

Summary of Session 2: Energy Markets, Energy Efficiency, Conservation, Technology Transfer and Investment in Northeast Asia

Steve Cowper, Chair and Moderator

The energy session was characterized by excellent presentations on the current state of energy demand and possible sources of supply in Northeast Asia, with an emphasis on oil and natural gas.

The special keynote address for this session was delivered by Mr. Sam Dale, the Singapore Bureau Chief for the oil and gas industry publication Energy Intelligence, formerly known as Petroleum Intelligence Weekly. Mr. Dale explained the factors leading to the current \$70/bbl price of oil, including global demand exceeding supply, caused by demand growth in the US and China as well as Europe and Asia which caused a drop in inventories. Other reasons were the level of perceived political risk and the actions of speculators. Mr. Dale believed it was realistic to assume a price floor of \$40/bbl for the near future, with the possibilities of price spikes to \$70-80. Compared to Japan and Korea, China takes a lower percentage of oil from the Middle East and is thus less susceptible to political risk from that region. Mr. Dale noted the many large pipeline and LNG projects in Russia could further diversify China supply and, later, could supply Korea and Japan as well. There is also a possibility of shipping crude oil from Canada to Northeast Asia. Mr. Dale closed by noting the many tangible benefits of regional cooperation in the energy sector, including enhanced security.

Dr. Andrey Korzhubaev, of the Institute of Petroleum Geology, Russian Academy of Sciences in Novosibirsk, presented a view of potential oil and natural gas production in Eastern Siberia and the Russian Far East, along with domestic demand, reduction of delivery risk, and required capital investment for pipelines and other transportation modes. Dr. Korzhubaev noted that an optimistic view of reserves in these regions would support annual production of 520 million tonnes of oil and as much as 900 billion cubic metres of gas. Oil in these regions is of high quality. By 2020, oil exports to the Asia Pacific region could reach 65-70 million tonnes per year, and if Western Siberian reserves are made available to the region, the figure could rise to 110 million tonnes/yr. After domestic demand, natural gas exports to Northeast Asia could reach 75-80 billion metres by 2020. Transportation means, i.e., pipelines and LNG facilities, allow a diversity of supply to Northeast Asia nations. Dr. Korzhubaev was confident that the large amounts of capital required to construct pipelines from Russian production areas to China, Korea and Japan could be found.

Dr. Shen Longhai, Senior Adviser, Energy Research Institute for the Chinese National Development and Reform Commission (NDRC), presented the case for energy conservation in meeting energy goals, noting that a reduction in demand was as effective as an increase in supply, and less expensive. Dr. Shen noted that the Chinese government has adopted the policy of giving a priority to energy conservation, and that by 2020 energy demand and increased environmental pollution in China will require alternative strategies. Dr. Shen said that current economic growth in China is characterized by "high

investment, high consumption, and high pollution." A detailed plan for energy conservation has been adopted in principle, and China plans to cooperate with other Northeastern nations to improve energy efficiency in the region.

Commentators on the panel made the following points:

Dr. Shin Joeng-Shik, former president of the Korea Energy Economics Institute, noted that Northeast Asia nations cannot tolerate high energy prices or energy shortages. Northeast Asian energy markets are not integrated or connected, and that progress was not impressive due mainly to a lack of trust. A political consensus is necessary.

Dr. Vladimir Ivanov of ERINA, reminded the participants that the LNG industry is not very old, and that it owes much to Northeast Asia. After stressing the need for energy security and sustainability of supply, he named three areas of potential cooperation in the energy development field: Compressed Natural Gas (CNG) technology, which requires shipbuilding; electric power transmission; and production on the Russian Arctic shelf.

Dr. Zhou Dadi, Director General, Energy Bureau, NDRC, emphasized the importance of guaranteeing the security and safety of an energy supply, given that Northeast Asia consumes 80% of the Asia-Pacific region's energy. Dr. Zhou adopted Dr Shen's suggestion of reducing demand. Dr. Zhou reminded the audience that the effect of energy policies on poor countries must be considered.

Dr. Xu Xiaojie, Senior Fellow, ETRC/CNPC in Beijing, complemented Mr. Dale's analysis, but noted that the outside world was overestimating energy demand in China, stating that 9 MBD was a more accurate figure because of energy savings and demand reduction. Current pricing is related to spare production capacity which should rise.

Dr. Yasuo Tanabe, Vice-President of RIETI in Japan, agreed with Dr. Shen that increased energy efficiency was critical and that end-use efficiency was also necessary for CO₂ reduction. Noting that US per capita energy use was four times that of Japan, Dr. Tanabe recommended that China adopt Japanese standards for energy efficiency.

Dr. Zhang Jianping, Deputy Division Chief of the Institute for International Economic Research at NDRC, commented that China's influence on world oil and gas prices was overstated and that the growth rate in other countries was more influential in pricing. Dr. Zhang encouraged regional cooperation, especially a continuing dialogue with Russia. Dr. Zhang also endorsed environmentally-friendly electric power generation.

Dr. Yoshiteru Nishie, Advisor to the International Power Business Department, J-Power, in Japan, emphasized the possibilities of clean coal electricity generation. Examples in Japan show that NO_x and SO₂ emissions can be reduced in China. Dr. Nishie suggested that more electric cars and hybrids be used.

In summary, there seemed to be a consensus among the presenters and the commentators that regional cooperation as to supply and demand was necessary to properly address

energy security, especially between large energy importers and Russia, and that energy conservation should play a major part in any regional energy plan.