



Planning for safe, reliable, efficient and sustainable baseload electricity

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While the global public debate on electricity production is focused on the future of intermittent electricity-producing technologies, the electricity sector continues to struggle with the challenge of providing safe, reliable and sustainable baseload electricity on a long-term basis.

Baseload electricity is the backbone of a nation's economic and social growth. It provides stability so that entrepreneurs, citizens and governments around the world can construct the economic sectors of growth. It enables advanced technology and communications, and empowers agriculture, industry and the services sector.

Without a stable and long-term planned baseload infrastructure, energy policy makers face higher levels of energy insecurity, creating perilous imbalances. There is no growth without continued electrical power, and no government across the world wants to face the social and economic damage of electrical blackouts.

Just last year, two massive power shortages in two consecutive days left hundreds of millions of people without electricity or water across northern and eastern India, paralysing one of the emerging world's economic powers. We will likely witness an increasing amount of blackouts across nations around the world, mostly due to poor energy policy making and the non-existence of reliable baseload electricity.

As stakeholders of the global energy debate, we must accept our responsibility as enablers of growth and come together during the World Energy Congress to address the challenges of providing safe and reliable baseload electricity through a careful balance between cost, energy security, affordability and environmental impact.

There is an ample consensus that all forms of electricity-producing technologies must be considered to power

the growth of nations around the world. However, energy portfolios need to become long-term oriented and balance assessment of the short-term gains of cheaper forms of baseload electricity with their long-term impact.

To do so, we must face the facts and have an honest debate about how and where our sector must evolve. The facts are:

- The electricity, heating and cooling sector is the highest contributor of greenhouse gas emissions in the world. It emits a quarter of the world's total emissions, nearly double the emissions of the transportation sector.
- Over the next 40 to 60 years, coal will provide the vast majority of the world's baseload electricity. Since the start of the 21st century, coal has been the fastest-growing global energy source. Nearly 1,199 coal-fired plants with an installed capacity of 1,401,268 MW are being proposed globally, even in Europe.
- Consequently, the electricity sector will continue to be the highest contributor of greenhouse gas emissions over the next decades. From an electricity production perspective, the decisions that energy policy makers make today will only be visible in the next 20 to 40 years, when the lifecycle of current power plants comes to an end.
- Clean baseload electricity generation, such as hydro or nuclear are proven technologies that play a critical role in providing sustainable baseload electricity. This, along with extensive research and development other forms of baseload technologies, will prove critical to improve the sustainability targets of the electricity sector for the next generation.

These facts highlight that this next decade will be crucial for the choices that the energy sector must take. Energy policy makers must protect their national interest and continue to provide baseload electricity. However, low-

cost electricity can only be one of the factors in making this decision: energy security, social equity and sustainability must also be taken into account in the energy equation.

The impact of the decisions we make today will only become apparent over the next 20 to 40 years. Think of how the world will look in 40 years in the context of this data, and use the World Energy Congress as a platform to improve energy policy and planning. □

Korea has won a US\$40 billion contract to build and operate four reactors for the UAE

