RECSiLICON

FOURTH QUARTER 2019

PRESENTATION

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Agenda

- Q4 Results
- Financial Review
- PV Market Outlook
- China Tariff Update
- Moses Lake's Future
  - Polysilicon Supply and Demand
  - Moses Lake Startup
- Yulin JV Update
- Battery Update
- Short-Term Business Plan
- Q&A

Highlights

Revenues: $31.8M

EBITDA Loss: ($ 3.0M)

December 31, 2019 cash balance of $29.4M

- Cash decrease of $16.8M
- Cash outflows from operations $14.5M
  - Working capital increase of $2.5M
  - Interest payments of $7.8M

Silicon gas sales

- Sales volume of 857MT (vs. guidance of 830MT)
- 8.2% Silane gas price decrease vs. Q3’19

Semiconductor segment polysilicon sales

- Total sales volume of 303MT (increase of 56.4% vs. Q3’19)
- 13.0% Average polysilicon price decrease vs. Q3’19
- 1.0% Semiconductor grade polysilicon price decrease vs. Q3’19

Phase I trade agreement between the U.S. and China

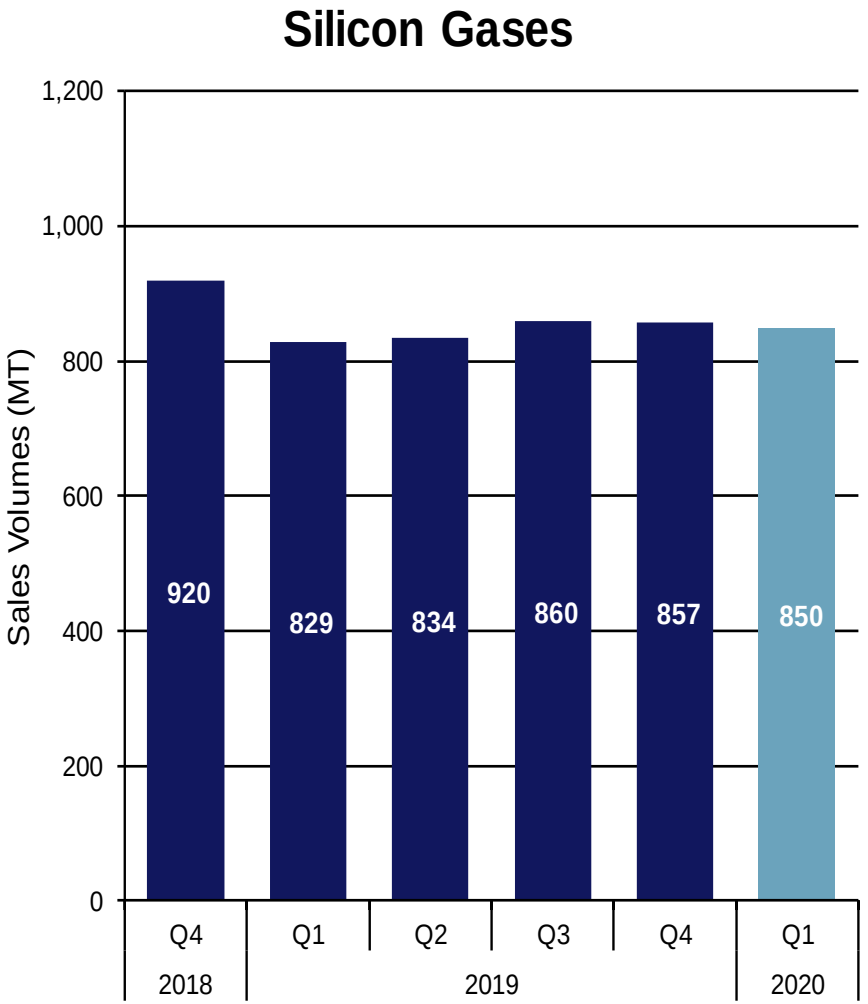
- Advised by U.S. Administration that China solar grade polysilicon markets will open
- Will evaluate the potential restart of FBR production

Process to evaluate the sale of the Butte, Montana plant on-going

- Will be sold only if an acceptable bid is received
- Proceeds will be used to retire debt, provide a buffer for contingent liabilities, and to restart FBR

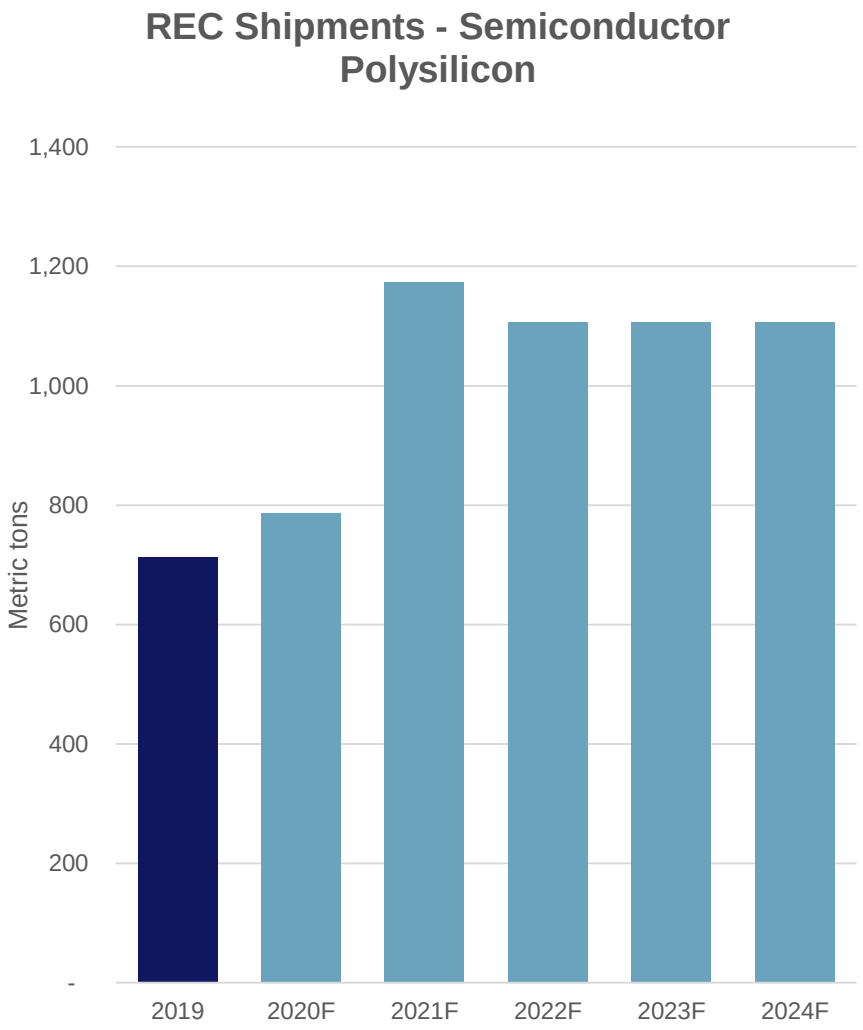
2019 Silicon Gas Sales stable, recovery expected in H2/2020

- Silicon gas sales volumes
  - Q4 2019 857 MT
  - 3,380 MT in 2019
  - Q1 2020 850 MT
  - 3,570 MT 2020
- Market recovery expected late in 2020
  - Uncertainty due to the Coronavirus outbreak in China
  - Duty on US silane when exported to China
  - Reduction of excess inventories



Electronic Grade polysilicon

- Semiconductor sales
  - 2019 713 MT
- Market recovery expected late in 2020
  - Uncertainty due to the Coronavirus outbreak in China
  - Duty on US polysilicon when exported to China
  - Reduction of excess inventories
- Focus on high end Float Zone polysilicon
  - 2 Producers of Float Zone
  - Product mix optimized for highest value creation



Financial Review

Summary of Segments

(USD million)	Q4 2019		2019		2018	
	Revenues	EBITDA	Revenues	EBITDA	Revenues	EBITDA
Semiconductor Materials	30.0	5.3	126.7	37.8	152.9	52.2
Solar Materials	1.7	(3.8)	33.4	(26.6)	69.2	(26.6)
Other	0.0	(4.5)	0.0	(24.1)	-	(30.0)
Eliminations	-	-	0.0	0.0	(0.9)	(0.5)
REC Silicon Group	31.8	(3.0)	160.2	(12.9)	221.2	(4.9)

- **Implementation of IFRS 16 – Leases**
  - Effective date January 1, 2019
  - Increased EBITDA equal to lease payments classified as finance leases
  - Recognition of interest expense (imputed)
  - Right of use assets depreciated over lease term

(USD million)	EBITDA Impact (IFRS 16 Leases)	
	Q4 2019	2019
Semiconductor Materials	1.2	5.5
Solar Materials	1.8	7.3
Other	0.0	0.0
Eliminations	-	-
Total Impact of IFRS 16	3.1	12.8

Key Financial Results – Semiconductor Materials

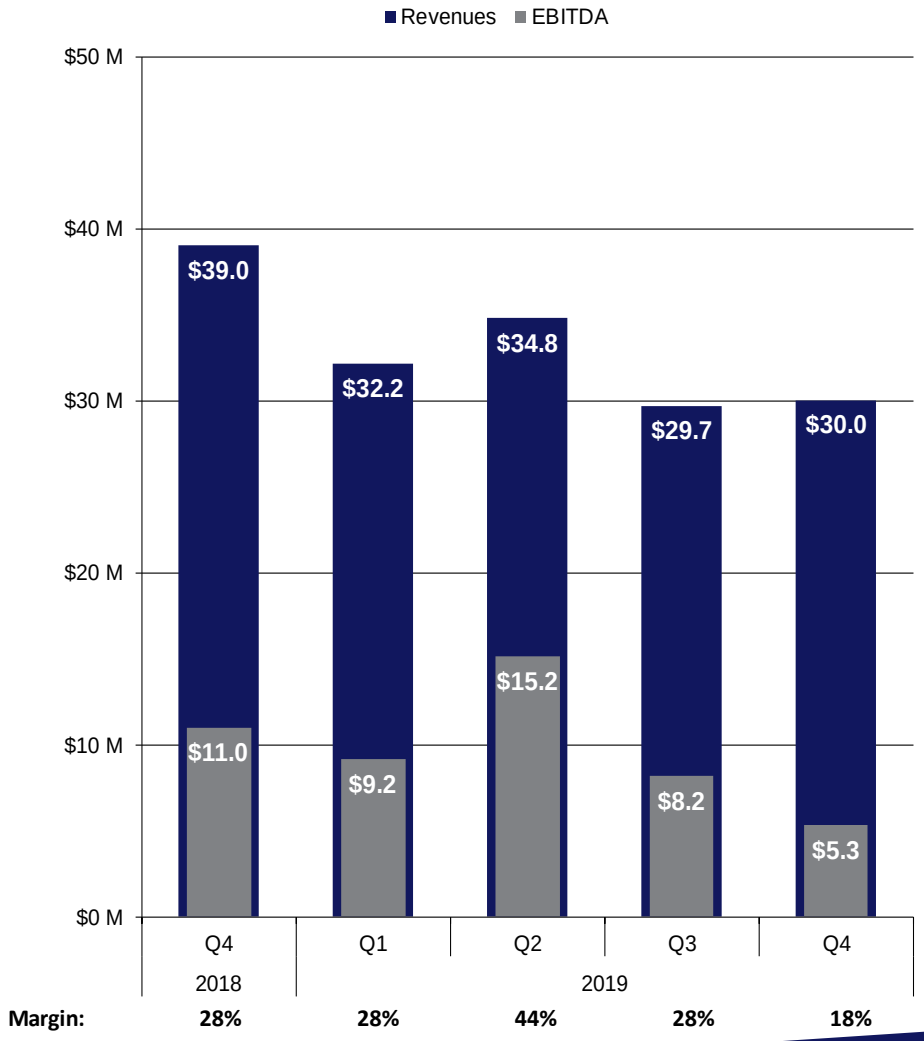
Revenues: $30.0M (1.1% increase vs. Q3'19)

- Polysilicon sales volumes 303MT (56.4% increase vs. Q3'19)
  - Semiconductor grade volumes 191MT (34.5% increase vs. Q3'19)
  - (13.0%) Average price decrease vs. Q3'19
  - (1.0%) Semiconductor grade price decrease vs. Q3'19
- Silicon gas sales volumes 857MT (0.3% decrease vs. Q3'19)
  - (8.2%) Silane price decrease vs. Q3'19

EBITDA Contribution of $5.3M

Compared to Q3'19 EBITDA contribution of $8.2M

- Lower silane and polysilicon prices
- Higher electricity costs (Q4'19 average ~$42/MW)
- Lower production (17.4% decrease vs. Q3'19)



Key Financial Results – Solar Materials and Other

Solar Materials

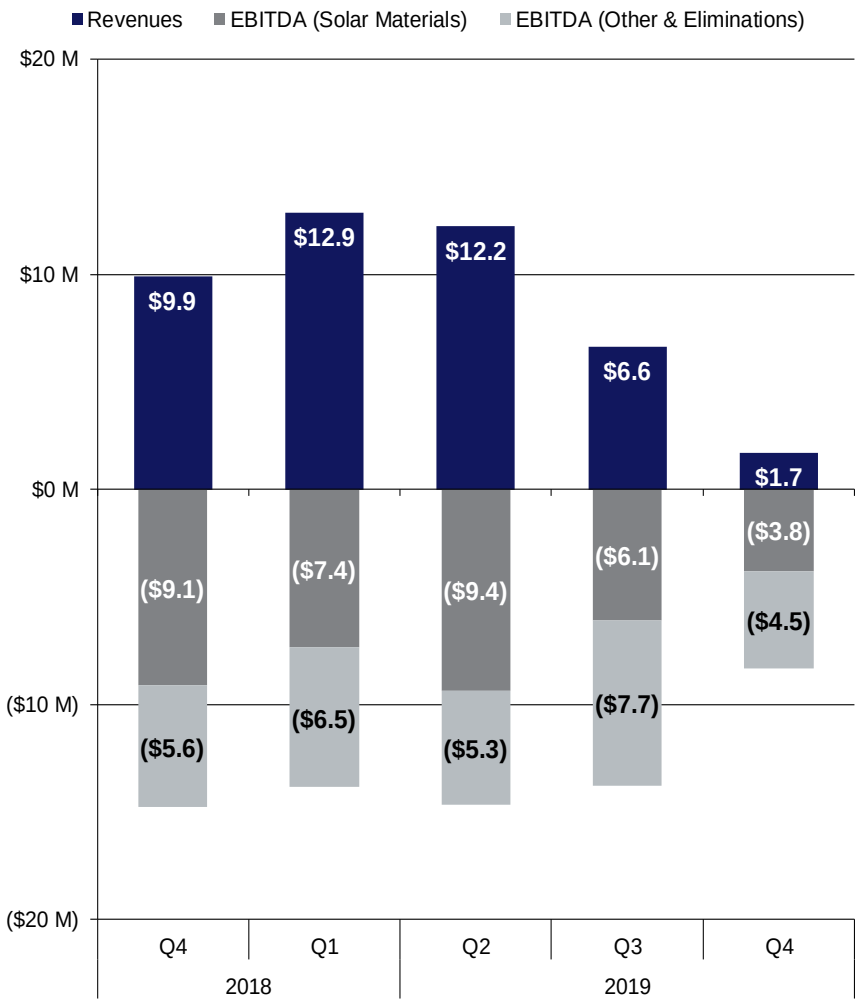
Revenues: $1.7M (74.4% decrease vs. Q3'19)

EBITDA contribution: ($3.8M) Loss

- Polysilicon sales volumes 340MT (64.7% decrease vs. Q3'19)
  - (24.0%) Average price decrease vs. Q3'19 (Low Mix of Prime)
  - (5.6%) Prime grade solar price decrease vs. Q3'19
  - Only small amounts of inventory remain
- Earnings include $0.6M Insurance Settlement
  - Business interruption claim from July 2016 equipment fire
- Net expense while FBR is not in operation
  - Expect approximately $4M per quarter net cost

Other and Eliminations

- Net cost: ($4.5M) (compared to $7.7M in Q3'19)
  - Q3'19 included $2.2M reorganization costs



Cash Flows

Cash outflows from operating activities ($14.5M)

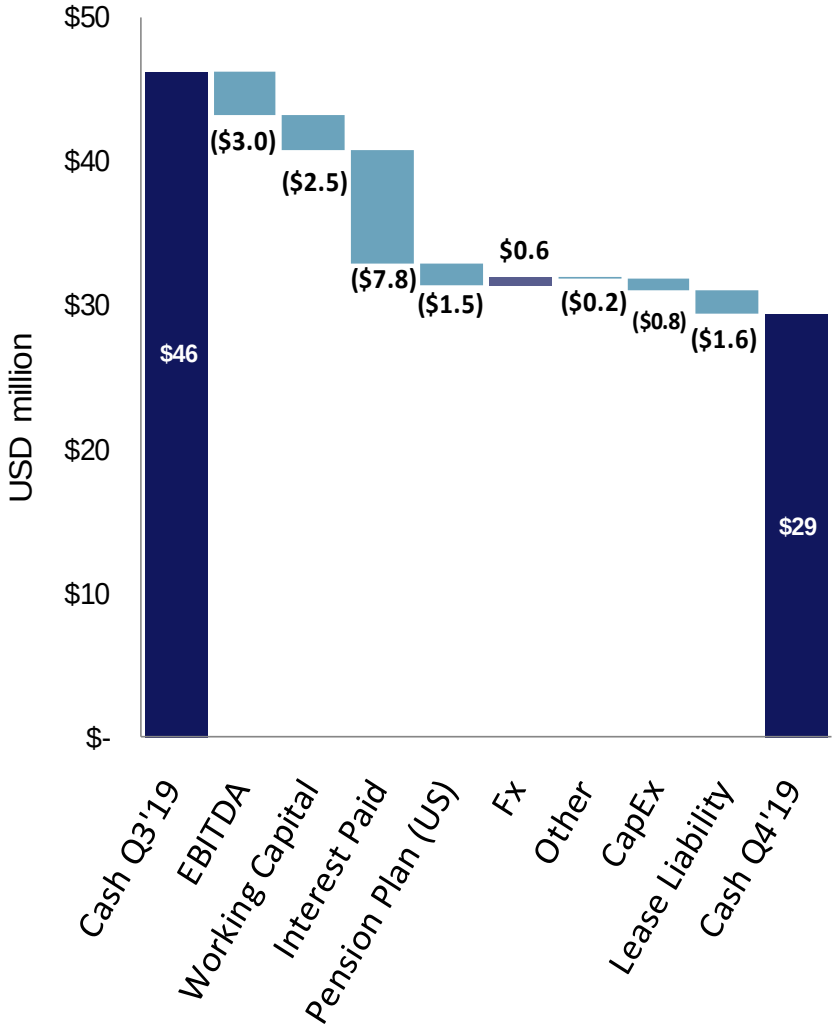
- EBITDA loss of ($3.0M)
- Working capital increase ($2.5M)
  - Decrease in inventories $7.3M
  - Increase in receivables ($3.0M)
  - Decrease in payables ($6.7M)
- Interest paid ($7.8M)
- Frozen defined benefit pension plan ($1.5M)
- Currency gain of $0.6M (weaker USD vs. NOK)
- Other ($0.3M)

Cash outflows from investing activities $0.7M

- Sale of land $0.3M
- Capex ($0.8M)
- Increase in restricted cash ($0.1M)

Cash outflows from financing activities ($1.6M)

- Payment of lease liabilities ($1.6M)



Debt

Nominal debt - $181.4M

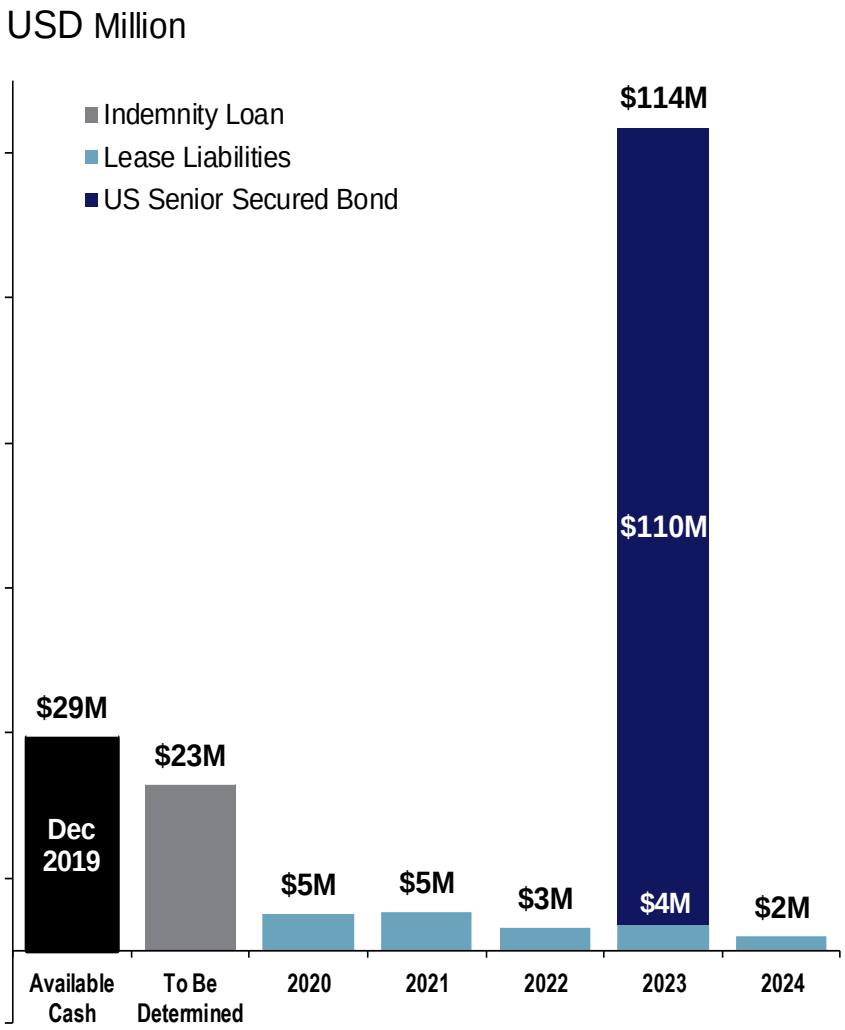
- Decrease of $0.9M in Q4'19
  - $1.7M Decrease in lease liabilities (IFRS 16)
  - $0.8M Due to weaker USD relative to NOK

Nominal net debt - $152.0M

- Increase of $15.9M in Q4'19
  - Decrease in cash of ($16.8M)
  - Decrease in nominal debt of $0.9M

Contingent liabilities

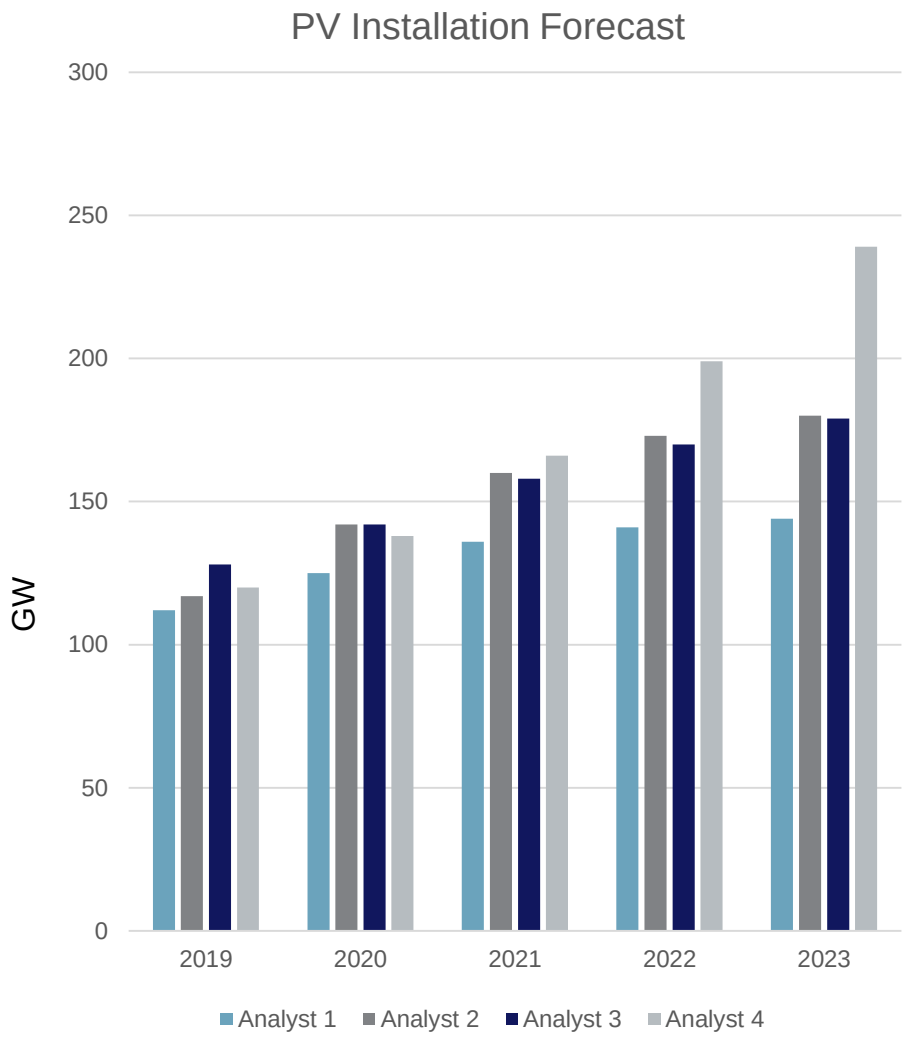
- Reassessment of tax - $29.3M
- Indemnity loan - $22.8M
- 2012 Property tax appeal - $7.7M



PV Market Outlook

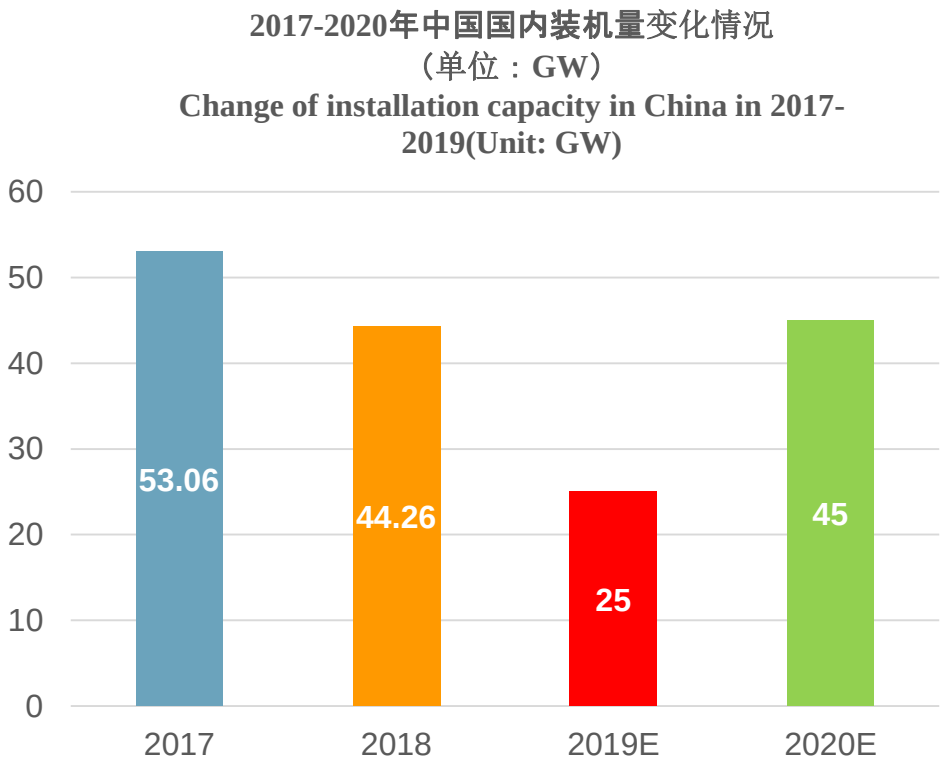
PV Installations will continue to grow in the coming years

- 2020 Range: ~130-145 GW
  China: 25 to 45 GW from 2019 to 2020
- 2021 Range: ~145-160 GW
- Less reliance on subsidies allowing for more stable growth
- Over 40 countries projected to install 1GW or more in 2020
- Energy storage improvements make PV more competitive



Source: REC Market Research, – January 2020

1.1 光伏产业发展——中国装机量趋势与预测
Development of PV industry-trend and forecast of installation capacity in China



数据来源：中国光伏行业协会 西北勘测设计研究院
Data source: China Photovoltaic Industry Association, Northwest Engineering Corporation Limited

- 2018年5.31后，下半年光伏开发热情锐减，全年装机环比出现较大跌幅。

After May 31, 2018, the enthusiasm for photovoltaic development in the second half of the year decreased sharply, and the installed capacity of the whole year decreased significantly month-on-month.

- 2019年光伏电价政策延迟至4月下发，平价及竞价项目申报结果5月底才确定，项目工期紧张；关键设备（组件成本占投资比例35-39%）及非技术成本仍较高，大量平价及竞价项目无法落地。

In 2019, issuance of photovoltaic electricity price policy was postponed to April, and the application results of parity and bidding projects were not determined until the end of may, resulting in tight project schedule. Key equipment (module cost accounts for 35-39% of investment) and non-technical costs are still high, and a large number of parity and bidding projects cannot be implemented.

- 2020年，将有约18GW的上年平价、竞价与光伏基地等项目结转，加上新申报项目，结合关键设备价格的下降，预计全年装机将明显回暖（43-50GW）。
- In 2020, about 18GW of last year's parity projects, bidding projects and PV base project will be carried forward, and new applied projects, combined with the decline in key equipment prices, the installation capacity of the whole year is expected to recover significantly (43-50GW).

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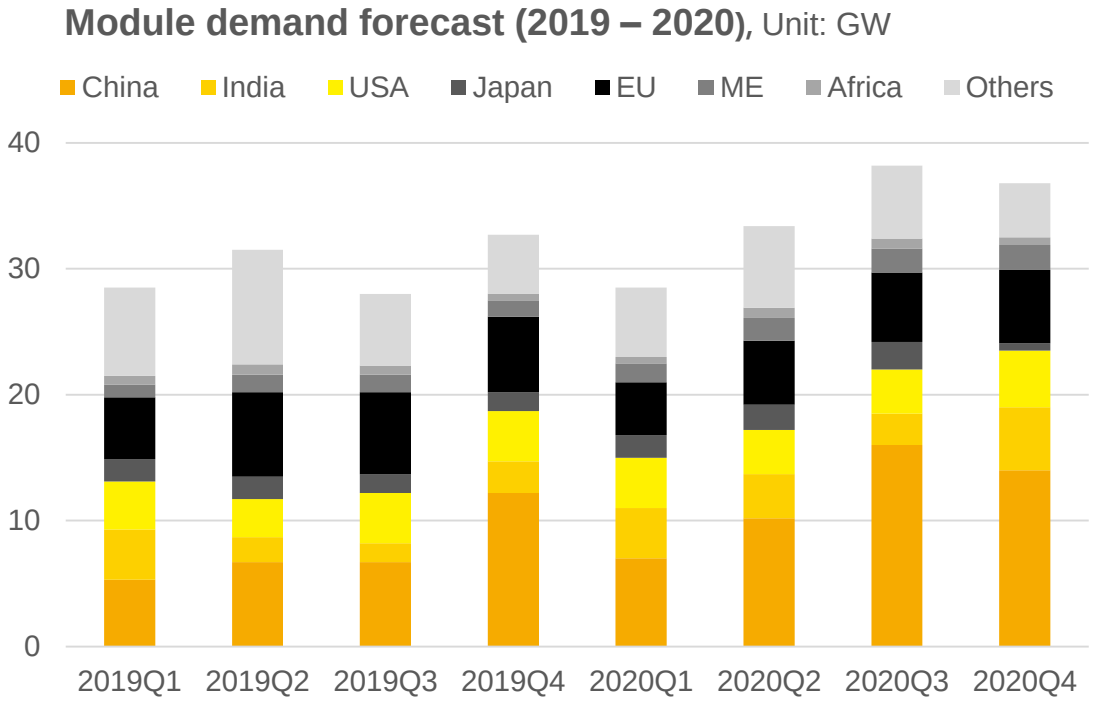
The PV installations are expected to increase in H2/2020

- H1/2020 ~62 GW
  - China ~17 GW
- H2/2020 ~75 GW
  - China ~30 GW
- EU is 2nd largest market
  - ~20 GW
- US and India nearly equal in PV installations
  - USA ~15.5 GW
  - India ~ 15 GW



Source: PV InfoLink – PV Market Monthly Note – December 2019

U.S. / China Trade Update

Phase 1 Trade Deal

Reopens China Market for US Solar Grade Polysilicon

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- Polysilicon prioritized in Phase 1 US/China Trade Deal by US Government
- Specific commitment from China to purchase minimum volume of US-made polysilicon in non-public annexes
- Impact: China market is open to US Solar Grade Polysilicon without tariffs
  - Overrides extension of China AD/CVD
- Effective mid-February 2020
  - Phase 1 provides for 2 years however, US Government expects long term purchases of US Poly
- Section 301 and other US leverage available for enforcement
- US Government recognition of strategic importance of US Polysilicon

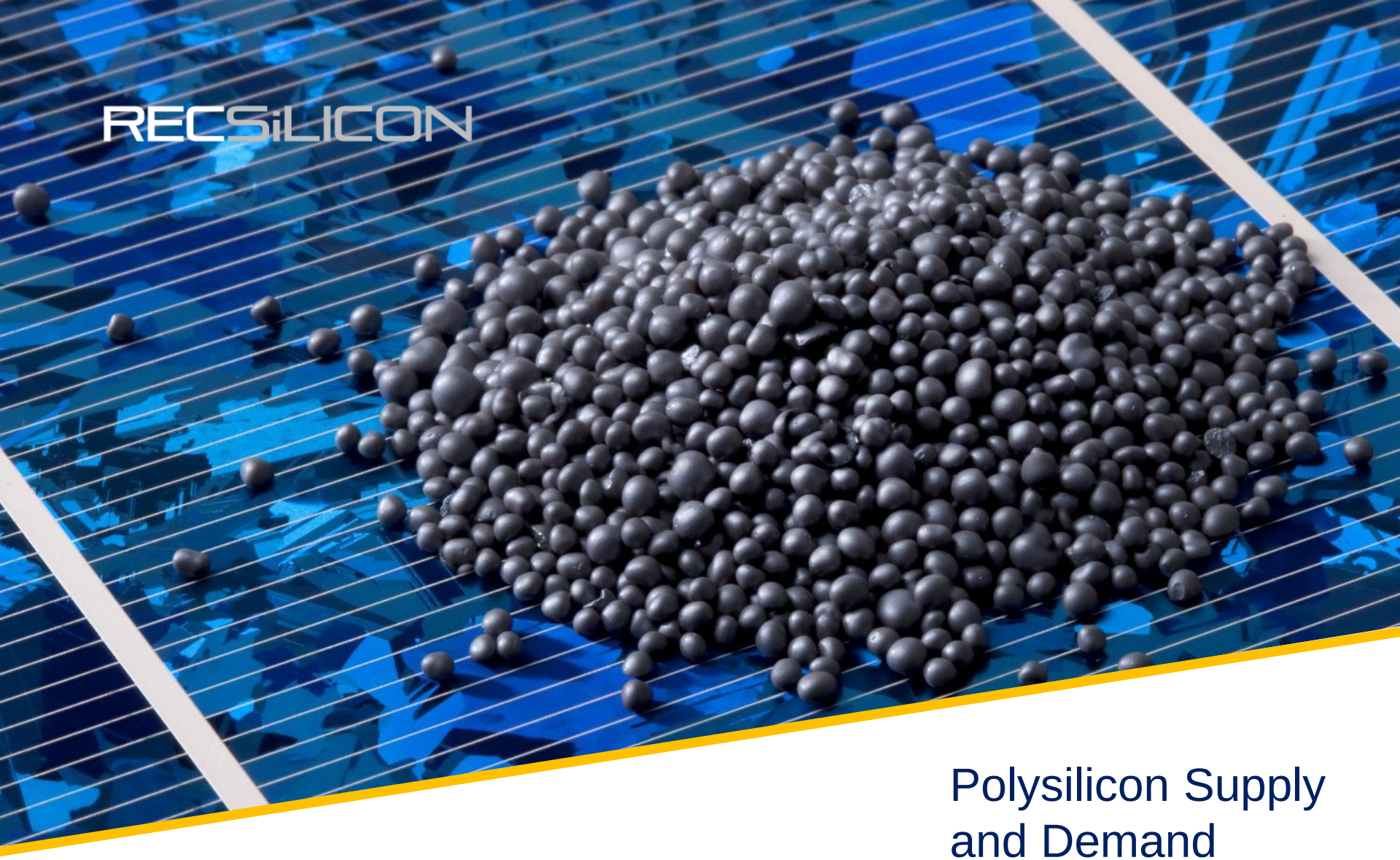
ECONOMIC AND TRADE AGREEMENT BETWEEN
THE UNITED STATES OF AMERICA AND
THE PEOPLE'S REPUBLIC OF CHINA
FACT SHEET

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.



Polysilicon Supply and Demand

1.6 光伏产业发展——主要多晶硅企业产能及结构
Development of PV industry- Production capacity and structure of main poly silicon enterprises

2020年全球主要多晶硅企业产能（万吨） Production capacity of main global poly silicon enterprises in 2020 (10k MT)		
序号 SN	硅料企业 Enterprises	产能 Production capacity
1	东方希望 East Hope	8
2	通威股份 Tongwei Co., Ltd.	8
3	大全新能源 Daqo New Energy Corporation	7
4	新特能源 Xinte Energy	7.2
5	新疆协鑫 Xinjiang GCL	6
6	天宏瑞科 TR Silicon	1.9
7	德国瓦克 Germany Wacker	8
8	韩国OCI South Korean OCI	7
9	其他企业 Other enterprises	5
合计 Total		58.1

数据来源：销售部整理
Data source: summarized by Sales Department

➢经过2018-2019年多晶硅行业的疯狂扩产，2020年全球主要多晶硅企业产能均迈入7万吨规模，合计产能56.7万吨；
After the crazy expansion of polysilicon industry in 2018-2019, the capacity of global main polysilicon enterprises will reach 70,000 tons per each in 2020, with a total capacity of 567,000 tons.

➢中国大陆前5大多晶硅企业合计产能达36.7万吨，全球占比达65%；
The top five poly silicon enterprises in China mainland have a combined capacity of 367,000 tons, accounting for 65% of the global total.

2020年中国多晶硅供应39万吨（国产）+12万吨（进口）合计51万吨，仅单晶需求45.9万吨，供应将十分紧张。
In 2020, the amount of poly silicon supplied in China will be 510,000 tons, including 390,000 tons of domestic supply and 120,000 tons of imported supply, with a demand of mono of 459,000 tons. The supply will be very tight.

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Chinese Companies Polysilicon Capacity 2020

Source: REC Silicon estimates

Estimated 2020 Global Polysilicon production

- Investment decisions in 2017/18 for significant expansion in Xinjiang and Inner Mongolia was based upon ~ $16/kg
- Limited capacity under development
  - Some brown field expansion
- Non-competitive cash cost companies have halted production
- Limited Semi capacity in China

Company	PV	Semi
East Hope	60	
Tongwei	80	
Daqo	70	
Xinte	70	
GCL	60	
Other Chinese	50	
Total China	***390***	
REC Silicon	0	1
Non-Chinese	***100***	***39***
TOTAL	**490**	**40**

The Polysilicon PV Market

Expect gradual polysilicon demand/supply balance

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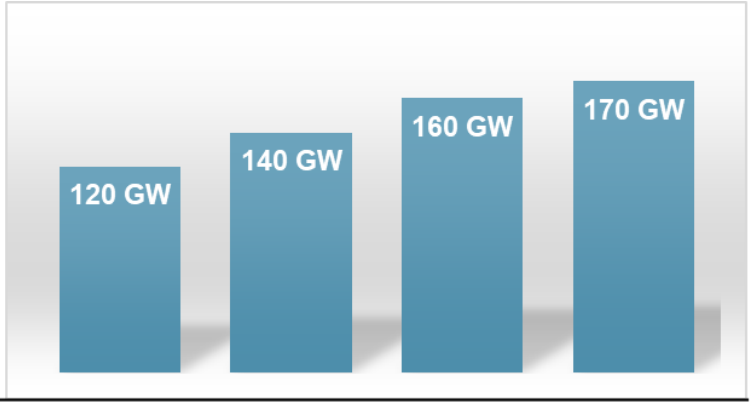
- Total Estimated Polysilicon Production in 2020 is ~530 kMT
- With forecasted growth in the PV market polysilicon will be in balance by the end of 2020
- New polysilicon investments not likely without stable price outlook above $16/kg



(kMT)	2019	2020	2021	2022
PV	432	490	544	561
Semi	38	40	40	42
Total	470	530	584	603
g/w	3.6	3.5	3.4	3.3

Source: REC Market Research, January 2020

Multi Wafers Continue to be in the PV Mix

- 30% in 2021 will require 48GW of multi equal to ~170,000 MT of poly (3.6g/W)
- 23% multi in 2022 will require 39GW equal to ~ 130,000 MT of poly (3.4g/W)

Multi-Si Wafer				
Rank	**Company**	**Annual Capacity GW**	**Annual Polysilicon Consumption kMT**	**Capacity Utilization**
1	Company A	18.0	72	40%
2	Company B	7.6	30	85%
3	Company C	5.5	22	55%
4	Company D	4.4	18	25%
5	Company E	3.8	15	50%
	Others	27.0	108	53%
		66.3	265	51%

Source: PV InfoLink Supply Chain Utilization Rates Report – December 2019-January 2020 forecasted utilization

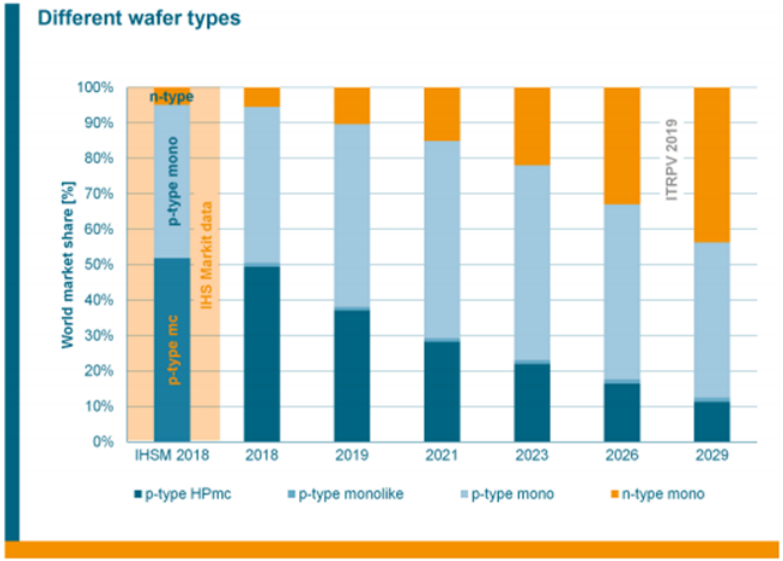


Fig. 38: World market shares for different wafer types. IHS Markit data are indicated for 2018 as reference, not distiguishing between HPmc and mc material [19].

Source: ITRPV, Tenth Edition, October 2019

FBR Prime Prices Near Mono Quality Levels

- May 31, 2018 Chinese decision to curtail PV installations reduced polysilicon prices dramatically
- Polysilicon prices trade today in the range of $9/kg (mono) to $7/kg (multi)
- FBR prime quality is trading between multi and mono grade polysilicon

Source: SSX Spot Price Index & Forward Pricing, January 2018 – January 2020

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Moses Lake Startup

FBR Efficiency Advantages

~ 20,000 MT Production Capacity

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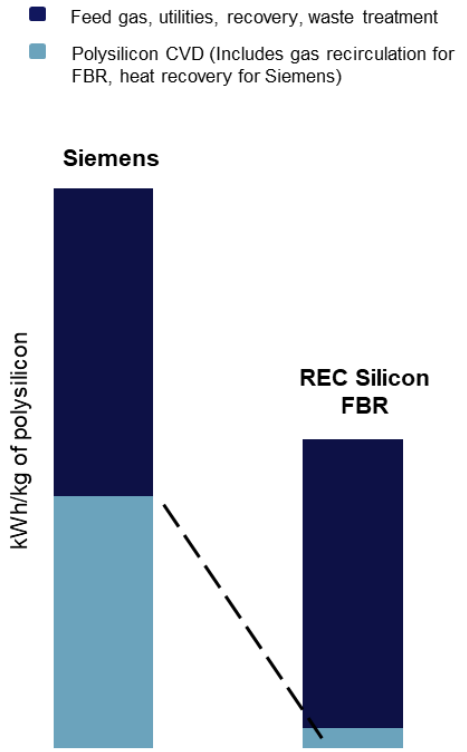
Energy consumption comparison



	China Siemens		U.S. REC Silicon FBR	
	Description	**Typical Number**	**Description**	**Typical Number**
Energy Consumption	High	40% of total cash cost	Low	6% of total cash cost
Production Process	Batch	Requires weekly turn around	Continuous	1-2 year between turn around times
Quality	Mono/Multi Grade		Mono/Multi Grade	
Product Form Factor	Processing Required	Adds >$1/kg in cash cost	Ready to use	
Labor Intensity	High (due to batch process)	~ 600 Employees	Low (due to continuous process)	~ 200 Employees

FBR Cash Cost

~ $8/Kg when Production at 100% Capacity

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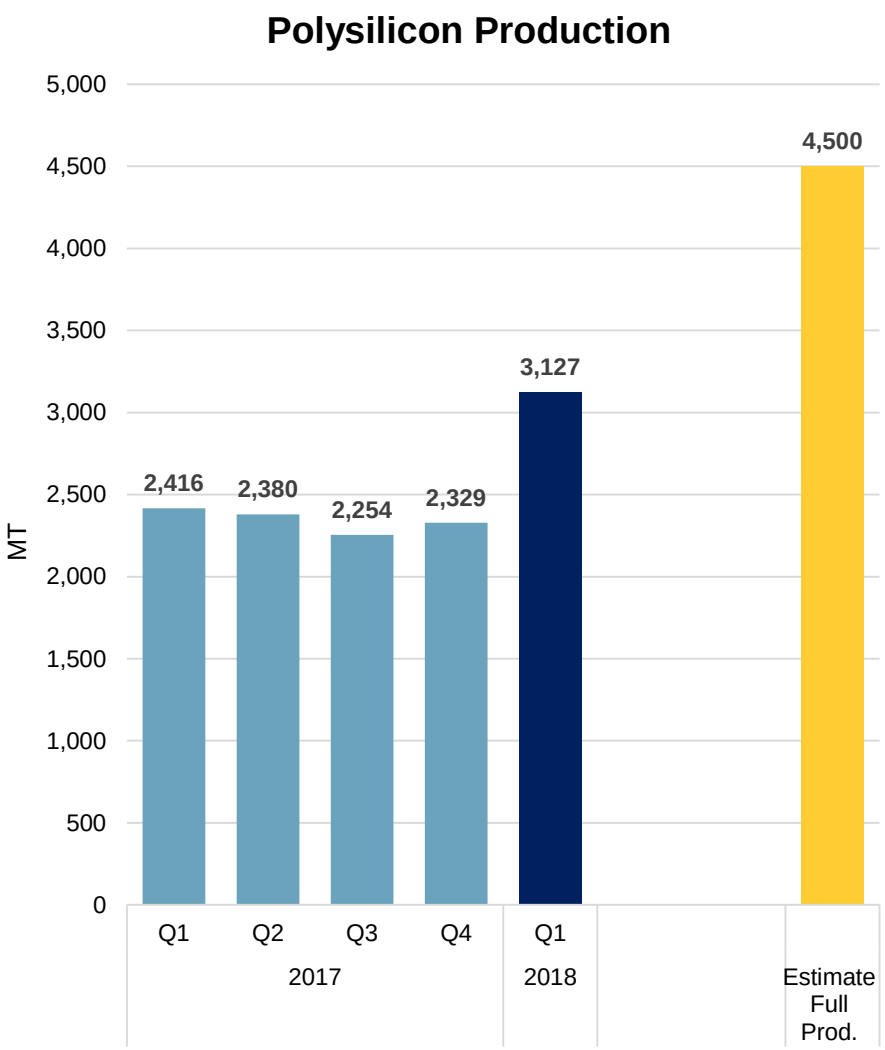

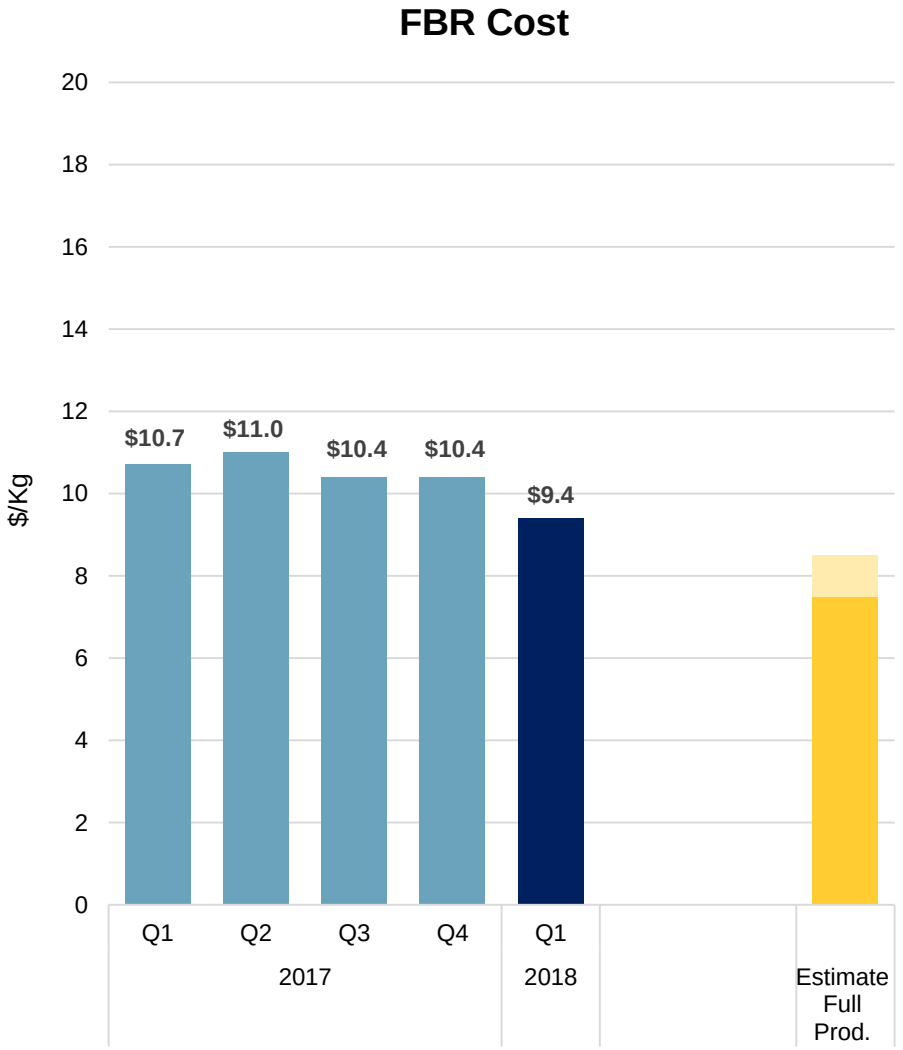

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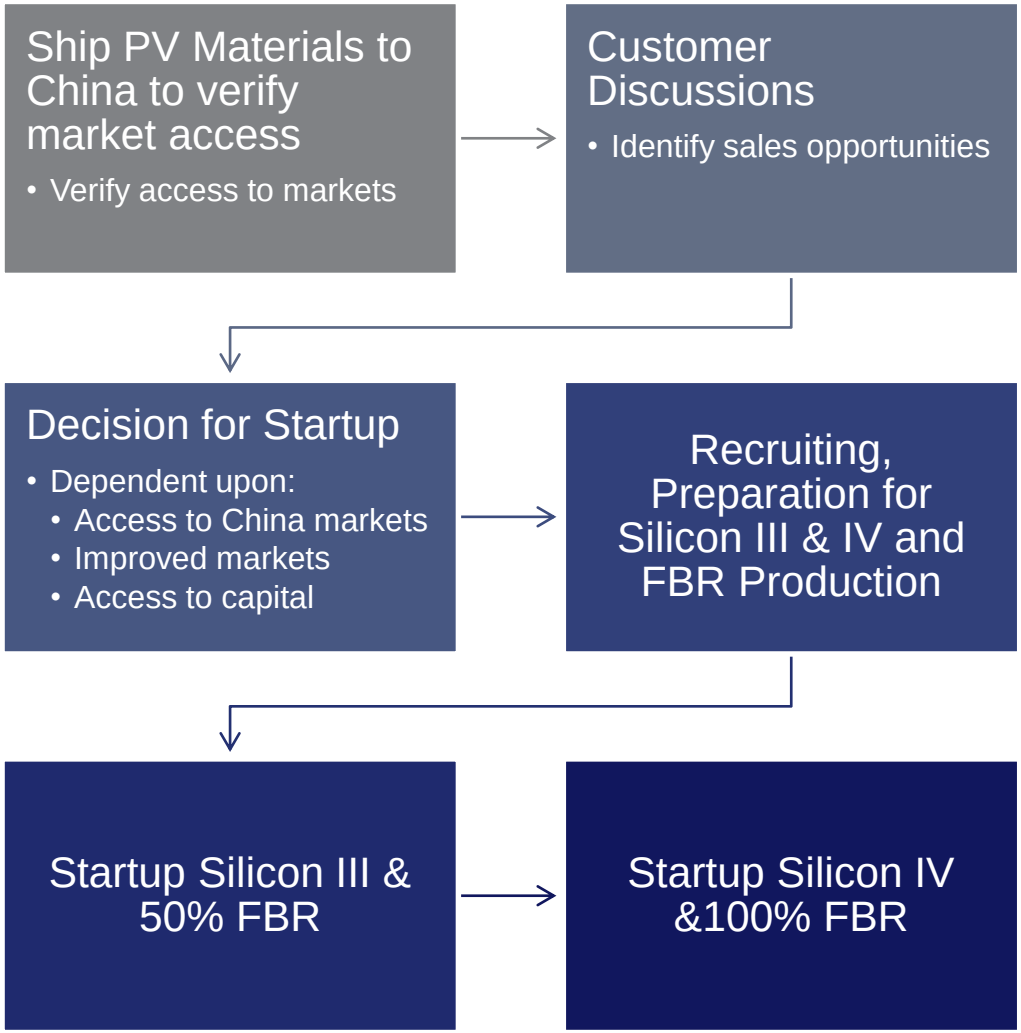
Potential FBR Startup in Moses Lake

- Moses Lake start-up costs
  - Estimate incremental expense of $20M
  - Plus working capital
- Sources of capital funds
  - Divestment of Butte
  - Equity



Yulin JV Update

Yulin, China – REC Silicon Presence in Primary Market

Plant characteristics

- Construction completed in 2018
- Large scale silicon manufacturing facility with
  - 19,000 MT 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

- 2019 Production
  - 47 MT of Loaded Silane
  - 6016 MT of FBR
  - 94 MT of Siemens
- High purity FBR production underway
- Siemens qualifications underway
- 2020 Production Plan
  - 300 MT of Loaded Silane
  - 10,000 MT of FBR
  - 60 MT of Siemens

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Battery Update

Battery Anodes using Silicon with Graphite More Efficient

Tesla (Panasonic) only company known to use the SiO_2 mixed with graphite in anodes

- Tesla's range superior to competitors

  EV's range under winter conditions compared to WTPL

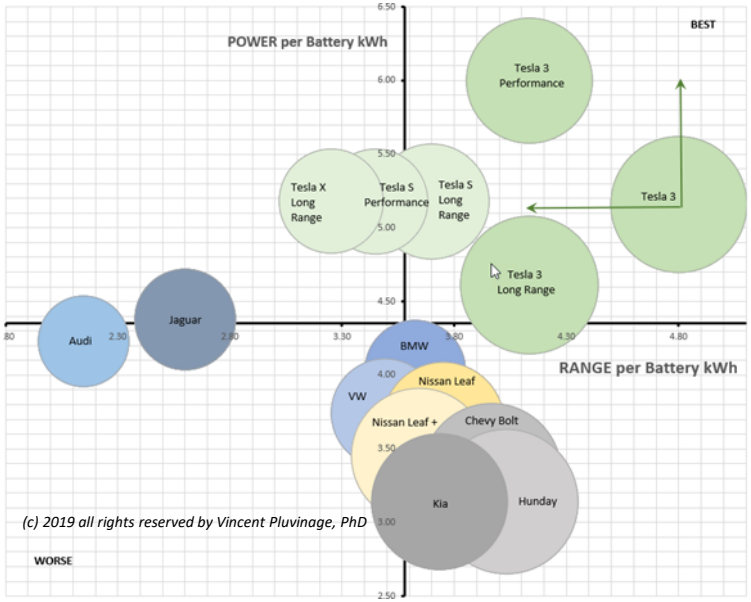
  https://www.tek.no/nyheter/nyhet/i/VbBwEV/tesla-overlegen-i-vintertest

Electric Vehicle	Specified WTLP Range	Km in the test
Tesla Model S	610 km	469.8 km
Tesla Model 3	560 km	404.4 km
Tesla Model X	507 km	419.6 km
Jaguar I-Pace	470 km	333.8 km
Mercedes EQC	417 km	307.0 km
Audi e-tron Quattro 55	415 km	341.1 km

- Tesla's batteries have greater range and power per kwh

  US DOE, Energy Efficiency & Renewable Energy, February 2020

  https://afdc.energy.gov/vehicles/search/results/?vehicle_type=light&category_id=27&fuel_id=41



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Strong Silane Interest from Anode Makers

Adding 25% silicon to graphite increases capacity 4x

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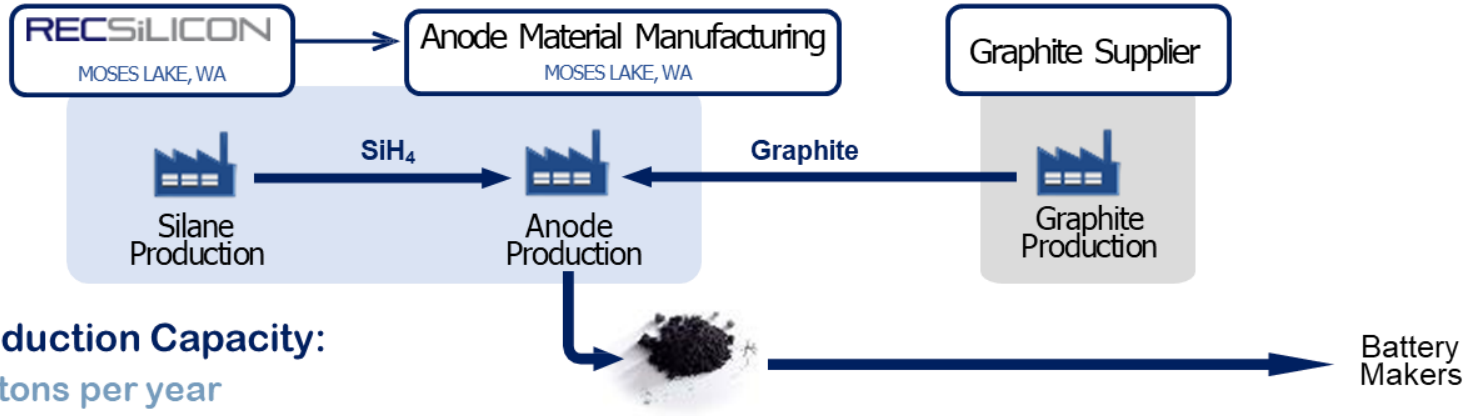
- Silicon anode makers need to co-locate with silane producer
  - Resolves logistical challenges for large quantities of silane gas
- Strong Interest from several companies to start pilot testing
  - Will take time before industrial scale

Graphite Production Capacity:

- 45,000+ tons per year



Silane Production Capacity:

- 15,000+ tons per year
- Highest purity & Lowest cost
- Hydroelectricity = low carbon footprint

Anode Production Capacity:

- 60,000+ tons per year

Short Term Business Plan

Short Term Business Plan for REC Silicon

- Potential restart of the Moses Lake FBR plant
  - Verify China's commitment to the Phase 1 Trade Agreement
  - Discuss purchase agreements with Customers
  - Monitor the PV market development
- Prepare funding for the required capital for the Moses Lake startup
  - Divestment of the Butte facility if an acceptable offer is received
  - New equity
- Continue dialog with Silicon Anode battery companies for pilot testing and industrial scale production of Silicon Anode materials
- Continue to operate stable and profitable Butte facility

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recsilicon.com

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About REC Silicon

REC Silicon ASA is a leading producer of advanced silicon materials, supplying high-purity polysilicon and silicon gases to the solar and electronics industries worldwide. We combine over 30 years experience and best-in-class proprietary technology to deliver on customer expectations. Our two U.S. based plants have a capacity of more than 20,000 MT high-purity polysilicon. REC Silicon is headquartered in Fornebu, Norway and listed on the Oslo stock exchange under the ticker: REC.

For more information, go to: www.recsilicon.com