



# REC 101

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Sol Systems

# Sol Systems – Leading Solar Platform Partner



## Our Firm

- **Established in 2008**, Sol Systems is one of the leading diversified sustainability platforms in the solar industry. **120+ energy professionals** create innovative value for partners
- We **develop and execute integrated onsite, offsite, tax equity and commodity solutions** to allow C&I clients to meet sustainability goals
- We execute on integrated solutions to maximize **ecosystem and community impact**



## Our Mission

We work with our customers, industry and communities to accelerate an **equitable transition** to a **sustainable energy future**



## Our Team

- **As a leading renewable energy developer, financier, trader and operator, with 120+ mission driven professionals**
- Sol empowers entrepreneurs to have a **meaningful impact on the world**
- Focused on catalyzing the development and **operation of sustainable infrastructure**

# What is a Renewable Energy Credit (REC)?



**A REC is a tradeable, market-based solution that represents the legal rights to making claims for using renewable electricity**

RECs are created when 1MWh of electricity is generated from a renewable resource and delivered to the electricity grid



**RECs are managed in REC Tracking Systems to facilitate trading and certification of renewable energy**

Each tracking system provides a standard level of detail: Project or Facility Name, Certificate or Serial number, Vintage, Location, Quantity, and Fuel Type



**RECs are used to reduce an organizations scope 2 emissions from purchased electricity**

From EPA document: RECs play an essential role in accounting and assigning ownership to the attributes of renewable electricity generation and use

## How RECs are Made



Renewable Energy Facility is Installed

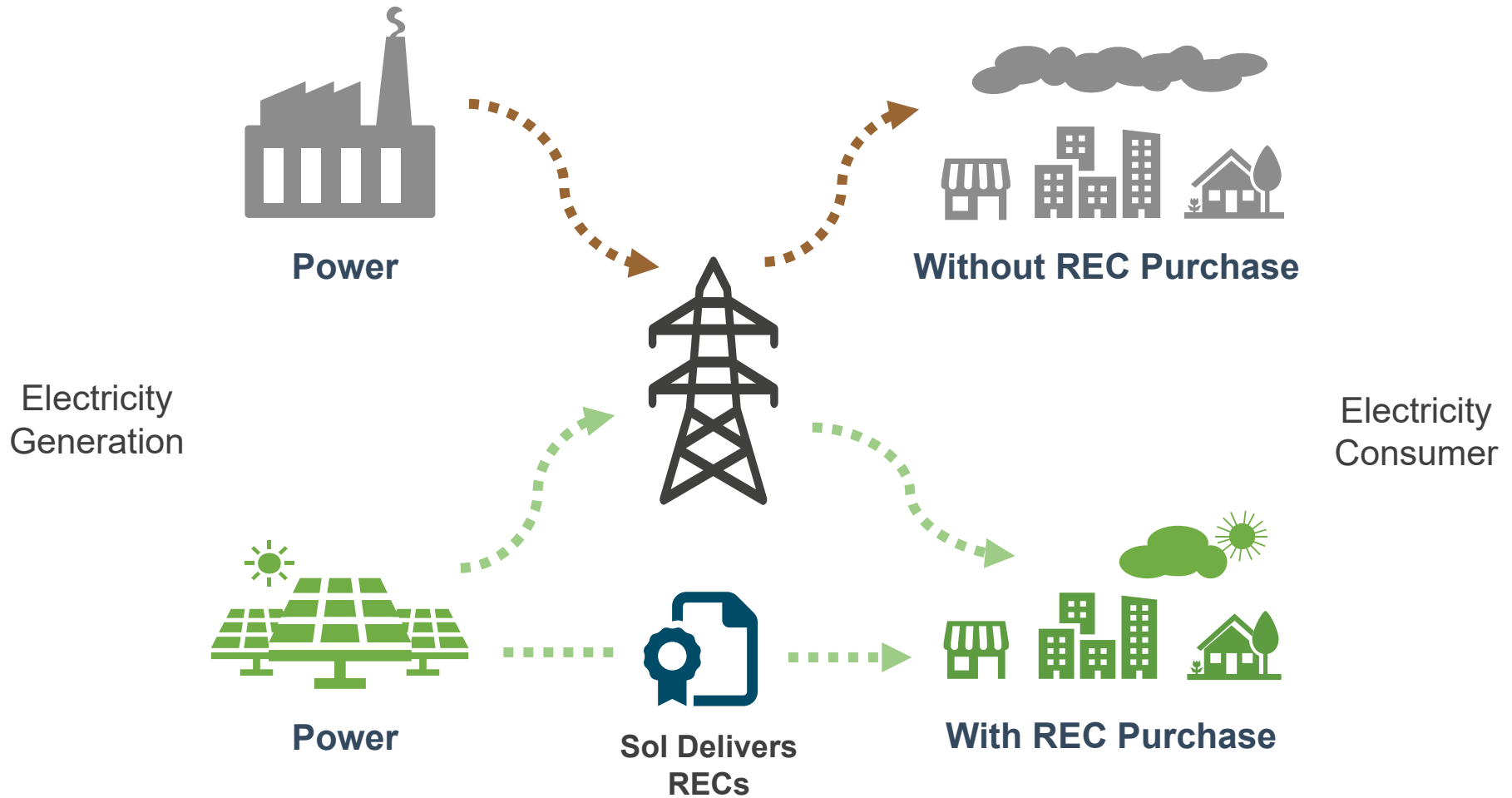


1 MWh of Electricity is Generated



1 REC is Produced

# Renewable Energy Credits (RECs)



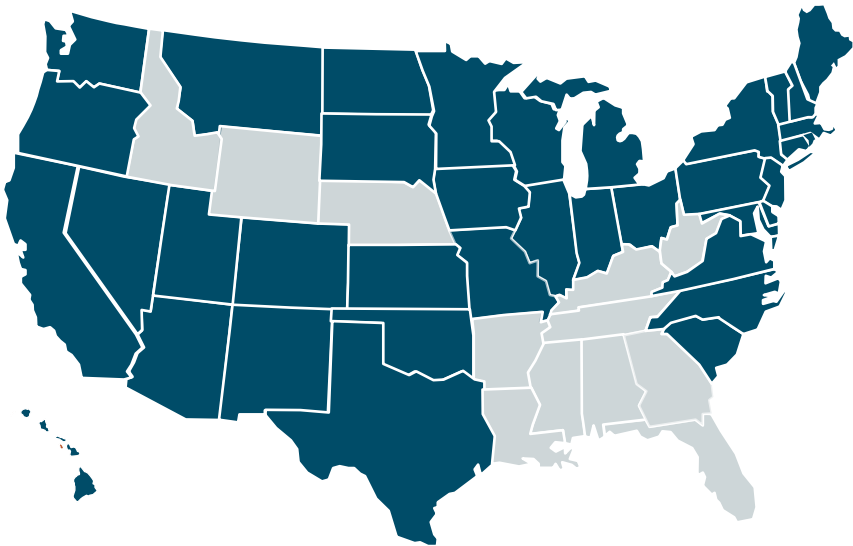
Sol delivers and retires RECs to reduce the customer's carbon footprint

# REC Markets

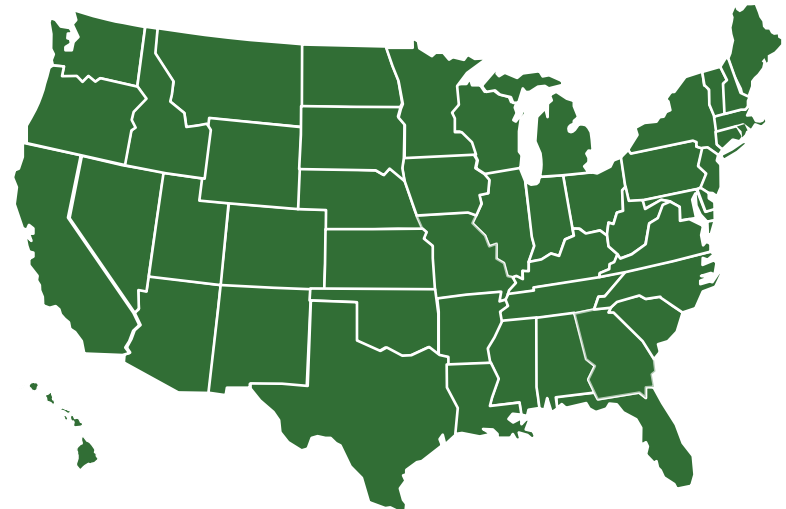
There are two separate REC markets in the United States

- **Compliance Markets:** State policy dictates that renewable attributes must be purchased by utilities. Demand is created through renewable energy goals set by the legislature.
- **Voluntary Markets:** Corporate demand for renewable attributes drives REC values. These markets exist nationwide for customers

## Compliance States



## Where We Sell Voluntary Credits



# Compliance vs. Voluntary RECs

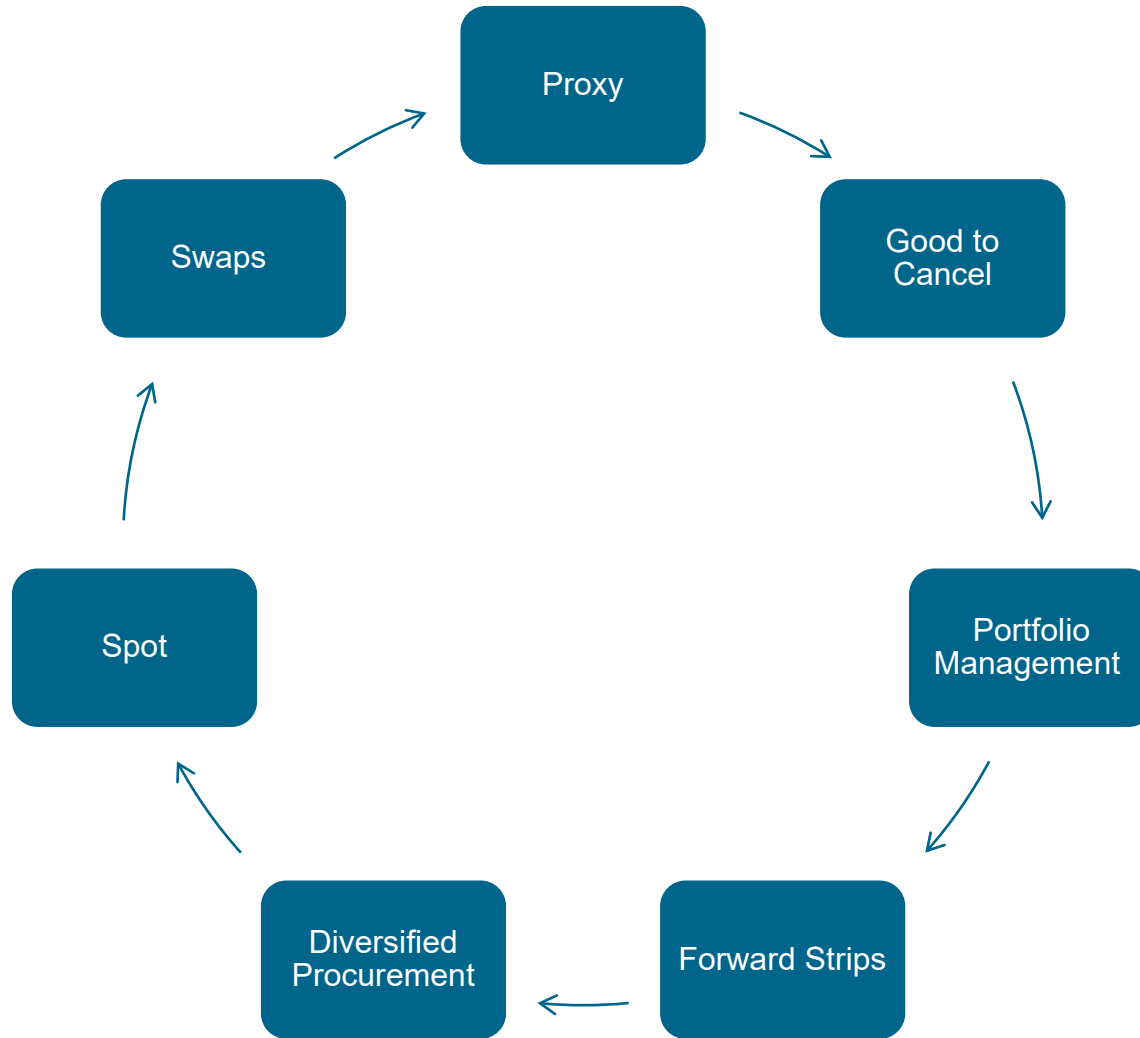
## Compliance

- Compliance RECs are used for **renewable portfolio standards (RPS)**
- A renewable portfolio standard (RPS) is a regulatory mandate to increase production of energy from renewable sources such as wind, solar, biomass and other alternatives to fossil and nuclear electric generation.
- RPS requirements by state regulators apply to utilities or electric suppliers in that region. For example, in Washington DC, electricity suppliers must buy 100% of their power from renewable sources by 2032, with 5% coming from local solar power

## Voluntary

- Voluntary RECs are **driven by climate-related sustainability goals**
- Voluntary RECs generally have lower prices as they are not tied to stringent RPS programs
- There are three ways to amplify the impact of Voluntary REC:
  - **Buy more** – to match electricity use
  - **Buy long-term** – to enable contracted cashflow for projects
  - **Buy from new-projects** – that need REC purchases enable construction

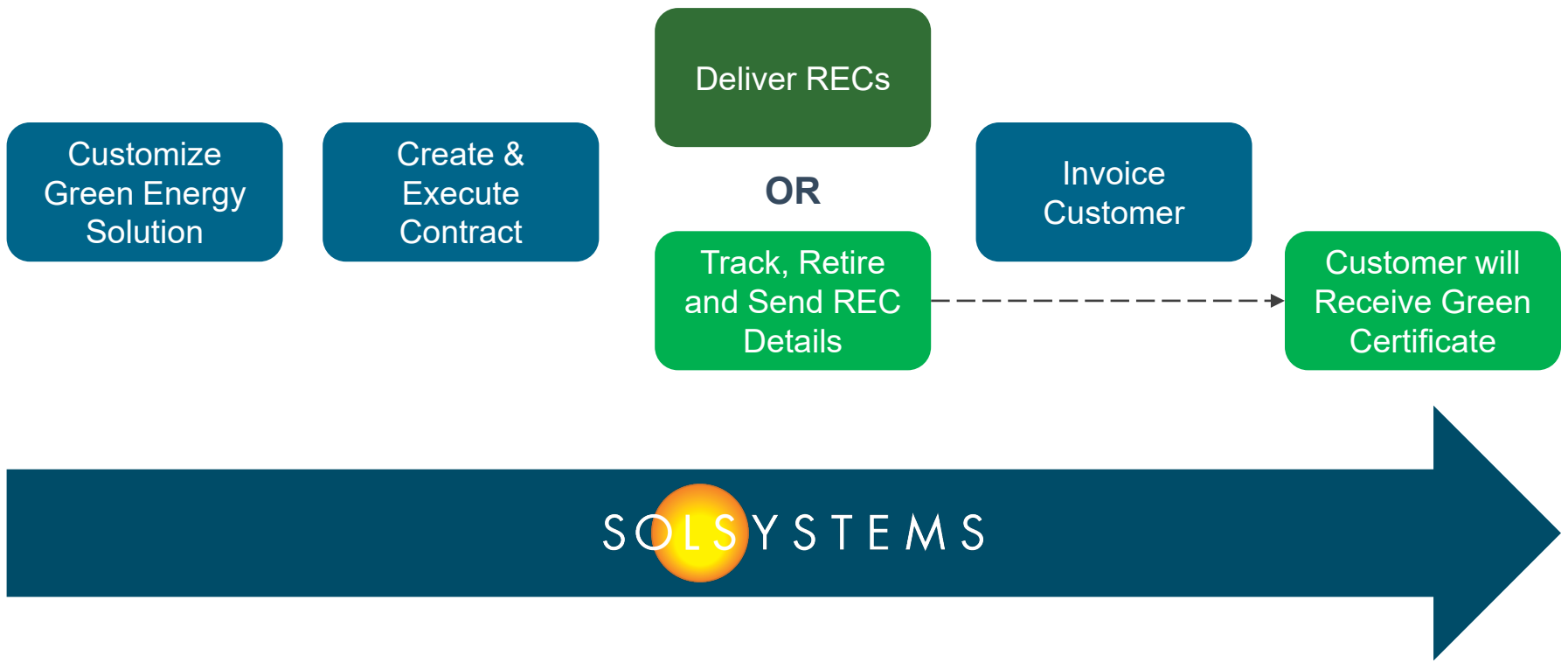
# Hedging Strategy



**QUESTIONS?**



# One Stop Shop



# Create and Execute Contract


Commercial Terms are Confirmed:  
Vintage Year, market, REC quantity, price, counterparty,  
delivery/ retirement deadline

## Trade Confirmation

<b>Vintage:</b>	Front Half 2023 - January 1, 2023 - June 30, 2023
<b>Settlement:</b>	Payment to be made within 5 Business Days after confirmation of Certificate transfer from Seller to Buyer.
<b>Quantity:</b>	50,000 Renewable Energy Certificates
<b>Price:</b>	2.40 USD per Renewable Energy Certificates <b>Total Price:</b> 120,000.00 USD
<b>Delivery:</b>	Delivery to be made through the Texas GIS. Delivery of these RECs to occur on or before September 15, 2023.
<b>Contract Detail:</b>	As agreed between Buyer and Seller. The quantity in this transaction is "Firm". This transaction is subject to contract and credit.

# Create and Execute Contract

## Sol Systems Drafts the Contract

 <b>REC CONFIRMATION</b>	
<p>The purchase and sale (the "<b>Transaction</b>") confirmed by this Confirmation is subject to the Terms and Conditions for the Sale and Purchase of Renewable Energy Credits, attached hereto as <b>Exhibit A</b>. Capitalized terms are defined in the Definitions section. <i>If you accept the terms of this Transaction, please sign below indicating your acceptance and send this Confirmation back to Sol Systems.</i></p>	
<b>Transaction</b>	
Transaction Date	[ transaction date ]
Buyer	[ buyer company name ]
Seller	[ seller company name ]
RECs	Green-E Eligible Renewable Energy Credits from [State name]-sited [technology (wind, solar)] projects as defined in the Applicable Standard (" <b>RECS</b> "). These RECs must be (i) generated from CRS-listed solar facilities and (ii) be eligible for certification under the Green-E Renewable Energy Standard for Canada and the United States, v3.5.
Applicable Standard	The Green-E Renewable Energy Standard for Canada and the United States, v3.5, and all associated order, rules, in effect on the date of this Transaction (" <b>Applicable Standard</b> ").
Vintage(s) (or Reporting Year(s))	[vintage year]  Front Half or FH refers to REC issued for generation occurring in the first six calendar months of the specified vintage year. Also, Back Half or BH refers to RECs issued for generation occurring in the last six calendar months of the specified vintage year.
REC Quantity	[REC quantity]
Contract Price	\$/price per REC/ REC
System Location(s)	All systems identified herein will be part of the portfolio (the " <b>Systems</b> "):  Not Applicable [Name, location (address or physical location), and system size, if applicable]  For avoidance of doubt, the specified volume of RECs must be produced from the specific Systems identified in the System Location(s) section of this Confirmation.
Delivery Date (or Annual Delivery Date)	For Vintage 202 <sub>1</sub> RECs, the following schedule will be followed:  RECs generated between January 1 and June 30 will be delivered on or before September 15 in the same generation year.  RECs generated between July 1 and December 31 will be delivered on or before March 15 following the generation year.

<b>Delivery Obligation</b>	Firm. With respect to Seller's delivery obligation under this Confirmation, the term " <b>Firm</b> " means that Seller guarantees that it shall deliver the specified fixed volume of RECs for each applicable Reporting Year indicated to Buyer without excuse. Force Majeure shall not excuse performance of Seller's Firm delivery obligation under the Transaction.
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<b>Retirement Obligation</b>	Firm. With respect to Seller's retirement obligation under this Confirmation, the term " <b>Firm</b> " means that Seller guarantees that it shall retire the specified fixed volume of RECs for each applicable Reporting Year indicated to Buyer without excuse. Force Majeure shall not excuse performance of Seller's Firm retirement obligation under the Transaction.
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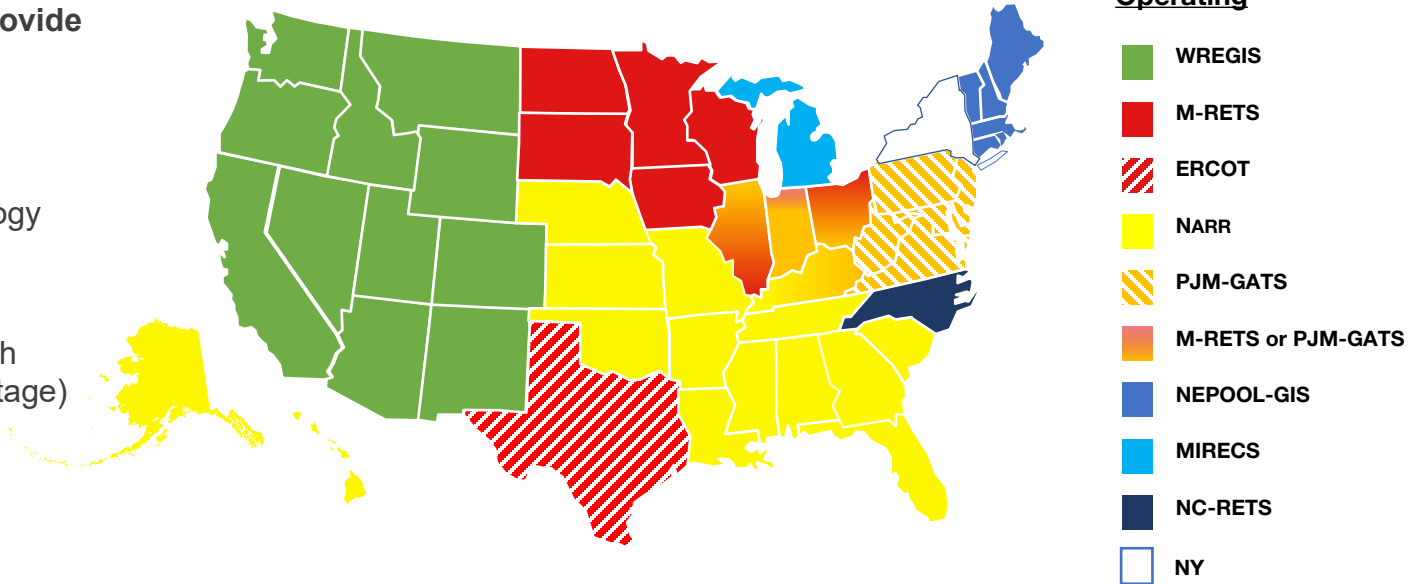
<b>Payment Date</b>	Buyer shall pay the Contract Price within 10 calendar days of the date Buyer receives an invoice from Seller reflecting the total amount due to Seller for the delivered or retired (as applicable) quantity of Purchased RECs (the " <b>Payment Date</b> ").
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# Deliver or Retire – Tracking Systems

Tracking systems are an electronic database that register basic information about each MWh of renewable energy generation in a specific U.S. geographical region and provide a mechanism for retirement of RECs. Each tracking system provides a standard level of detail, the details you can expect to receive from each tracking system is listed below.

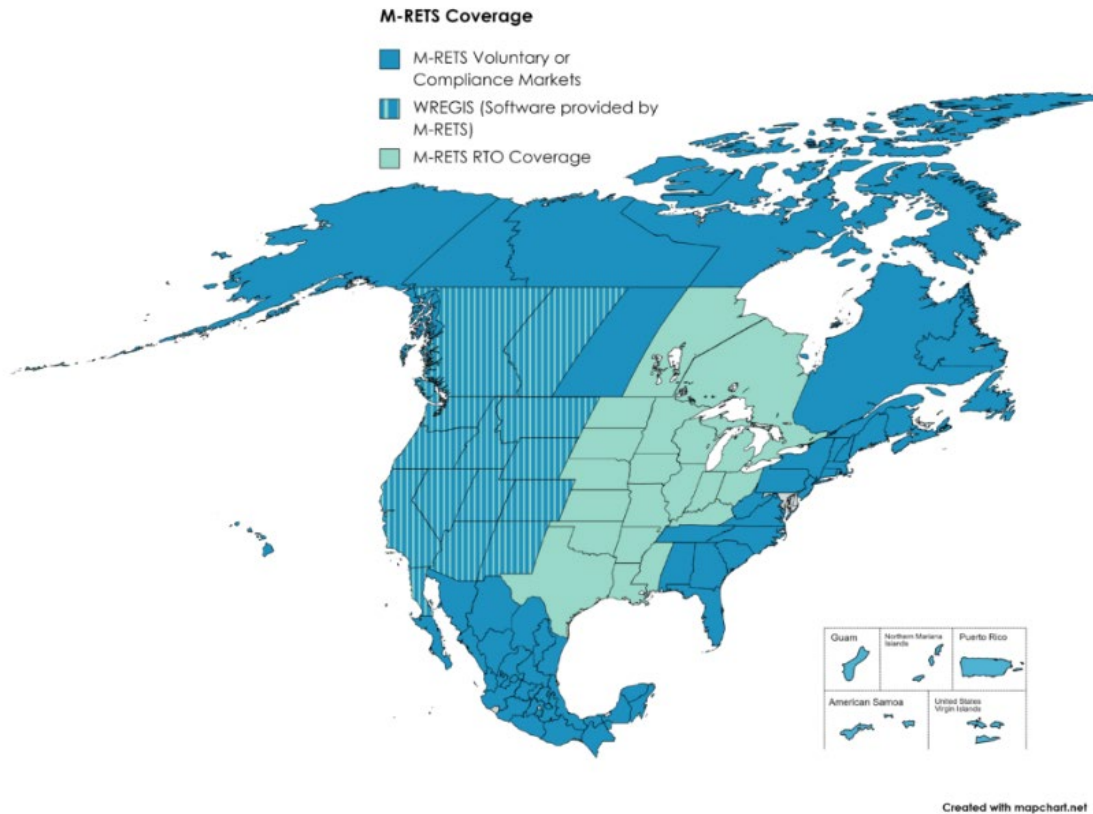
## All Tracking System provide specific REC detail:

- Renewable facility location
- Generation technology
- Facility owner
- Fuel type
- Month/year the MWh was generated (Vintage)
- Certificate/Serial Numbers
- Volume



# Tracking Systems - M-RETS

Starting with vintage 2018 generation, the M-RETS platform tracks environmental attributes used for voluntary claims in all states, provinces, and territories in North America. M-RETS is an independent non-profit organization, making it unique amongst REC or energy tracking systems in the U.S.



M-RETS Coverage in North America

# REC Detail in Tracking System

## NAR Tracking System:

Sub-Account	Sub-Account ID	NAR ID	Asset	Fuel/Project Type	Certificate Vintage	Certificate Serial Numbers	Quantity
DefaultACT	3059	GEN2474	Bethel Wind Farm LLC - Bethel Wind Farm LLC	Wind	09/2022	NAR-REC-2474-TX-09-2022-136769-1 to 16947	16,947
DefaultACT	3059	GEN2474	Bethel Wind Farm LLC - Bethel Wind Farm LLC	Wind	10/2022	NAR-REC-2474-TX-10-2022-137872-1 to 15145	15,145
DefaultACT	3059	GEN2474	Bethel Wind Farm LLC - Bethel Wind Farm LLC	Wind	12/2022	NAR-REC-2474-TX-12-2022-139556-1 to 21413	21,413
DefaultACT	3059	GEN2474	Bethel Wind Farm LLC - Bethel Wind Farm LLC	Wind	08/2022	NAR-REC-2474-TX-08-2022-136259-2066 to 10957	8,892

## MRETS Tracking System:

<input type="checkbox"/>	Account ↑	Account ID	M-RETS ID	Generator	Fuel Type	Vintage	Generation Start Date	Generation End Date	Location	Eligibility	Quantity (RECs)
	Filter...	Filter...	Filter...	Filter...	Filter...	Filter...	Filter...	Filter...	Filter...	Filter...	Filter...
<input type="checkbox"/>	Default	08D6083F-722E	M307	Pointe du Bois - Pointe du Bois	Hydroelectric Water	07/2015	-	-	MB	MB, MN	360
<input type="checkbox"/>	Default	08D6083F-722E	M307	Pointe du Bois - Pointe du Bois	Hydroelectric Water	06/2015	-	-	MB	MB, MN	785
<input type="checkbox"/>	Default	08D6083F-722E	M506	Long Spruce - Long Spruce	Hydroelectric Water	03/2015	-	-	MB	MB	9791
<input type="checkbox"/>	Default	08D6083F-722E	M306	Slave Falls - Slave Falls	Hydroelectric Water	04/2015	-	-	MB	MB, MN	340
<input type="checkbox"/>	Default	08D6083F-722E	M304	Pine Falls - Pine Falls	Hydroelectric Water	07/2015	-	-	MB	MB, MN	855

# REC Retirements

REC Retirements vary by Tracking System, however, the general processes remain the same:

1. Create Retirement Sub-Account for Counterparty
2. Fill in Reasoning for REC Retirement (e.g. Green-E Retirement, Voluntary Retirement).
3. Fill in Any Additional Details for Future Auditing.

Required fields are indicated by Bold Text

**Retirement Sub-Account** Waymo Retirement Sub-Account

Display Retirement Publicly  Yes  No

**Retirement Type** Green-e Energy certified Voluntary Market Sale

**Compliance Period** 2022

**Retirement Reason** Green Electricity Product

Beneficial Owner Name (if applicable)

**Beneficial Owner Email** griffin.wilson@solsystems.c

**Additional Details** Retirement on Behalf of Waymo LLC

Batch Retirement Processing  Stop Batch Retirement on first failure.

Execute EMA Batch Exit Batch Mode

Figure 1: Retiring RECs in EMA (Auto-Retirement)

Retire RECs

Reason to Retire:  Mandatory Compliance  Voluntary Retirement

Year: 2022 Technology Type: Solar

Quarter: Any Quarter FIN: Any

Compliance Year: 2022 Number of RECs: 50

Type of RECs: Regular RECs

Memo: Retirement on Behalf of Waymo LLC

Voluntary Reason: green-e

Retire

Figure 3: Manually Retiring RECs in ERCOT

# REC Delivery

REC delivery/transfers vary by tracking system, however, the general processes remain the same:

1. Batch RECs in Internal Inventory Management Platform (Trading App).
2. Download Batch for Transfer – if in EMA Supported Tracking System.
3. Execute Delivery per Price, Quantity, and Counterparty Account in Contract Details.
4. Mark Batch as Transferred and Send Invoicing Details.

Batch Actions

Autofill Batches

Name \*

DTE - 901 NJ SREC 2023 - \$85.00

Rec contract vintage \*

DTE Energy Trading Inc. NJ SREC certified, 2023, 4090@85.0, (\$10)

Destination account \*

Note \*

New SREC Batch from selection

SREC Batch \*

DTE - 901 NJ SREC 2023 - \$85.00 03037

Add Selection to Existing Batch

Remove Selection from Batch

Estimation actions

Id	Messages	Batch	Cur Acct
1326045			Sol Systems(GATS)
1326046			Sol Systems(GATS)
1326047			Sol Systems(GATS)
1326048			Sol Systems(GATS)
1326049			Sol Systems(GATS)
1326050			Sol Systems(GATS)
1326051			Sol Systems(GATS)
1326052			Sol Systems(GATS)
1326053			Sol Systems(GATS)
1333565			Sol Systems(GATS)
1333566			Sol Systems(GATS)
1333567			Sol Systems(GATS)
1333568			Sol Systems(GATS)
1333569			Sol Systems(GATS)
1333570			Sol Systems(GATS)
1333571			Sol Systems(GATS)
1333572			Sol Systems(GATS)
1333573			Sol Systems(GATS)
1333574			Sol Systems(GATS)
1333575			Sol Systems(GATS)
1333576			Sol Systems(GATS)
1333577			Sol Systems(GATS)
1333578			Sol Systems(GATS)

Figure 1: Batching RECs in Trading App

EMA Batch Information

Required fields are indicated by Bold Text

Settlement Date \* Mar 24 2023

Unit Price 15.0000

Show Price in Underlying Registry? Yes

Counterparty Registry Account DTE Energy Trading, Inc.

Update EMA Batch

Execute EMA Batch

EMA Batch

Project	Registry Assigned ID	Tax Lot	Previous CP	Vintage	Market Detail	Qty Avail	Qty Selected	Unit Price	Ccy	Trans Amt	Broker Fee	Net Trans Value
No records found.												
<b>Totals</b>							0			0.00	0.00	0.00

Figure 2: Executing Delivery in EMA



# Invoice Process

Invoices are sent to counterparties once a retirement or transfer is made or prior to delivery for a pre-pay contract. Below is an example of our invoicing structure:

1. Details of the REC Transfer: Quantity Delivered, Market & Vintage Year, Price per REC
2. Delivery Date & Invoice Due Date: Typically, 10 calendar days from delivery
3. Payment Information

**SOLSYSTEMS**

**Invoice**

**1** Sol Systems, LLC  
1101 Connecticut Ave NW  
Suite 200  
Washington DC 20036  
United States

**2** Date: 5/30/2023  
Invoice: SS-1489  
Delivery Date: 5/30/2023  
Due Date: 6/9/2023

TO: Discount Power, Inc  
6 Armstrong Road  
Shelton CT 06484  
United States

Quantity	Description	Unit Price	Amount
5,000	MA Class 1 2022	\$38.75	\$193,750.00
<b>Subtotal</b>			\$193,750.00
<b>Tax Total (%)</b>			\$0.00
<b>Total</b>			\$193,750.00

**3** **Payment Instructions**

<b>Preferred Method : ACH</b> Institution: Bank of America Bank Routing: 054001204 Bank Account: 001924243492	<b>Alternate Payment Method : Wire</b> Institution: Bank of America Bank Routing: 026009593 Bank Account: 001924243492
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**Thank you for your business!**

**Reference:** Please add payor name and invoice # in reference to ensure proper credit  
Confidential - Internal Distribution

# Green Certificate for REC Retirements

**Renewable Energy Certificate**

Presented to:

**SOLSYSTEMS**

For supporting renewable energy sources by purchasing clean electricity

**#X**  
KILOWATT HOURS

**100%**  
RENEWABLE ENERGY

Yuri Horwitz  
Founder and CEO of Sol Systems

This certificate was provided by Sol Systems  
www.solsystems.com

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