



Working draft of the Korean 11th Basic Plan for Supply and Demand of Power

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The Basic Plan for Power Supply and Demand is released every two years and provides the Korean government's long-term outlook for electricity supply, the plan for power generation facilities, and the management of electricity demand.

On May 31, 2024, the Ministry of Trade, Industry and Energy released a working-level draft of the 11th Basic Plan for Power Supply and Demand. The working-level draft will be finalised by the Electric Policy Council after consultation with relevant ministries and public hearings.

1. Key takeaways

▣ **Forecast of electricity demand in 2038:** Maximum power demand to be 129.3GW.

▣ **Plans for electricity supply by 2038:**

(i) Need new facilities capable of 10.6GW. A plan is proposed to cover new power generation facilities to meet the above demand, including up to three large-scale nuclear power plants and one small modular reactor (SMR), as well as LNG combined heat and power generation.

(ii) Total capacity of target facilities 157.8GW.

(iii) Confirmed facilities: 147.2GW.

▣ **Renewable Energy:** In order to achieve Nationally Determined Contributions targets, solar and wind power facilities will be expanded from 23GW in 2022 to 72GW by 2030, and it is expected to achieve a three-fold increase in renewable energy targets under the COP28 Declaration.

By 2038, solar and wind power facilities will have a capacity of 115.5GW and the total renewable energy facilities including hydro, bio and others are expected to increase to 119.5GW.

▣ **Thermal Power:** In addition to converting coal-fired power plants into LNG power plants, the plan is to convert 12

coal-fired power plants, whose design lifespan reaches 30 years in 2037 to 2038, into carbon-free plants such as pumped storage hydro or hydrogen power plants.

▣ **Nuclear Power:** Plan to have 30 plants operational by 2038.

▣ **Energy mix:** Power generation quantity and proportion of power generation (unit: TWh, %)

Year	Nuclear	Coal	LNG	Renewable	Hydrogen Ammonia	Others	Total	Carbon-free energy	
								Carbon	Zero carbon
2030	204.2 (31.8%)	111.9 (17.4%)	160.8 (25.1%)	138.4 (21.6%)	15.5 (2.4%)	10.6 (1.7%)	641.4 (100%)	301.9 (47.1%)	339.4 (52.9%)
2038	249.7 (35.6%)	72.0 (10.3%)	78.1 (11.1%)	230.8 (32.9%)	38.5 (5.5%)	32.5 (4.6%)	701.7 (100%)	209.1 (29.8%)	492.6 (70.2%)

※ Carbon-free energy: Nuclear power + renewable energy + hydrogen/ammonia - fuel cells/IGCC

▣ When comparing the energy mix of the 2030 numbers of the 11th Basic Plan with the 10th Basic Plan, there have been slight decreases in nuclear power (32.4%→31.8%) and coal (19.7%→17.4%) and increases in LNG (22.9%→25.1%) and hydrogen/ammonia (2.1%→2.4%). Renewable energy remains unchanged (21.6%→21.6%).

2. Things to watch

The plans set out in the working-level draft have attracted a lot of interest. In particular, the targets and forecasts require legislation to be passed and investments to be made to meet the relevant targets. In this regard, the navigation of competing interest for nuclear power projects and securing LNG supply will be important. Also, some of the Bills that were tabled to promote offshore wind and the expansion of the power grid have lapsed having not been passed at the 21st National Assembly. Whether these Bills will be revived in the 22nd National Assembly remains to be seen and would seem essential to support the government’s objectives.

If you have any questions or need help with the above, please feel free to contact us. Our dedicated Project & Energy Group is recognised as a top ranking team in various international publications such as Chambers & Partners. It is the only Korean law firm that provides a one-stop service that can assist project and energy clients with regulatory advice, project finance, construction and operation and M&A.

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