



Korea: Leading the transition to a creative energy economy

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Since the Industrial Revolution of the 19th century, energy has driven the world's economic development, bringing prosperity to mankind. But now the world is facing a tremendous challenge related to energy. As the World Energy Council points out, the Energy Trilemma, the trade-offs between energy security, social equity, and environmental impact mitigation, is the most significant challenge.

We are living in a world where the regular oil price is US\$100 per barrel. Uncertainty in international energy supply and demand continues to be caused by geopolitical risks in oil producing countries and surging energy demand from emerging economies. The impact of climate change has increased the importance of eco-friendly energy. We can no longer ignore the fact that 1.3 billion people around the world have no access to electricity.

Responses to the Energy Trilemma: Transition in energy

The world needs to come up with drastic and advanced measures to address the Energy Trilemma and secure clean, safe, and available energy for all. In particular, "Transition in Energy" is important from three perspectives.

First, transition in global energy cooperation. International energy cooperation has been taking place mainly among energy producing countries, and among energy consuming countries, separately. In fact, there has been a tense relationship between energy producing and consuming countries. Now, however, energy consuming countries should not only focus on securing energy, while ignoring producing countries' development. Energy producing countries should also not excessively control energy supplies without considering circumstances in consuming countries. If this goes unchecked, it will be impossible to achieve sustainable and balanced global economic development.

To overcome the Energy Trilemma the world is facing right now, we need a transition in global energy cooperation to break down walls between energy producing and consuming countries. Asia, in particular, is mixed, consisting both of countries with strong energy demand and countries with huge energy supply potential. It is necessary, therefore, to seek ways in which we can achieve new energy cooperation, contributing the world's energy market stability and bringing benefits for all.

We have to explore new initiatives for energy cooperation in Northeast Asia, for instance. We also need to build the foundations for Northeast Asian countries to join together in the development of shale gas in North America and

China, and of conventional oil and gas in Eastern Siberia. In addition, we have to create an environment that enables different countries' energy infrastructures to connect with one another, including regional power grids, gas pipeline networks, and oil pipelines. To that end, we need to create a united legal and institutional foundation, such as an Energy Charter Treaty. If such an infrastructure is established, it would make it easier to attract the vast private investment required, and would also allow us to build funds to develop energy infrastructure jointly between regional governments.

Second, transition in our energy economy model. We have to address our traditional energy economy model, where growth and environment are in conflict. With a paradigm shift to a "creative energy economy," which integrates creative ideas, scientific technology and IT, we can create a virtuous cycle where energy saving and environmental improvements create new markets and jobs. We need to extend investments in new energy technology development, such as smart grids, LEDs, and green cars that can reduce environmental impact and meet energy demand at the same time. In addition, new technologies should lead to the creation of start-ups and venture capital businesses to create new, additional value and jobs.

Given that governments around the world do not have the necessary financial capability, due to the economic crisis, I believe they have to make efforts to build an environment where we can take full advantage of private investment and creativity through the mechanism of the market.

Third, transition in energy policy and institutions. Currently, energy policies and institutions in most countries have focused on the stable supply of fossil fuels. We have to review, from scratch, whether the existing energy policies and institutions are sufficient to achieve our new goals – "securing clean, safe, and available energy for all."

Energy pricing regimes and regulations have to be adjusted to encourage the equitable distribution of energy resources and their efficient use. Investment in clean energy technology also needs to be extended. We have to increase support for people in energy poverty, while the means of providing support needs to be streamlined, so as not to encourage wastage of energy.

Korea's contribution to resolving the Energy Trilemma

In just half a century, Korea has transformed itself from one of the poorest countries in the world into a nation which has

a modern energy system and infrastructure. Korea imports most of its energy, however it has grown into the world's leading exporter of petroleum products, the second biggest export item in Korea, and of nuclear power plants. Energy consumption rapidly increased during this industrialisation. However, we have continued our efforts to improve our environment and our quality of life. Now, with its successful experience, Korea will play a leading role in resolving the Energy Trilemma facing the world and contribute to the international energy market.

First of all, Korea will lead the transition to the creative energy economy. The Korean government is pursuing a "Creative Economy" where new economic paradigms and creative ideas are linked with scientific and information technology, thereby creating jobs and new markets. We can say that the paradigm of the creative economy will contribute significantly to the energy industry. We will reduce the country's electricity consumption by using ICT, including ESS (Energy Storage System) and EMS (Energy Management System), and build a system where the

stored electricity can be traded on the power exchange. We anticipate that we can reduce up to 1 million KW of electricity peak and create a 3.5 trillion market and 15,000 jobs through this system. We will develop the energy industry into a driving force of the creative economy and share with the international community our know-how and experience in the transition to this creative energy economy.

Second, Korea, as an oil importer and petroleum product exporter, will do its best to build cooperation in the international community. Korea will actively participate in the dialogue for "clean, safe, and available energy for all" among energy producing and consuming countries, the energy industry and civil society. Korea has hosted international energy conferences, including the Asia Energy Ministerial Meeting and the World Energy Congress as part of its effort to build cooperation. In the coming years, Korea will actively participate in energy cooperation in Northeast Asia and increase its support for and investment into the infrastructure of developing countries to expand its commitment to global energy co-operation. □

President Park Geun-hye with World Energy Council officers and speakers on Day 3 of the Congress in Daegu

