

One Day in Bangkok

By Fatih Birol

Earlier this year, I touched down one morning at Suvarnabhumi Airport in Bangkok to chair a workshop hosted by the Thai Ministry of Energy on the energy prospects for Southeast Asia, aimed at gathering input for a *World Energy Outlook* special report.

In the past, when people thought of Asia in the context of the global energy landscape, they thought of China. Nowadays, they are thinking of China and India. But the events of that day highlighted that Southeast Asia is rapidly becoming a third major player in the picture.

Energy demand in the 10 countries that make up the Association of Southeast Asian Nations (ASEAN) — Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam — has risen two and a half times since 1990 and is now around three-quarters of the level of India.

Economic and demographic trends suggest that considerable growth is still to come, especially considering that the per capita energy use of the region's 600 million inhabitants is low, at just half of the global average.

We released the product of our analysis — the *World Energy Outlook Special Report: Southeast Asia Energy Outlook* — at the 7th East Asia Summit Energy Ministers Meeting on Sept. 26 in Bali, Indonesia. It was warmly welcomed in the ministerial communiqué with calls for the International Energy Agency (IEA) to build on the momentum it created through follow-up work.

(See <http://www.worldenergyoutlook.org/southeastasiaenergyoutlook/#d.en.43468>)

The report found that Southeast Asia's energy demand is set to increase by over 80% between today and 2035, a rise equivalent to the current demand of Japan. This will support a near tripling in size of the region's economy and a population expansion of almost one-quarter.

The power sector is fundamental to the outlook, and within it coal is increasingly the fuel of choice rather than natural gas. Coal remains relatively abundant and affordable, while additional gas supplies will have to be sourced from imports of liquefied natural gas at prices that are currently five times higher than in the United States. This creates a strong incentive for the region's larger gas producers, namely Indonesia and Malaysia, to export new supplies rather than use them domestically. For those countries that rely on gas imports, the choice is often even more clear cut as the cost of generating power from coal is currently around half that of gas. This counters the shift away from coal in most other regions of the world and is already underway: some three-quarters of the thermal power

generation capacity under construction is coal-fired.

Policy action could eventually swing the economics of power generation in favor of less carbon-intensive options. But, more immediately, priority needs to be placed on ensuring that the efficiency of the coal plants that are being built is improved. Currently it is very low owing to the almost exclusive use of subcritical technologies. In addition to a substantial improvement in air quality and reduced greenhouse-gas emissions, fuel use could also be cut significantly — for example, if the region's coal-fired power plants were as efficient as those in Japan today, their fuel use would be one-fifth lower.

This preference for the least-cost option to meet its rising power needs is put into context when you consider the serious challenges that Southeast Asia — which includes many countries still in the early stages of economic development — faces in ensuring energy remains affordable. Its oil imports are on track to increase from 1.9 mb/d today to just over 5 mb/d in 2035 making it the fourth-largest net importer in the world, behind only China, India and the European Union. This will prove very costly: spending on oil imports will triple to almost 4% of GDP. Meanwhile, its net gas exports, which are an important source of revenue, will shrink by around three-quarters.

Given the anticipated scale of the region's energy demand growth, developing policies to attract investment will be vital for enhancing energy security, affordability and sustainability. Some \$1.7 trillion of investment is required in energy infrastructure through to 2035. Mobilizing this will not be easy unless existing barriers are addressed, including subsidized energy prices, under-developed energy transport networks and the need for greater stability and consistency in the application of energy-related policies.

Some 15 hours after landing in Bangkok, when back in the air en route to Paris, it became abundantly clear to me that the IEA and ASEAN member countries have become natural allies. We both need to build secure and sustainable energy supplies and markets, as platforms for promoting economic development. These are global challenges to be tackled on a global basis. **JS**



Bangkok and the rest of Southeast Asia are powering up.

Dr. Fatih Birol is chief economist at the IEA in Paris. He is responsible for its flagship World Energy Outlook publication, and is the founder and chairman of the IEA Energy Business Council. He is also chairman of the World Economic Forum's (Davos) Energy Advisory Board.