Pareto Securities Energy Conference

September 15-16, 2021

A Global PV and Semiconductor Company

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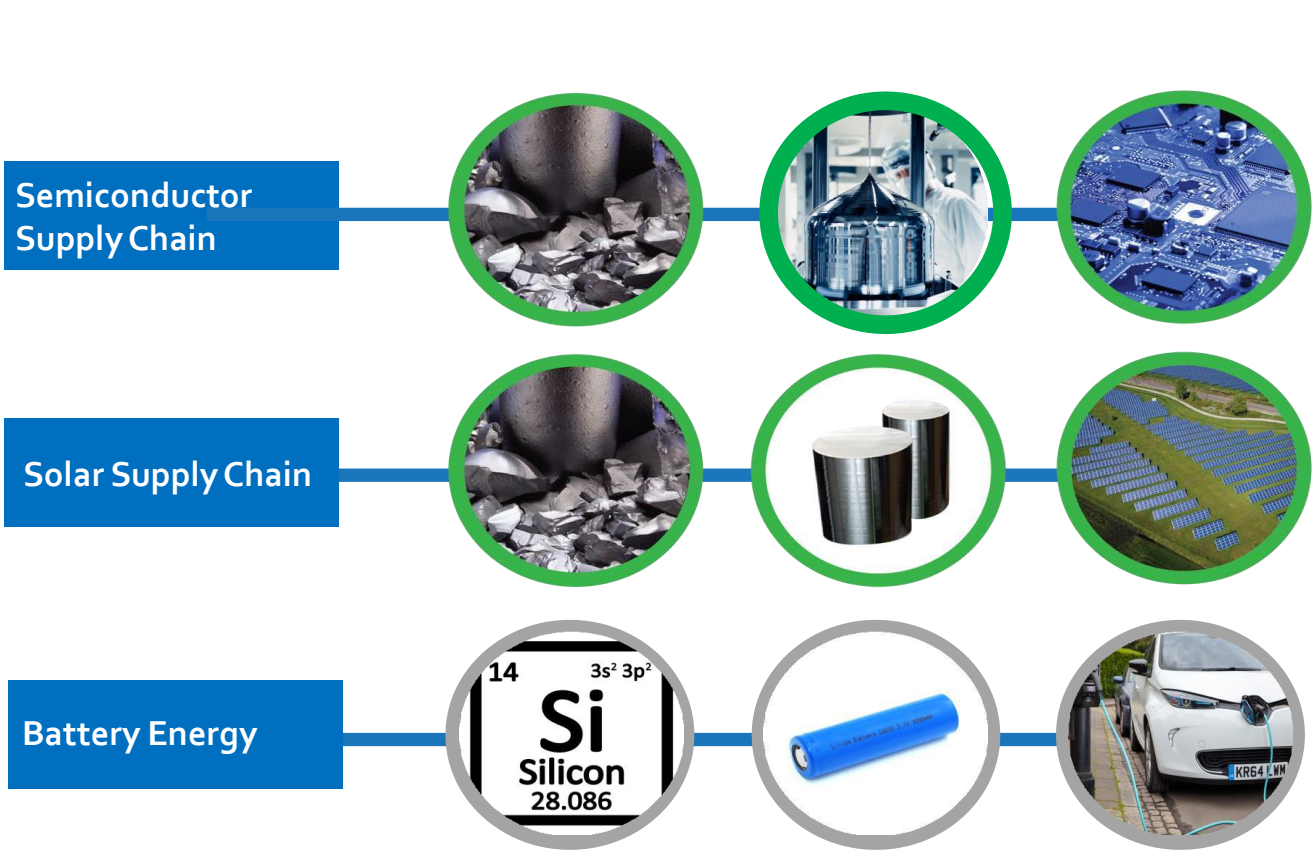
James A. May II, CFO

Polysilicon: Foundation of our High-tech Future



Annual polysilicon Consumption (2020 global)

30 KT (5%)

550 KT (95%)

Emerging market

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Semiconductor Business

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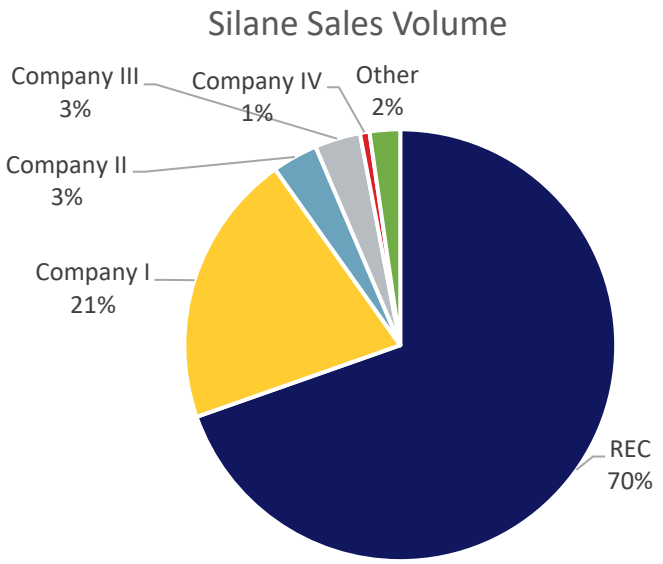
Silicon Gases

Dominant supplier to the Semiconductor Industry

	Silane Gas	MCS	DCS	DiSilane Gas
Total Available Market	~3,500MT	~160MT	~1,900MT	~45MT
REC "Sales"	~2,400 MT	~140MT	~240MT	~2MT
REC Market Share	~70%	~90%	~13%	~5%

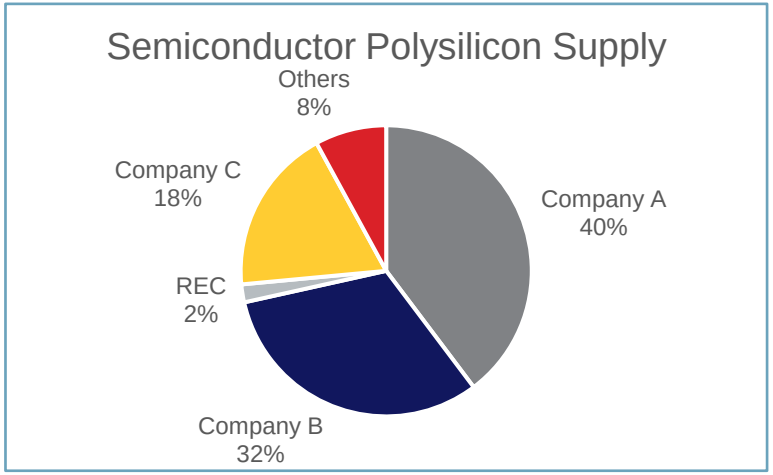


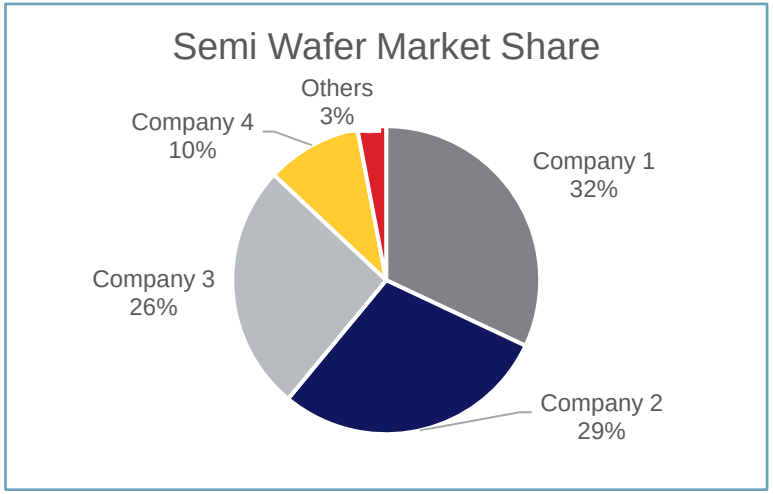
Excludes: The Chinese market

Semiconductor Polysilicon

REC Silicon important FZ supplier

	Semiconductor CZ Polysilicon	Semiconductor FZ Polysilicon
Total Available Market	~38,000MT	~1,500MT
REC "Sales"	~350MT	~450MT
REC Market Share	~1%	~30%





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Building a US Based Low-Carbon Solar Value Chain

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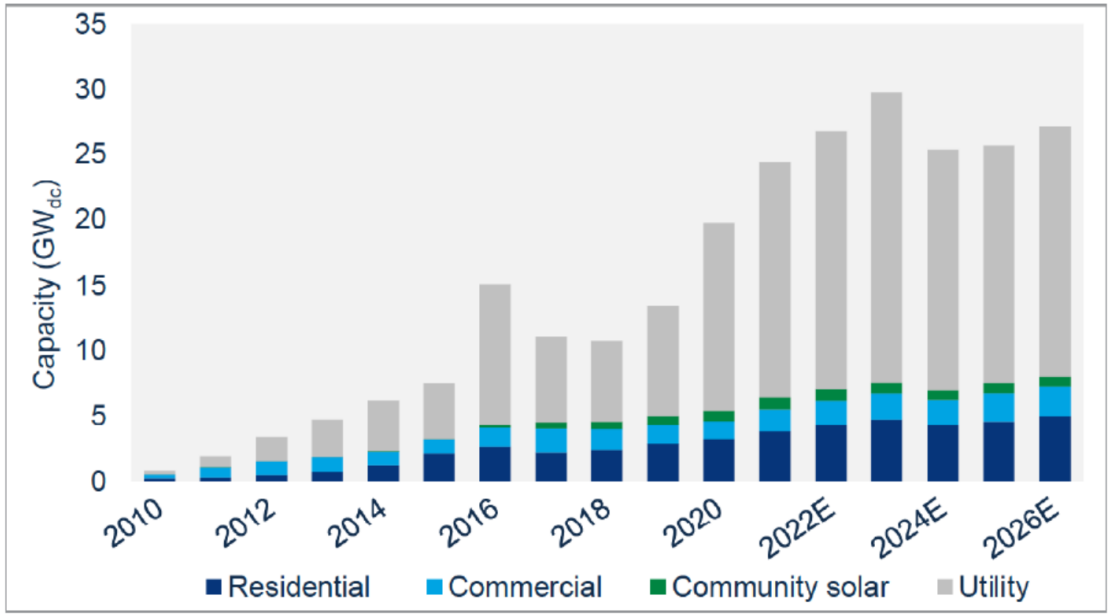
US Solar PV Installation Growth Continues

- Investment Tax Credit extended 3 years
  - Driving increased installation
  - More support for further extensions
- Increasing governmental support for renewable energy
- Biden Administration pushing for faster transition to renewables

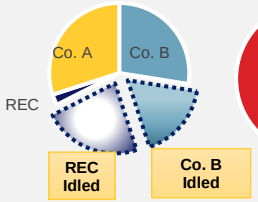
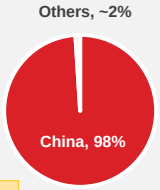
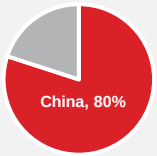
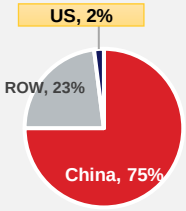
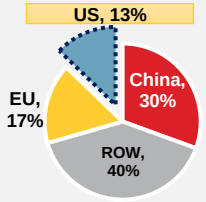
U.S. PV installation historical data and forecast, 2010-2026E



Source: Wood Mackenzie/SEIA U.S. solar market insight® 2021 Q2

Idled Capacity at REC and other US Polysilicon Companies

Ability to support 50% of US demand for solar installations

Solar Value Chain	Polysilicon	Ingot growth / wafers	Solar cell	Solar module	Installations
					
Production Capacity					
US Capacities	**~10GW (Idled)**	~0GW	~1GW	~4GW 2.4 GW Thin Film	**~20-25 GW**

US Political Initiatives

Create US manufacturing jobs and support the renewable US agenda

- US Senate and Congress Supporting Investments
  - Senate introduces bill to support advanced solar manufacturing production
  - Discussion around further extension of the solar investment tax credit
- Department of Energy Supports Supply Chain
  - Creating national blueprint for lithium batteries
  - Taking actions to support investment in advanced manufacturing and US job creation
- Washington State Governor Visits REC
  - Receives Update on Solar and Battery markets
  - Discusses US initiatives
- US Government takes actions on forced labor in Xinjiang
  - Withhold Release Order to detain silica-based shipments made with forced labor
  - Add 5 PRC entities (3 polysilicon producers) to list of entities participating in force labor
  - Bi-partisan legislation passed by the Senate (SB S65)

Department of Energy announces $200 million in new funding for batteries and EVs

The funds support DOE national lab efforts and create partn… electric vehicles, connected vehicles, and will span fi…

JUNE 15, 2021 RYAN KENNEDY

JON OSSOFF
U.S. SENATOR FROM GEORGIA

Sen. Ossoff Introduces Legislation to Rapidly Boost American Solar Manufacturing

June 21, 2021

Sen. Ossoff's "Solar Energy Manufacturing for America Act" will create new tax credits to rapidly boost American solar manufacturing, accelerate the transition to clean energy, and support American energy independence

Legislation would create tens of thousands of American jobs

Georgia hosts largest solar manufacturer in Western Hemisphere

Sen. Ossoff continues to lead on clean energy, pushing for generational investment

Co-sponsored by Senators Warnock, Bennet, Stabenow

Washington, D.C. — Today, U.S. Senator Jon Ossoff introduced the Solar Energy Manufacturing for America Act to rapidly boost American solar manufacturing, accelerate the transition to clean energy, and support American energy independence. Sen. Ossoff has focused on making Georgia a national leader in clean energy technology and the United States the world leader in clean energy.

BRIEFING ROOM

FACT SHEET: New U.S. Government Actions on Forced Labor in Xinjiang

JUNE 24, 2021 • STATEMENTS AND RELEASES

At the recent G7 Summit in Cornwall, United Kingdom, the world's leading democracies stood united against forced labor, including in Xinjiang, and committed to ensure global supply chains are free from the use of forced labor. The United States is translating these commitments into action. The Biden-Harris administration is taking additional steps to hold those who engage in forced labor accountable and ensure that we continue to remove goods made with forced labor from our supply chains through actions by the Department of Homeland Security's U.S. Customs and Border Protection, the Department of Commerce, and the Department of Labor.

Solar Manufacturing Tax Credit (SMTC) Proposal

To support supply chain in the US in the solar power field

Product	Tax Credit
Module	7 cents/watt
Cell	4 cents/watt
Ingot & wafer	$12/m^2 (≒ 5.5 cent/watt)
Polysilicon	$3/kg (≒ 1.0 cent/watt)
Thin-film module	11 cents/watt

- Credit cap per company (including affiliates) is 11 cents/watt
  - The credits are maintained until the end of 2028, and then step down to 70% in 2029, 35% in 2030, and 0% in 2031
  - The credit is refundable, so if there is no tax to be deducted, it can be returned in cash
- The SMTC is part of the $3.5T budget plan slated for the reconciliation process
  - Budget reconciliation allows for approval by a simple minority in congress
  - Senate to create detailed plan for $3.5T for House vote followed by Senate vote
  - Timing & outcome are uncertain
  - Being linked to bipartisan infrastructure deal

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Battery Update

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Electrical Vehicle will dominate in the future

Combustion vehicle peaked in 2017

EV sales to increase from 3.1 million in 2020 to 14 million in 2025

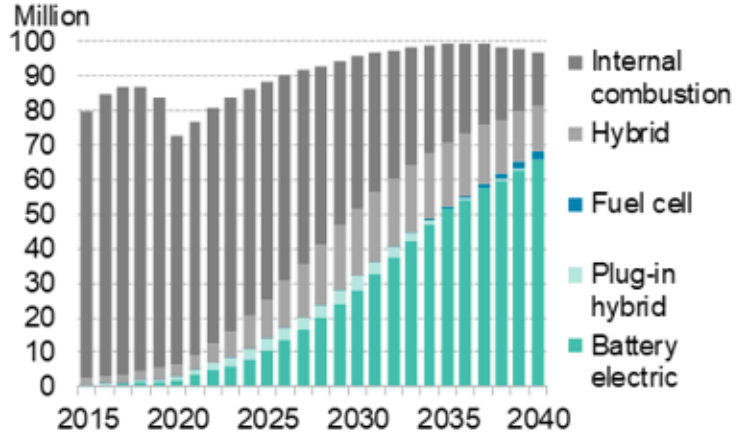
- Policy support
- More efficient and lower cost batteries
- China and Europe will be the main EV market

Battery production dominated by China

- 2020 77% China
- 2025 forecast
  - 65% China
  - 25% Europe
  - 6% USA

Figure 4

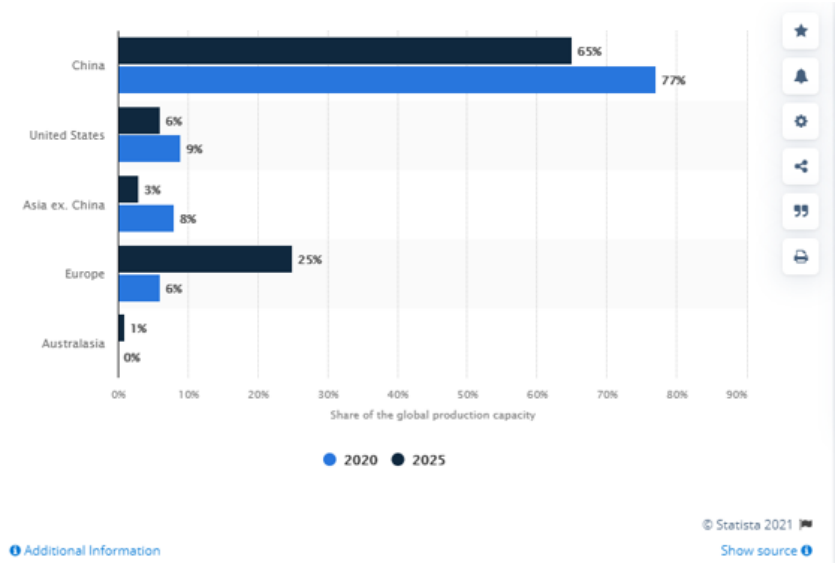
Global passenger vehicle sales outlook by drivetrain - Economic Transition Scenario



Source: BNEF.

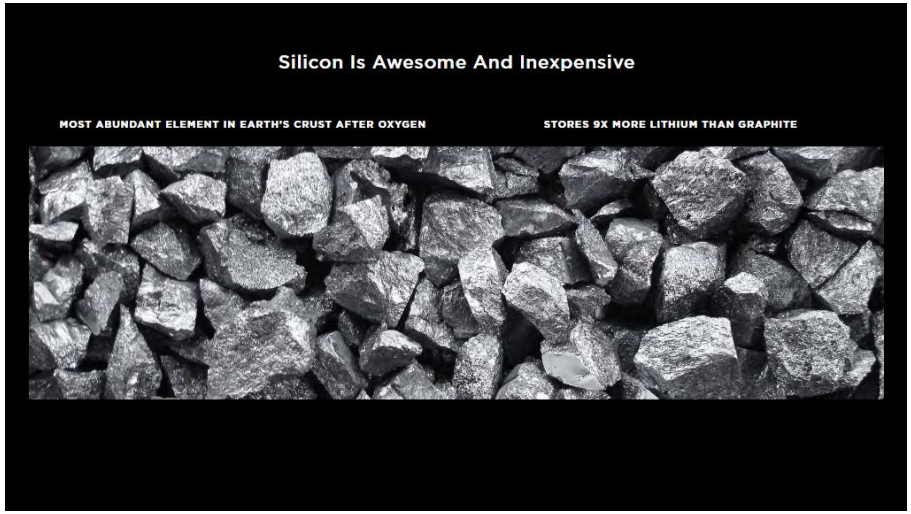
Share of the global lithium-ion battery manufacturing capacity in 2020 with a forecast for 2025, by country

(in gigawatt hours)



Silicon Anodes may be next step in increased Battery Efficiency

- Silane is the most efficient silicon source for advanced silicon anodes
- Anodes containing silicon increases capacity by ~40%
- REC is negotiating with several silicon anode companies for silane supply



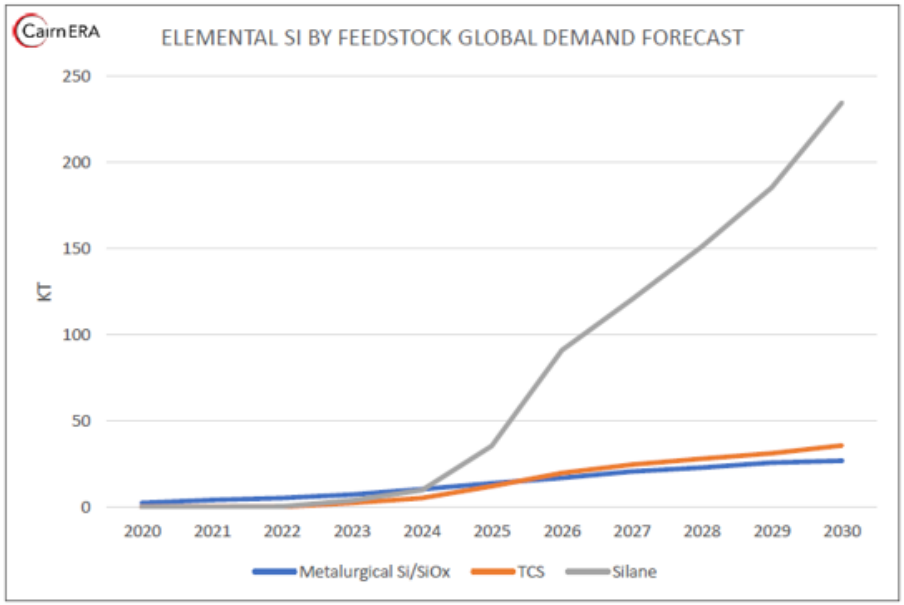
Tesla Battery Day, September 22, 2020

Silane will be the preferred Silicon source in Battery Anodes

LIB ANODE MATERIALS LANDSCAPE

Breakdown by Si Source

- Silane will become the most common Si source material by 2024 and will reach 40 KT by 2025 and 268 KT by 2030. By then it will account for 75% of all Si source shipments used in the LiB industry.
- Metallurgical Si will be the most commonly used material in the first few years of the forecast, thanks to it's use as a lower-grade material in low-intensity (i.e. 1%). Metallurgical Si is especially cheap to convert to SiOx formulations, which dominate the low-intensity spectrum of Si usage.
- TCS (trichlorosilane) will be the smallest proportion of Si sourcing after 2024, thanks to the difficulty in handling and limited availability. By 2030, Cairn ERA forecasts that 36 KT of TCS will be utilized in the LiB industry.



CairnERA

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REC well positioned to supply global market with silicon gases

REC Silicon Moses Lake

REC Silicon
Moses Lake, WA

Next Generation Silicon Anode Manufacturing
Moses Lake, WA

Silicon Anode Materials

Cell/ Battery manufacturing

Silane production capacity:
~25,000 tons per year
Highest purity & lowest cost
Hydroelectricity = low carbon footprint

Co-location is Necessary

REC Silicon Butte

- Largest producer and distributor of Silane Gas
  - Unmatched experience and safety record
  - Recognized product quality and reliability
  - ~70% Semiconductor market share
- Infrastructure to protect market share
  - Large module fleet
  - Secure distribution channels
  - Available capacity to support market growth
- Current silane distribution network +/- 7,000MT/year
- Distribution capacity expansion capex ~$30M per 1,000MT

Political Initiative concerning battery manufacturing in the US

Energy Efficiency & Renewable Energy: $16.26B

- $3B: Battery Manufacturing and Recycling Grants (p. 2507, sec. 40207(c)) – Placed in **EERE** to support battery and battery component manufacturing, and recycling. Demonstration projects not less than $50M each, Commercial-scale projects no less than $100M each, Retooling/Expanding existing facilities no less than $50M each.
- $1B: Clean Hydrogen Electrolysis Program (p. 2510; sec. 40314 [sic], listed under sec. 40313) – RD&D, Commercialization, and Deployment of electrolyzers to reduce hydrogen cost (<$2/kg). Includes hydrogen storage, integration with compression, drying, storage, and integration with renewable/nuclear generation, including hybrid systems with storage.
- $750M: Advanced Energy Manufacturing and Recycling Grant Program (p. 2508; sec. 40209) – Grants for manufacturing or recycling of EERE technologies, grid modernization equipment, CCS, equipment to refine/electrolyze/blend renewable or low-carbon fuels, electric/fuel cell vehicles, components, and infrastructure (including rail, air, marine), hybrid vehicles and components; other equipment to reduce GHG. **Also grants to reduce GHG emissions of manufacturing facilities (e.g., bioenergy).** Eligibility is less than $100M revenue, <500 employees, energy bills between $100k-$2.5M.

Office of Fossil Energy & Carbon Management: $7.49B

- $3.5B: **Four regional clean direct air capture hubs** (p. 2522, sec. 40308) - Hubs will facilitate deployment of direct air capture projects, capacity to capture and sequester/utilize at least 1,000,000 metric tons of CO2 from the atmosphere annually, form a single or multiple units, demonstrate capture, processing, delivery, and sequetion or end=use of captured carbon, could be developed into a regional network
- $3B: Battery Material Processing Grants (p. 2506, sec. 40207(b)) – Placed in **FECM** to support battery materials processing/supply chain. Demonstration projects not less than $50M each, Commercial-scale projects no less than $100M each, Retooling/Expanding existing facilities no less than $50M each.
- $2.5B: Carbon Storage Validation and Testing (p. 2521-2522, sec. 40305) - Expanding program to include Commercialization of Carbon Storage, evaluating CO2 storage needs and strategy, creating a Large-Scale Carbon Storage Commercialization Program to support new or expanded sequestration projects, transport infrastructure, feasibility, site characterization, permitting, and construction.
- $2.1B: CO2 Transportation Infrastructure Finance and Innovation Program Account (p. 2526, sec. 40304(a)) - Loan, loan guarantee, and grant program for development-phase activities, construction, environmental mitigation, and acquisition and installation of equipment.

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Summary

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Silane: Feedstock for the Energy Transition

SILANE

SEMICONDUCTOR

Proven Global Leader

Butte

- ~3,200MT Si-gas
  - 70% Semi global demand
- High-purity FZ polysilicon

EBITDA **~$35M**

SOLAR VALUE CHAIN

Established Footprint to Capture Solar Market Upside

Moses Lake

- FBR Poly: ~18,000MT
  or
- Silane Gas: ~25,000MT

Technology

- Fluid Bed Reactor (FBR)
  - High quality
  - Low cost

Market Inflection

BATTERY VALUE CHAIN

Silicon Anodes to Drive Silane Market Expansion

Moses Lake

- Sole supplier of pure silane in western world
- Co-Location discussions with multiple potential partners
- ~$1.7B invested in Moses Lake for Silane and FBR capacity

Growth Driver

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Thank you

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