



RECSiLICON



FIRST QUARTER  
2020

---

PRESENTATION

# Disclaimer

---

This presentation includes and is based, inter alia, on forward-looking information and statements that are subject to risks and uncertainties that could cause actual results to differ. These statements and this presentation are based on current expectations, estimates and projections about global economic conditions, the economic conditions of the regions and industries that are major markets for REC Silicon ASA's (including subsidiaries and affiliates) lines of business. These expectations, estimates and projections are generally identifiable by statements containing words such as "expects", "believes", "estimates" or similar expressions. Important factors that could cause actual results to differ materially from those expectations include, among others, economic and market conditions in the geographic areas and industries that are or will be major markets for REC Silicon ASA's businesses, energy prices, market acceptance of new products and services, changes in governmental regulations, interest rates, fluctuations in currency exchange rates and such other factors as may be discussed from time to time in the presentation. Although REC Silicon ASA believes that its expectations and the presentation are based upon reasonable assumptions, it can give no assurance that those expectations will be achieved or that the actual results will be as set out in the presentation. REC Silicon ASA makes no representations or warranties, expressed or implied, as to the accuracy, reliability or completeness of the presentation, and neither REC Silicon ASA nor any of its directors, officers or employees will have any liability to you or any other persons resulting from your use.

This presentation was prepared for the first quarter 2020 results on May 12, 2020. Information contained herein will not be updated. The following slides should be read and considered in connection with the information given orally during the presentation.

REC Silicon ASA shares have not been registered under the U.S. Securities Act of 1933, as amended (the "Act"), and may not be offered or sold in the United States absent registration or an applicable exemption from the registration requirements of the Act.

# Agenda

---

Q1 Results

Silicon Gases & Semiconductor Market Outlook

Financial Review

US/China Trade Update

PV Market Outlook

Yulin JV Update

Battery Update

Short-Term Business Plan

Q&A

# REC Silicon Highlights

**Revenues:**                 **\$24.7M**  
**EBITDA:**                   **\$ 1.0M**

## **March 31, 2020 cash balance of \$30.2M**

- Cash increase of \$0.8M
- Cash inflows from operations \$2.2M

## **Silicon gas sales**

- Sales volume of 730MT (vs. guidance of 850MT)
- Average silane gas prices stable

## **Semiconductor segment polysilicon sales**

- Semiconductor grade polysilicon sales volume of 85MT
- 14.0% Semiconductor grade polysilicon price increase vs. Q4'19

## **Decision to restart FBR production facility postponed**

- Market uncertainty caused by COVID-19
- Uncertainty regarding implementation of Phase I Trade Agreement

## **Process to evaluate the sale of Butte, Montana plant**

- Several interested parties
- Due diligence delayed due to COVID-19

## **Response to COVID-19**

- Prioritize the health and safety of REC Silicon's workforce
- Focus on maintaining capability to continue operating

# Q1 2020 Key Metrics Actual vs Guidance

## Polysilicon Sales Volume \*\*

Total	89MT
Inventory Increase	151MT

## Total Polysilicon Production

Actual	242MT
Guidance*	280MT
Deviation	-13.5%

## Semiconductor Production

Actual	168MT
Guidance*	180MT
Deviation	-6.9%

## Silicon Gases Sales Vol.

Actual	730MT
Guidance*	850MT
Deviation	-14.1%

\* Guidance Presented October 30, 2019

\*\* Excludes Fines and Powders



RECSiLICON



Silicon Gases and  
Semiconductor

---

# Technology is driving the Semiconductor Market

Short-term uncertainty due to COVID-19

## Macro Trends

- 5G Mobility
- Internet of Things
- Artificial Intelligence
- Automotive automation and electrification
- Renewable energy and power control

## Short-Term Uncertainty

- Global weakness triggered by COVID-19
- US/China Trade
- Flat Panel Display & market shift
- Chinese oversupply

APRIL 15, 2020 / 10:44 PM / 15 DAYS AGO

### TSMC Q1 profit almost doubles but trims full-year revenue estimate on pandemic

Yimou Lee 4 MIN READ

MARKETS BUSINESS INVESTING TECH POLITICS CNBC TV

TECH

### Intel shares drop on low Q2 guidance

PUBLISHED THU, APR 23 2020:4:05 PM EDT | UPDATED THU, APR 23 2020:6:02 PM EDT

Jordan Novet @JORDANNOVET

SHARE f t in e

Sign in PRO WATCHLIST MAKE IT SELECT

MARKETS BUSINESS INVESTING TECH POLITICS CNBC TV USA INTL

Verizon PayItForward™ Tune in to show your support. Tuesdays & Thursdays 9PM-11:05PM ET Learn more >

TECH

### Samsung says it expects Q2 smartphone and TV sales to 'decline significantly' due to coronavirus

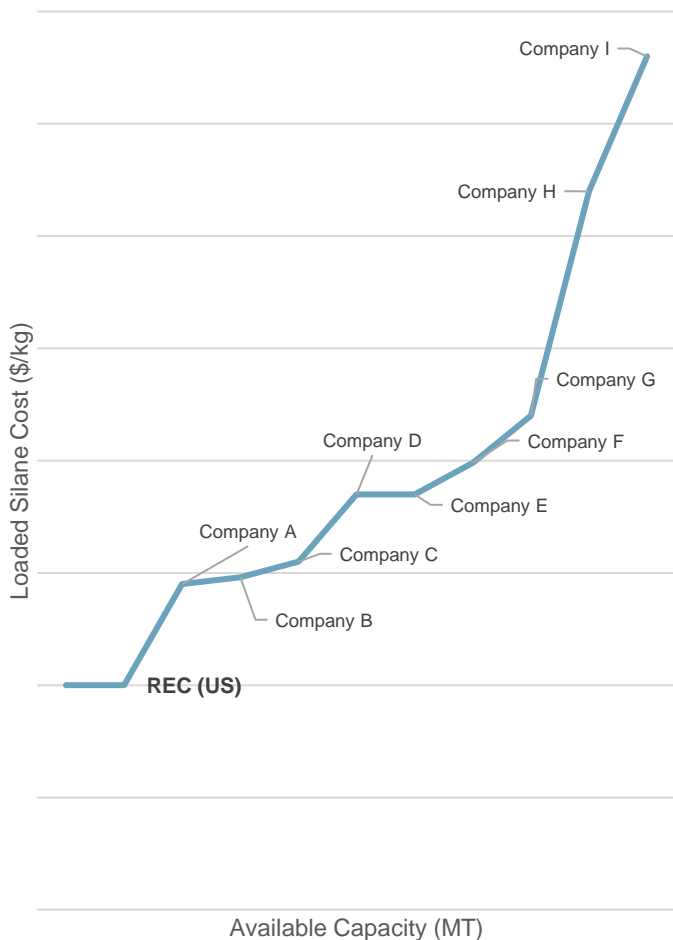
PUBLISHED TUE, APR 28 2020:10:16 PM EDT | UPDATED MOMENTS AGO

Saheli Roy Choudhury @SAHELIRC

SHARE f t in e

# REC Silicon - Leading Silane Gas Producer

Silane Gas Cash Cost Supply Stack



Largest producer and distributor of Silane Gas

Unmatched experience and safety record

Recognized product quality and reliability

Infrastructure to protect market share

Large module fleet

Secure distribution channels

Available capacity to support market growth

2018		
Company	Sales (\$B)	Share
Samsung	\$82.9	16.1%
Intel	\$70.2	13.6%
SK Hynix	\$37.0	7.2%
Micron	\$31.0	6.0%
Broadcom (1)	\$18.5	3.6%
Qualcomm (1)	\$16.5	3.2%
Toshiba*	\$15.4	3.0%
TI	\$15.0	2.9%
Nvidia (1)	\$12.3	2.4%
ST	\$9.6	1.9%
—	\$308.2	60.0%
—	\$514.0	100.0%

*REC as the Major Supplier*

Source: IC Insights

(1) Fabless

\*Includes Toshiba Memory



# Q1 2020 Silicon Gas Sales marginally lower

China silane market down due to COVID-19

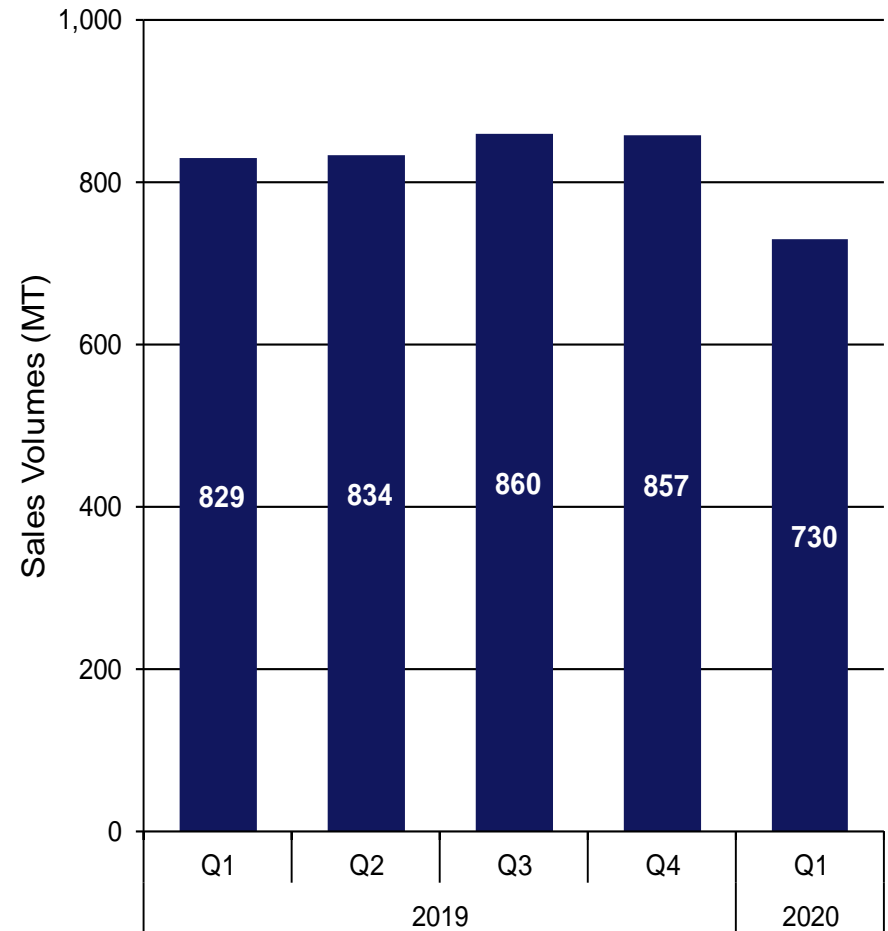
## › Silicon gas sales volumes

- Q1'20 730MT vs. 850MT guided
- Lower shipments due to COVID-19
  - Due primarily to quarantine mandates imposed by China in January 2020
  - Customer orders delayed to control inventory levels

## › Market recovery expected, timing uncertain

- Uncertainty due to COVID-19
- Duty on US silane when exported to China

## Silicon Gases



## Q1 2020 Electronic Grade Polysilicon in line with forecast

2020

## › Semiconductor grade polysilicon sales

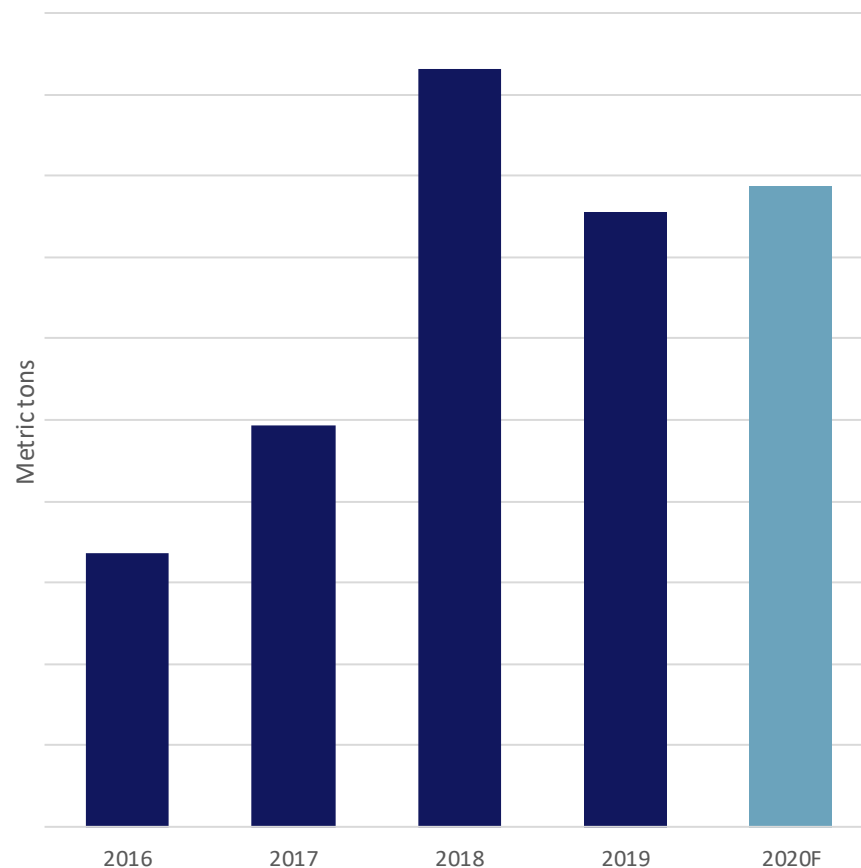
- 2019 713MT
- 2020 800MT

## › Market recovery expected, timing uncertain

- Uncertainty due to COVID-19
- Duty on US polysilicon when exported to China

## › Focus on high end Float Zone polysilicon

- 2 Producers of Float Zone
- Product mix optimized for highest value creation

REC Shipments - Float Zone  
Polysilicon

RECSiLICON



## Financial Review

---

# Summary of Segments

(USD million)	Q1 2020		Q1 2019		2019	
	<u>Revenues</u>	<u>EBITDA</u>	<u>Revenues</u>	<u>EBITDA</u>	<u>Revenues</u>	<u>EBITDA</u>
<b>Semiconductor Materials</b>	<b>24.5</b>	<b>8.0</b>	<b>32.2</b>	<b>9.2</b>	<b>126.7</b>	<b>37.8</b>
<b>Solar Materials</b>	<b>0.2</b>	<b>(2.8)</b>	<b>12.9</b>	<b>(7.4)</b>	<b>33.4</b>	<b>(26.6)</b>
<b>Other</b>	<b>0.0</b>	<b>(4.1)</b>	<b>-</b>	<b>(6.5)</b>	<b>0.0</b>	<b>(24.1)</b>
<b>Eliminations</b>	<b>-</b>	<b>-</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>REC Silicon Group</b>	<b>24.7</b>	<b>1.0</b>	<b>45.0</b>	<b>(4.7)</b>	<b>160.2</b>	<b>(12.9)</b>

# Key Financial Results – Semiconductor Materials

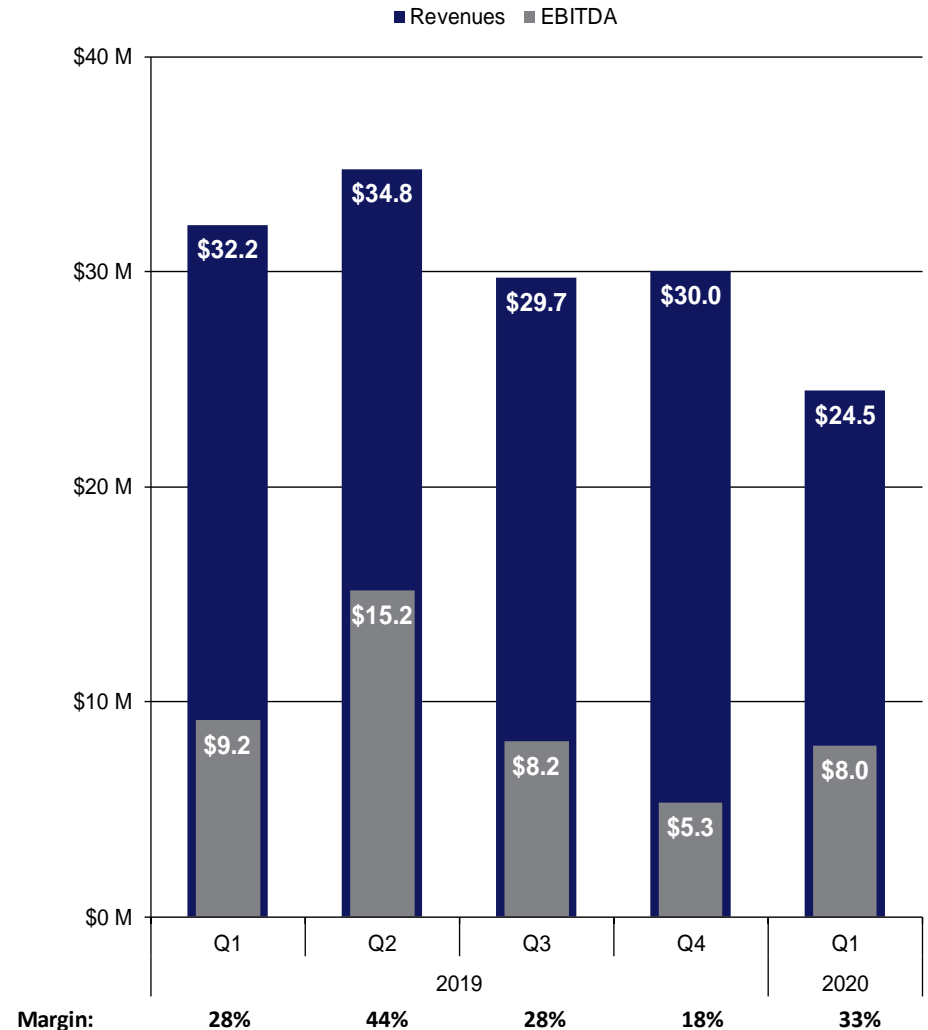
## Revenues: \$24.5M (18.5% decrease vs. Q4'19)

- › Polysilicon sales volumes 88MT  
(71.1% decrease vs. Q4'19)
  - Semiconductor grade volumes 85MT  
(55.8% decrease vs. Q4'19)
  - 67.0% Average price increase vs. Q4'19
  - 14.0% Semiconductor grade price increase vs. Q4'19
- › Silicon gas sales volumes 730MT  
(14.8% decrease vs. Q4'19)
  - (0.7%) Silane price decrease vs. Q4'19

## EBITDA Contribution of \$8.0M

Compared to Q4'19 EBITDA contribution of \$5.3M

- › Lower fixed cost spending
- › Lower electricity costs
- › Higher average polysilicon sales prices
- › Offset by lower silicon gas sales volumes



# Key Financial Results – Solar Materials and Other

## Solar Materials

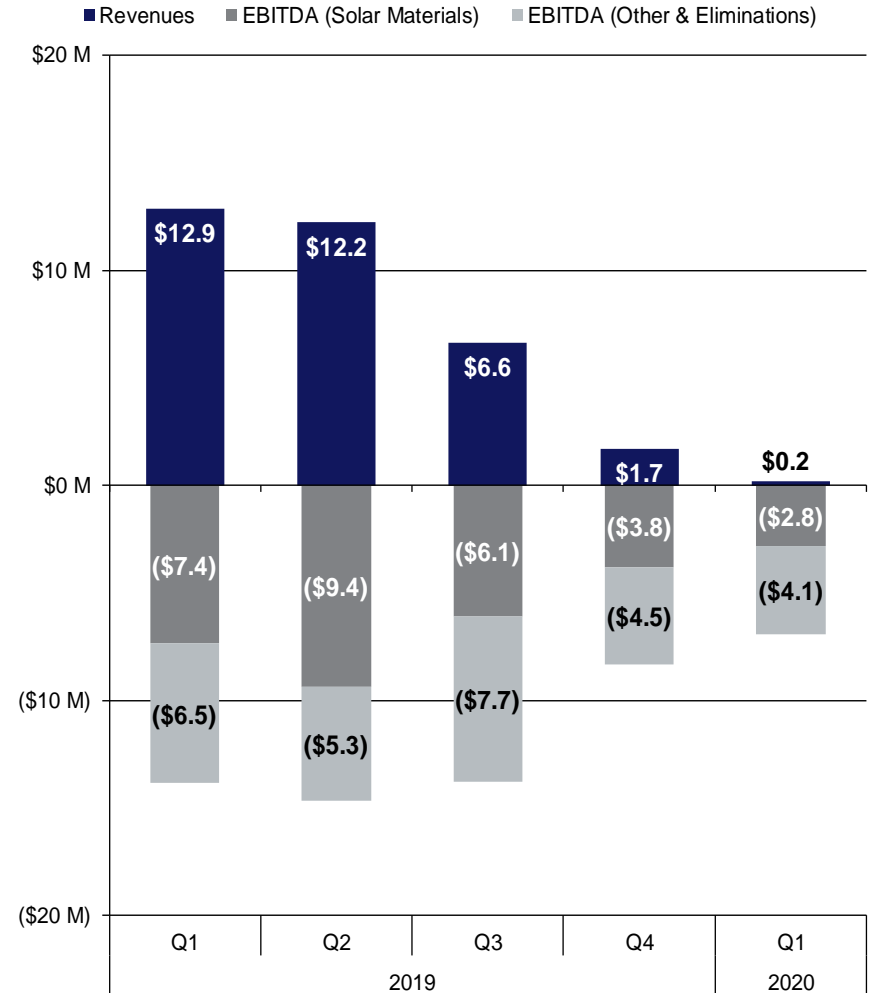
Revenues: \$0.2M

EBITDA Contribution: (\$2.8M) Loss

- › Polysilicon sales volumes 1MT
  - Sales of remaining inventories only
- › Net Expense of \$2.8M reflects successful efforts to decrease spending rates to maintain liquidity

## Other and Eliminations

- › Net cost: (\$4.1M) (compared to \$4.5M in Q4'19)
  - Lower net expense due primarily to timing of expenses



# Cash Flows

## Cash inflows from operating activities \$2.2M

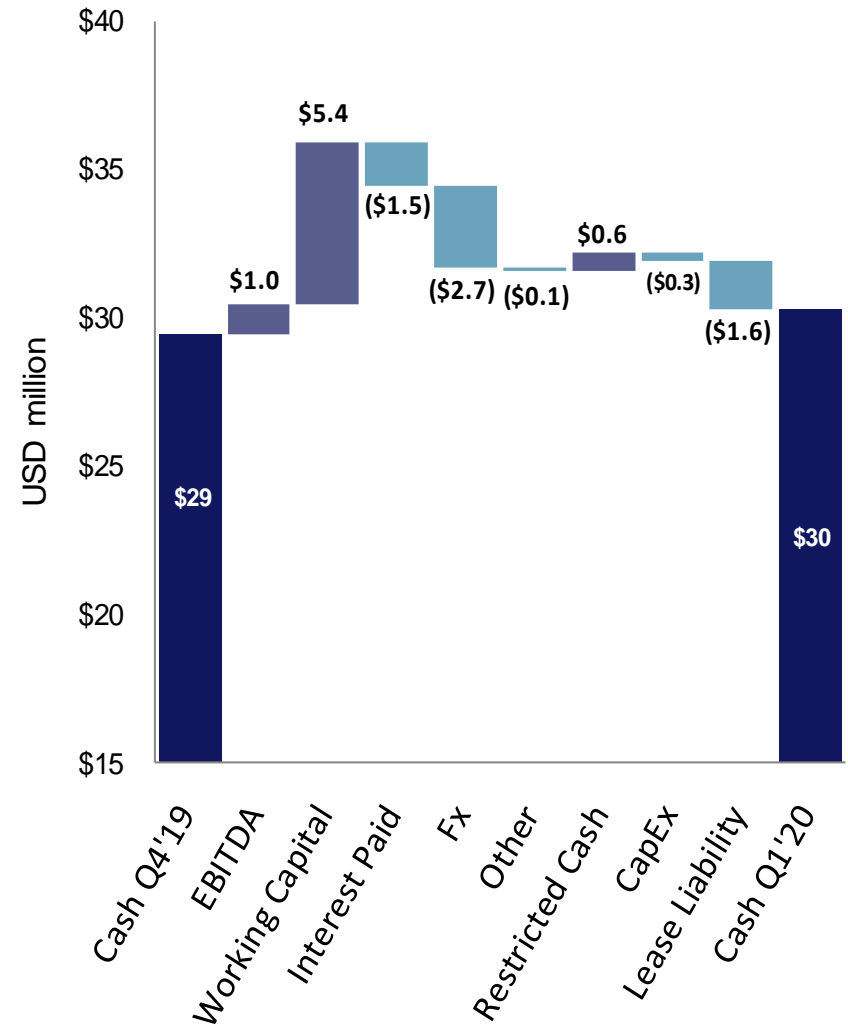
- › EBITDA of \$1.0M
- › Working capital decrease \$5.4M
  - Increase in inventories (\$5.2M)
  - Decrease in trade receivables \$7.0M
  - Increase in payables and accruals \$3.6M
- › Interest paid (\$1.5M)
- › Currency loss of (\$2.7M) (Stronger USD vs. NOK)
- › Other (\$0.1M)

## Cash inflows from investing activities \$0.3M

- › Capex (\$0.3M)
- › Decrease in restricted cash \$0.6M

## Cash outflows from financing activities (\$1.6M)

- › Payment of lease liabilities (\$1.6M)



# Debt

## Nominal debt - \$176.0M

- › Decrease of \$5.4M in Q1'20
  - \$1.6M Decrease in Lease Liabilities (IFRS 16)
  - \$3.7M Due to stronger USD relative to NOK

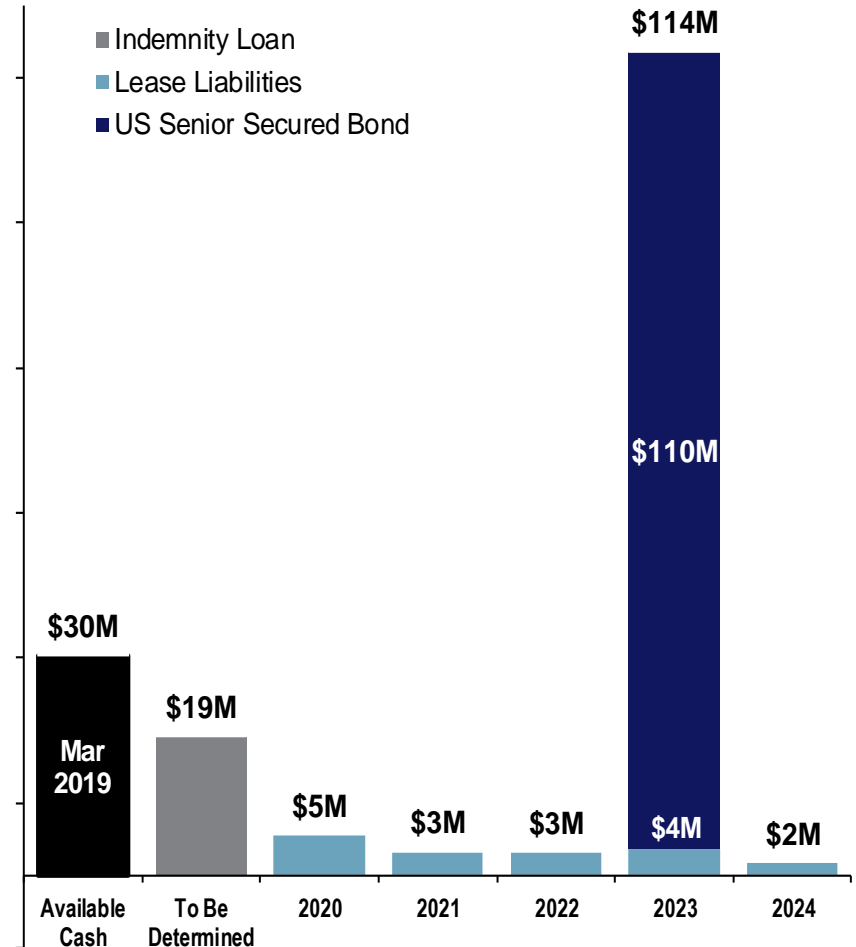
## Nominal net debt - \$145.7M

- › Decrease of \$6.3M in Q1'20
  - Increase in cash of \$0.8M
  - Decrease in nominal debt of \$5.4M

## Contingent Liabilities

- › Reassessment of tax - \$20.3M
- › Indemnity loan - \$19.0M
- › 2012 Property tax appeal - \$8.0M

USD Million







RECSILICON

## U.S. / China Trade Update

---

# Phase 1 Trade Deal

## Reopens China Market for US Solar Grade Polysilicon

- › China committed to purchase US-made polysilicon in Phase 1 US/China Trade Deal
  - Commitments contained in non-public annexes
- › COVID-19 delaying execution of the Phase 1 Trade Deal
- › Long Term Impact: China market is open to US Solar Grade Polysilicon without tariffs
- › Section 301 and other US leverage available for enforcement
- › US Government recognition of strategic importance of US Polysilicon



ECONOMIC AND TRADE AGREEMENT BETWEEN  
THE UNITED STATES OF AMERICA AND  
THE PEOPLE'S REPUBLIC OF CHINA  
FACT SHEET

### EXPANDING TRADE

The Phase One economic and trade agreement signed by the United States and China on January 15, 2020, commits China to undertake structural changes to open up its economy and improve its trade regime. It is expected that these changes and other trade liberalization being pursued by China will lead to improved trade flows benefiting China's trade partners, especially the United States. China is facing increased consumer demand from its growing middle class for high-quality imports of goods and services, which the United States is able to produce and supply at competitive prices.

Consistent with the two sides' projections, China is committing that over the next two years it will import no less than \$200 billion of U.S. goods and services **on top of** the amounts that it imported in 2017 in four broad categories:

- China's imports of U.S. manufactured goods, such as industrial machinery, electrical equipment, pharmaceutical products, aircraft, vehicles, optical and medical instruments, iron and steel, **solar-grade polysilicon**, hardwood lumber, and chemical products, among other goods, will total at least \$120.0 billion in 2020 and at least \$131.9 billion in 2021.
- China's imports of U.S. agricultural products, such as soybeans, cotton, grains, meats, ethanol, seafood, and the full range of other agricultural products will total at least \$80 billion over the next two years. China will also strive to purchase an additional \$5 billion of agricultural products annually.

RECSiLICON

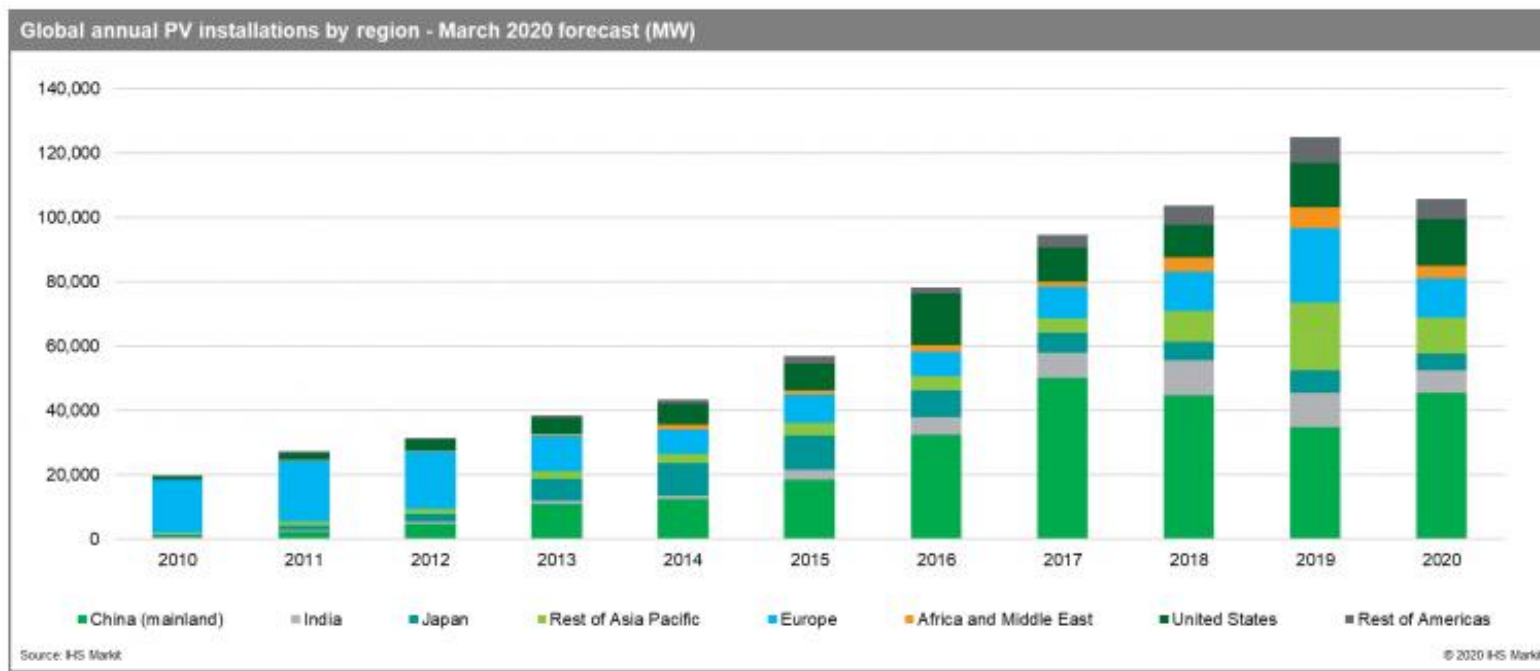


PV Market Outlook

---

# PV Global Installations will decline in 2020 due to COVID-19

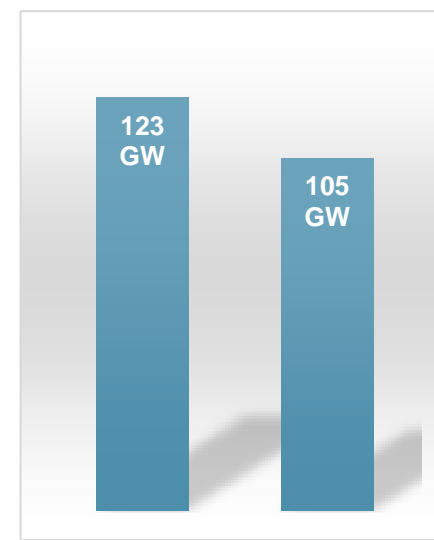
- > 2020 PV installation ~105GW
  - 20GW lower compared to 2019
- > The demand outside of China may decline from ~85GW in 2019 to ~55GW in 2020 due to the effect of COVID-19
- > China may increase installations from ~30GW in 2019 to ~50GW in 2020 to stimulate the demand
- > China has become gradually more dependent on the global market for their PV industry



Source: IHS Markit, March 2020

# 2020 Global Polysilicon Market may decline ~15% from 2019 **2020**

- › Polysilicon 2020 demand will probably be ~ 75kMT lower than in 2019
- › Major overcapacity in the PV value chain
  - Mainly affects China which dominates the PV manufacturing industry
- › Polysilicon Production adjustments 2020
  - Non-Chinese company production (~50kMT) permanently curtailed February 2020
  - Non-Chinese company indicated 30% reduced production (~20kMT) May 2020
  - Chinese companies announced extended maintenance May 2020



(kMT)	2019	2020
PV	465	390
Semi	38	40
<b>Total</b>	<b>503</b>	<b>430</b>
<b>g/w</b>	<b>3.8</b>	<b>3.7</b>

Source: CSIA and REC Market Research, – APRIL 2020

# Polysilicon Market may not be in balance until 2022

- › China may stimulate domestic PV installations to relieve pressure on its PV manufacturing industry
- › 2022 demand ~150GW
  - 525kMT Polysilicon
  - Restart of idle and cost competitive capacity
- › Chinese companies continue to announce new expansions
  - New investments will require \$15/kg polysilicon price without subsidized funding



Source: REC Market Research, – APRIL 2020

# Restart of Moses Lake

Dependent on Phase 1 Agreement and Market Outlook

- › 2022 Installation ~150 GW
  - Polysilicon ~525 kMT
  
- › 2022 Polysilicon capacity support ~150 GW
  - Production 2020 ~390 kMT
  - Idle capacity ~85 kMT
  - New capacity ~60 kMT
  
- › High cost/low quality Chinese producers to halt production
  
- › A consolidated market with a limited number of polysilicon companies

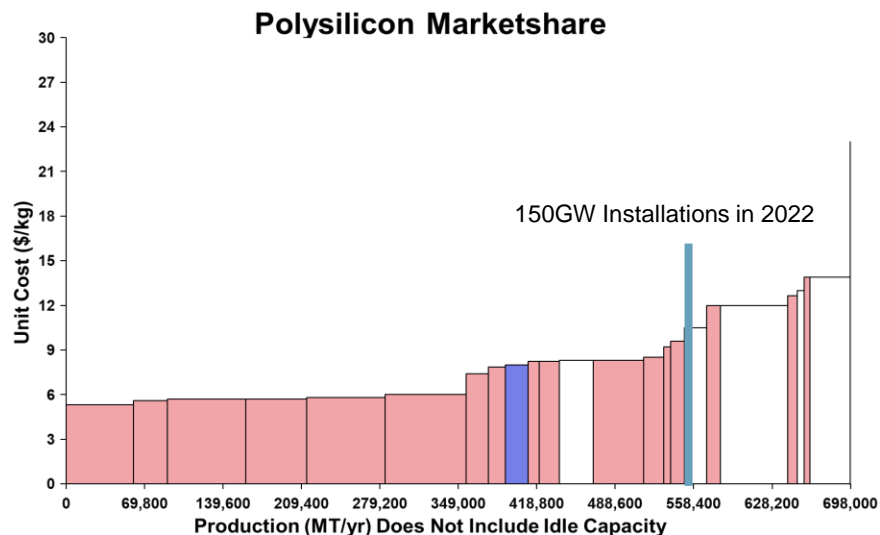
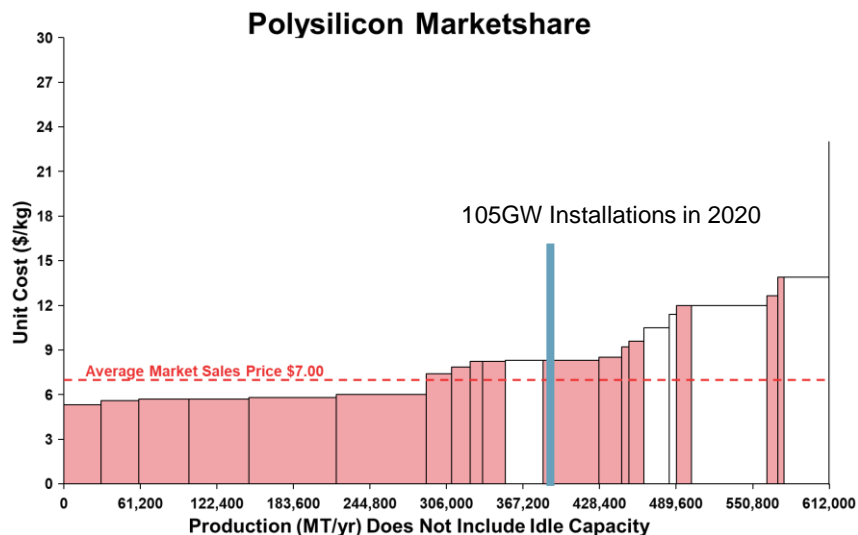
Company	PV Production 2020	Restarted PV Production 2022	Added PV Capacity 2022	Total PV Capacity 2022
East Hope	30	10	30	70
Tongwei	75	5	30	110
Daqo	65	5		70
Xinte	65	5		70
GCL	55	25		80
Other Chinese	30	0	0	30
<b>Total China</b>	<b>320</b>	<b>50</b>	<b>60</b>	<b>430</b>
REC Silicon US	0	18		18
Other Outside China	70	17		87
<b>TOTAL</b>	<b>390</b>	<b>85</b>	<b>60</b>	<b>535</b>

Source: CSIA and REC Market Research, – APRIL 2020

# REC Silicon's FBR Plant in Moses Lake Cost Competitive

Very low CO<sub>2</sub> emission due to superior technology and hydroelectric power

FIRST  
QUARTER  
2020



- › 2020 105GW installation demand requires 390kMT
- › China polysilicon import assumed to be 70kMT due to cost, quality & low CO<sub>2</sub> requirements from non-Chinese customers
- › High cost, low quality, & high CO<sub>2</sub> polysilicon plants will continue to shutdown

- › 2022 150GW installation demand requires 525kMT
- › China polysilicon import assumed to be ~105kMT due to cost, quality & low CO<sub>2</sub> requirements from non-Chinese customers



RECSiLICON



Yulin JV Update

---



# Yulin, China – REC Silicon Presence in Primary Market 2020

## Plant characteristics

- › Construction completed in 2018
- › Large scale silicon manufacturing facility with
  - 19,000MT FBR-B granular Polysilicon
  - 300MT Siemens semiconductor grade Polysilicon
  - 500MT Silane Gas loading

## Positioned to capitalize on growing PV industry

- › Located in principal market – China
- › FBR-B is semiconductor grade capable which is optimal for monocrystalline PV applications
- › Current REC ownership of 15%, option to increase exposure to 49% from January 2021



## Near Term Outlook

- › Q1 Production
  - 22MT of Loaded Silane
  - 1,618MT of FBR
  - 22MT of Siemens
- › High quality FBR production
- › Q1 FBR production reduced from plan due to insufficient raw materials and COVID-19 related impacts.



RECSiLICON



Battery Update

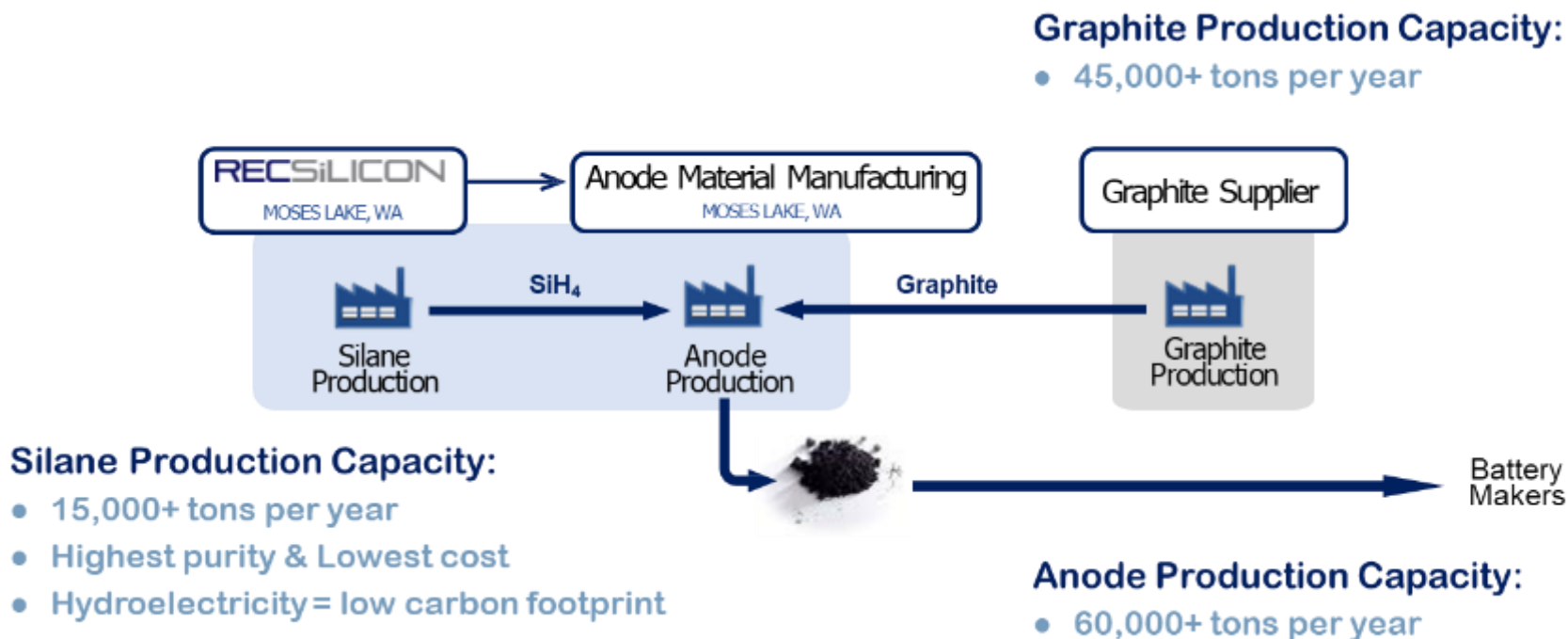
---

# Strong Silane Interest from Anode Makers

FIRST  
QUARTER  
2020

Adding 25% silicon to graphite increases capacity 4x

- › Silicon anode makers need to co-locate with silane producer
  - Resolves logistical challenges for large quantities of silane gas
- › Strong Interest from several companies to start pilot testing
  - Will take time before industrial scale



RECSiLICON



## Short Term Business Plan and Guidance

---

# 2020 Business Plan for REC Silicon

- › Continue to operate stable and profitable Butte facility
- › Restart of the Moses Lake FBR plant postponed
  - Verify compliance by China with Phase 1 Trade Agreement commitments
  - Monitor PV market development
  - Moses Lake restart will require additional capital
- › Divestment of the Butte facility if an acceptable offer is received
  - Interested parties' due diligence delayed due to COVID-19
- › Continued support from REC Silicon to Yulin JV
- › Continue dialog with silicon anode battery companies for pilot testing and industrial scale production of silicon anode materials



RECSiLICON



Q2 2020 Reporting  
July 23, 2020

Follow us on



---

[recsilicon.com](https://recsilicon.com)