



Korean Renewable Energy Bidding System

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On August 30, 2023, the Ministry of Trade, Industry and Energy (MOTIE) announced an amendment to the Rules on the Operation of the Electricity Market. In order to address certain issues with the burgeoning renewable energy supply in Jeju Island and Jeollanam-do province, MOTIE issued the “Rules on the Operation of Jeju Pilot Project for Improvement of Electricity Market System”. It is expected to be implemented before the end of February 2024.

Jeju Island will be a pilot project and in order to introduce measures to stabilize the electricity market system, MOTIE plans to roll out changes nationwide by the end of 2025.

Among other things, the rules introduce a renewable energy bidding system for renewable energy generators satisfying certain criteria.

Background

Renewable energy generators do not participate in the electricity bidding market. Their electricity is unconditionally purchased in consideration for the SMP (System Marginal Price, being a system limit price).

As a result, it has been difficult to forecast demand and supply due to the problem of intermittent nature of the supply of electricity from renewable energy generators. MOTIE’s introduction of a renewable energy bidding system seeks to stabilise the management of demand and supply.

When the system is introduced, renewable energy generators will be treated the same as other electricity generators in that they will be subject to orders from the Korea Power Exchange to supply and control supply.

Key takeaways

	Details
Mandatory Application	Power generators with capacity greater than 3MW
Voluntary Application	Photovoltaic or wind power generation facilities with a facility capacity of more than 1 MW.
Registration Requirement	Necessary to register as a “dispatchable renewable energy generator”. Technical requirements include installation of real-time information devices (RTU, renewable data acquisition devices, etc.), remote output control functions, and maximum output adjustment functions for real-time information reception
Bidding Scope	Supply capacity and bid price submission for up to 10 sectors
Available Capacity	Forecasted capacity (from 0 MW)
Tender Price	Maximum: KRW 0/kWh Minimum: (REC average price for last 2 months x 2.5) x (-1) <i>* As fuel costs are KRW 0, bidding for variable costs (in other words unit power generation cost being based mainly on fuel costs) cannot be conducted, and negative bidding is conducted</i>
Market Price determination	The higher of (a) the variable cost of the general generators, and (b) the bid price of a dispatchable renewable energy generator.

For renewable energy generators that have participated in the market and won a bid, additional settlement payments and capacity fees, in addition to SMP will be paid.

<p>Electricity Volume Settlement Amount + Additional Settlement Amount + Capacity Price – Imbalance Penalty</p>

	Details
Electricity Volume Settlement Amount	(i) A day-ahead market settlement (as determined under the day-ahead market), plus (ii) A real-time market settlement (as determined under the real-time market).
Additional Settlement Amount	(i) Variable cost preservation settlement (settlement payments received in cases where electricity generation is required more than the Unit Commitment due to a demand response), plus (ii) Expected profit settlement payments (settlement payments received when output control is required to ensure power generation is less than the Unit Commitment).
Capacity Price (CP)	Charges payable in proportion to the capacity of the installation.
Imbalance Penalty	Penalty imposed for excessive power generation when real-time power generation exceeds the allowable error over the demand response.

The above MOTIE plans to expand the renewable energy bidding system nationwide has met opposition from renewable

energy generators. Whether the plans will become implemented in its current form will need continual monitoring.

[\[Korean version\]](#) 재생에너지 입찰제도 도입

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