bank, International Chamber of Commerce and the World Business Council for Sustainable Development (WBCSD).

Conclusion
Being a country which is rich of its natural resources, Malaysia has to manage them optimally with the best interest of the nation and the environment. The government has shown its concern to enhance the quality on environment and to preserve the sustainability of its resources through various strategies and policies. As far as standards of best practice is concerned, at present, it is the various international standards to be followed, acknowledging the fact that the petroleum industry is an industry which involves transnational companies. A solution to solve the problem of multiplicity of standards may be achieved if there is a standardized self-regulatory code of conduct at the international level. By having so, it would create an understanding of the standard at every production level which could secure the environment and the sustainability of petroleum and gas in the long run.

15 Switzerland. IUCN. 17th May 2006. www.iucn.org
16 Nairobi. UNEP. 17th May 2006 www.unep.org