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Advanced Materials & Technologies for the Solar and Semiconductor industry

## The Merger of Two Leading Technology Companies



# ABOUT US

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**HPQT is being created from the combination of Magnolia Solar and Solar Silicon Resources Group.**



- MAGNOLIA SOLAR CORP (OTCQB:MGLT)
- R & D base in Micro and Nano technology for solar cells
- Funded by NYSERDA for Solar Cell Development
- Key technology development funded by US Federal government agencies i.e. DoD, and NASA
- 15 + Patents filed with US Patent Office
- Close Collaboration with CNSE / Albany NY
- Singapore-based unlisted public company
- Principal activities: operational high purity quartz & silica sand mining assets in Australia
- High Purity Quartz R&D and Pilot Production Facilities
- Main assets: Lighthouse quartz mine (Independent BMI mine valuation: US\$1.4B) and surrounding leases & Mourilyan silica sand mine.

# Disclaimers

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## Safe Harbor

This presentation and other written or oral statements made from time to time by representatives of Magnolia Solar Corporation contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements reflect the current view about future events. Statements that are not historical in nature, such as forecasts for the industry in which we operate, and which may be identified by the use of words like “expects,” “assumes,” “projects,” “anticipates,” “estimates,” “we believe,” “could be,” “future” or the negative of these terms and other words of similar meaning, are forward-looking statements. Such statements include, but are not limited to, statements contained in this presentation relating to our business, business strategy, expansion, growth, products and services we may offer in the future and the timing of their development, sales and marketing strategy and capital outlook, and the consummation of the contemplated acquisition of Solar Silicon Resource Group Pte Ltd. Forward-looking statements are based on management’s current expectations and assumptions regarding our business, the economy and other future conditions and are subject to inherent risks, uncertainties and changes of circumstances that are difficult to predict and may cause actual results to differ materially from those contemplated or expressed. We caution you therefore against relying on any of these forward-looking statements. These risks and uncertainties include those risk factors discussed in Part I, “Item 1A. Risk Factors” of our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 (the “2013 Annual Report”). Any forward-looking statements are qualified in their entirety by reference to the factors discussed in the 2013 Annual Report. Should one or more of these risks or uncertainties materialize (or in certain cases fail to materialize), or should the underlying assumptions prove incorrect, actual results may differ significantly from those anticipated, believed, estimated, expected, intended or planned.

Important factors that could cause actual results to differ materially from those in the forward looking statements include: a continued decline in general economic conditions nationally and internationally; decreased demand for our products and services; market acceptance of our products; the ability to protect our intellectual property rights; impact of any litigation or infringement actions brought against us; competition from other providers and products; risks in product development; inability to raise capital to fund continuing operations; changes in government regulation, the ability to complete customer transactions and capital raising transactions.

Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We cannot guarantee future results, levels of activity, performance or achievements. Except as required by applicable law, including the securities laws of the United States, we do not intend to update any of the forward-looking statements to conform these statements to actual results.

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# Disclaimers (continued)

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## Forecasts

All forecasts are provided by management in this presentation and are based on information available to us at this time and management expects that internal projections and expectations may change over time. In addition, the forecasts are entirely on management's best estimate of our future financial performance given our current contracts, current backlog of opportunities and conversations with new and existing customers about our products.

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## CONFIDENTIAL INFORMATION

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The recipient agrees that it will not disclose to any third party or use any Confidential Information disclosed to it by us except when expressly permitted in writing by us. Recipient also agrees that it will take all reasonable measures to maintain the confidentiality of all Confidential Information in its possession or control.

This overview is delivered solely as reference material with respect to our company. This document shall not constitute an offer to sell or the solicitation of an offer to buy securities in our company in any jurisdiction. The information herein is based on data obtained from sources believed to be reliable.

# BUSINESS ACTIVITIES

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## Key Raw Materials

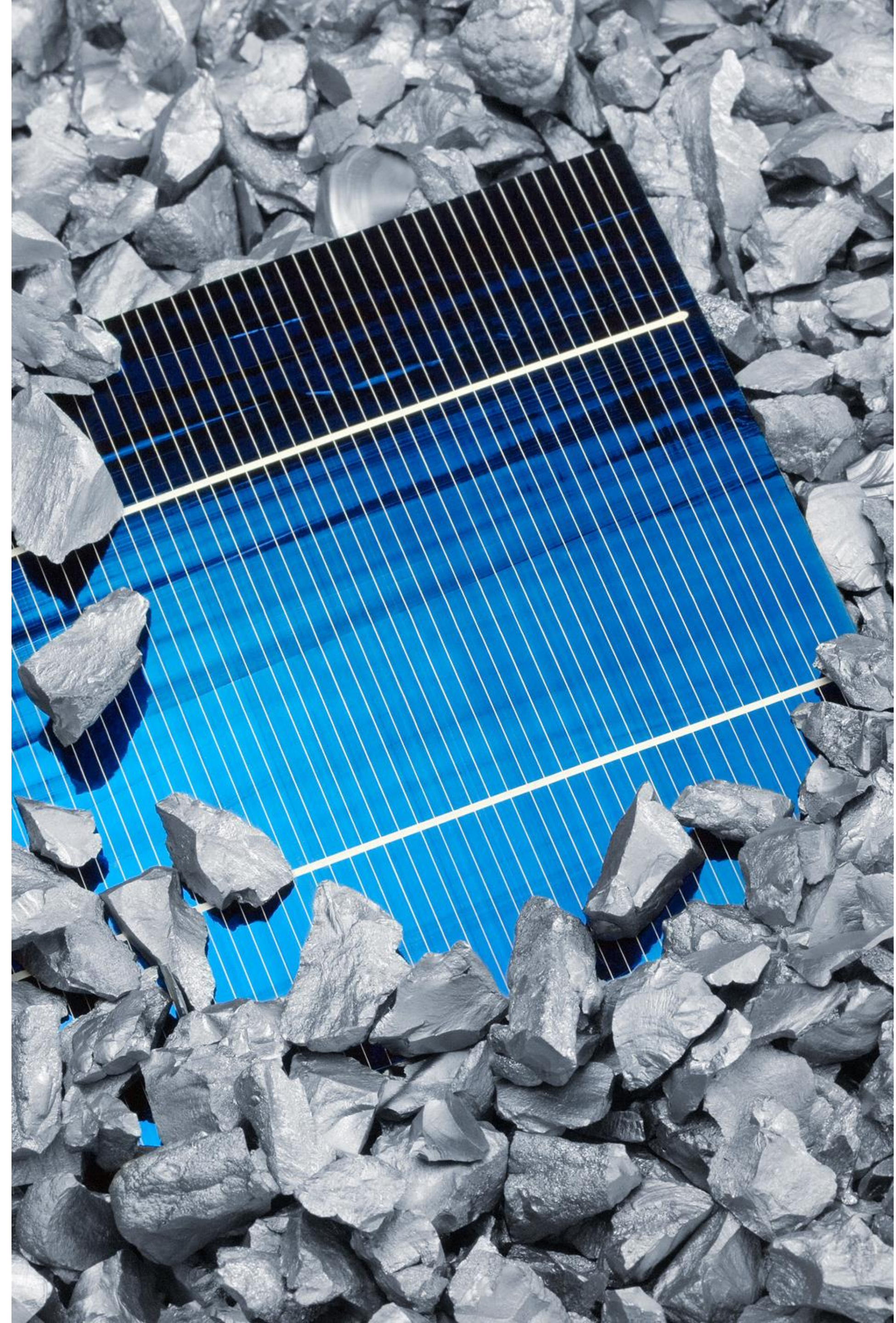
- High purity quartz and HPQ sand production capability

## Key Technologies

- Advanced anti-reflective coatings
- Advanced reflective surface coatings
- Next generation high efficiency solar cells

## Advanced R&D

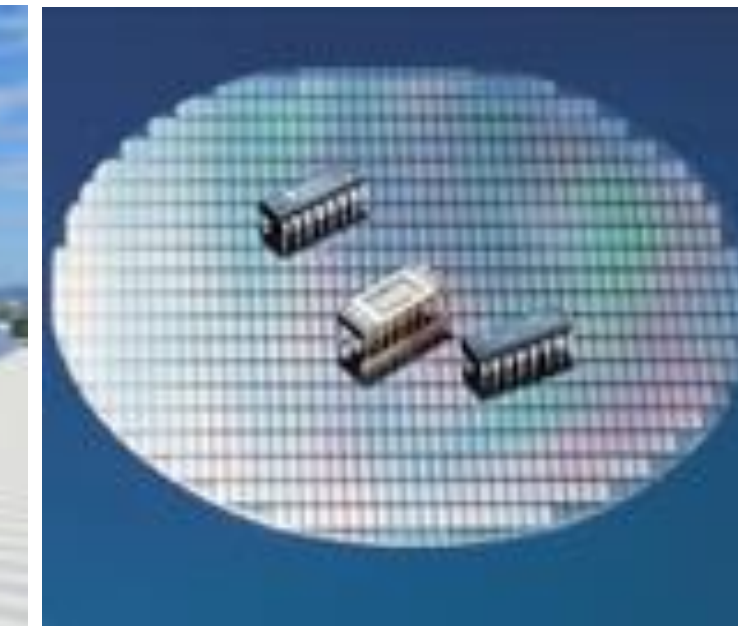
- Nanomaterials and nanotechnology



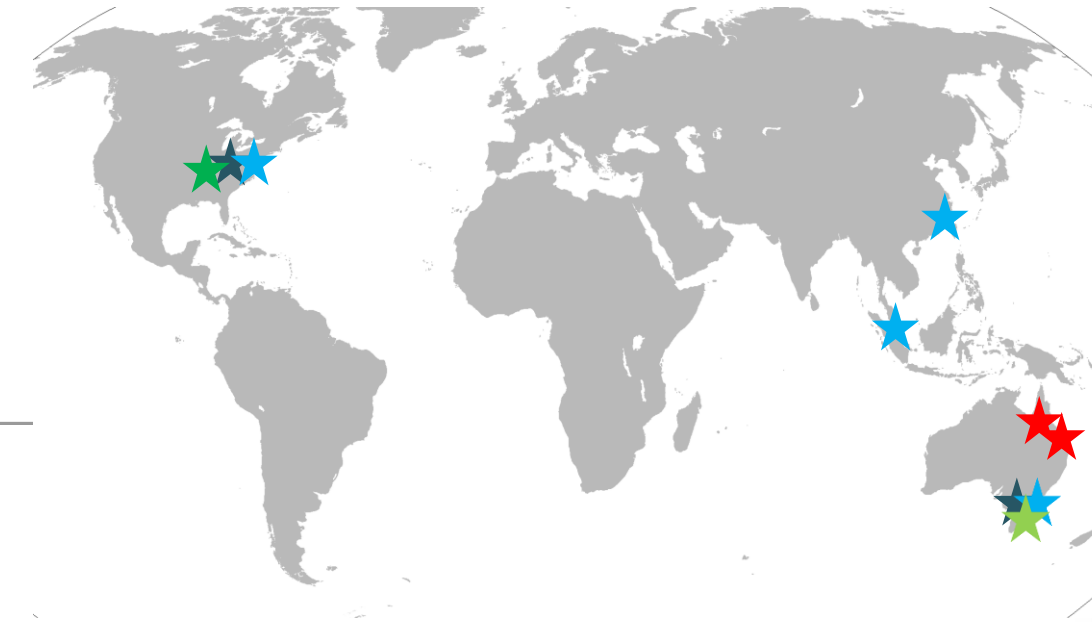
# MATERIALS

## - HIGH PURITY QUARTZ APPLICATIONS

- Everything that is high tech electronics
- Specialist optics, lenses
- Halogen lights, lab-ware
- LCD screens
- Solar cells
- Semiconductor wafers
- Fillers
- Vital crucibles, quartzware for solar & semiconductor production
- Fiber optics
- Electronics grade material has a higher purity than solar grade material.

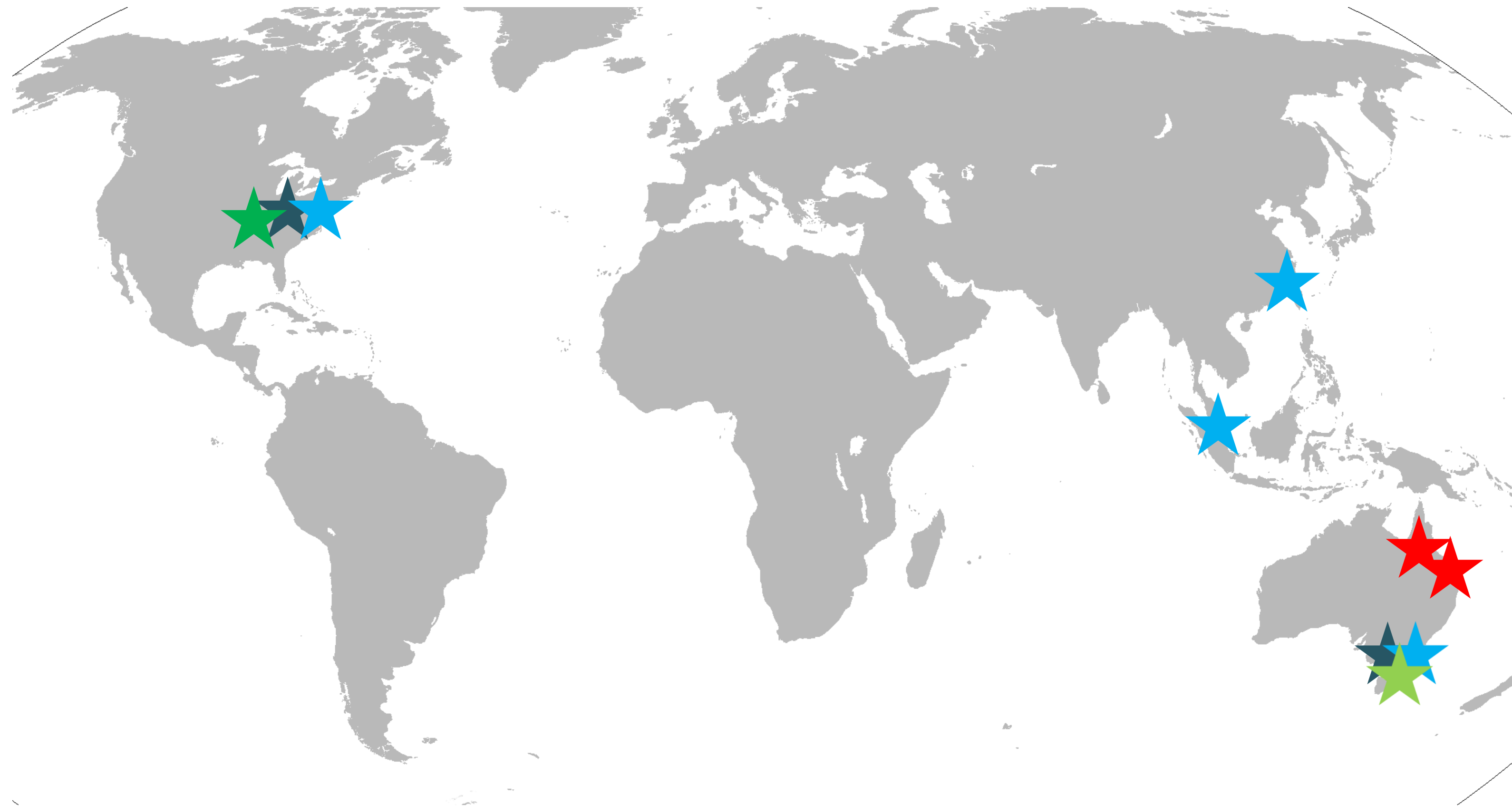


# COMPANIES STATUS



- Established operations - close to markets
- Advanced R&D - Patented Technologies
- Vertical Integration – with company owned supply chain
- Significant Assets - unique multi million ton deposits of high purity quartz and silica sand. (Independent Valuation >USD\$1.4B+)
- State of the art R&D and pilot production facilities for rapid commercialization of technology
- June 4, 2014 Letter Of Agreement Signed and SEC 8K filed
- SEA in the works, rename/restructure  
    anticipated completion during Q4 CY2014
- Pre-RTO/Merger investor opportunity (US\$30Million)





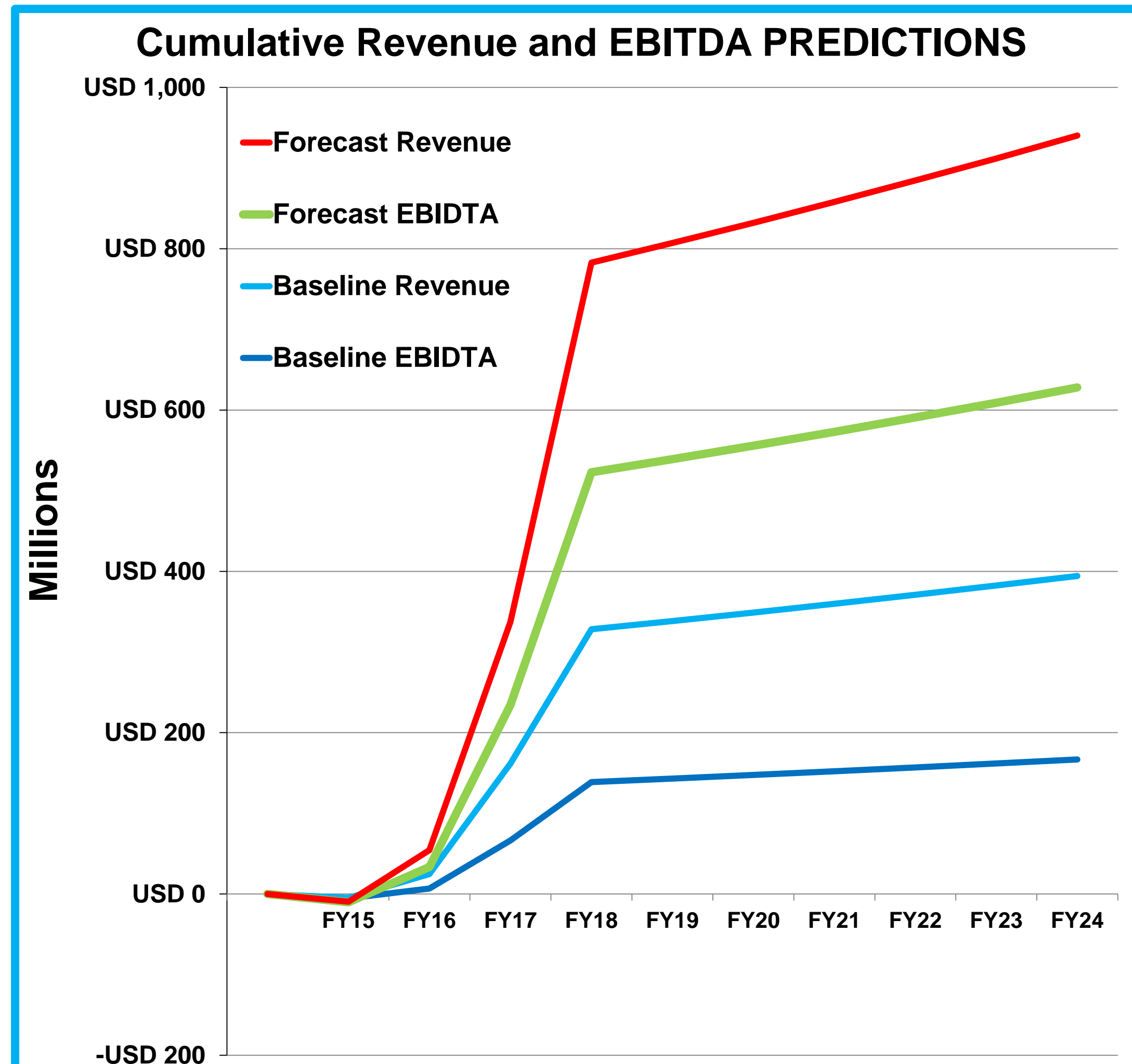
## GLOBAL OPERATIONS

- Research & Development – Albany CNSE, New York, Melbourne (Australia) ★
- Mining - Queensland (Australia) ★
- Sales & Marketing – Australia/Singapore/China & USA ★
- Production Facilities – Australia ★ & USA (planned) ★



# PRE MERGER INVESTMENT- HPQT BUSINESS EXPANSION

Includes expanding Pilot Production to Full Scale 10,000-40,000 Ton HPQS



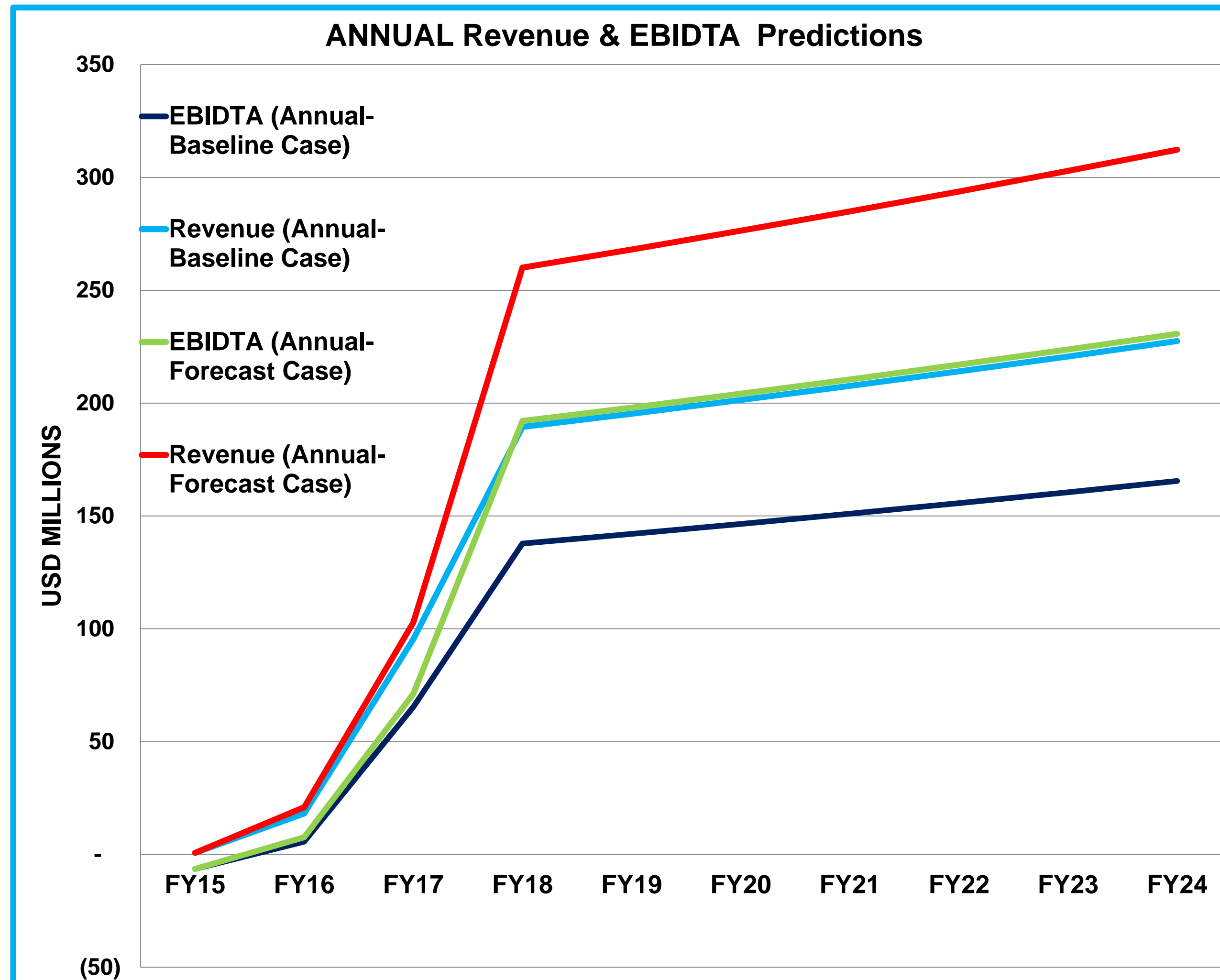
## Financial Headlines:

(Figures based on HPQS production only)

- Project Funding Requirements: **US\$30 Million**
- Projected 10 Year NPV : **\$595M (Baseline) / \$920M (Forecast)**
- Projected IRR : **90.7% (Baseline) / 103% (Forecast)**

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# USE OF FUNDS

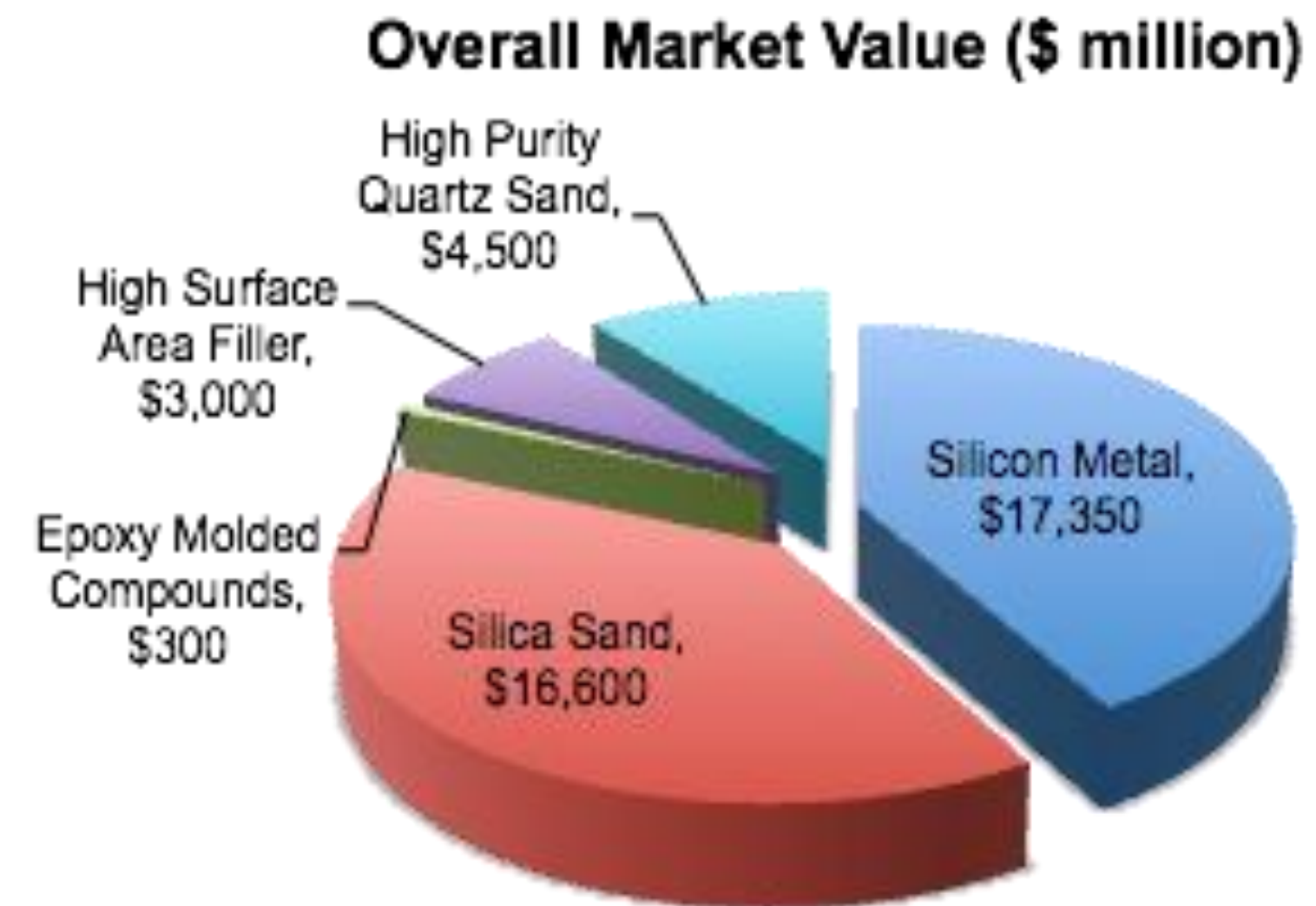
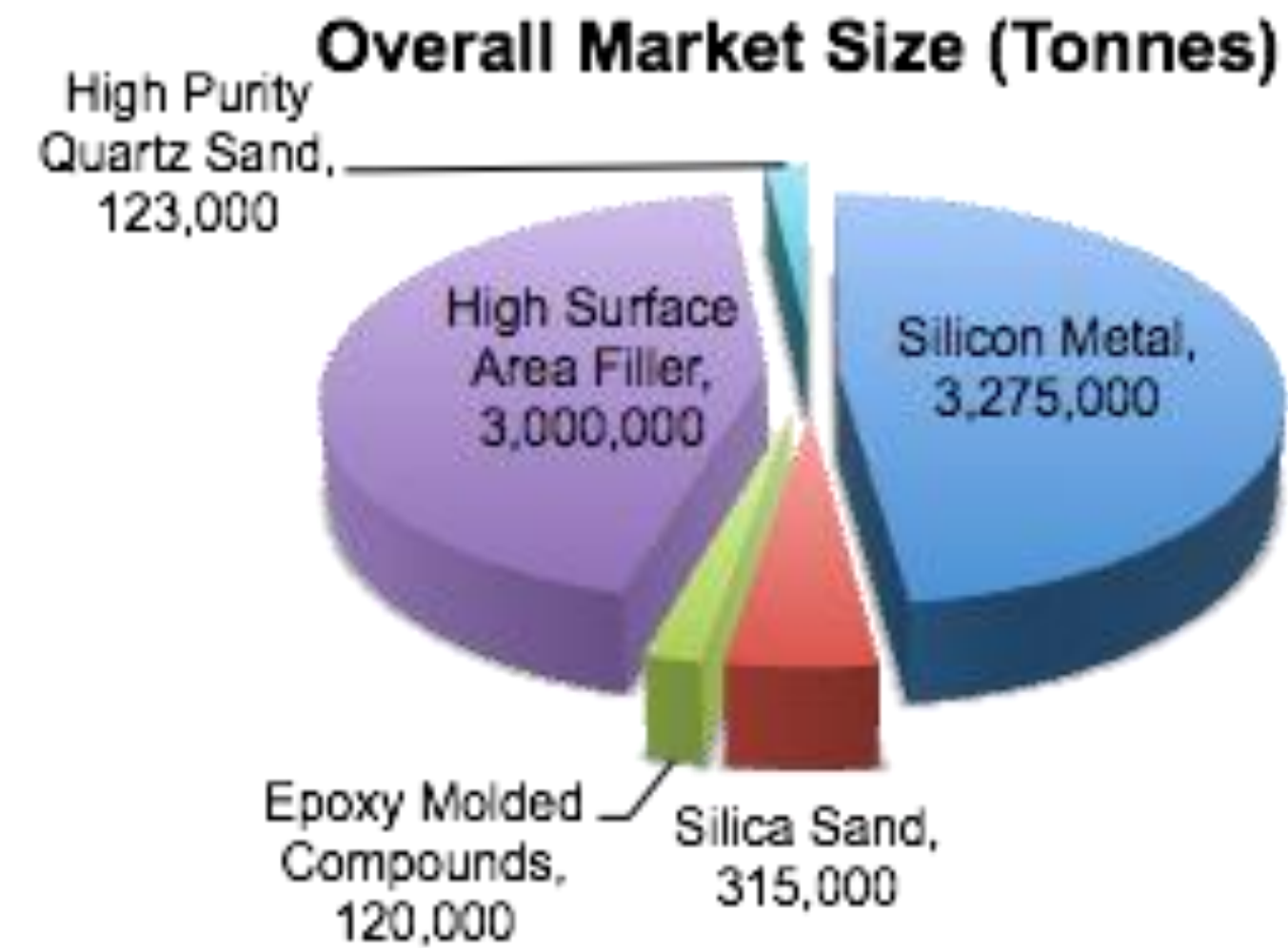
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The company is seeking to raise USD\$100M+ for commercialization of its assets and technologies. First Round pre merger seeking US\$30M.

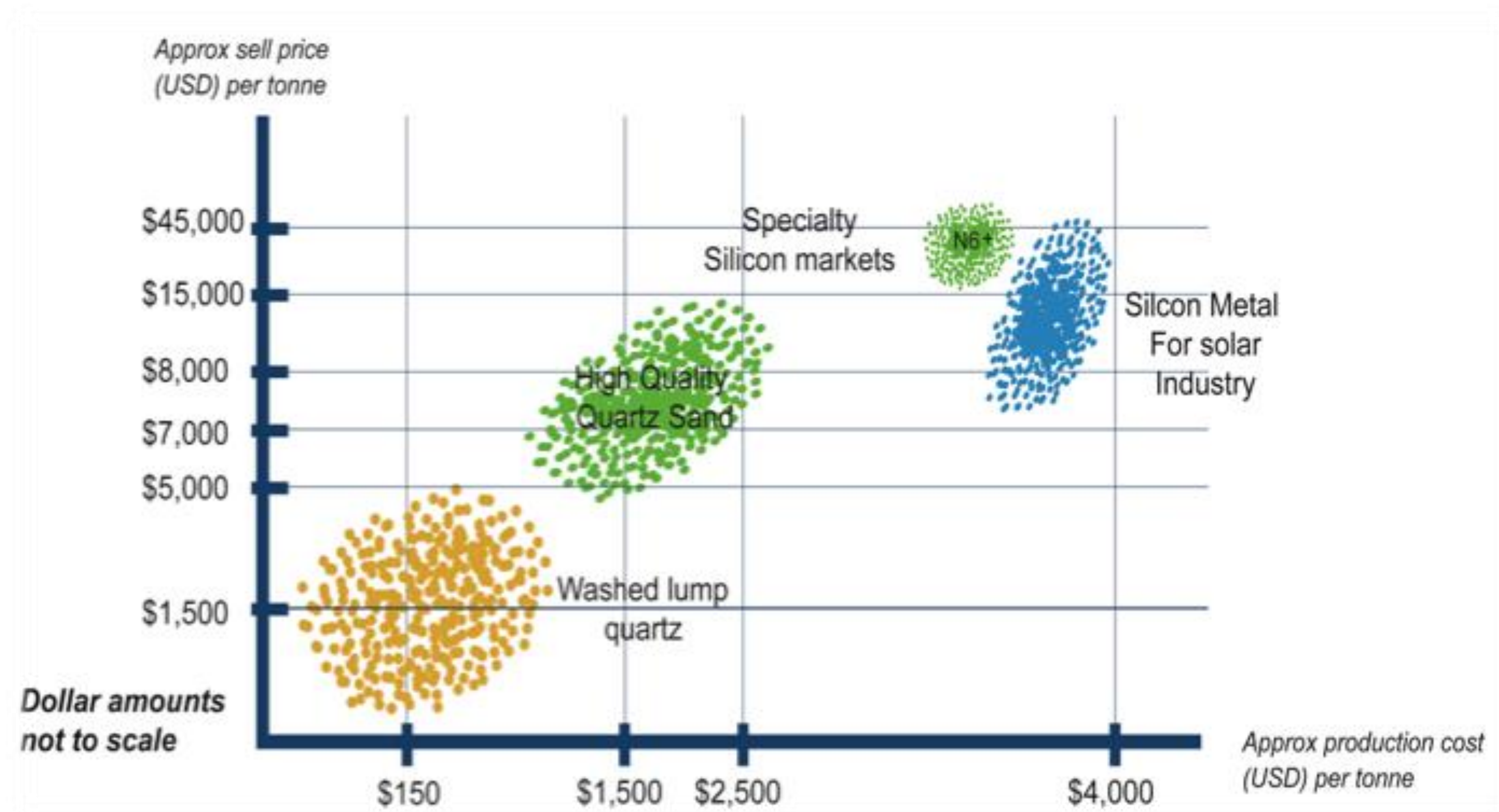
Expense \$USD	Round 1 – Pre Merger
Quartz Sand Factory Australia	\$12.7M
Quartz Sand Factory USA	
Furnace tech	
Consolidation Costs	\$8.5M
Further Resource Estimates	
R&D Solar & Semiconductor	
Working Capital	\$8.8M
<b>Total</b>	<b>\$30M</b>

# MARKET HIGHLIGHTS- HPQS

- High Growth Markets
  - Solar 35%
  - Semi 20%
- Massive growth in solar installations
- Multi-mono price parity
- Semi fab upgrades – 450mm
- Markets at current capacity production

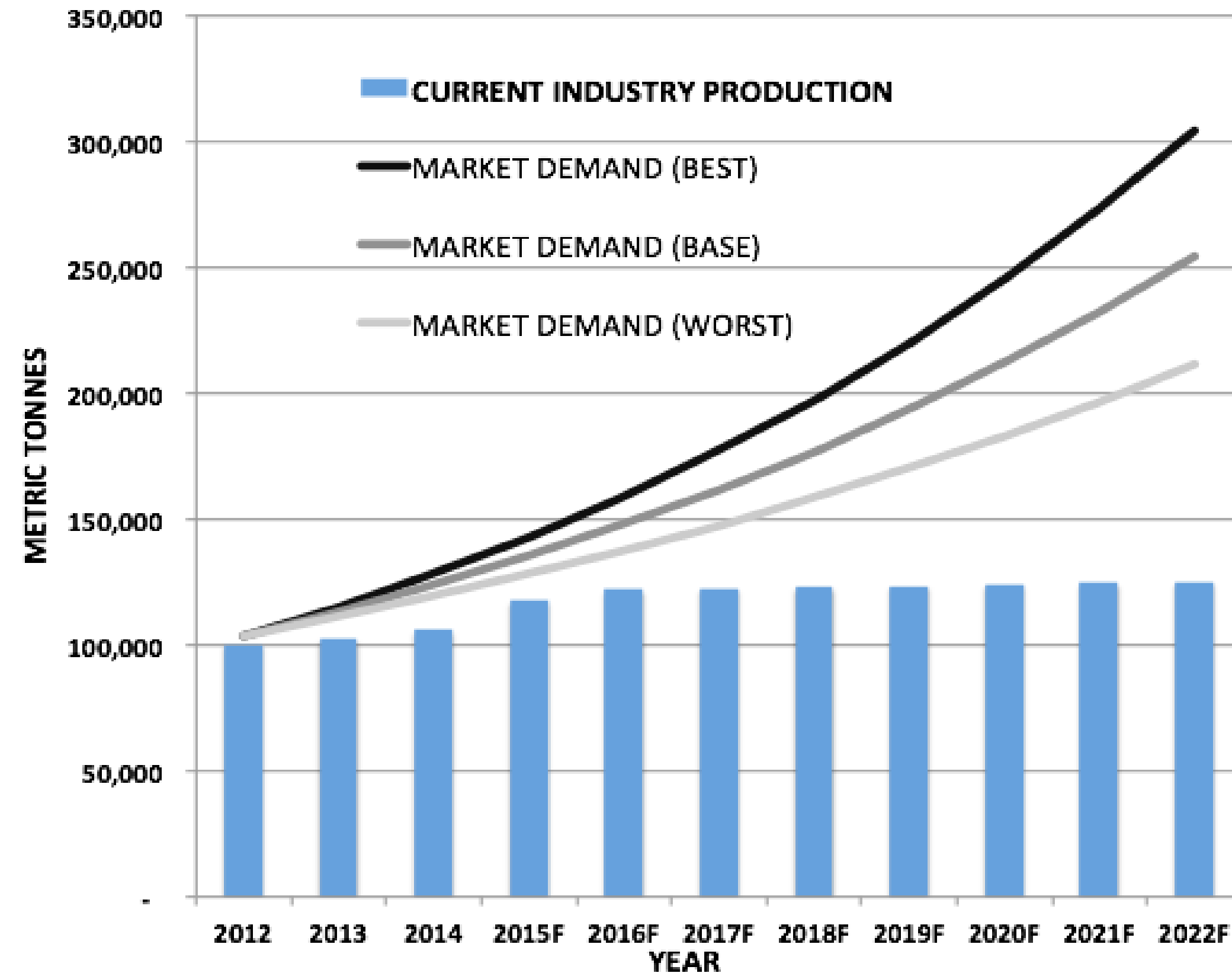


# HIGH MARGIN PRODUCTS- HPQS



# HPQS GLOBAL DEMAND

- Historically there has always been a supply shortage of HPQS
- This trend is projected to continue for the next ten years.
- The massive uptake in solar cells is driving this growth.
- The equipment upgrade in the semiconductor industry is driving this growth.



# SOLAR DIVISION TECHNOLOGY OVERVIEW

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- 15 Patent applications in advanced materials and solar technologies
  - Quantum dot solar cells
  - Single junction multi band-gap materials,
  - Thin film materials and manufacturing techniques.
- These technologies have the potential to achieve high conversion efficiencies with low cost manufacturing.
- Focus on commercially achievable solar technologies

# ADVANCED RESEARCH

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- The companies research is co-located in Albany NY with:
  - SUNY/DoE \$300M Solar fabrication facility.
  - CNSE - advanced solar test facility
  - Semitech – Multibillion dollar facility and home of the 450mm wafer upgrade
- Advanced quartz test facility in Melbourne, Australia.





# TECHNOLOGY - COMMERCIALIZATION

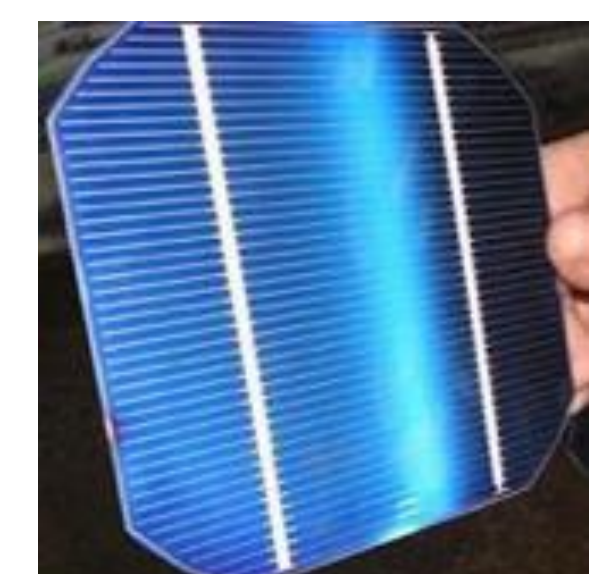
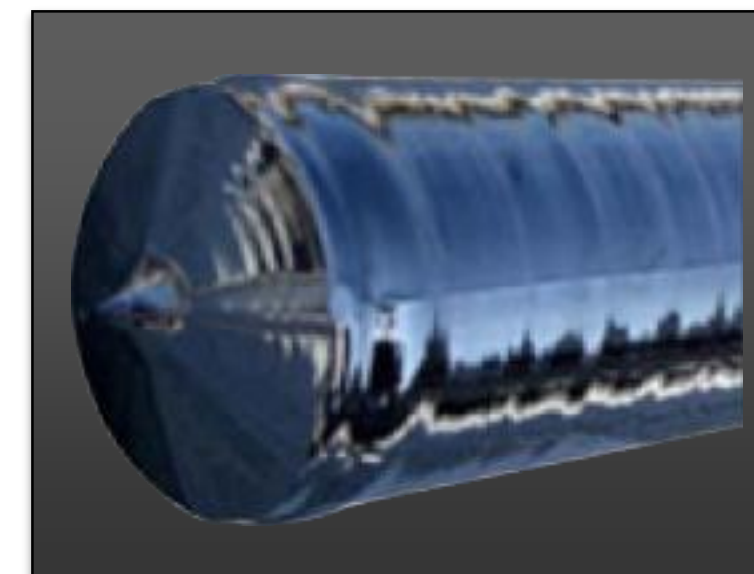
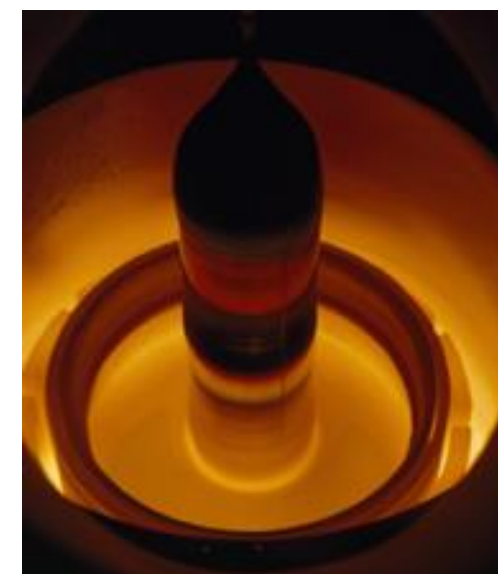
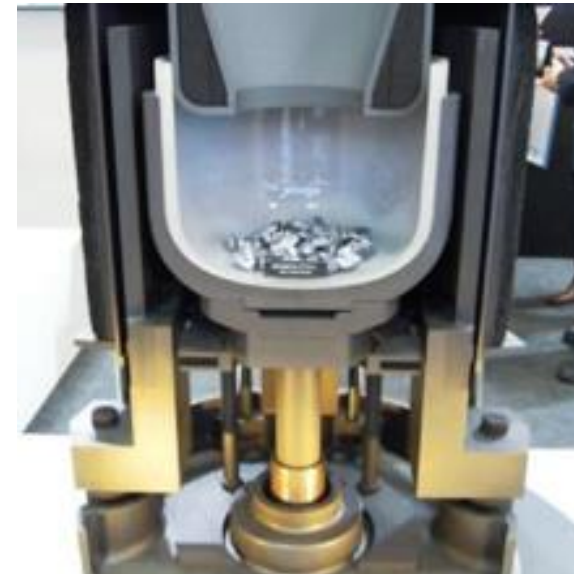
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- The company is very much focused on the commercialization of its advanced technologies. Through the advanced facilities at the SUNY Nanotech. The company has been able to take its technology ideas and develop scalable manufacturing processes.
- Significantly shorter commercialization cycle at a substantial cost savings, with access to considerable technical expertise, including SEMITECH resources
- The primary application of the IP under development would be in two distinct pathways:
  - Establish manufacturing operations for new products with the technology.
  - Produce manufacturing equipment that can be made directly or under license. This equipment can be sold to existing manufacturers and 'swapped' into the manufacturing line.

# KEY INVESTMENT ADVANTAGES

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- High margin high value markets
  - High margin and High NPV and IRR projected.
  - Average USD\$4,500 profit per metric ton projected.
  - Low barriers to entry and limited worldwide competition
- Established manufacturing processing techniques ready for full scale production
- First volume offtake agreements worth US\$72M over next 12 months in final negotiation (Additional to financial projections.)
- Valuable portfolio of patents granted or pending for leading edge solar and semiconductor ready for commercialization
- Immense opportunities to expand the business through vertically integrating the balance of the High Purity Quartz Sand value chain in the Solar and semiconductor sector.



## Contact Details:

### High Purity Quartz Technologies:

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### Solar Silicon Resources Group:

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Email: [investor@ssrg.com.sg](mailto:investor@ssrg.com.sg)

#### Forward-Looking Statements

This release contains forward-looking statements, including, without limitation, statements concerning our business and possible or assumed future results of operations. Our actual results could differ materially from those anticipated in the forward-looking statements for many reasons, including: our ability to continue as a going concern, adverse economic changes affecting markets we serve; competition in our markets and industry segments; our timing and the profitability of entering new markets; greater than expected costs, customer acceptance of our products or difficulties related to our integration of the businesses we may acquire; and other risks and uncertainties as may be detailed from time to time in our public announcements and SEC filings. Although we believe the expectations reflected in the forward-looking statements are reasonable, they relate only to events as of the date on which the statements are made, and our future results, levels of activity, performance or achievements may not meet these expectations. We do not intend to update any of the forward-looking statements after the date of this document to conform these statements to actual results or to changes in our expectations, except as required by law.