

Sourcing Renewable Energy Certificates

Karl Trutschmann – Feb 13th, 2023

EVERY CONNECTION COUNTS

A stylized globe with a network of glowing green and blue lines and nodes overlaid on it, symbolizing global connectivity and technology.

**SAVE. REUSE.
BE GREEN.**

Move to Certified Renewable Energy

Green electricity certificates are transferable guarantees of origin that companies can buy separately from physical electricity contracts

Benefits:

- ⇒ Provide companies, institutions, and individuals a simple way to offset their carbon footprint & support clean energy
- ⇒ Ability to claim energy generated from renewable source
- ⇒ Currently an acceptable method under SBTi (Science Based Targets Initiative)
- ⇒ Complimentary to your own production i.e., Solar...
- ⇒ See Next slide for types and locations

Options on how to proceed:

1. Choose a provider who supplies both electricity and certificates
 2. Pick an electricity supplier who buys certificates and sells you both separately
 3. Separately tender for electricity supply and green electricity certificates.
 - This means you may opt for two different suppliers
- ⇒ You will need to know your forecasted annual kWh volume
- ⇒ You can source partial or full volume as well as source for future years

What, Where & How?

IREC's: America's and China

- International Renewable Energy Certificates
- USA also called Green-e®

GO's: Europe

- Guarantee of Origin Certificate

TIGR's. India

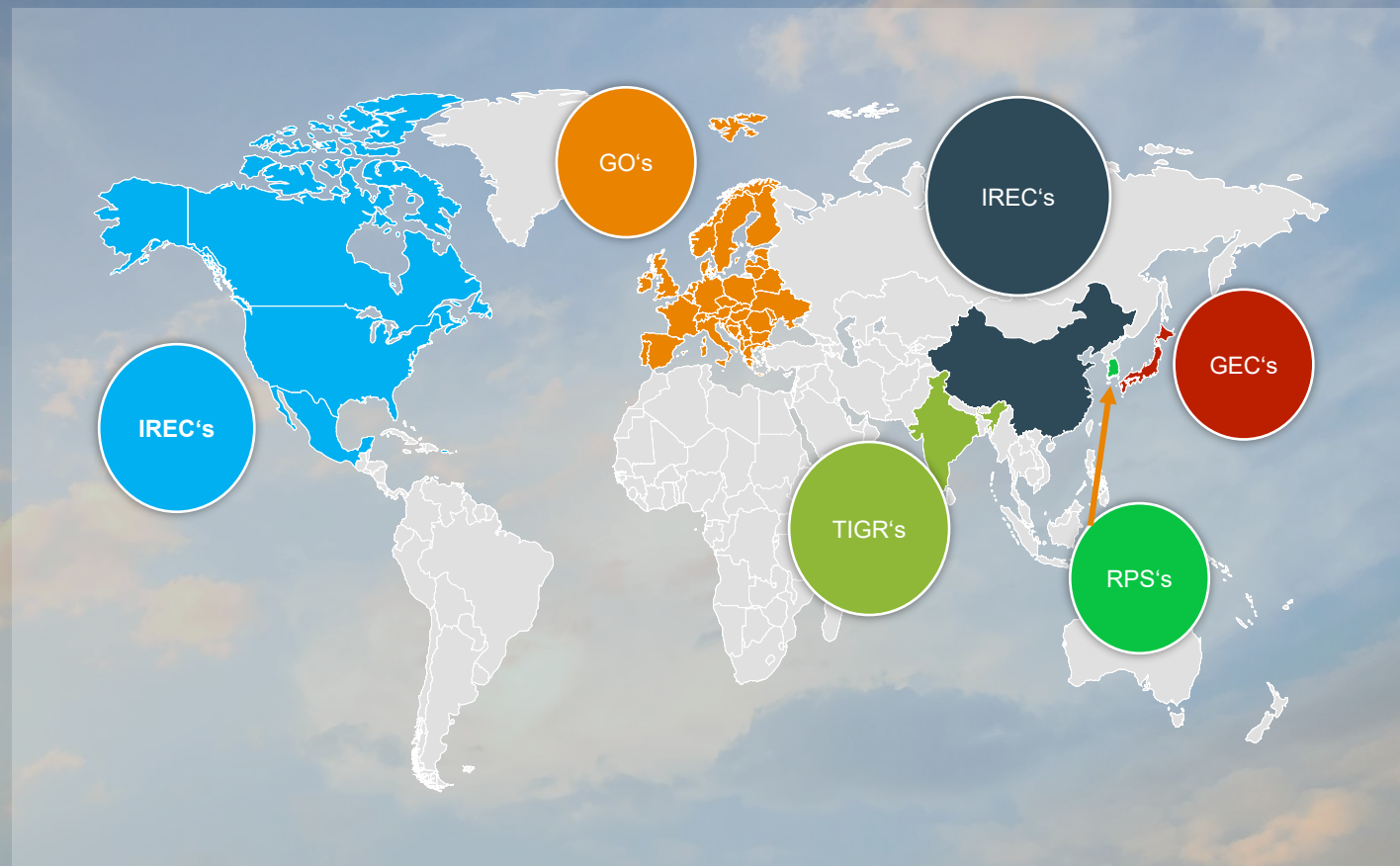
- Tradable Instrument for Global Renewables

GEC's: Japan

- Green Electricity Certificates

RPS's: Korea

- Renewable Portfolio Standard



- Contact your energy provider for further options in your region
- Reach out to the above certification organizations to ensure compliance to national regulations

- Reach out to reputable energy consultants
- Ensure Certificates are recognized by local auditors
- REC's are a current option - VPPA's (virtual power purchase agreements are another option)

FAQ's



Why Purchase Renewables?

- TE, our Customers and Shareholders are requesting increases in renewable electricity – TE is already >65%
- Straightforward method of addressing Scope 2 emissions equaling a Scope 3 reduction for TE
- Part of current path to TE 2030+ sustainability targets
⇒ Recognized industry objectives (Paris Accord & G7/G20...)
- Spur Investment into Renewable Production Projects

What is accepted as Renewables?

- Solar, Wind, Biomass, Geothermal, Hydro, Tidal
- Nuclear is NOT classified as Renewable

Pricing is Market Driven:

- Current price ranges of \$2-\$10+ per MWh
- Given the lack of significant investment, the Certificate pricing will likely remain volatile and is expected to rise due to demand increase for REC's over the years
- Plan your sourcing strategy ahead of time

FAQ's

Will we need to purchase Renewables annually?

- There is a yearly requirement to re-certify

Where and How to Buy Renewables?

- Inform yourself and use certified entities.
- Seek guidance or work with from Energy Consultants or your current energy supplier
- For Reference only:
 - ⇒ TE partners with Siemens Energy & Sustainability Management
 - ⇒ TE sources Renewable Certificates in multiple countries via certified partners such as Climate Impact Partners or Summit Energy Services (Schneider Electric)
 - ⇒ Renewable Energy Certification bodies exist in a majority of countries, contact them to ensure what you are purchasing is not “Fake” and is auditable per your reporting standards

Recap & Next Steps

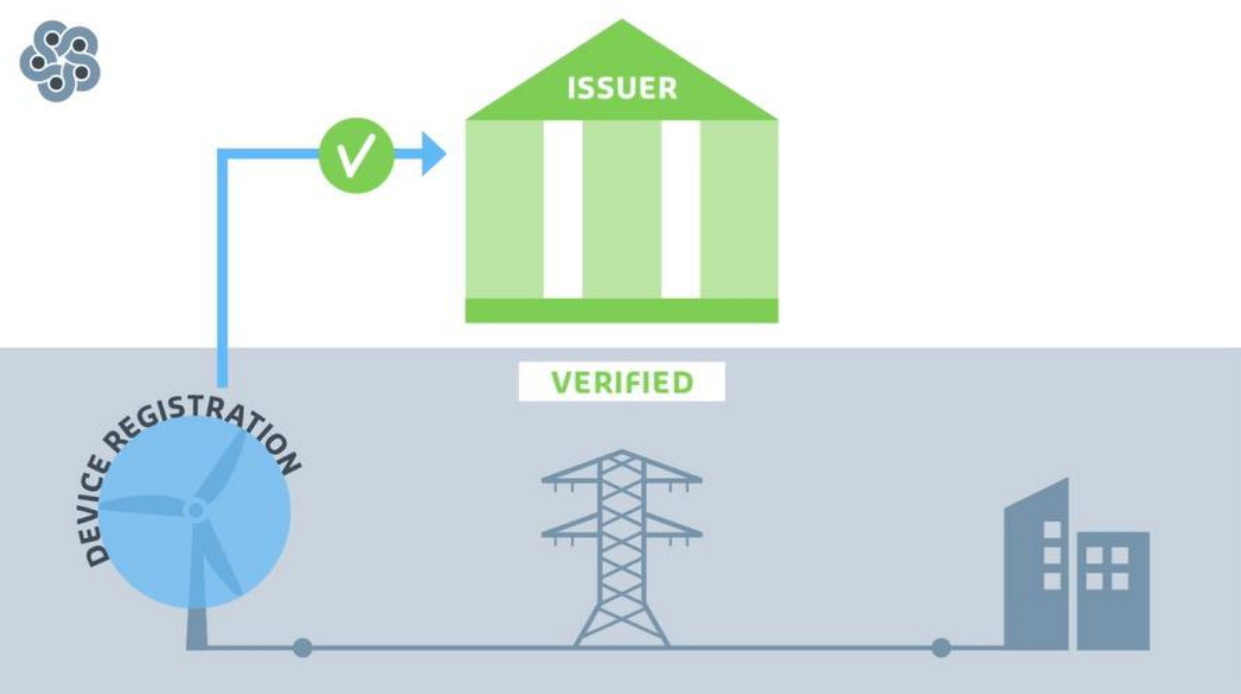


- Know your future volume requirements
- Contact:
 - ⇒ Current utility providers and review their offer
 - ⇒ Other certified organizations that sell Certificates independent to your current provider
- Our expectation is that you invest in renewables
- Share your plan with TE team direct or via Survey by end March 23'

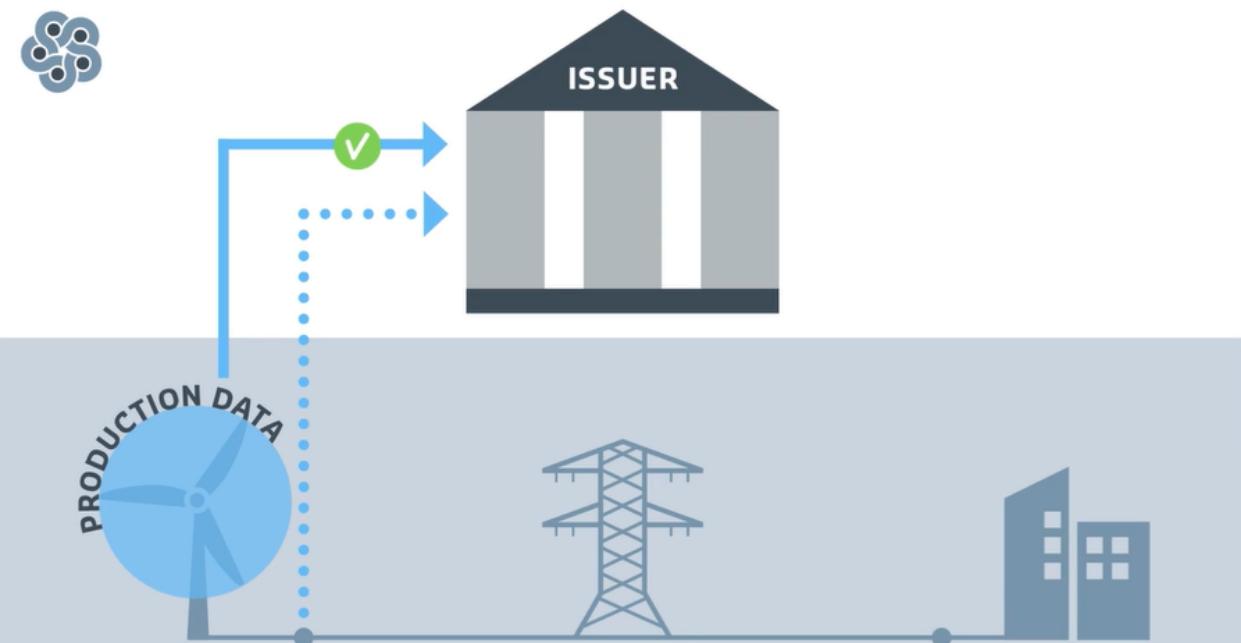
IREC Certification Process

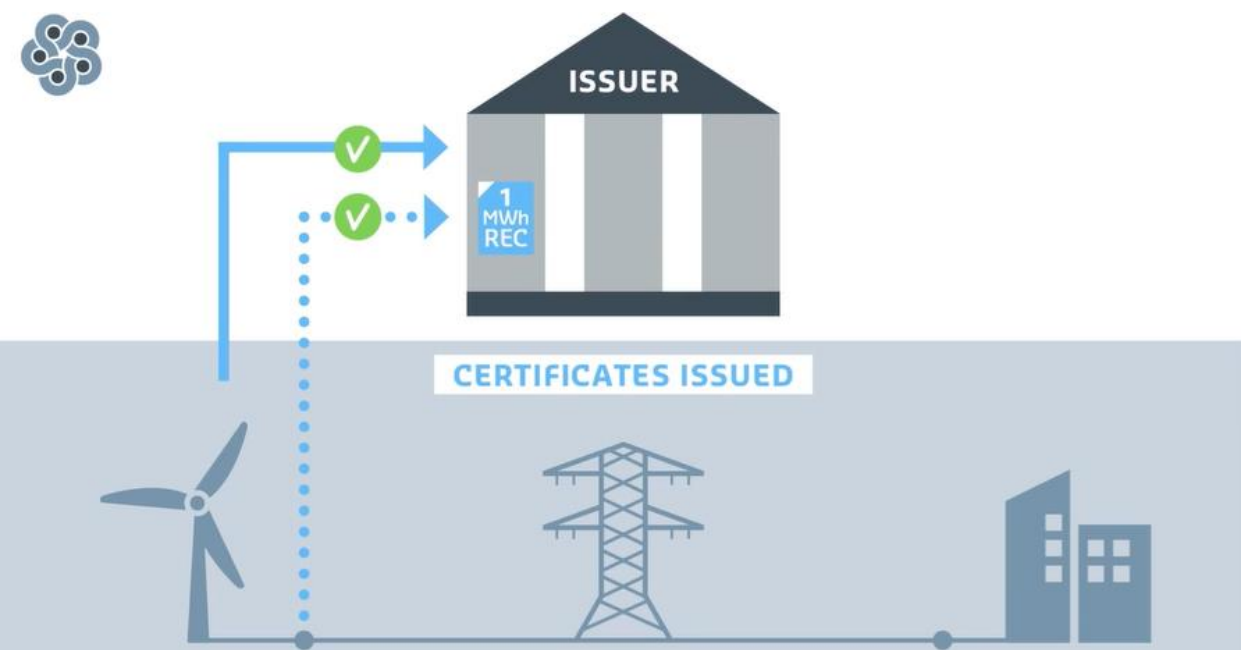
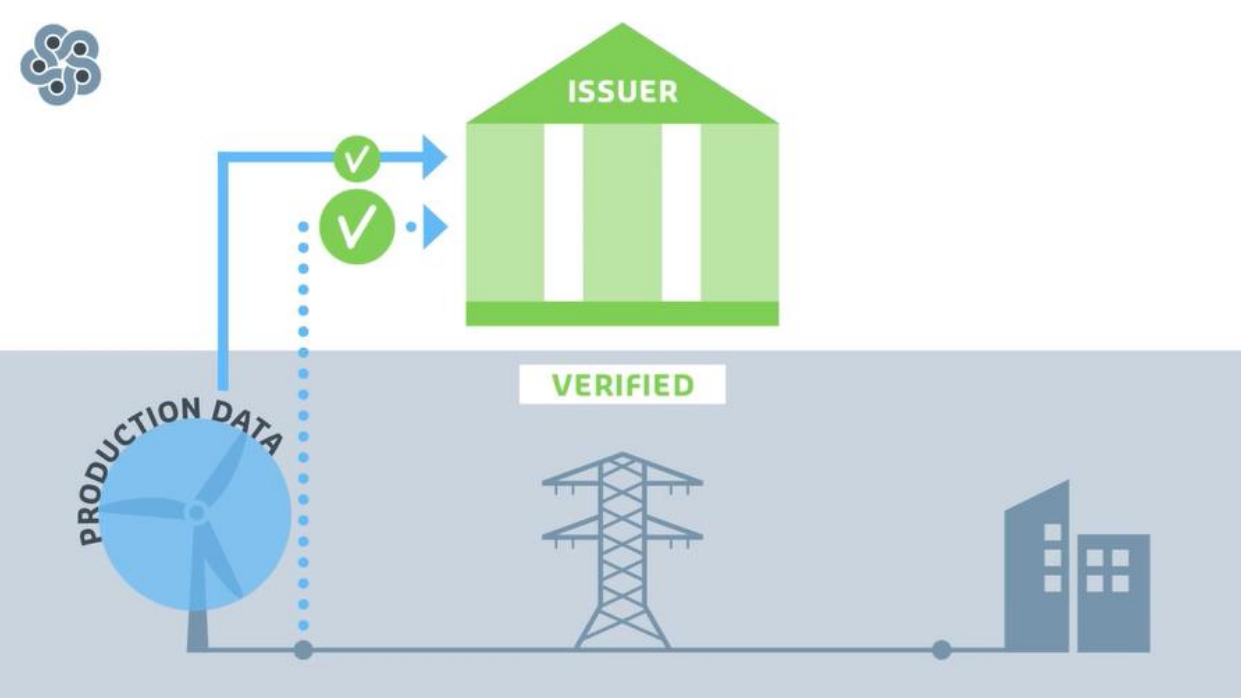


- The following are links to the IREC website and a visual aid representing the REC (Renewable Energy Certificate) certification process:
 - ⇒ <https://www.irecstandard.org/>
 - ⇒ <https://vimeo.com/141543977>
- The following slides are an extract of the video



- In order to source Renewable Energy i.e., from windmill
 - ⇒ The device owner must first register it on the IREC registry by submitting detailed information about the device
 - ⇒ All documents are verified by a 3rd party
 - ⇒ Once approved the registrant must then submit meter reading information to inform them of the volume of energy being produced in MWh

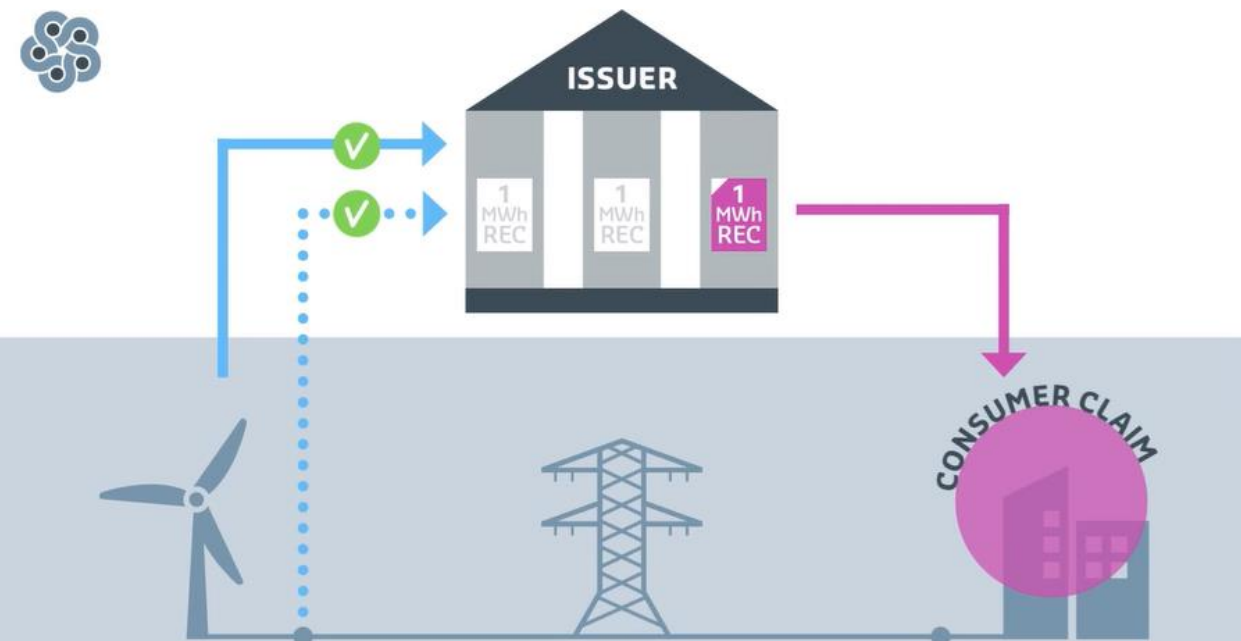




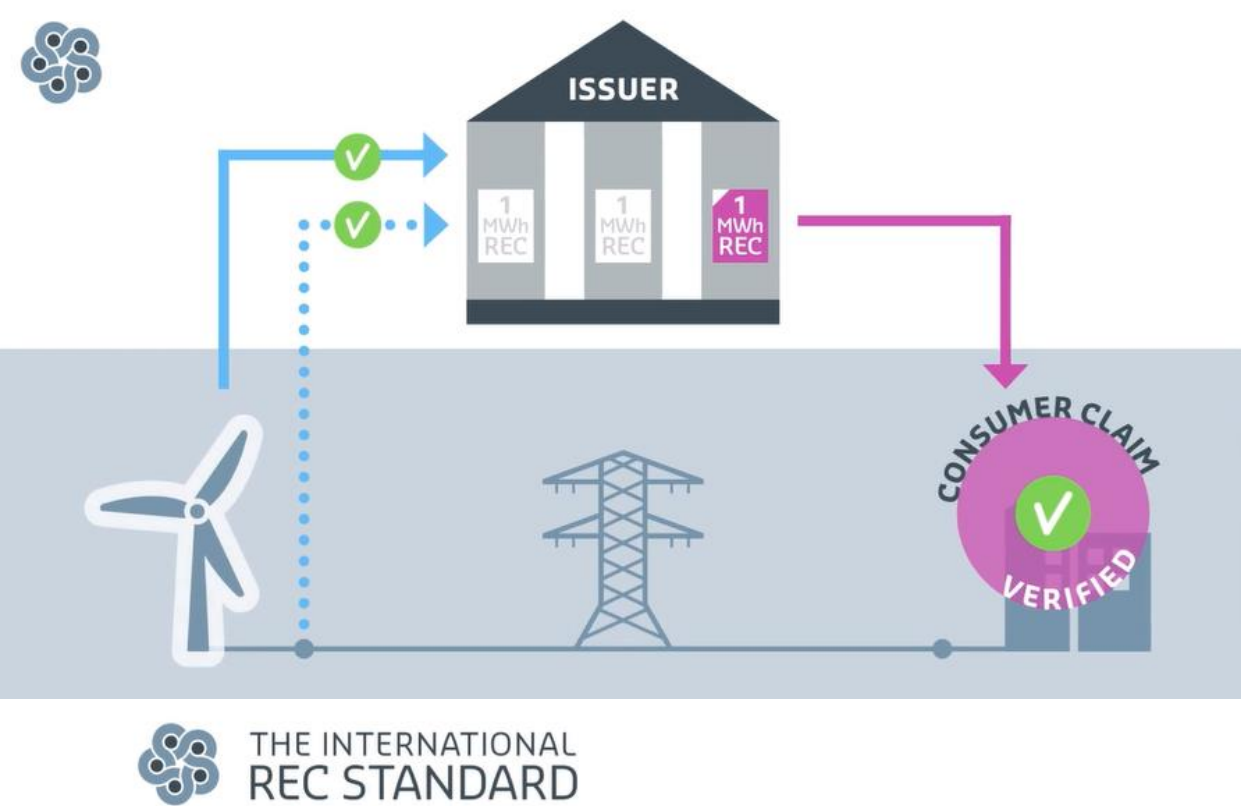
- This must be again verified by a 3rd party and only then can REC's be issued
- The IREC's represent a contractual agreement between the electricity generator and the electricity consumer (whomever is purchasing renewable energy)
- IREC's introduce verifiable attribute ownership and encourage the development of green electricity markets
- IREC's can be traded within the central registry and can only be redeemed by a single consumer



- Based on the IREC, consumers can make a public statement
- This statement is:
 - ⇒ Unique
 - ⇒ Reliable
 - ⇒ Transparent



- In order to make the statement more credible and verifiable, you should have a third-party audit your certificate redemptions
- Auditors should verify the correct number and type of certificates that have been redeemed



- IREC's represent individual products and not commodities
- Every certificate is as unique as the generator that produced it
- Consumers can decide which type of production (renewable) they wish to purchase

Introduction to **How I-REC works**

This animation is developed by The International REC Standard
 For more information go to www.irecstandard.org

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