

TRANSCRIPT OF THE INTERVIEW WITH

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UNITED WORLD: According to ADB Vice President Ursula Schaefer-Preuss during the UN-Energy Security Challenges in the Asia and Pacific Region (ESCAP) this year, "Over the past 30 years, energy consumption in the Asia and Pacific region has risen 230% as a result of development and growth. This is expected to increase." What are the key challenges for the energy sector in Thailand?

HON. SOMBAT SARNTIJAREE: There are many challenges. So far, we mostly rely on the fossil fuels. In the future, we feel that this would not be enough. Electricity consumption from both locally generating and imported has steadily increased at a yearly average rate of 5.9%.

We came up with the Thailand Power Development Plan for 2007 to 2021 (PDP 2007) under the policy framework of the Ministry of Energy to tackle various issues such as the power demand, reliability of power supply, fuel diversification, power purchase from neighboring countries, and etc. In the long run, we mean to alleviate our dependency on fossil fuels and find more renewable sources of energy. As such, for the ten-year-term, we need some intermediate resources like coal. For the long term, we are looking into building a nuclear power plant. This will help us reduce our dependency on natural gas in a cost-effective way. As you know, uranium is abundant. Nuclear power allows us to potentially meet the increasing demand for energy while minimizing CO₂ emission, and is ideal for large-scale, base-load electricity demand.

UNITED WORLD: Energy is a cornerstone of all modern economies. Industry requires secure and reliable power to operate effectively. In view of this, what is your assessment of PDP 2007? How effectively can it meet these issues surrounding the energy sector?

HON. SOMBAT SARNTIJAREE: We are confident that the PDP 2007 is a viable plan and we mean to implement it as faithfully as possible. Through the Nuclear Power Project (NPP) in the PDP 2007, we mean to have around 4,000 MW by 2020 to 2021.

As you know, using coal as an energy source does not go well with the global greening objective because of the CO₂ emissions (the main greenhouse gas). It only makes sense that we find more environmentally sound ways to produce electricity. However, we need it for the medium-term. After which, we will have nuclear power, which is more sustainable. The government set up the Nuclear Power Infrastructure Preparation Committee (NPIPC) under the National Energy Policy Council (NEPC) last year to prepare Thailand for its first nuclear power plant. The NPIPC has 20 members and 5 infrastructure subcommittees. These subcommittees undertake the respective study and planning for the nuclear power infrastructure preparation. The NPIPC adopted the International Atomic Energy Agency's (IAEA's) approaches as contained in Basic Infrastructure for Nuclear Power Project and IAEA Documents of Considerations to Launch a Nuclear Power Programme as a basic approach for its work plan. The NPIPC completed the Nuclear Power Infrastructure

Establishment Plan (NPIEP) and got the plan approved by the government late December last year. The government also set up a Nuclear Power Utility Planning subcommittee to study the implementation of the NPP. We expect results of the feasibility study by 2010. We will include this study in our readiness report to submit to the government. All these go in ten year cycles. We have been closely working with the IAEA experts during the preparation of the plan and the IAEA will continue to provide technical support to us.

UNITED WORLD: Nuclear Energy is a controversial subject altogether. While it is currently one of the more viable sources of electricity, many are concerned about issues like radiation and possible meltdowns. How receptive is the Thai population to your NPP?

HON. SOMBAT SARNTIJAREE: A lot of people do not understand the concept of nuclear energy, and how important it is to us, especially in terms of meeting the increasing demand for power in the most sustainable way. Right now, nuclear energy provides 16% of the world's total energy. That is a significant amount. It also allows us to generate large-scale power while reducing the harmful CO₂ emissions.

We have assigned a group to explain the pros and cons of nuclear energy to the general population. We are hoping that in the future, the safe operation of nuclear plants will be demonstrated and recognized; thereby increasing the community's confidence in it as a viable source of energy.

UNITED WORLD: What are some of the advantages of the NPP?

HON. SOMBAT SARNTIJAREE: Nowadays, with many obstructive factors, options for Thailand power generation are as a niche. Therefore, nuclear power plant can be an interesting option for the long-term planning of power development. As PDP 2007, we have proposed nuclear power to be one of our future energy sources.

A nuclear power plant has many advantages in various aspects over other plants: for instance, high security with bulk power supply, fuel acquisition stability due to long time continuously operating - up to eighteen month without refueling in the meantime, clean operation without pollutant emissions to the environment such as CO₂ emission in particular, more reliability and efficiency according to lower fuel consumption rate, lower generation cost due to lower fuel utilization and fuel cost – a ton of uranium is able to generate the same amount of electricity as about sixteen thousand tons of coal, and more availability for fuel sources such as uranium.

UNITED WORLD: At the moment, what are your main sources of energy?

HON. SOMBAT SARNTIJAREE: For the first six months of 2008, the main fuels used for power generation are natural gas (68.6%), lignite (12.3%), and imported coal (8.7%). At the

end of this year, it is anticipated that the main fuels used are natural gas (72%), lignite (12%), and imported coal (8%).

UNITED WORLD: You mentioned that you will be using coal-fired plants in the immediate future, to meet the country's requirements till the NPP pushes through. Would this entail imports or does Thailand have enough coal for these new projects?

HON. SOMBAT SARNTIJAREE: By 2015, we'll start having coal-fired plants come on line. That's when we're going to need more coal from outside Thailand. We plan to import coal from overseas by then. Right now, we get lignite from our own mines to sustain the Mae Moh power plant in the northern province of Lampang. The Mae Moh power plant has an installed production capacity of 2,400 MW in total.

As you know, the demand for energy is expected to increase by 5.5%. Out of the required new capacity of 39,676 MW by 2021, coal will make up 13.6%.

We have a lot of power projects to meet this electricity demand; among these are the four gas-fired power plants with the combined capacity of 2,829 MW. We mean to use more coal and less bunker oil.

UNITED WORLD: How will you finance the development of these four gas-fired power plants?

HON. SOMBAT SARNTIJAREE: We finance one part of the development of these four gas-fired power plant projects from our own funds and the rest from domestic bonds. Within this year, we plan to issue THB 10 billion (or US\$ 302 million) worth of domestic bonds to finance our power plant projects and transmission system projects

UNITED WORLD: According to scarcity of energy resources in the country, how do you secure your power supply?

HON. SOMBAT SARNTIJAREE: According to our revised PDP 2007, we are looking into buying power from Laos or Myanmar, and reducing the import of LNG.

Our imported coal share increased slightly, from 8.4% in 2008 to 16.8% in 2017. Net imports of energy from neighboring countries are expected to continue to meet a major share of total electricity demand.

In 2006, our government had another MOU with the government of Laos to import power at 5,000 MW till 2015. Last year, our government had another MOU with the government of Laos to import power at 7,000 MW by 2015. Right now, Laos has around ten projects (including hydropower and lignite) lined up to sell electricity to Thailand. The Power Purchase Agreements have been signed for Laos to supply to Thailand, using the power

generated by Laos' Nam Theun 2 (NT2) and Nam Ngum 2 (NN2). Both NT2 and NN2 are currently under construction.

For Myanmar, further negotiations are awaiting the results of the feasibility studies done on the potential projects that are in the pipeline. Right now, we are studying the feasibility of a hydroelectricity project in Myanmar. The Ta Sang Project is at the southern part of San State, 130 kilometers away from the Thai-Myanmar border. It has an expected installed capacity of about seven thousand MW.

Another hydropower development is the Hatgyi Project located in Karen state about 45 kilometers far from Thai-Myanmar border. Its expected capacity is 1,360 MW, 170 MW of which will be for the local demand of Myanmar; and 1,190 MW will be exported to our country.

All these and a few other projects are still under negotiations.

UNITED WORLD: Which countries are you looking to import coal from?

HON. SOMBAT SARNTIJAREE: Initially, we plan for coal importing for our power generation from Australia and Indonesia.

UNITED WORLD: We understand that you are also looking to import coal from Australia and Indonesia. What is the reason behind this?

HON. SOMBAT SARNTIJAREE: Australia and Indonesia would be the best sources for coal as transportation costs would be lowest.

UNITED WORLD: In terms of your current infrastructure projects, how do you deal with the forecasted 30% increase in construction cost?

HON. SOMBAT SARNTIJAREE: Our on-going projects comprise EGAT's projects and the projects of power purchase from neighboring countries. To tackle the expected 30% increase in construction costs, those projects will be treated with the appropriate measures depending on their nature.

Separately, most EGAT's projects are turn-key projects in agreements with the contractors. The increase in construction cost may not much affect to us nor the contractors due to the fact that the construction of these projects have begun and some of them are nearly completed.

For the power purchase projects from neighboring countries, the increase in construction cost will directly affect the development of power projects in neighboring countries. All projects of which the power purchase agreements (PPA) have not been signed are requested by Laos or project developers for renegotiation on the tariff of power trades.

However, we have to do our best in effective, efficient, and productive operations and management for the reasonable electricity price to our customers.

UNITED WORLD: The state-owned Petroleum Authority of Thailand (PTT) PLC is the largest oil company in Thailand. How do they fit in the PDP 2007?

HON. SOMBAT SARNTIJAREE: Normally, we develop the Thailand power development plan (PDP) in accordance with the fuel availability proposed by the Petroleum Authority of Thailand Plc. (PTT), who is responsible for acquiring fuels such as heavy oil, natural gas and liquefied natural gas (LNG) for EGAT's power plants, in terms of amount of fuels to be supplied and price projection.

As the PDP 2007, there are currently four EGAT's gas-fired power plant projects under construction, and their fuel will be supplied by the PTT via natural gas pipeline. Not only the four gas-fired power plant projects, but also the forthcoming projects, that their fuel, natural gas, will be supplied by the PTT. For natural gas scarcity and shortage supply problem in the long term, therefore, the PTT planned to acquire LNG for EGAT.

In addition, the PTT will also supply natural gas and oil to the private utilities as independent power producers (IPPs) and small power producers (SPPs) taking part in the PDP 2007 as well.

UNITED WORLD: How will all these affect the power cost in Thailand?

HON. SOMBAT SARNTIJAREE: All things considered, this is still cheaper than the other options. We have to keep that in mind.

UNITED WORLD: You mentioned that the country has a lot of infrastructure projects lined up. Have American companies expressed interest?

HON. SOMBAT SARNTIJAREE: Yes, many American companies have participated in the bidding for our power projects. They have showed a lot of interest. We are still going through the selection process. It all boils down to the company's competitiveness and bidding price.

The General Electric (GE) who is interested in all EGAT's power plant projects and continuously participating in bidding for our project development.

For nuclear power plant (NPP) projects, there are two American companies, namely Black & Veatch, and Burns and Roe, have been shortlisted to be the consultant for our NPP feasibility study. Not only American investors, who are looking for investment in the country, but also

Japanese companies like Newjtec, Inc. and Japan Atomic Power Company, as well as the Swiss company as AF Colenco Company have been shortlisted.

UNITED WORLD: Since its inception, EGAT has been committed to the betterment of the Thai society. The company has been actively participating in projects geared towards building the economy, both at national and local levels. Can you tell us about some of your CSR Programs?

HON. SOMBAT SARNTIJAREE: According to our corporate plan, one of the EGAT strategic directions is “*Becoming a caring organization for society and environment*” that help develop a better quality of life for communities and Thai society.

We have emphasized the importance of corporate social responsibility (CSR) in all operations and activities to enhance a better quality of life for Thai people as well as to save and protect the environment. Built on this value, we have conducted operations and activities in the manner that meets ethical and legal expectations and respects people, communities and the environment. Our ultimate aim is “*to bring happiness for all Thais.*”

For years, we has continuously contributed to the good of communities and societies in various ways, i.e. community development, energy conservation, educational promotion, support for religious institutions, environmental conservation, assistance and donations for disaster victims and the underprivileged, and many other social services. Major social contribution projects implemented are described as follows:

- ***Reforestation Project:*** We have launched the reforestation project since 1994. In 2007, our target area of forest plantation has been met, covering an aggregate area of 384,000 rai (or 61,440 hectares) of degraded forests in 49 provinces across the country. In effort to achieve sustainable success of the forestation project, we have also provided support to the communities in various development programs aiming for community capacity building and awareness inculcation among the local people. Furthermore, we will continue to support further reforestation projects in degraded forest areas.
 - ***Biological Way of Life for Sustainable Development Project:*** This project aims to promote and transfer knowledge and know-how on sustainable and self-reliant livelihood in accordance with the royal philosophy of Sufficiency Economy. Training and demonstrations of simple techniques for biological agriculture and applications of effective micro-organisms (EM) have been provided to local administration agencies and agricultural colleges, and particularly, local communities in the vicinity of EGAT’s power plants and transmission facilities across the country. The project focuses on four areas, including agriculture, fishery, livestock, and environmental conservation.
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- ***Demand Side Management (DSM) Program:*** This project has been implemented since 1993 and was designed to promote the efficient use of electricity. A wide range of projects and campaigns have been continuously implemented, including the Energy-Efficient Label No. 5 Programs for several types of electrical appliances, Unplug Program, Energy-Efficient Compact Fluorescent Lamp (CFL) No. 5 Program, and etc. Our highly successful program is an Energy-Efficient Label No.5 Program. For further motivation to use high efficiency CFLs, price reduction will also be offered to consumers. So, the project will lead to sustainable energy conservation and also help reduce global warming problem.
 - ***Green Learning Classroom Project:*** We have initiated this project as a part of our DSM Program aiming to educate young students and inculcate awareness of energy and environmental conservation by sponsoring the establishment of educational materials and equipment in schools all over the country. We have also collaborated the school in developing curriculum as well as teaching and learning plans and providing instructors for the program.
 - ***Lab School Project:*** For this project, we have provided financial support to 32 selected schools, mainly to develop learning and teaching facilities such as computers, libraries and laboratories. The project also focuses on developing students' creative and analytical thinking capabilities as well computer and language skills.
 - ***Clean and Clear Canal Project:*** We, in collaboration with the local administration and communities near our sites, have organized to help improve the water quality of polluted canals and waterways in the provinces and also to transfer knowledge and know-how on the applications of effective microorganisms (EM) for wastewater treatment to the communities.
 - ***Eyeglasses for the Poor Project:*** We had collaborated with public and private sectors to provide eye care services and eyeglasses free of charge to rural people. The project has provided eyeglasses for free to over 80,000 rural poor people in all over the country.
 - ***Sports Promotion:*** We had provided financial support to amateur sport associations, the Petangue Association of Thailand and the Thai Amateur Weightlifting Association, aiming to help raise the standards of sports and promote the development of athletic talents and potentials of Thais.
 - ***Donations for Disaster Victims:*** We and the EGAT associated companies donated money and electrical equipment for disaster victims, for instance the cyclone Nargis at Myanmar, several flooding areas across the country, and etc.
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- ***Elephants Return Home Project:*** We contributed to return elephants to the forest, with honor of our beloved King, in which the celebrated His Majesty the King's 81st Birthday Anniversary, including installation of solar cell – electric fences to prevent and save elephants and wild animals.

UNITED WORLD: Part of EGAT's objective is to be the ASEAN Power Grid center and the region's leading company in energy and related businesses. Can you elaborate on this?

HON. SOMBAT SARNTIJAREE: Our objective to be the ASEAN Power Grid center is based on two incentives:-

- 1) The power system of EGAT is the biggest in ASEAN. The generation and transmission facilities are of international standards. We have the 500 kV transmission networks which can form part of the ASEAN Power Grid. Our system is now connected to Lao PDR, Cambodia and Malaysia which can be the initial foundation for the future ASEAN Power Grid.
- 2) Thailand is located in the center of Southeast Asian Peninsular which is surrounded by countries with high potential of natural resources. The development of these resources will only be technically and financially sound only if the power is transmitted to the demand center which in this case is Thailand. The power demand in Thailand will be growing continuously at a rate of 5 -6 % annually. Therefore, power projects in the neighboring countries in which the local demand is too low to drive the project development can be constructed to supply power to Thailand. In terms of resource utilization, this is an optimal implementation since we will not be able to develop any project if there is no demand. In the long run, excess power can also be further transmitted to Malaysia and the rest of ASEAN when we have the ASEAN Power Grid.

UNITED WORLD: You have been part of EGAT since 1976. Out of 7 candidates, you were picked to be Governor to succeed Hon. Krairri Karnasuta last year. The members of the Board said that you have been appointed because of your vision. Can you tell us more about it?

HON. SOMBAT SARNTIJAREE: EGAT's brand vision is to be the very best at helping people enjoy an easier and better everyday life that will bring happiness and success. My vision goes in line with that. We need to communicate what our brand is all about to the public. Through our initiatives, people will see that we are competitive, innovative and that we have integrity. We want them to feel that we care about society. We are not just another big company. We have heart. We are there to make their lives better. We invest THB 30 million for programs in the interest of the public annually. We have developments to ensure that the country has enough power supply to sustain it well into the future.

In terms of quality, we have the Independent Evaluation Group (IEG) under the Ministry of Finance assessing our operations on a regular basis, to make sure that we meet the highest standards. So far, we have done all right—in fact, we have shown better results than some of the other countries in the region.

UNITED WORLD: Where do you see EGAT heading in the next 10 years?

HON. SOMBAT SARNTIJAREE: Throughout the 39 years since EGAT was established in 1969, we have achieved a satisfactory operational performance in developing the power system and supplying the country with appropriate electricity supply sources and sufficient and reliable electricity services at the most reasonable prices. We generate electricity for the customers with awareness that electricity is an important infrastructure for all developments in the country that need electricity around the clock. Therefore, we strongly intend to reach our mission which is to create and improve the quality of life, strengthen the country competitiveness through reliable and affordable energy and services, and harmonize with the environment.

In the next 10 years, I hope to see EGAT to be recognized in the world class point of view as a well known international organization in terms of customer services, management, good governance, and environmental friendly operations, as well as to be “*an excellent rated organization*” by the international rating institutions.

Importantly, EGAT must be the organization with continuous productivity improvement for sustainability.

I also wish to see EGAT as a leading state enterprise and the main power supplier and energy related business of the country. EGAT shall operate under good governance with efficient workforce and efficiency. EGAT shall be a learning organization to enhance capability for regional business undertaking. More importantly, EGAT shall be part of the community and shall observe corporate social responsibility strictly.

UNITED WORLD: Thank you very much for your comments.
