



## Energy Security: A View From China

by Prof. Ji Guoxing

It appears superfluous to talk about energy security in a time of present low oil prices and oil glut in the world market, but it is not an unwarranted anxiety that the world could be faced with the real challenge of an oil supply shortage in the future.

Energy security was stressed during period of the oil crises in 1973-1974 when prices first tripled in response to an Arab embargo and in 1979-1980 when prices nearly doubled after Iran dethroned its Shah, but has been more or less ignored since then. The fact that the then-anticipated energy supply shortages did not materialize does not justify optimism for the future.

The world energy equation is not promising, and oil supply prospects in world oil markets are not optimistic. World oil production will begin to decline before 2010, sooner than most people think, and oil prices would then rise in real terms. It is predicted that around 2010 a perpetual global oil shortage will seem certain. Unlike previous shocks, it will not be a short-term supply interruption, but will herald a historic discontinuity with profound implications for both the oil industry and oil consumers. The situation would be different from the 1970s energy crisis, which was caused not by any underlying lack of supply but by Middle East politics and regulatory rules that impeded market forces.

This is mostly due to the fact that world oil production is approaching its highest level, and the eventual depletion of the oilfields is to take place. About 70 percent of the world's supply of oil comes from fields that are more than 30 years old, and the great majority of them are declining. Flow of oil starts to fall from any large oilfield when about half the crude is gone.

Some may argue that huge deposits of oil may lie undetected in far-off corners of the globe. This is actually very unlikely. The fact is that the majority of new oilfields with rich reserves have already been verified, and that only extremely deep water and polar regions remain to be fully tested, with prospects that are even now reasonably well understood. The technology for oil exploration and production is marching forward, but will not prevent the impending shortfall in the supply of oil. Some people like to point out that the world contains enormous caches of unconventional oil such as tar sands, oil shale and bitumen that can substitute for crude oil. But so far, no one has devised an economical means to extract such fuels. Such substitutes for crude oil might also exact a high environmental price.

The views traditionally held in economic circles that "so long as there is demand, there does not exist the problem of supply," and "the world might never run out of oil" are dangerous and

incompatible with the truth. It is mere conjecture to emphasize the oversupply of oil. Economists assert that higher prices will endlessly refill petroleum reserves by granting increased incentives to produce. This was true in the 1970s, when price controls discouraged production; it may not be true after 2010, when feasible reserves begin to decline.

Energy security is of particular importance in the Asia Pacific owing to its physical unavailability to meet its demand, and energy security is now becoming a fundamental cornerstone of economic policy for the Asian Pacific economies.

High economic growth in the Asia Pacific has brought with it drastic increases in oil consumption. Being the most dynamic region in the world, the Asia Pacific has ranked first globally in energy demand growth. Oil reserves in the region are limited, and regional oil production is insufficient for their own consumption. Thus oil imports are imperative. The Middle East will continue to be the main oil supplier to East Asia.

The region's dependence on the Middle East will be much enhanced, and by 2010 Asia's dependence on the Middle East could exceed 90% of all imports. Russia's Far East and Central Asia are potential energy assets for the Asia Pacific, and might soon be more significant oil and natural gas suppliers. But little infrastructure is currently available for transportation. Several projects to bring gas from Eastern Siberia and Central Asia to China or Korea or South Asia are under consideration.

Progress toward trade liberalization of the oil market in recent years in the region has mitigated to a certain extent the energy supply situation, but the view that "the true solution to future energy needs of Asia can only be solved by accelerating the trend toward market-based energy strategy" is one-sided. Market forces are wonderful, but they cannot change the fundamental energy supply picture.

The present Asian financial crisis since July 1997 has already had an impact on Asian countries' economic growth rate and on their energy demand. It is estimated that the 1997 demand growth was reduced by some 100,000 b/d (barrels per day), though the demand growth in China and India compensated the reduced demand in these Asian countries plagued by the financial crisis. The crisis and the consequent economic slowdown are expected to continue for around 3-5 years. Then Asian Pacific countries will continue their advance towards industrialization and again be one of the most dynamic regions in the world. In the medium-term and long-term, Asia Pacific energy demand growth will resume strongly, because the fundamental elements for continuous economic growth in most Asian economies remain sound.

Unlike Europe, East Asia has no mechanism for allocating energy in an emergency. The growing wedge between oil supply and demand and the thirst for oil in the region would strain relations among Asia Pacific countries, and would pit energy

customers against one another more directly. The effect of energy rivalries and tension could easily have destabilizing international and regional consequences.

In my perspective, energy security in the Asia Pacific involves three dimensions: oil and natural gas supply security due to the big gap between regional demand and supply; environmental security due to the high percentage of coal in the regional energy structure; and nuclear security due to the regional commitment to expand nuclear power plants. Among them, oil and natural gas supply security is the key issue of Asia Pacific energy security concerns.

Asia Pacific energy security is closely related to China's energy security. They are inseparable from each other. It is estimated that from now on to 2015, approximately half of the Asian energy demand will come from China. Since 1993 when China first became a net oil importer, there has been an annual deficit in China's oil balance. China's net oil import is projected to reach 1.1 million barrels per day (mb/d) in 2000, and 2.3-3.0 mb/d in 2010, as its oil production in 2000 is expected to be a little higher than the current level (3.2 mb/d), and in 2010 to be 3.7-4.5 mb/d. Currently around half of China's oil imports are from the Middle East. From an environmental standpoint, China's reduction of its coal usage is of significance to the whole region. Whether China can manage the growth in its energy demand while trying to wean itself from coal is a big question.

China plays a critical role with respect to the above-mentioned three dimensions of energy security. As China is the largest energy consumer in the Asia Pacific, and might become one of the world's largest oil importers after the U.S. and Japan, and as coal will still be the principal energy in China in the foreseeable future, China would be at the root of the region's energy problem, and would hold the key to regional energy security. How China solves its enormous energy needs will be one of the great challenges over the coming decades.

To unfold energy security cooperation between China and the other Asia Pacific countries is a prime task facing the region. Without China's participation and cooperation, Asia Pacific energy security is unrealistic and unworkable. Without others' cooperation, China's own energy security cannot be guaranteed. Since China will be forced to tap the supply of many other parts of the world, it will have a significant impact on the worldwide and regional supply of oil and gas. China's energy consumption should be fitted into the larger international and regional energy markets. Regional energy cooperation in accommodating China's entry into the global and regional markets is of great importance to the region and the world.

The time has come that Asia Pacific energy security cooperation be put on the policy agenda of regional countries. The wide use of natural gas may be the solution to the region's energy dilemma. A series of concrete measures with respect to cooperative oil and gas supply security, cooperative environmental security, and cooperative nuclear security between China and other Asia Pacific countries should be worked out. The prospects of the settlement of the regional gap between energy supply and demand depend on successful cooperation.

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#### **REMINDER:**

In the June 4 issue of PacNet we presented a Readers' Survey, asking each of you to list what you believe to be the five greatest challenges to Asia-Pacific security. Please remember to fax or email your response by June 18th. Thank you to the many of you who have already responded, and to those of you who will be doing so. We will share the results in a subsequent PacNet.