

RENEWABLE ENERGY MARKETS ASIA 2023 PANEL DISCUSSION

MARKET SPOTLIGHT: JAPAN



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Thursday, 27 April 2:30-3:00 PM



**Renewable Energy
Markets™ Asia 2023**



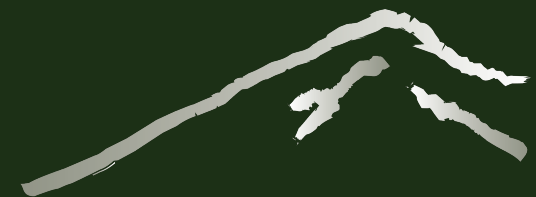
Market Spotlight: Japan

Corporate Renewable Energy Solutions

Albert Sutanto

Manager SE Asia Markets & Global EACs Sourcing
Mt. Stonegate Green Asset Management Ltd.

Singapore, 27 April 2023



Mt.Stonegate

About Mt. Stonegate

Mt. Stonegate has been active in the renewable energy market since 2013. We enable corporate buyers to achieve their renewable goals in a professional way. Consulting operations, innovative project management, as well as guidance to leading market players in their green asset investments across East Asia, are among many of the services that we offer to our thriving corporate and business customers.



MULTINATIONAL
SOLUTIONS



ONE-STOP
SERVICE



FLEXIBILITY

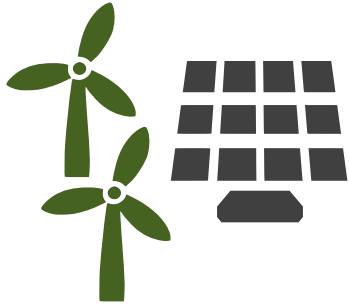


MARKET
EXPERTISE

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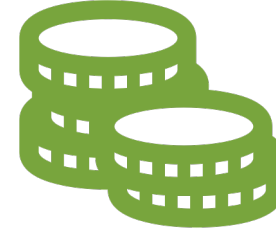
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Corporate Renewable Energy Solutions



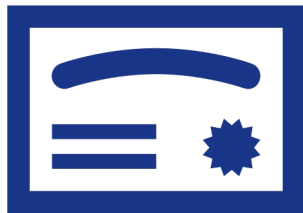
On-Site Installation

- On-site generating facility (e.g. rooftop solar)
- High Investment and O&M



Green Product / Tariffs

- Additional services from retail company
- Short-term basis



Energy Attribute Certificates

- Additional purchase of environmental value (in addition to default electricity)
- In Japan: GEC, J-Credit, NFC, I-REC



Power Purchase Agreement




- Physical / Financial PPA
- Include both electricity and certificates (bundled)
- Fix and long-term basis



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Energy Attribute Certificates (EACs) in Japan

Types	 Green Electricity Certificate	 J-Credit Scheme	 Non-Fossil Certificate
Fuel Source	Solar, Wind, Hydro, Geothermal, Biomass (mainly biomass)	Solar, Wind, Hydro, Geothermal, Biomass (mainly residential solar)	Solar, Wind, Hydro, Geothermal, Biomass
Purchasing Method	Directly from registered issuer	Auction or directly from owner	Auction in trading market
Issuance Amount	436 GWh (FY21)	1.3 TWh (FY21)	112 TWh (FY21)
Cancellation	Anytime	Anytime	Same Fiscal Year

Source: Renewable Energy Institute

I-RECs in Japan





The first I-REC(E) have been issued in Japan and the issuance criteria have been expanded

Dec 19, 2022

The first I-REC(E) have been issued in Japan by the accredited I-REC(E) Issuer, Local Good. These issuances were from three devices using three different energy sources, including wind and solar. This is...

I-REC Issuance Criteria in Japan:

- On-Site consumption facilities
- Non-FiT receiving facilities (with or without NFC)
- FiT receiving facilities*

Name	Country	Fuel Type
Katsuraosousei ochiai solarpower plant	Japan	 Solar
Yusuhara-Town Wind farms	Japan	 Wind



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Green Tariff / Products



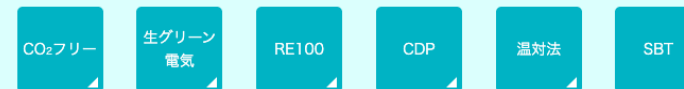
再エネECOプラン

ご加入いただくことにより実質的に再生可能エネルギー由来のCO₂フリー電気をお使いいただくことができます。
 ※ご要望があれば、属性情報が付加されたトラッキング付非化石証書を活用することでRE100にも対応いたします



CO₂フリーの水力100%電気をお届け アクアプレミアム

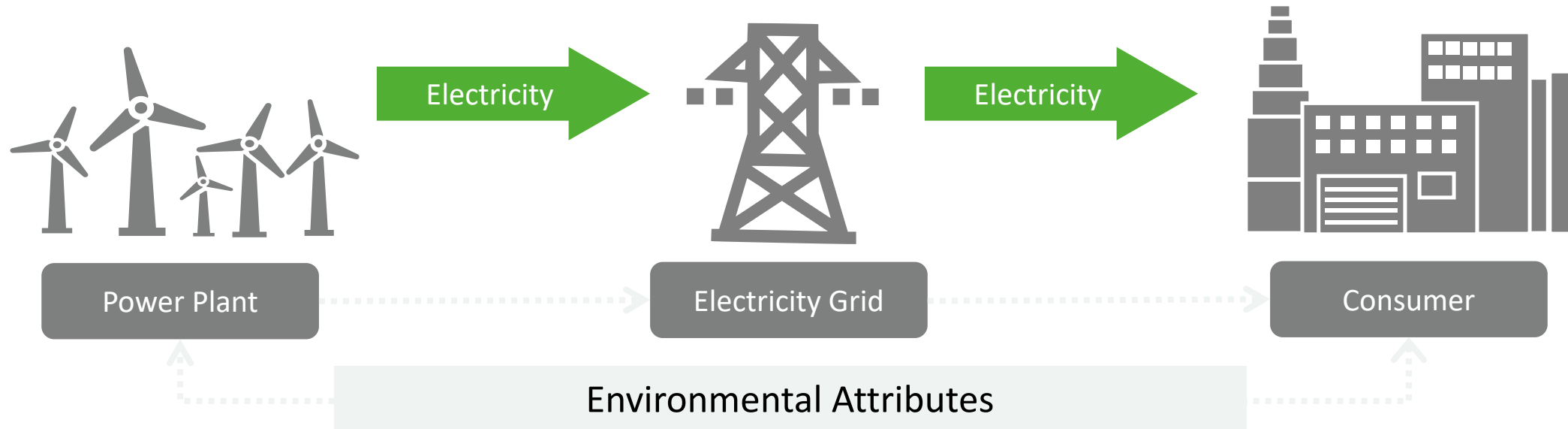
- ✓ 一般水力発電（揚水発電やFIT電源を除く）を電源としたCO₂フリーの料金メニューです。
- ✓ 「同時同量」で水力発電由来の「生グリーン」電気をお客さま向けにリアルタイムに調達します。
- ✓ 多くの水力発電所から昼夜を問わず安定した再生電気を調達。



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Power Purchase Agreement



Physical Power Purchase Agreement

- Delivery of physical electricity and environmental attributes with or without grid transmission

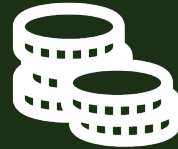
Virtual (Financial) Power Purchase Agreement

- Delivery of Environmental Attributes without its physical electricity

Key Characteristics and Challenges of Virtual PPA in Japan



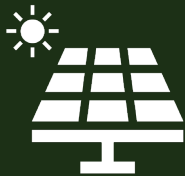
Seller market: No buyer tender possible.



Feed-in Premium:
Market Price is floored



Mostly Solar – scaling up will be challenging



Order-to-develop



Lack of Market Openness



Grid Balancing Issues



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Thank you for your attention!

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