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# Agenda

REC Silicon Q1 Financial Results	T. Torvund, CEO
Financial Overview	J.A. May II, CFO
Market Outlook	T. Torvund
U.S. / China Trade Dispute Update	T. Torvund
Yulin JV Update	T. Torvund
Guidance	T. Torvund
Q & A	

# Highlights

Revenues: \$69.6M

**EBITDA:** \$14.6M

#### FBR Cash Cost of \$9.4/kg

Operation of Both Silane Units at Reduced Rates

- FBR Facility Operated at ~63% Capacity Utilization

#### **Continued Strong Silicon Gas Sales Volumes**

- Sales Volume of 897MT (7.5% Decrease vs. Q4'17)
- 6.9% Silane Gas Price Decrease vs. Q4'17

#### March 31, 2018 Cash Balance of \$112.0M

- Cash Increase of \$7.4M
- \$7.4M Cash Flows from Operations

### Successful Completion of \$110M Bond Issue on March 23, 2018

- Ensures Sufficient Liquidity to Meet 2018 Debt Maturities
- Settlement Completed on April 13, 2018

### Yulin JV Operating at Reduced Capacity Utilization

- ~800MT of Granular Produced in Q1'18 (Secondary Quality)
- Full Capacity Utilization Expected in H2'18
- Resolution to Equity Contribution Announced on February 1, 2018

# **Key Metrics**

Polysilicon Sales Volume **		
Total	2,904MT	
Inventory Increase	619MT	

FBR Production	
Actual	3,127MT
Guidance*	2,620MT
Deviation	19.4%

FBR Cash Cost	
Actual	\$9.4/kg
Guidance*	\$11.1/kg
Deviation	-15.7%

Total Polysilicon Production		
Actual	3,523MT	
Guidance*	2,990MT	
Deviation	17.8%	

Semiconductor Production			
Actual	250MT		
Guidance*	210MT		
Deviation	18.9%		

Silicon Gases Sales	Vol.
Actual	897MT
Guidance*	880MT
Deviation	1.9%

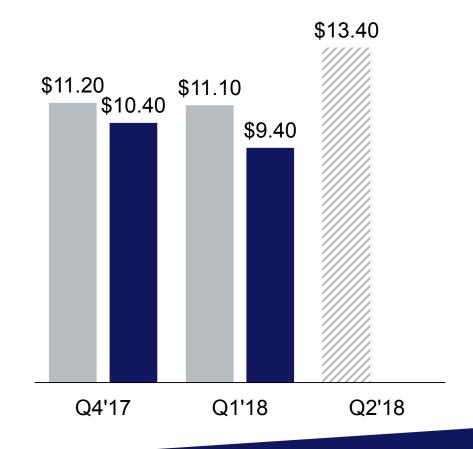
<sup>\*</sup> Guidance Presented February 9, 2018

<sup>\*\*</sup> Excludes Fines and Powders

# FBR Realized Cash Cost Compared to Guidance

- Q4'17 Cash Cost Lower Due to:
  - 3% Higher Production
  - Lower Spending
- Q1'18 Cash Cost Lower Due to:
  - 19.4% Higher Production
    - Longer Silane III Operation
  - 2017 MGS Inventory
- Q2'18 Guided Cash Cost
  - 27% Lower Production Compared to Q1'18
  - Silane III Planned Maintenance
  - 2018 MGS Costs







FINANCIAL REVIEW

# **Summary of Segments**

(USD million)	Q1 2	018	Q4 2	017	Year 2	2017
	Revenues	EBITDA	Revenues	EBITDA	Revenues	EBITDA
Solar Materials (Moses Lake)	32.7	8.4	37.1	3.8	127.8	(1.7)
Semiconductor Materials (Butte)	37.7	17.5	41.9	16.7	147.5	55.3
Other	-	(10.8)	-	(9.7)	-	(32.7)
Eliminations	(8.0)	(0.4)	(0.9)	(0.5)	(2.9)	(1.2)
REC Silicon Group	69.6	14.6	78.0	10.3	272.4	19.8

# 2018

# **Key Financial Results**

#### **Solar Materials**

Revenues: \$32.7M (11.6% Decrease vs. Q4'17)

EBITDA Contribution: \$8.4M

Polysilicon Sales Volumes 2,563MT (25.2% Decrease vs. Q4'17)

- 17.5% Average Price Increase vs. Q4'17
- 4.8% Prime Grade Solar Price Increase vs. Q4'17

#### **Semiconductor Materials**

Revenues: \$37.7M (10.0% Decrease vs. Q4'17)

EBITDA Contribution: \$17.5M

> Siemens Sales Volumes 342MT (25.2% Decrease vs. Q4'17)

- 28.6% Average Price Increase vs. Q4'17
- Price Increase Due to Higher Mix of Semiconductor Sales Volumes
- Silicon Gas Sales Volumes 897MT (7.5% Decrease vs. Q4'17)
  - (6.9%) Silane Price Decrease vs. Q4'17
  - Framework Distribution Agreement Price Discounts to Maintain Volume

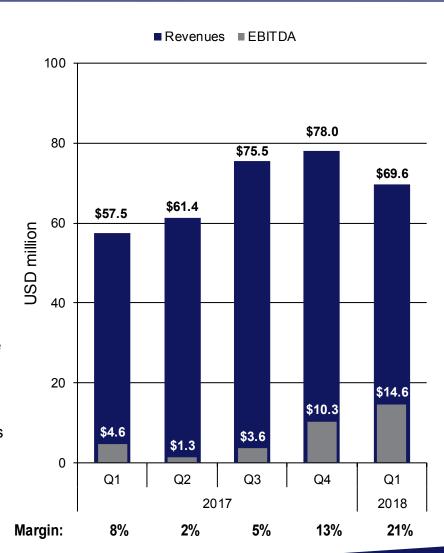
#### Other and Eliminations

Net Cost: \$11.3M (10.6% Increase vs. Q4'17)

Higher Expenses due to Efforts to Monetize Non-Core Assets and Re-Finance Debt

#### EBITDA of \$14.6M

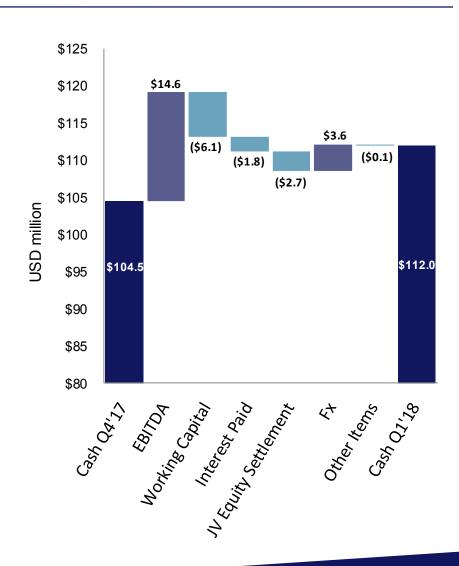
- > High Silicon Gas Sales Volumes
- Polysilicon Price Increases
- FBR Cash Cost of \$9.4/kg



# 2018

# Cash Flows From Operating Activities \$7.4M

- EBITDA of \$14.6M
- Working Capital Increase (\$6.1M)
  - Increased Inventories (\$6.9M)
  - Decreased Accounts Payable (\$2.1M)
  - Decreased Accounts Receivable \$2.9M
- Interest payments (\$1.8M)
- JV Equity Settlement Installment (\$2.7M)
- Currency Gain of \$3.6M (Weaker USD)
- Other (\$0.2M)



# Liquidity at March 31, 2018

### Nominal Debt - \$194M

- Increased by \$4M in Q1'18
  - Due to Weaker USD Relative to NOK

### Nominal Net Debt - \$82M

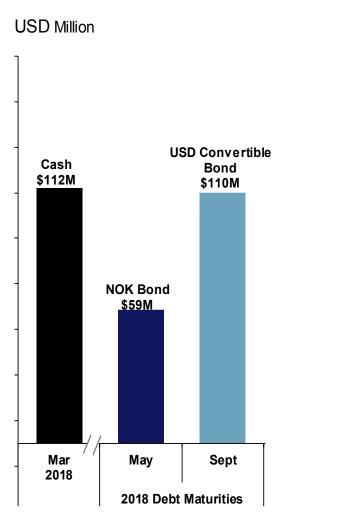
- Decreased by \$3M in Q4'17
  - Increase in Cash of \$7.4M
  - Increase in Nominal Debt of \$4M

## Indemnity Loan - \$26M

- Callable Beginning in February 2016
- Has not Been Called
- Due Date is Uncertain

### Reassessment of Tax - \$30M

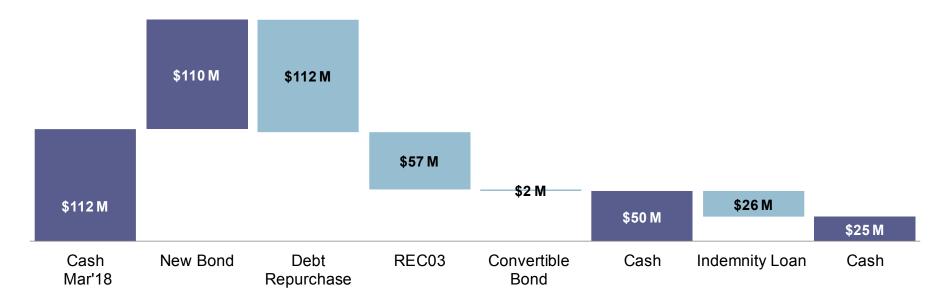
- Do Not Expect Final Ruling Before H2'18
- > Uncertain Timing and Outcome





2018

# Completion of \$110M Bond Issue



#### Successful Issuance of \$110M Senior Secured Bond on March 23, 2018

- 11.5% Coupon with Semi-annual Interest Payments
- > Settlement Completed on April 13, 2018
- > Five Year Term Due on April 13, 2023

#### Debt Repurchase of \$112M

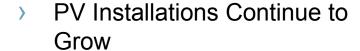
- > REC03 NOK 9 million at 100.5% Plus Accrued Interest (\$1.3M)
- ) USD Convertible \$41.6M at 103.5% Plus Accrued Interest (\$43.3M)
- USD Convertible \$66.2M at 102.0% Plus Accrued Interest (\$67.9M)

#### Remaining Debt Maturities

- > \$57M REC03 Due on May 3, 2018
- \$2.3M USD Convertible Due on Sep 11, 2018

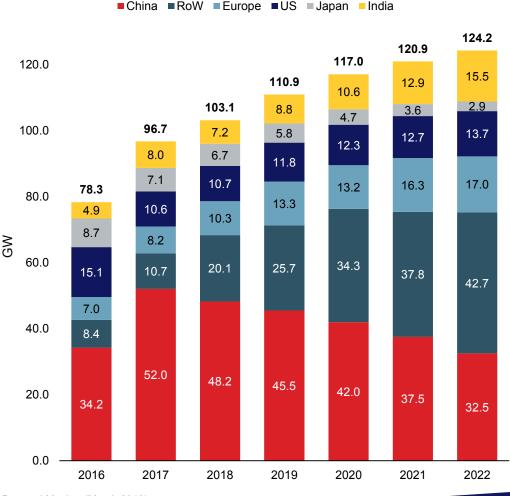


### Global Installation Growth: 2016 – 2022



- Analysts Predict 95GW-120GW in 2018
- China Expected to Remain Dominant
- 2017 US Installations Declined Compared to 2016
  - 2018 Comparable to 2017
- Emerging Markets Gaining Strength
- Moderate Growth in Europe

#### GTM Installation Forecast 2016-2022E

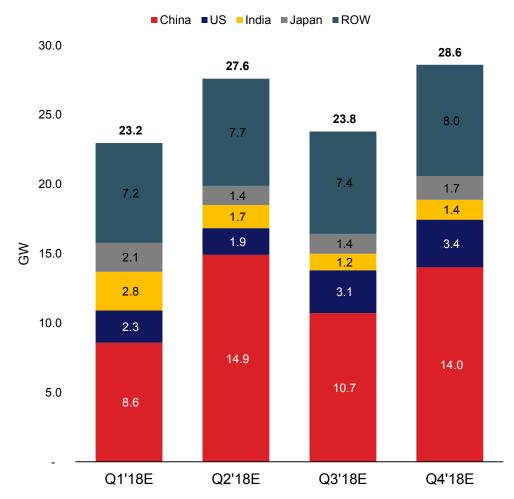


Source: GTM Research, Global Demand Monitor (March 2018)

### Installations in 2018 Follow Previous Years Fluctuation

- Strong Installations in China Expected in Q2 and Q4 2018
  - Due to 2017 FiT Expiring in June 2018 and the 2018 FiT Expiring in December
- Uncertainty in India **Forecast Remains** 
  - Trade Concerns
- US Installations Expected to be Stronger in H2'18

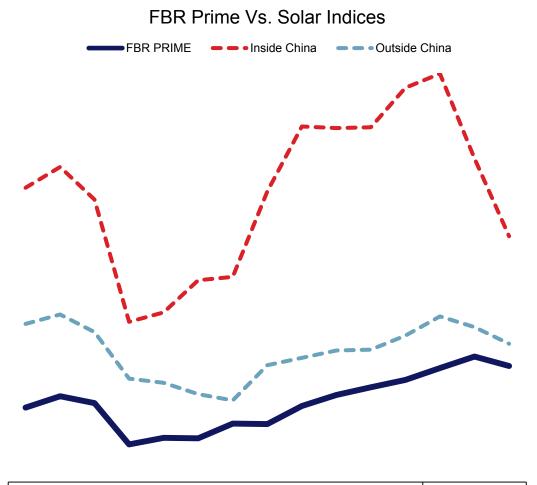




Source: GTM Research, Global Demand Monitor (March 2018)

# Polysilicon Spot Price

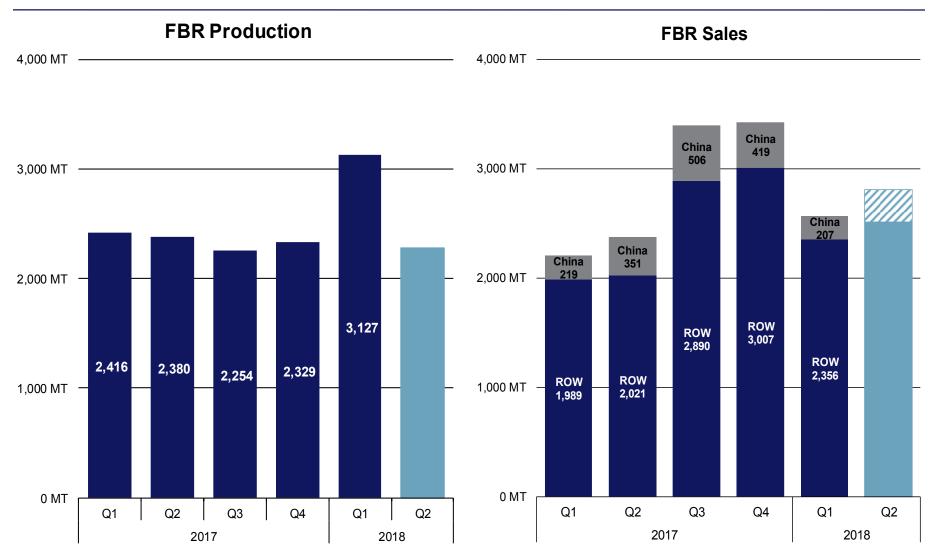
- Market Prices Declined Due to Seasonality Slow Down
- **REC Prime Grade Solar** Price Increase 4.8% vs. Q4'17
  - Contracted Early in the Quarter
- **REC Expects Prices for Q2** in Line with Q1



JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR 2017 2018

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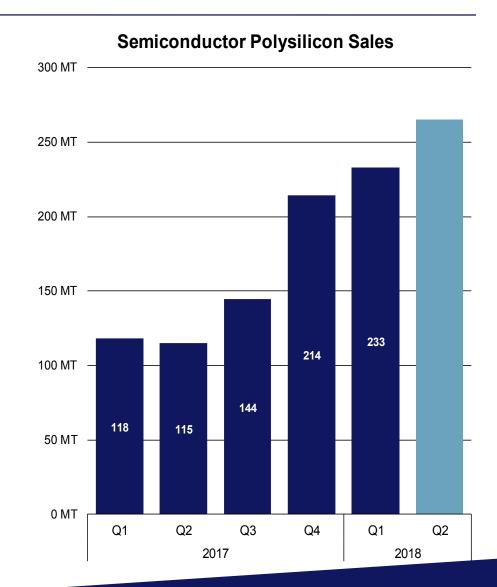
### **FBR Production and Sales**



Note: Excludes Fines & Powder

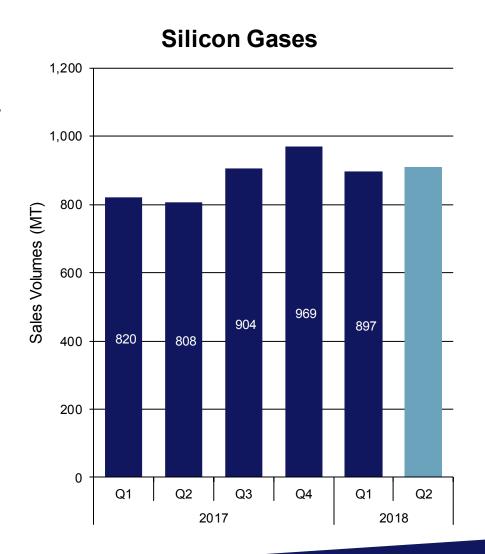
# Electronic Grade Polysilicon Sales

- Electronic Grade PolysiliconSales Increased 18.1%Compared to Q4'17
- Successfully Qualified for Semiconductor Grade Customers
  - Float Zone
  - Semiconductor Grade
- Expect to Sell ~270MT in Q2'18



2018

- Silicon Gas Sales Volumes 897MT
  - Decreased 7.5% Compared to Q4'17
  - Increased 9.4% Compared to Q1'17
- Continued Strong Demand in Silicon Gas Markets
- Expect to Sell ~910MT in Q2'18





# Section 201 US / China Solar Trade Dispute Continues

#### > Section 201

- Affects all Imported Cells & Modules into US from all Countries
- 4 Year Remedy Announced Effective in Early February 2018
  - 30% Tariff on Cells & Modules, Stepdown to 5% Over 4 Years
  - 2.5 GW Cell Quota
  - Much Less Severe Than Requested by Solarworld & Suniva

#### President Trump Express Commitment to Pursue Settlement for US Polysilicon

- New USG is Focused on Value of US Polysilicon Industry
- Section 201 Announcement Noted "The U.S. Trade Representative Will Engage in Discussions... that could lead to positive resolution of the separate antidumping and countervailing duty measures currently imposed on Chinese solar products and U.S. polysilicon..."

#### Numerous Companies Have Applied For Products to be Excluded From Section 201

- Exemption Decisions in Coming Months
- Sunpower Acquisition of SolarWorld Americas
  - Sunpower Opposed Section 201 Tariffs
  - SolarWorld Now Supports Sunpower Product Exclusion Request From the Section 201

# US / China Solar Trade Dispute Continues

#### AD/CVDs

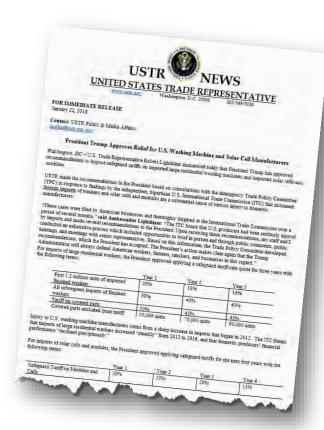
- Section 201 Tariffs Cumulative to Existing AD/CVDs on Chinese & Taiwanese Cells and Modules
- US AD/CVDs on Chinese Solar Products Now Increased for 2016 Imports to 62%

#### **Section 301 Intellectual Property Investigation**

US Threatened Tariff List does not Include Solar Cell or Panels From China

### Geopolitical Situation between US & China is Interesting

Potentially Preparing For a Negotiation on Trade Matters and Disputes Between the Two Countries?





YULIN JV UPDATE



## Yulin JV Financial History



#### **2014 Yulin JV Agreement:**

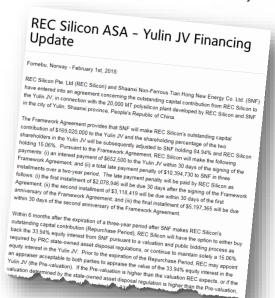
- Received \$198M for Technology Transfer
  - Paid off \$142.7M of REC Debt
- REC's Equity Contribution
  - 15% August 2014: \$75M
  - 34% July 2017: \$169M Resolved

#### February 1, 2018 Agreement:

- Yulin JV Shareholding:
  - SNF ~85%, REC Silicon ~15%
- REC to Pav:
  - \$ 0.6M in Interest (Paid Q1'18)
  - \$10.4M in 3 Installments (Paid \$2.1M Q1'18)
- After January 2021, REC has the option to:
  - Buy back ~34% Equity Interest from SNF,
  - or Remain a ~15% Equity Holder,
  - or Sell REC's ~15% Equity Interest



Yulin JV Signing Ceremony February 2014



#### FIRST QUARTER

# Production Goals for 2018: 8,000 MT Granular Polysilicon



#### Fluid Bed Reactor Status:

- > ~800 MT Granular Polysilicon Produced in Q1'18
  - Secondary Quality Start-up Material
- Remaining FBR Reactors Start-up H2'18

#### Silane Unit Status:

- Silane 20 Unit Running at Half Capacity
- Silane 10 Unit Start-up H2'18

#### **Siemens Reactor Status:**

- Siemens Reactors Finishing Pre-production Preparations
- Starting Commercial CZ production in Q2'18
- > FZ Production Trial Runs Starting in H2'18

### **Total Investment Within Budget of \$1.25 Billion**







### Q2 Guidance

2018

**FBR Production** 

2,280MT Q2

**FBR Cash Cost** 

\$13.4/kg Q2

**Total Polysilicon Production** 

2,660MT Q2

**Semiconductor Production** 

Q2 270MT **Silicon Gas Sales** 

Q2 910MT 2018 CapEx \*

Maintenance \$4M

<sup>\*</sup> Additions to Property Plant and Equipment

