

KOREAN ENERGY DAY
IEF Secretariat, 5 December 2012
Event Summary

1. Event background

The Korean Energy Day was held at the IEF Headquarters on 5 December 2012 with the participation of the diplomatic Community in Riyadh, representatives of Saudi Government, the industry and experts from research institutions. The objective of holding a Country's Energy Day is to offer IEF member countries a platform to showcase their energy policy and technology developments, share their experience and know-how, explore areas of cooperation with other member countries and to deliver key messages on energy related issues. In addition to lectures, such Energy Days serve to structure and enrich the global energy dialogue to the benefit of IEF member countries.

Two presentations were made by the Korean delegation:

- Energy Industry Development Profiles in Korea, by Ji-Chul Ryu, Korea Energy Economics Institute,
- Korea's Energy Cooperation Policy and Green Growth, by Shim Jae Hyun, Director Energy, Climate Change & Environment Division, Ministry of Foreign Affairs and Trade.

The presentations were followed by an interactive exchange with the participants.

Some of the key points made during the talks are summarised in the lines that follow.

2. Overview of Korea's energy balance

Korea has very limited domestic resources, and is subsequently heavily dependent on imported fossil fuels; its energy dependency on energy imports is around 96.5%.

Korea's energy consumption pattern is heavily dependent on fossil fuels, which represent 85% of its primary supplies, the rest being nuclear (12%) and renewables (less than 3%).

Total energy demand in 2010 reached 200 million Toe; with 60% of global demand, the industrial sector is the main area of consumption, followed by the residential and commercial sector (19%) and the transport sector (18.5%).

The country's energy mix has changed significantly during the last two decades:

- Oil share decreased from 53.8 % in 1990 to 38.5 in 2010,
- LNG has increased its share from 3.2% to 17.5% over the same period,
- While coal and nuclear share remained globally unchanged (29% and 12% respectively).

Korea's energy intensity has declined steadily since its peak in 1997 as energy efficiency has improved significantly, especially for the power industry.

3. Korea's energy policy

Energy security has always been the main feature of Korea's energy policy, although the country's energy policy has been through a paradigm change over the last three decades.

From securing stable energy supply in the 1970s, the energy policy evolved to a diversification of energy sources in the 1980s, to market deregulation and energy efficiency in the 1990s, to developing a low carbon society based on energy security, energy efficiency, modernisation of energy infrastructure and environmental protection, in the current vision.

The energy industry moved from a "Government intervention" to a "market-oriented" environment. Important public investments in the energy sector (especially in the refining and power generation sectors) have been made in the period 1970-1980s.

4. Future developments and challenges for the Korean energy sector

The National Basic Energy Plan was established in 2008 with the objective to set direction for mid and long term energy policy. It aimed at restructuring the domestic energy consumption pattern by reducing dependency on fossil fuels and expanding the use of nuclear power. It seems that the Fukushima accident has not impacted plans to increase nuclear energy in Korea, although many countries are reviewing their plans and objectives. Public acceptance for nuclear energy is still high considering, the lack of domestic resources and the subsequent security of supplies concerns. The government is however giving due attention to the issue of siting of nuclear projects. It has also been underlined that the human resources component is crucial in building a viable and secure nuclear power industry. Developing countries planning to develop nuclear power should adopt the same approach in human resources development and capacity building.

Securing long-term stable energy resources in a sustainable manner is a core element of the Energy Plan. The country's future challenges and plans encompass the following key actions:

- Strengthening energy diplomacy with energy producing/exporting countries (Middle East, Australia, Russia, SE and Central Asia),
- Enhancing regional energy cooperation in North East Asia,
- Enhancing partnerships between government and business sectors,
- Establishing energy market integration between South and North Korea,
- Pursuing active overseas resource developments through the promotion of overseas E & P business and government support,

- Addressing environmental concerns and moving to a low carbon energy system (by boosting the green energy industry, improving energy efficiency, reducing energy consumption and reducing the use of fossil fuels).

5. Green Growth actions

Korea's development strategy for the future will be based on "Green Growth", with the objective of developing a low carbon society and changing people's behaviour and way of thinking. The objective is to boost the use of renewable energy (a targeted share of 11.5% by 2030, compared to 2.6% currently) and nuclear energy (a share of 27.8% by 2030, compared to 12.2% currently).

In order to develop a low carbon society, a key objective for Korea is to develop international cooperation in renewable energy, particularly with the following international organisations:

- International Renewable Energy Agency (IRENA),
- Renewable Energy and Energy Efficiency Partnership (REEEP),

The Government's role in this regard will be:

- To establish clear and long-term policy and identify competitive fields of green technology, financially adaptable and commercially viable,
- To have cost-effective approach to promote technology development in energy storage and solar photovoltaic,
- To stimulate private sector involvement,
- To strengthen international cooperation in the fields in renewables and clean technology (CCS).

6. Korea-Saudi Cooperation

Potential for renewable energy in Saudi Arabia and its plans to increase the share of renewables in its energy mix were highlighted.

Korea and Saudi Arabia agreed to expand cooperation in the energy sector to nuclear power, the development of renewable energy and to knowledge sharing. Wind and solar energy, PV, hydrogen fuel cells, integrated gasification combined cycle, energy storage, small-scale combined heat and power, smart grids, and energy efficiency have been identified as potential areas for cooperation.

Joint R & D and demonstration projects are already being implemented between academia and research centres of the two countries.

This cooperation is a win-win situation as Saudi Arabia's goal is to increase the share of renewables and low-carbon forms of energy in its energy mix and Korea has the technology and know-how and plans to be one the world's leaders in low carbon industries.