

Corporate PPA Guidebook

- Japan Section Digest -

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Renewable Energy Institute

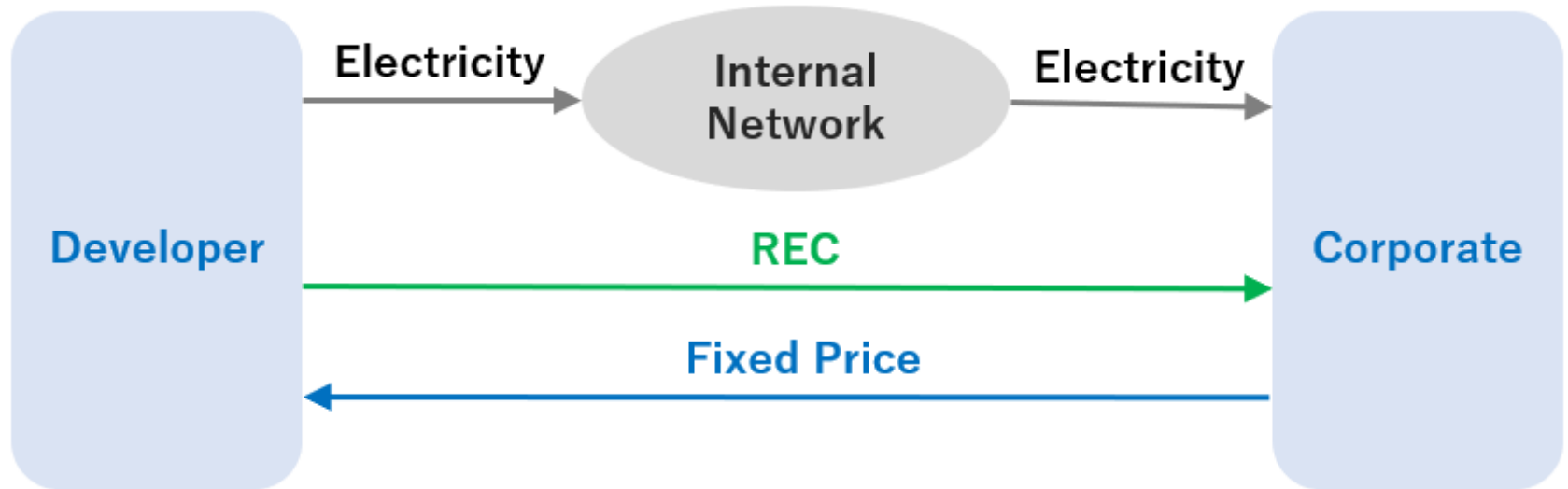
Objective and Background

- “Corporate PPA Guidebook” is compiled for helping corporate energy users in Japan to make Power Purchase Agreements, PPAs, for securing renewable electricity to be consumed by local and global business activities.
- This Digest Edition in English summarizes the sections on Japan of the Guidebook for overseas corporate energy users to understand how Corporate PPAs can be made under the existing Japanese laws and market regulations.
- Due to the regulations, direct PPAs between developers and corporate energy users are not allowed except Onsite PPAs, but with involving retailers as electricity providers, Corporate PPAs are realizable in Japan.
- This document covers Onsite PPAs, Physical PPAs and Virtual PPAs based on the current and planned new policies such as Feed-in-Premium.

Major Procurement Methods in Japan

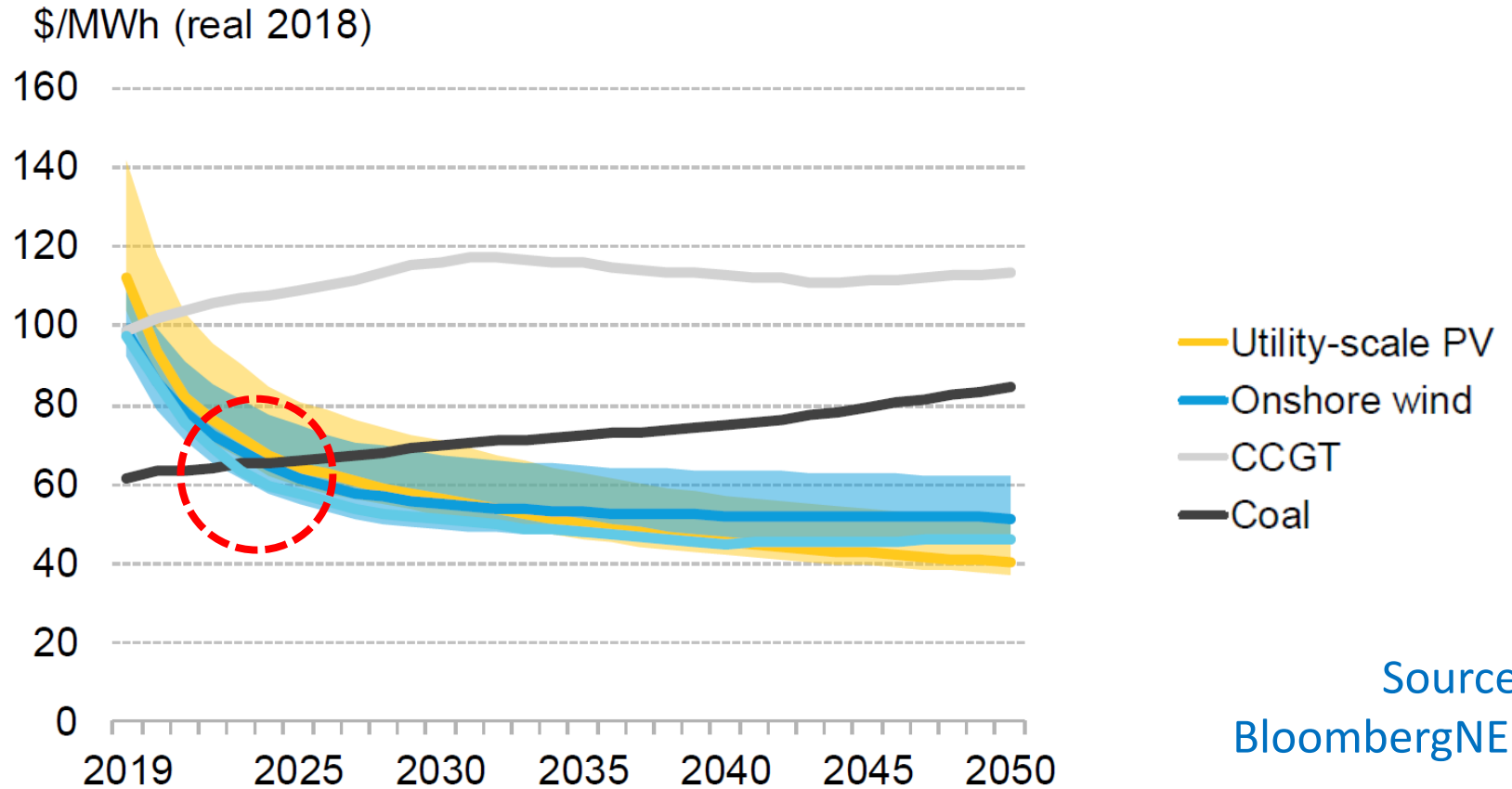
Method	Description	Features
Onsite Generation	Construct renewable energy power plant and consume generated electricity internally	<ul style="list-style-type: none"> ▪ Initial investment or 3rd party owned ▪ Low-cost renewable electricity secured ▪ Environmental aspects of power plant identified ▪ Risks of trouble in operation
Green Product	Purchase renewable electricity from registered retailer	<ul style="list-style-type: none"> ▪ Short-time contract available ▪ Specific power sources unidentifiable (some cases) ▪ Higher tariff than standard products (many cases)
Renewable Energy Certificate	Purchase certificate derived from renewable electricity	<ul style="list-style-type: none"> ▪ Separated from physical procurement ▪ Specific power sources unidentifiable (some cases) ▪ Additional cost on top of electricity procurement
Corporate PPA	Invest renewable energy development and receive electricity and/or attribute	<ul style="list-style-type: none"> ▪ New renewable electricity added ▪ Retailer involved in 3-way contract for PPA ▪ Environmental aspects of power plant identified ▪ Business risks of long-term investment

Contract Scheme of Onsite PPAs



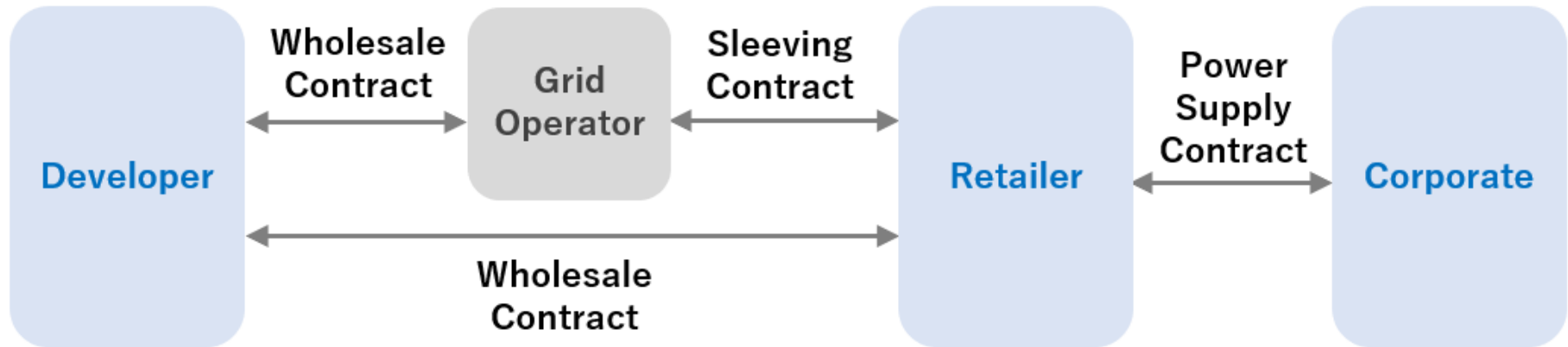
Onsite PPAs can be made directly between developers and corporate energy users under the current regulations. Offsite PPAs require retailers to be involved as electricity providers using grid network.

Generation Cost by Sources (LCOE)



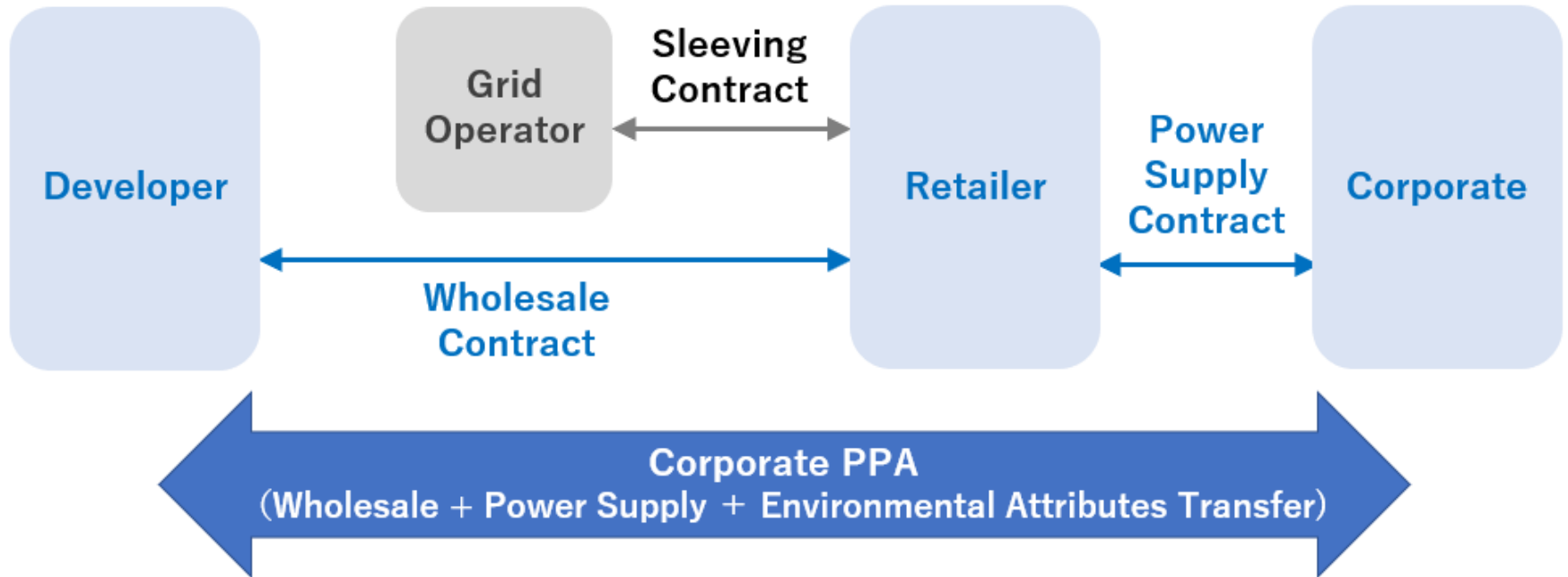
Average wholesale price is around \$90 and standard tariffs for corporate are around \$160. Onsite PPAs are economically reasonable and Offsite PPAs will be feasible in early 20's.

Standard Contracts in Japan



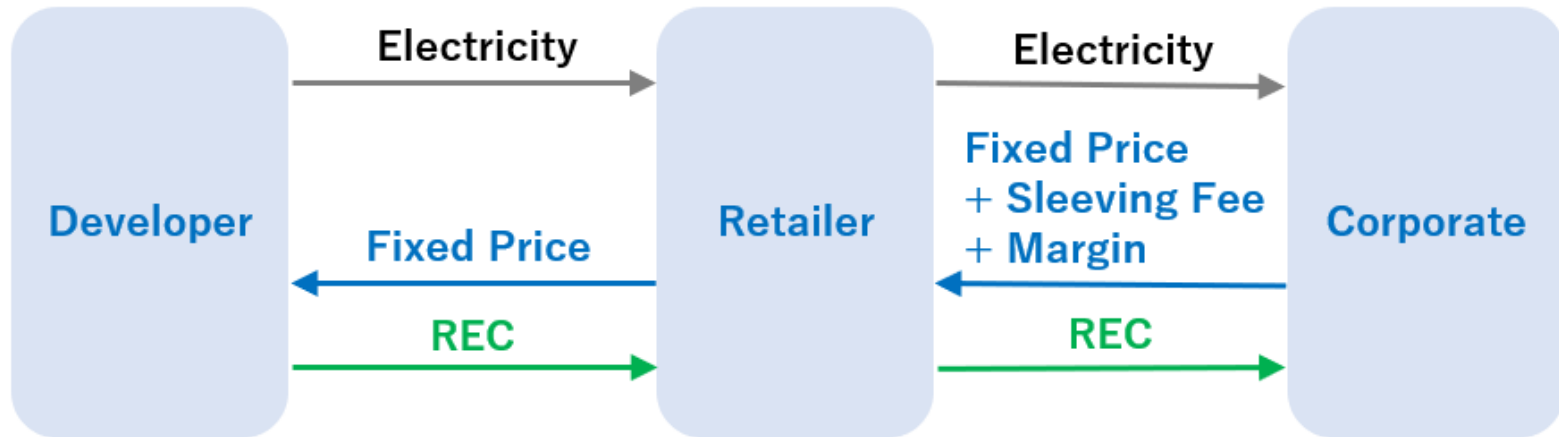
The contract scheme of electricity is not unique in Japan. Wholesale contracts are made between generators and retailers or grid operators while retailers make sleeving contracts with grid operators. Consumers make power supply contracts with retailers.

Physical PPAs in Japan



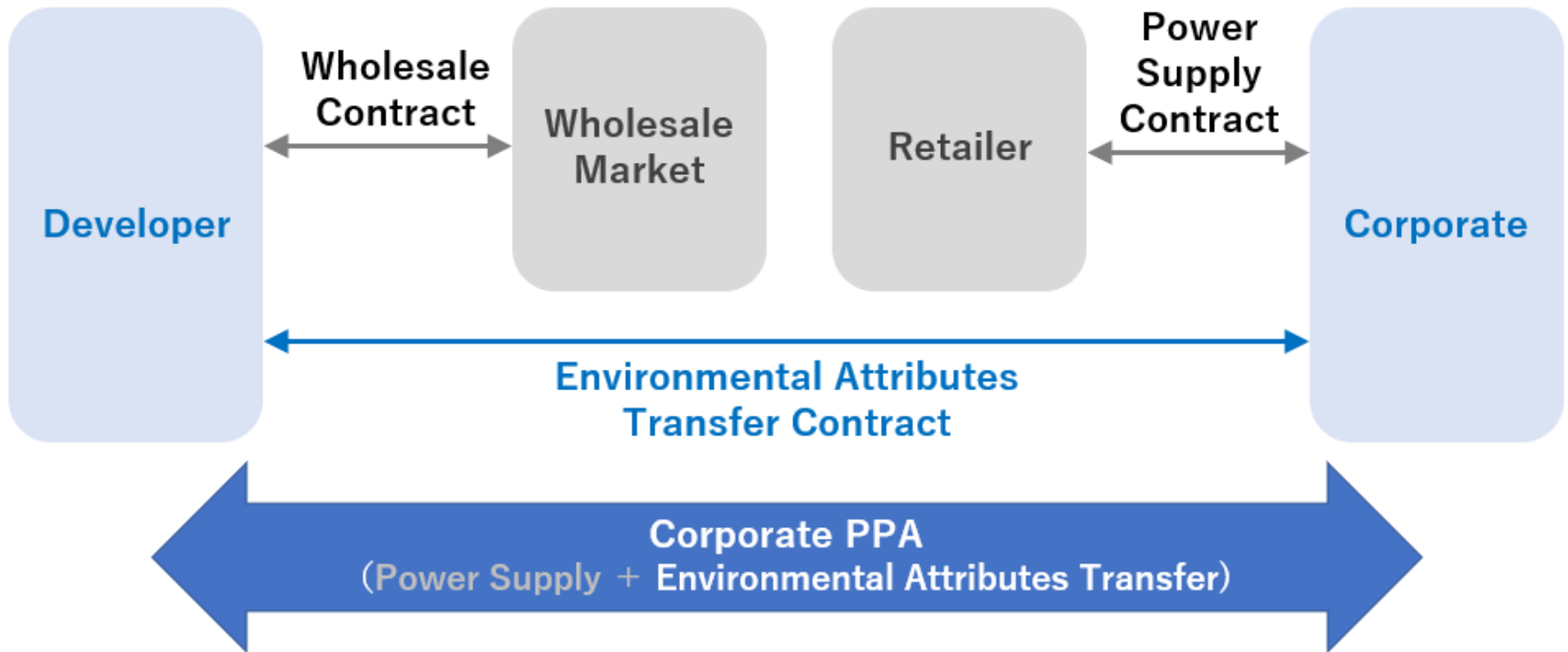
In Physical PPAs, 3-way contracts between generators, retailers and corporates will be made to supply electricity with environmental attributes.

Logistics of Physical PPAs



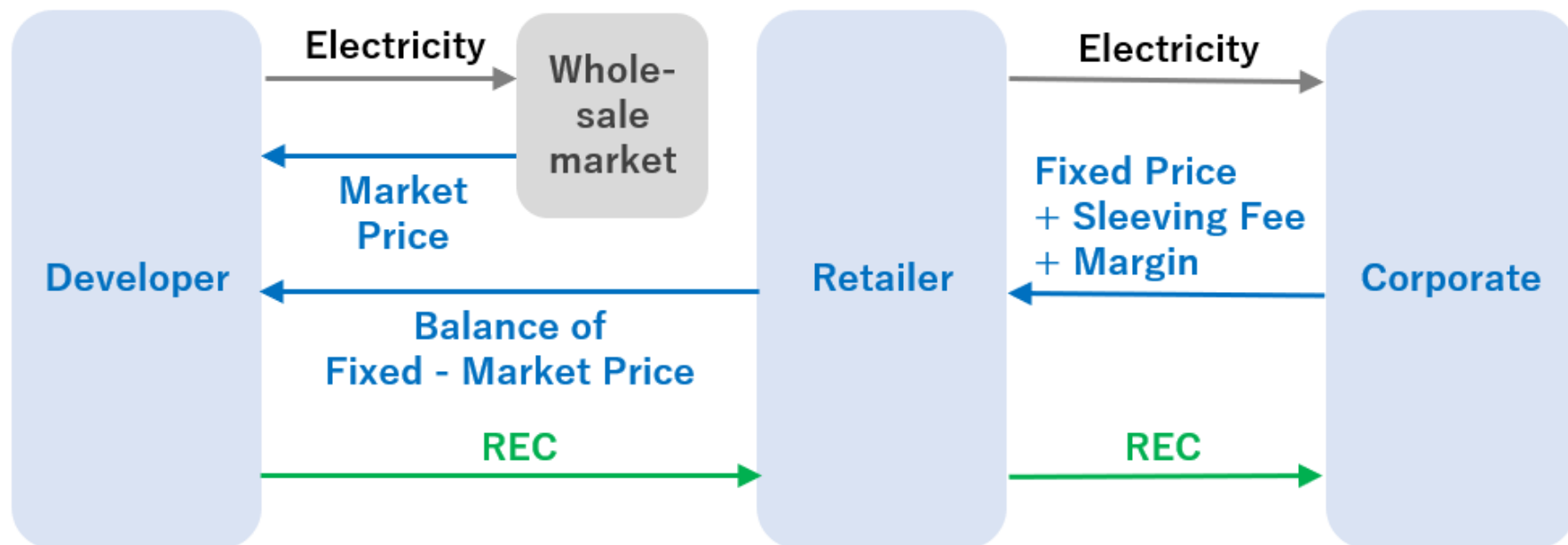
Corporates pay fixed fees to generators through retailers including sleeving and management fees. Environmental attributes are transferred from generators to corporates.

Virtual PPAs in Japan



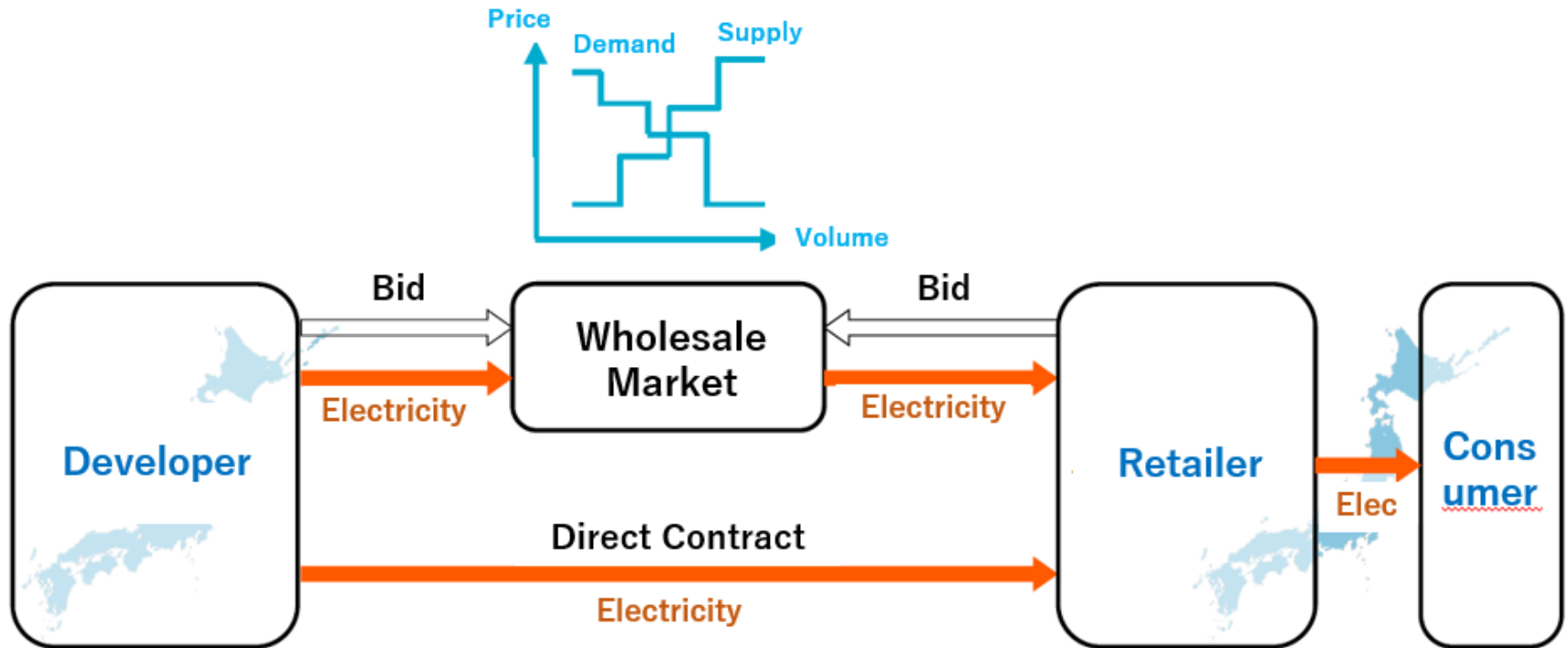
In Virtual PPAs, 3-way contracts between generators, retailers and corporates will be made for transferring environmental attributes while the existing contracts of supplying electricity may continue.

Logistics of Virtual PPAs



Corporates pay fixed fees to generators through retailers including sleeving and management fees. Generators and retailers adjust the balance of fixed contract prices and floating market prices.

Feed-in-Premium (from FY2022)



Source: METI (translated by Renewable Energy Institute)

Feed-in-Premium will be introduced in April 2022 for large scale solar and wind projects. Developers receiving the premium can transfer environmental attributes to consumers through retailers.

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