

IEE Japan Makes Predictions about Global Energy Supply and Demand through 2030

On September 20, the Institute of Energy Economics, Japan (IEE Japan) released a report entitled "2006 Energy Outlook for Asia and the World," in which it analyzed the world's energy supply and demand situation through the year 2030, placing emphasis on Asia. It predicted that the generating capacity of the world's nuclear power plants (NPPs) would grow approximately 30% from current levels by 2030, increasing by 114 GW, with some 110 GW accounted for by new plants in Asia, making it the major thrust of nuclear power's expansion worldwide.

According to the report, primary energy consumption would rise 60% worldwide by the year 2030 from current levels, and that the comparable figure within Asia alone would double. Meanwhile, the report predicted that the amount of electricity generated worldwide would increase 90% worldwide to 33,663 TWh, and that in Asia would grow 150% to 13,191 TWh.

The composition of the world's electricity generation in 2030 is expected to change as follows: the share of natural gas-based thermal power is expected to increase from the current 20% to 28%, with that of coal-based thermal power inching up from 40% to 41%, and that of nuclear power falling sharply from 16% at present to only 10%. While Asia is expected to be the primary locus for the new construction of NPPs from the perspective of energy security and global warming countermeasures, the extent of that expansion is not expected to be enough to cover the global increase in electricity demand.

The capacity of the world's facilities for nuclear power generation will grow from the current 385 GW to 499 GW in 2030, with the comparable figures for Asia at 82 GW and 199 GW, respectively. In contrast to the sizable expansion of Asia's capacity, the OECD members in Europe are expected to experience a 30 GW decrease in their capacity. Broken down by country, China will see a sevenfold increase to 50 GW, while India will experience a tenfold increase to 32 GW. South Korea's capacity, meanwhile, will grow 70% to 30 GW, while Japan's will increase 40% to 66 GW, according to the report.

In line with the aforementioned rapid increase in generating capacity, the period from 2005 to 2030 will see capital investments of 26 trillion yen being made in Asia overall, of which China will account for 10 trillion yen, India for 7 trillion yen, South Korea for 3 trillion yen, and Japan for 4 trillion yen.

Editor: Noriyuki Ishii, JAIF