



NY - GEO 2026

March 24-25, 2026 | Brooklyn, NY



The Power of G-RECs

Moderator: Donovan Gordon / *NY-GEO Board*

Panel: Kelcy Kline / *Carbon Solutions*

Ryan Dougherty / *GeoExchange Organization*

Maggie McCarey / *Dandelion Energy*

Jason Cullum / *Ground Loop H&AC - Maryland*

March 25, 2026

The Power of GRECs

Introduction to Renewable
Energy Certificates



Panel Members



Ryan Dougherty

GeoExchange Organization



Maggie McCarey

Dandelion Energy



Kelcy Kline

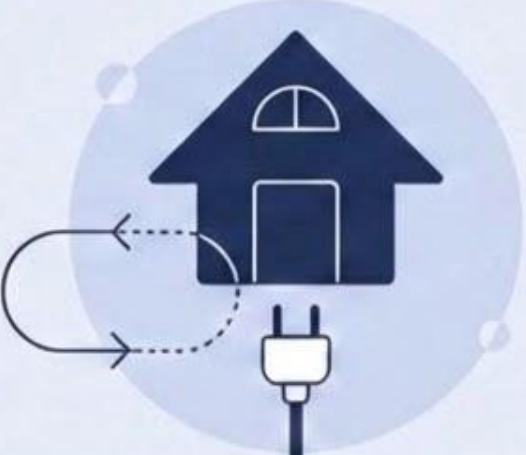
Carbon Solutions Group



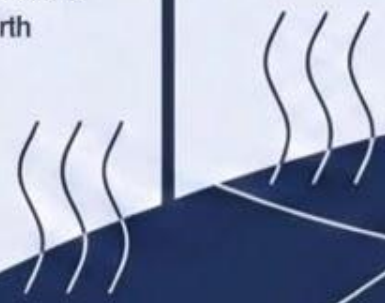
Jason Cullum

Ground Loop Heating and Air
Conditioning

Geothermal pump system is installed in a home

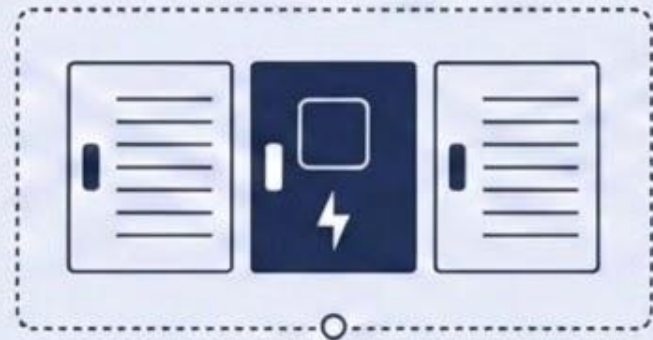


Heat is transferred between your house and the earth



Heat is stored in the earth

RPS facility certification and REC tracking system registration



RECs can be sold to:



Companies!



Utilities!



1 MWh



1 GREC

REC Process



1. Geothermal (GSHP) system commences operation



2. System applies and receives certification from RPS administration (meets eligibility)



3. System is registered with regional tracking system



4. RECs are minted and transacted (by aggregators or brokers)

Determining RECs Theory

GRECs are generally calculated by comparing the energy required to meet a building's heating and cooling load using a geothermal system versus a defined baseline system, with state-specific inputs and assumptions.

Factors in GSHP REC Calculations (vary by methodology):

- Building Characteristics (square footage, climate, insulation)
- Baseline System Type (fuel oil, propane, gas, electric, etc.)
- Baseline Equipment Efficiency
- Geothermal System Performance (COP/EER, capacity)
- Energy Required to Meet Load (geothermal vs. baseline)
- State-Specific Adjustments (conversion factors, modeling tools)

GREC Status

State	Program status	Classification	Overview
MD	Active	Tier 1 geothermal carve-out (GREC)	<p>Adopted: 2012 (GSHP added as Tier I) Expanded in 2021 carve-out law (HB 1007)</p> <p>Notes:</p> <ul style="list-style-type: none"> • Tier I Legacy systems: in service ≤ Dec. 31, 2022 • GREC New carve-out: systems in service ≥ Jan. 1, 2023
PA	Active	Tier II through Demand-Side Management / Energy Efficiency No carve-out	<p>Adopted: 2004</p> <p>ENotes:</p> <ul style="list-style-type: none"> • AEPS framework with geothermal/DSM pathways, not a dedicated GSHP carve-out
VA	Passed; process under construction	Tier 1 geothermal carve-out (GREC)	<p>Adopted: 2024 (SB 508)</p> <p>Notes:</p> <ul style="list-style-type: none"> • Eligible starting 2025 compliance year • Operational framework effective Jan. 1, 2026 (SCC rules)
IL	Passed; process under construction	GREC block program	<p>Adopted 2025 (SB 25)</p> <p>Notes:</p> <ul style="list-style-type: none"> • Geothermal Homes and Businesses Program under IPA review • The GHBP starts in the delivery year beginning June 1, 2028 • Eligible systems must be new systems in service ≤ June 1, 2026
NY	Statutory Tier 1 eligibility exists, but the practical REC path limited	Tier 1 No carve-out	<p>Adopted 2019 (added to statutory definition via CLCPA) 2020 (included in Tier 1 via PSC order)</p> <p>Notes:</p>

GREC Value and Calculations

State	ACP / Value Structure	Methodology of Calculating REC Quantity
MD	Post-2022 geothermal carve-out: 2025 \$100 2026 \$90 2027 \$80 2028+ \$65 Pre-2023 systems: 2025 \$25	$GREC = \text{Energy savings (difference) between a baseline heating and cooling system(s) and the GSHP; as determined by use of the Climate Master Energy Savings Calculator}$
PA	2025 \$45 Current benchmark is 10% Tier II by 2021 and beyond.	$AEC = \text{Capacity of system} * (1/\text{Baseline efficiency} - 1/\text{GSHP efficiency}) * \text{Correction factors.}$ <i>Only electric baseline systems are considered, so there is no crediting for fossil fuel-based heating systems (i.e. gas furnaces).</i>
VA	HB252 sets a \$100/MWh effective ACP for GRECs, but only if supply is available at or below that price. Otherwise utilities can fall back to standard RECs under the \$45 ACP.	$\text{Proposed correction:}$ $GREC = (\text{Performance rating} - 1) * (\text{non-geothermal kWh used by the pump})$ $GREC = (\text{COP/EER} - 1) * (1 / \text{COP or EER}) * (\text{Energy delivered by system}); \text{repeated for heating and cooling and summed.}$
IL	No ACP structure in the proposal. The bill proposed annual blocks of GREC volumes with block pricing instead.	$\text{Proposed formula to match VA's corrected:}$ $GREC = (\text{Performance rating} - 1) * (\text{non-geothermal kWh used by the pump})$ $GREC = (\text{COP/EER} - 1) * (1 / \text{COP or EER}) * (\text{Energy delivered by system}); \text{repeated for heating and cooling and summed.}$ $\text{Proposed methodology language: "Eligible geothermal renewable energy credits shall be the product of the performance rating of the geothermal heating and cooling system and the energy usage of the geothermal heating and cooling system needed to serve the space heating and cooling and/or water heating load required by the building."}$

Maryland Market Case Study

Maryland GREC Market: Early-Stage but Demonstrating Measurable Activity in Official RPS Data

- Maryland is the leading GSHP carve-out model: HB 1007 created a dedicated Tier 1 geothermal carve-out that ramps from 0.05% (2023) to 1.0% (2028+), including an LMI set-aside and defined ACP structure.
- The program is active and generating compliance activity: the PSC reports 1,134 geothermal facilities and 53,721 GRECs tied to 2024 compliance, with post-2022 GREC pricing around \$94/REC.
- Early success, but still supply-limited: Maryland's 2024 geothermal obligations exceeded available retirements, confirming both real demand and a need for more project supply.



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