

CHAPTER 2

THAILAND ENERGY POLICY AND STRATEGY

The Thai government is trying to pursue policies that facilitate new investments to rebuild the country's industrial base while at the same time improving Thailand's environment. The country is facing a challenge similar to that in many developing countries: how to de-link environmental impacts from economic development. The national policy for the country to seek alternative energy was fortunately recognized by the past two administrations. Although politically, Thailand is at a turning point, where tremendous reform has to be made, the energy policy between the new and the former government should be considered to have continuity as the essence of the goal is, more or less aligned, in one way or the other.

The energy policy, which was addressed by Thailand's new Prime Minister, General Surayud Chulanont, in the Policy Statement of the Council of Ministers, to the National Legislative Assembly on Friday, 3 of November, 2006, stated under the economic policy that the government will promote energy efficiency, energy saving, the development and use of alternative energy, the survey and development of domestic and international sources of energy-including the joint development areas with neighbouring countries-the use of clean energy, an appropriate price structure for energy and restructuring of the management of energy affairs by ensuring that there is a clear division between energy policymaking and

regulation, and promoting long- term competition in the energy business as well as research and development of alternative energy.⁹

The above mentioned policy is consistent with that of the past administration led by Dr. Thaksin Shinawatra where in February of 2005, where it was intended that the energy policy was aimed to conserve, develop and promote the efficient consumption of energy, while balancing the indigenous natural resources and the environment, with ultimate goal to reduce the degree of reliance on energy imports. Under that, the strategic goals were introduced, whereby the first is to enhance the competitiveness of the economic sector. Secondly, it was aimed to secure to promote the national energy security, again meaning that the continuing availability of energy at an affordable price, and sufficient amount is ensured for the protection of economic activities and growth. And lastly, cleaner energy to improve the quality of living for all. Furthermore, an additional goal was to promote Thailand as the energy hub for the Southeast Asia region.

Thailand's Current Energy Situation

According to the energy situation report in the year 2006,¹⁰ Thailand imported up to 10.7 billion US dollars worth of crude oil; that accounted for 6.5% of the national GDP. With that statistic, it reflected that the amount of money spent on importing, if conservation campaign is successfully promoted and becomes effective, could be reduced and the additional savings could then be allocated for research and

⁹ <http://www.eppo.go.th/index-E.html>

¹⁰ <http://www.eppo.go.th/info/report49-50/report-49-50.pdf>

development of alternative forms of energy. Thailand has to be given credit as the government, in the past few years, has been more assertive with its national policy to prioritize the development of alternatives and explore other potential forms of energy, in conjunction with various energy conservation campaigns.

According to the Department of Alternative Energy Development and Efficiency, which is under the Ministry of Energy, Thailand's energy strategies for economic development, as well as for regional integration, have been set as such: (1) the strategy for efficient use of energy (2) the strategy for energy security to ensure sufficient and reliable energy supply for at least 30 years (3) the strategy for renewable resource development aimed at increasing the share of renewable energy from currently, 0.5 per cent, to 8 per cent of total energy by the year 2011 (4) the strategy for participation and environmental concern by promoting the utilization of clean fuels such as ethanol, biogas and natural gas and (5) the strategy for Thailand to become a regional energy center through the development of strategic energy land bridge and energy hub with its neighbors.

As you can see, most notably are the campaign to promote ethanol, bio-fuels, and the use of natural gas for vehicles or NGV. The goal is to be able to increase the share of renewable energy, which was at 5 per cent in 2006, and reach 8 per cent by 2011.

In order to see where Thailand is heading in terms of the development of alternative energy, the energy situation of Thailand within the past few years needs to be illustrated. Referring to the statistics compiled by the Department of Alternative Energy Development and Efficiency (DEDE), which is under the Ministry of Energy,

the figures in the year 2005 had shown that it was the seventh consecutive year, at the final energy consumption of the nation, had increased at the rate of 1.8 per cent annually.

The types of energy have also been categorized into two main groups. The first being commercial energy which comprises of petroleum products, natural gas, coal and electricity. The second group is the new and renewable energy which includes fuel wood, charcoal, paddy husk, and bagasse. The consumption for the first group increased 1.6 per cent, whereas the second group increased 2.9 per cent. Of course, any incremental increase means million of baht invested on import.

Thailand, when observed in market proportion, still depend heavily on commercial energy with the share 82.7% of the total final energy consumption, and the remaining 17.3% was renewable energy, which suggests that there are still plenty of room for development in that group, and particular, in the area of clean alternative energy which could replace the conventional forms of energy demand.

Commercial Energy

To break it even further by the type energy under the commercial energy group, which is fuel or electricity that is delivered in measured quantities and paid for accordingly, petroleum products still showed the greatest proportion or 63 per cent of the final commercial energy consumption in 2005. The petroleum products were mainly consumed in transport sector which makes up to 72.2 per cent, which is then followed by manufacturing sector, agricultural sector, residential sector, commercial

sector, mining sector and construction sector, shared 11.6 per cent, 9.8 per cent, 4.0 per cent, 1.8 per cent and 0.6 per cent respectively.

Under petroleum products, diesel made up to 51.8 per cent of the share, with gasoline, fuel oil, jet fuel and liquid petroleum gas (LPG), and kerosene at 16.6 per cent, 12.2 per cent, 10.8 per cent, 8.5 per cent and 0.1 per cent, respectively.

Almost all natural gas or 97.6 per cent was used in manufacturing sector, and only 2.4 per cent was in transport sector. Whereas, approximately 13.1 per cent of the final commercial energy consumption were from coal and its products where consumption increased by 14.1 per cent from 2004 and was consumed primarily in manufacturing sector.

Electricity consumption in 2005 increased at a rate of 5.4 per cent from the year before and shared 20 per cent of the final commercial energy consumption. Of this total, 46.0 per cent was used in manufacturing sector. The rest was used in commercial, residential and other sectors, which shared 31.7 per cent, 21.1 per cent and 1.2 per cent, respectively.

New and Renewable energy

As for the second group, total renewable energy consumption in 2005 had an increase of 2.9 per cent from the year before and accounted for 17.3 per cent of the final energy consumption. Renewable energy was mainly consumed in residential sector shared 50.3 per cent and the other 49.7 per cent was consumed in manufacturing sector.

In terms of the economic activities, energy usage by each economic sector could also be a good indicator to where alternative energy could be replaced, if sufficient policy in promoting its usage is encouraged.

The agricultural sector accounted for 5.1 per cent of the total final energy consumption. The major energy consumed in this sector was petroleum products which made up 99.3 per cent of its total energy consumption while the remaining portion was electricity. Under this circumstance, it could be seen how, Thailand, where the majority of its people are still in the agricultural sector, would be extremely vulnerable to the exposure of fluctuating global oil prices more than other developing countries, which have shifted strategies towards knowledge-based driven economies.

Mining had approximately 0.2 per cent of the final energy consumption of 2005. Almost all energy consumed in mining sector in 2005 was electricity, which made up 79.2 per cent of its total energy consumption and the remaining 20.8 per cent came from petroleum products.

Energy consumption in manufacturing sector for the year 2005 accounted for 36.3 per cent of the final energy consumption, which increased 3.1% from the year before. The major energy consumed was coal, which was at 29.8 per cent of the energy consumption in this sector. However, new and renewable energy made up 23.8 per cent or almost one fourth of the consumption, with the share of electricity, petroleum products, and natural gas at 21 per cent, 16.7 per cent and 8.7 per cent, respectively.

In 2005, the construction sector accounted for 0.2 per cent of the final energy consumption. All energy consumed in this sector was petroleum products. The

residential sector consumed 14.3 per cent of the final energy consumption in the form comprised of new & renewable energy of 60.9 per cent. However, electricity still share up to 24.4 per cent and petroleum products 14.7 per cent. The commercial sector, which includes services, government institutes and non profit organization, accounted for 6.2 per cent of the final energy consumption. Energy consumed in this sector comprised primarily from electricity, which was 85.1 per cent and petroleum products of 14.9 per cent.

Finally, the energy consumption in transportation sector for 2005 was 37.7 per cent of the final energy consumption. Most of the energy consumed in this sector were petroleum products, comprising of diesel 54.2 per cent, gasoline (including gasohol) 22.6 per cent, jet fuel 14.9 per cent, fuel oil 6.6 per cent, and LPG 1.5 per cent, respectively. Moreover, a small volume of natural gas for vehicles, at a mere 0.2 per cent, was consumed by some air conditioned buses in Bangkok Metropolitan Region and electricity was used by sky trains and subway.

In order to better tackle the problem of growing energy consumption, the national energy policy and development plan, under the Administration of Prime Minister General Surayud Chulanont, have been approved by the National Energy Policy Council (NEPC) and the Cabinet on 6 November 2006 and 21 November 2006 respectively.¹¹

Thailand's Energy Policy and Development Plan could be divided into two parts. The first is the short term plan, which is where implementation can immediately take place. The first objective is to restructure and improve the Energy Industry Management so as to optimize the efficiency of the national energy management.

¹¹ www.energy.go.th/en/aboutUs_09Law_05.asp

Firstly, this is done by speeding up the drafting and enforcement of Energy Act in certain areas, for example, to separate the policy-making features from the regulatory ones and then to accelerate the enforcement of, updating and/or amendment to other energy-related laws, in order to solve problems and obstacles as well as to facilitate the implementation of energy-related matters.

Secondly, the energy procurement to ensure sufficiency and security of energy supply is to be encouraged by promoting exploration and development of petroleum resources, within Thailand and the neighboring countries, for example speeding up procurement of natural gas from production fields such as the Gulf of Thailand or other natural resources located in the Thailand-Malaysia Joint Development Area (JDA). This also extends to the development of networks for natural gas pipeline with neighboring countries like Myanmar or Indonesia, as well as, speeding up the negotiation on petroleum resource development located at the Thailand-Cambodia continental shelf, which is overlapping. It also promotes the role of public companies, like the PTTEP, with the recent ad-campaign on Oman, to make exploration and development of petroleum resources both domestic and overseas.¹²

However, in conjunction with the above plans to facilitate consumption, it was also stated that Thailand's Power Development Plan needs to be revised. This is to be done through adjustment of the demand forecast to better correspond with the economic conditions so as to ensure appropriate investment in the power sector and hence adequate supply to meet the demand. Also, it aims at promote greater participation of the private sector in power generation by accelerating the issuance of a request for proposals for power purchase from Independent Power Producers (IPPs),

¹² www.ptt-ep.com/en/news/index.asp?id=572

in other words, to liberalize the energy market and make it more open for prospective investors, where it should be heavily emphasized on alternative energy investment. And finally, the procurement of energy could also be the diversification of fuel sources and types for power generation and options such as power purchase from neighboring countries, to ensure energy security and price stability, taking into account the generation costs, environmental impact and consumers' benefits.

The strength of Thailand's energy policy is that it took account of the current global energy situation. Realizing that it is imperative to become less reliant on energy import, the strategies within the policy addresses, both the short and long term goal, which clearly specify the involvement of various stakeholders in the Thai society. Notably, the efforts in promoting energy conservation could be seen by various programs initiated by both the public and private sector, be it the "Harn Song" or Divide by Two, a campaign to promote energy conservation through easy steps such as turning off the light when the room is unoccupied or keeping the air conditioner at 25 degrees Celsius. Commercially, the promotion of natural gas, as seen on the PTT NGV commercials, educates consumers and clarifying myths on why such form should be considered as a choice of consumption.

The most important emphasis, no matter how effective a campaign may be, is the continual effort to promote and build energy conservation conscience. Although some may argue that the first place for awareness and action of energy conservation can start at individual level, the government will need to make consistent effort in educating its people, if understanding is to be created before action could take place. The weakness of the policy should not be based on how realistic or feasible the policy

is, but how much effort is really being made on targeting key factors at various stages of the policy execution.