

The Silicon Supply Chain

Presented by:
Gary Homan, Vice President
Hemlock Semiconductor Group

Discussion Topics

- Global Polysilicon Supply Capacities
 - “As Publicly Announced”
- Global Polysilicon Supply Capacities
 - “Adjusted for Grid Parity Costs”
- Supply versus Demand
- Impact on Potential Solar Growth Rates

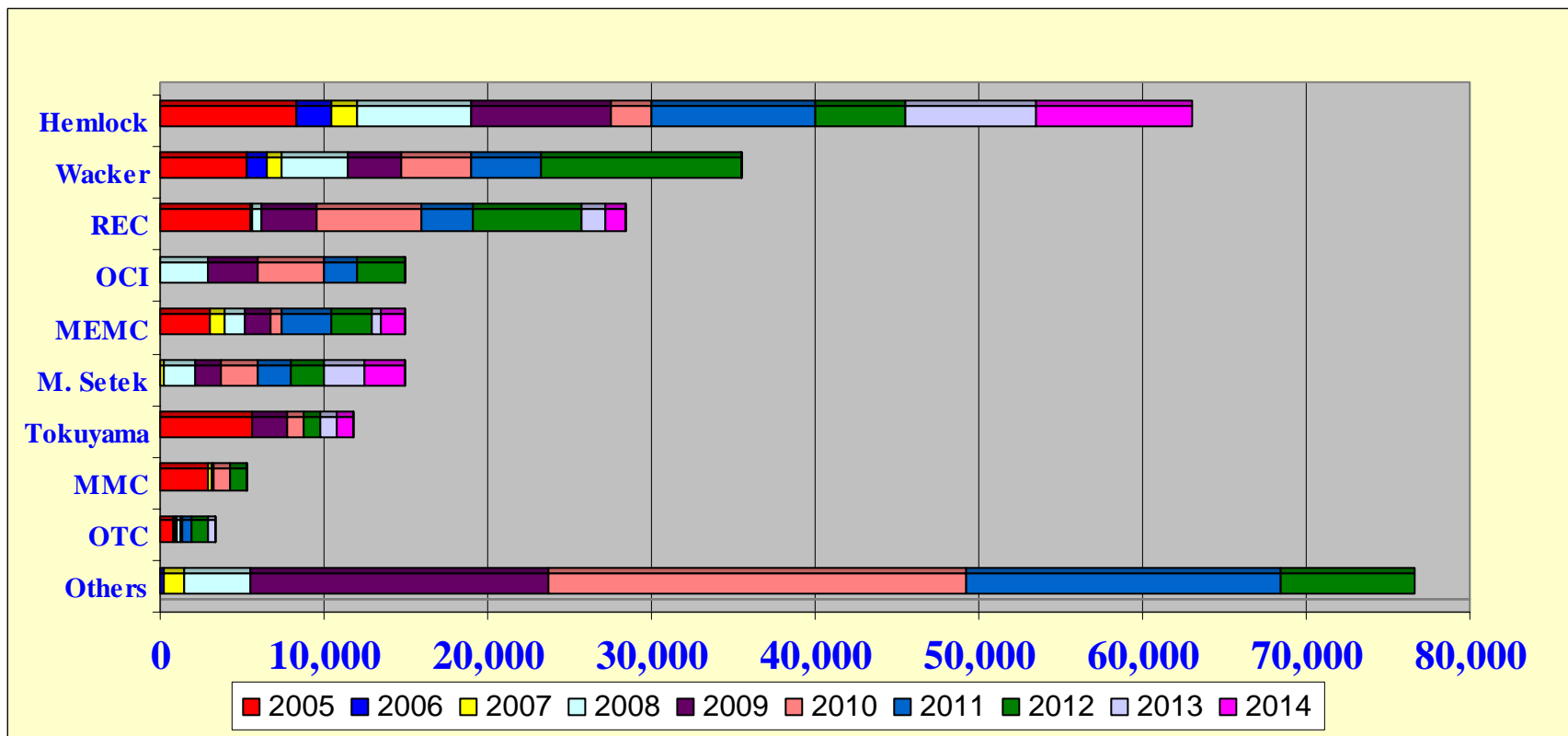
About Hemlock Semiconductor Group

- Began polysilicon production in 1961
- Hemlock Semiconductor Group is comprised of two JVs:
 - *Hemlock Semiconductor Corporation (Michigan site)*
 - *Hemlock Semiconductor L.L.C. (Tennessee site)*
- Owned by Dow Corning Corporation (63.25%), Shin-Etsu Handotai Co., Ltd. (24.5%), and Mitsubishi Materials Corporation (12.25%)
- A leading supplier of hyper-pure polycrystalline silicon
- *Announced up to \$US 4 Billion of capacity expansions*



HSC's Global Polysilicon YE Forecast

“As Announced*”



Total Polysilicon Capacity by Year

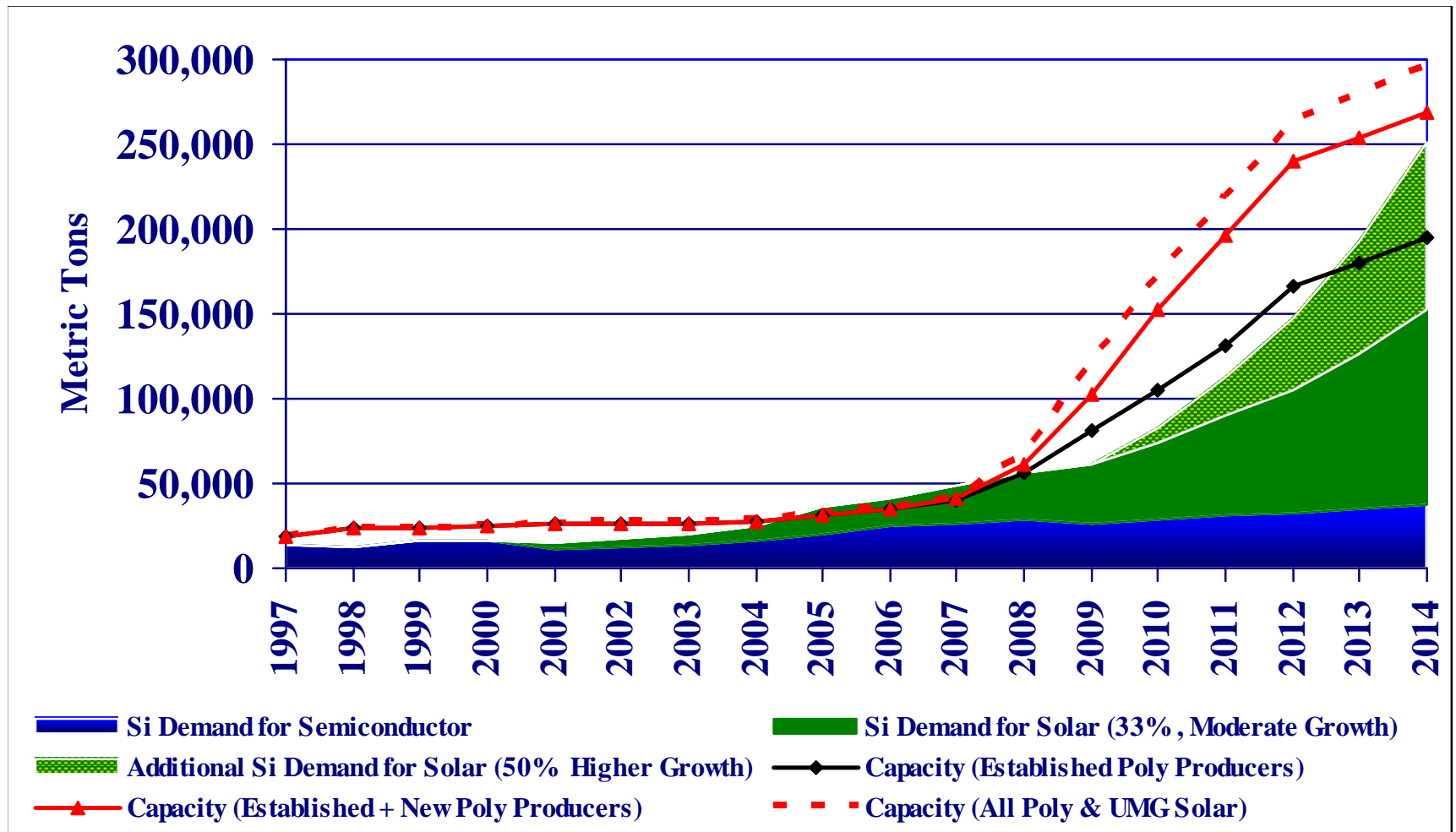
2005: 32K Tons 2006: 36K Tons 2007: 41K Tons 2008: 61K Tons 2009: 104K Tons
 2010: 151K Tons 2011: 196K Tons 2012: 239K Tons 2013: 253K Tons 2014: 269K Tons



*Source: Public information and internal research by HSC

Gary Homan
June 2009

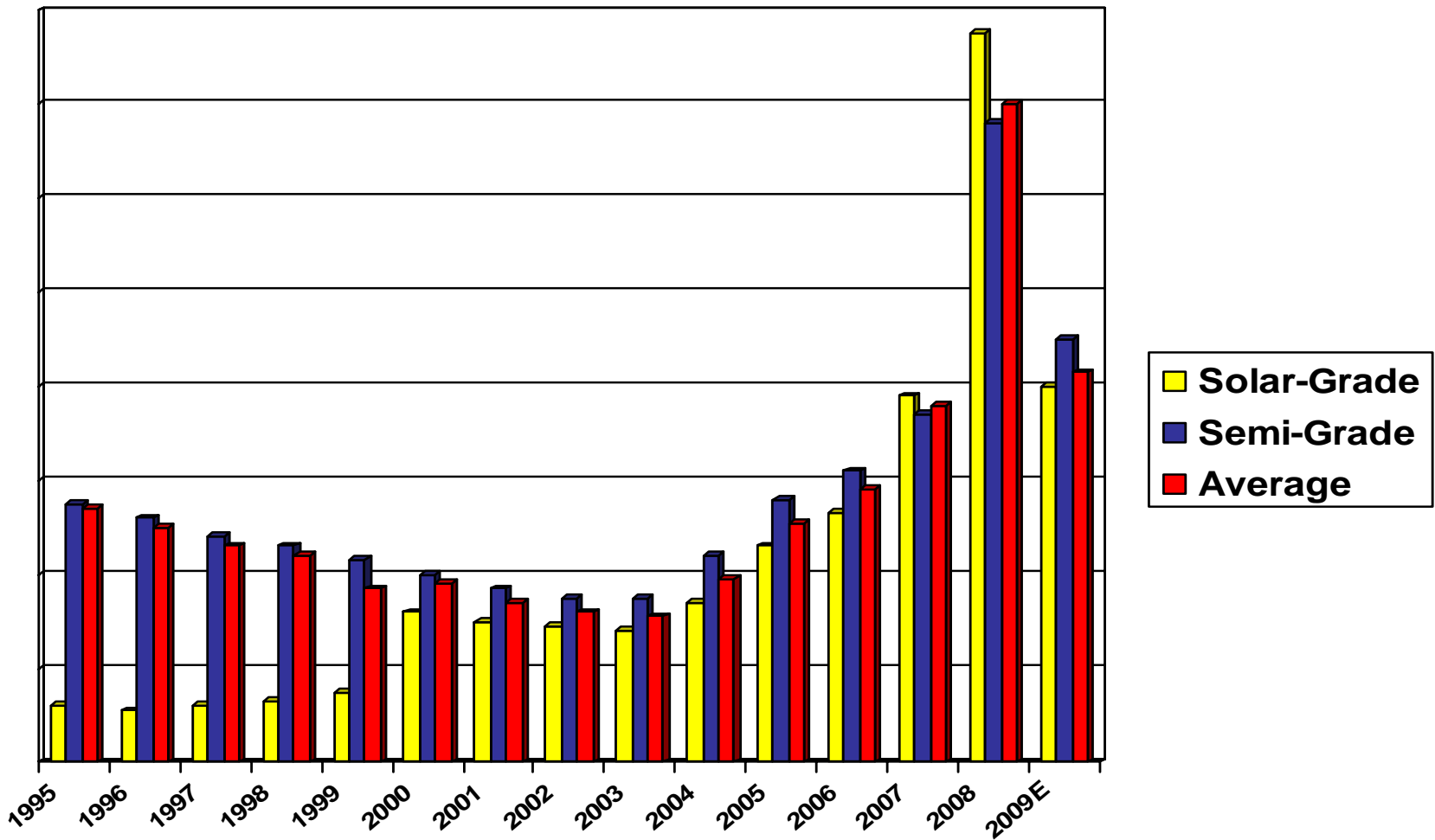
HSC's Global Polysilicon Supply/Demand Forecast versus "Announced Capacity*"



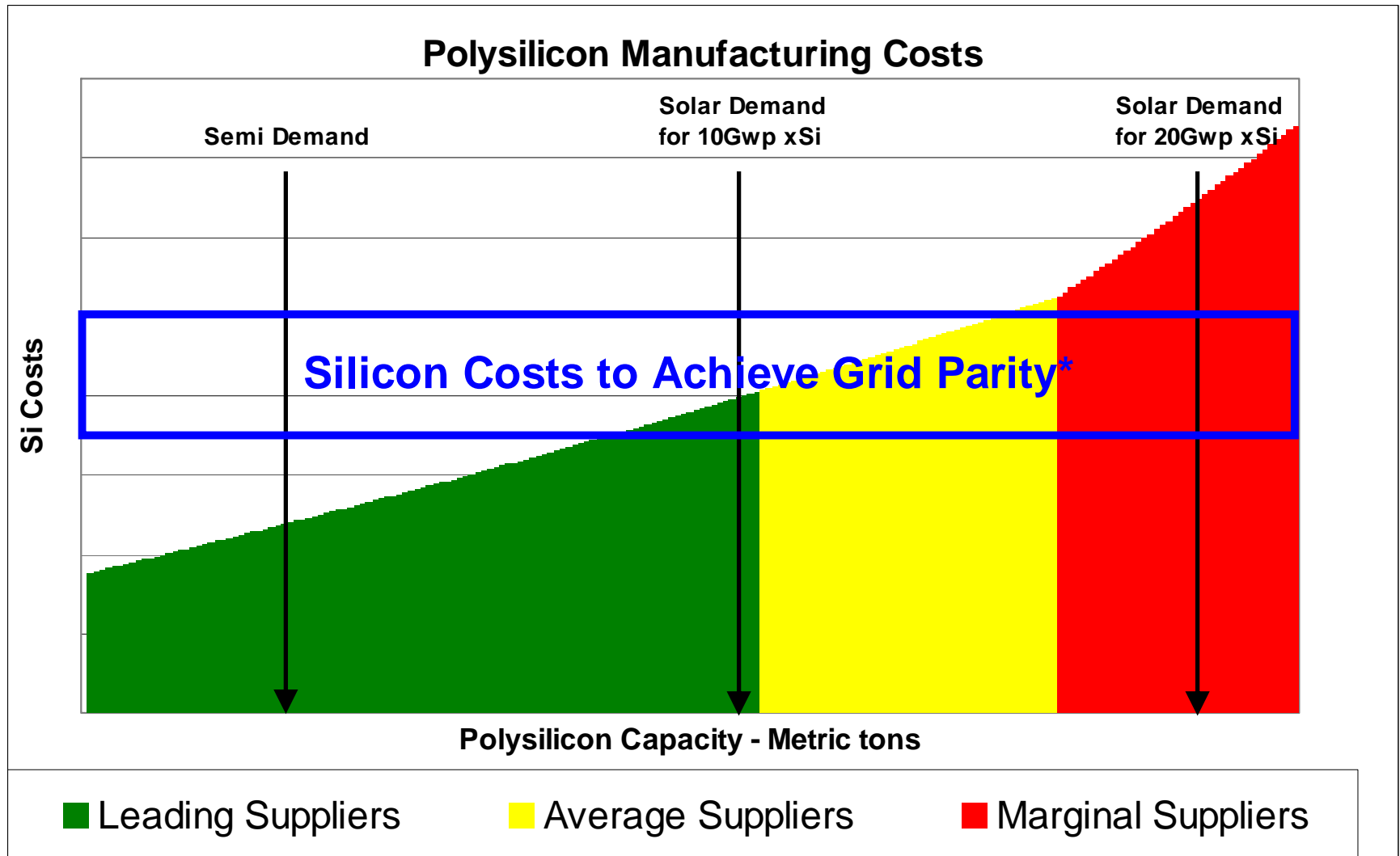
Polysilicon Capacities: **“Some Observations”?**

- **The silicon shortage has eased!but for how long?**
 - *Price erosion versus previous spot silicon costs may drive increased demand?*
 - *Future costs may impact expansion plans with some poly manufacturers?*
- **There are multiple new entities producing polysilicon**
 - *Extra capacity is driving silicon costs toward grid parity*
- **Sustainability of new polysilicon entrants may be challenged?**
 - *Venture and public monies are more difficult to secure?*
 - *Can all polysilicon producers reduce costs to meet grid parity criteria?*
- **Efficiency = Quality + Consistency**
 - *Cost of Ownership (CoO) demands high efficiency per gram Si*
 - *Lower priced virgin polysilicon will provide the best CoO based on:*
 - ✓ *Lower price = lower cost*
 - ✓ *Hyper-Purity levels = higher photon conversion efficiency*
 - ✓ *Consistent-predictable quality = higher yields*

Global Polysilicon Estimated Price History*

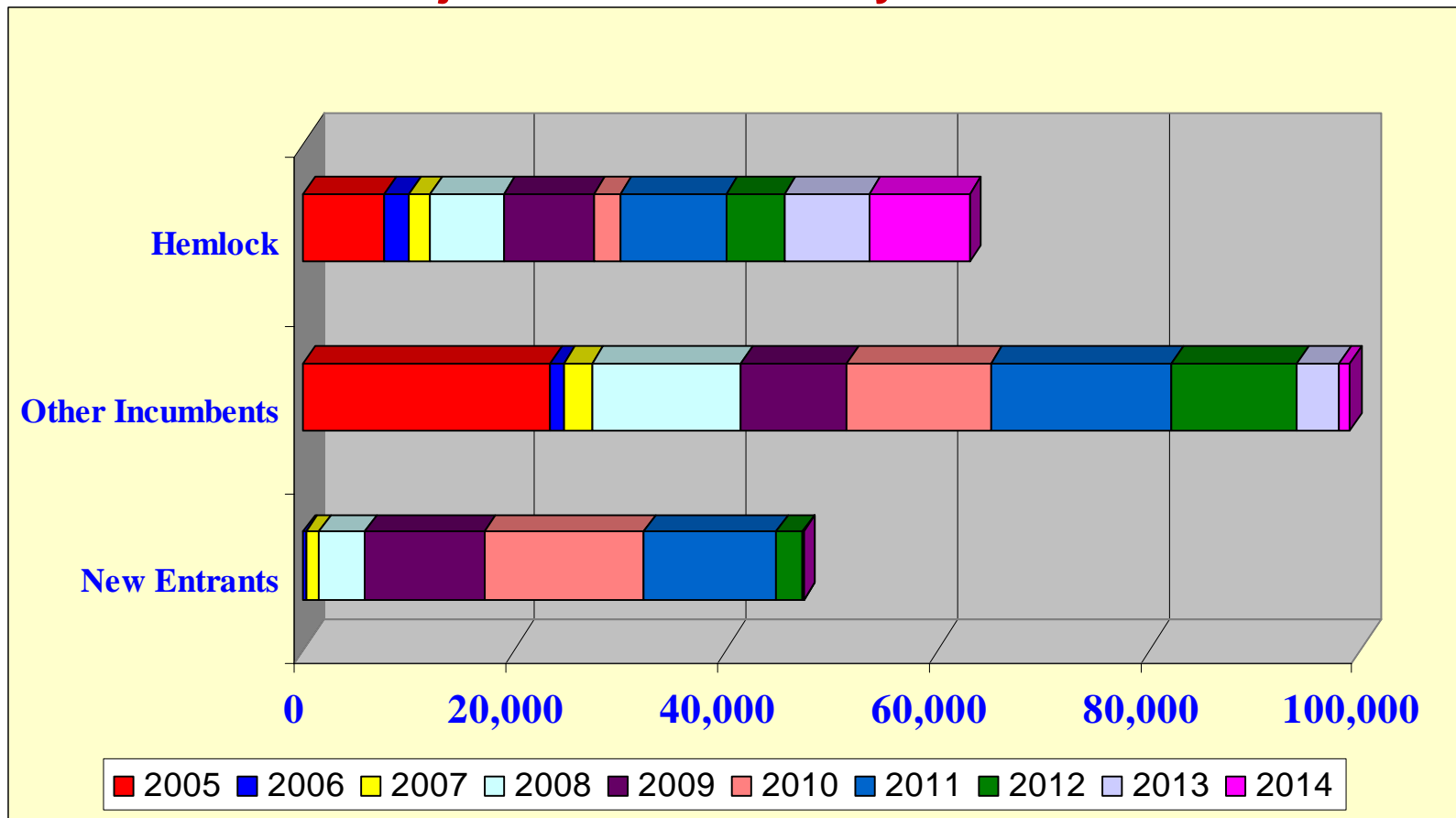


Polysilicon Costs are Critical



HSC's Global Polysilicon YE Forecast

“Adjusted for Grid Parity Costs*”



2005: 32K Tons 2006: 36K Tons 2007: 41K Tons 2008: 64K Tons 2009: 96K Tons
2010: 126K Tons 2011: 167K Tons 2012: 187K Tons 2013: 199K Tons 2014: 209K Tons

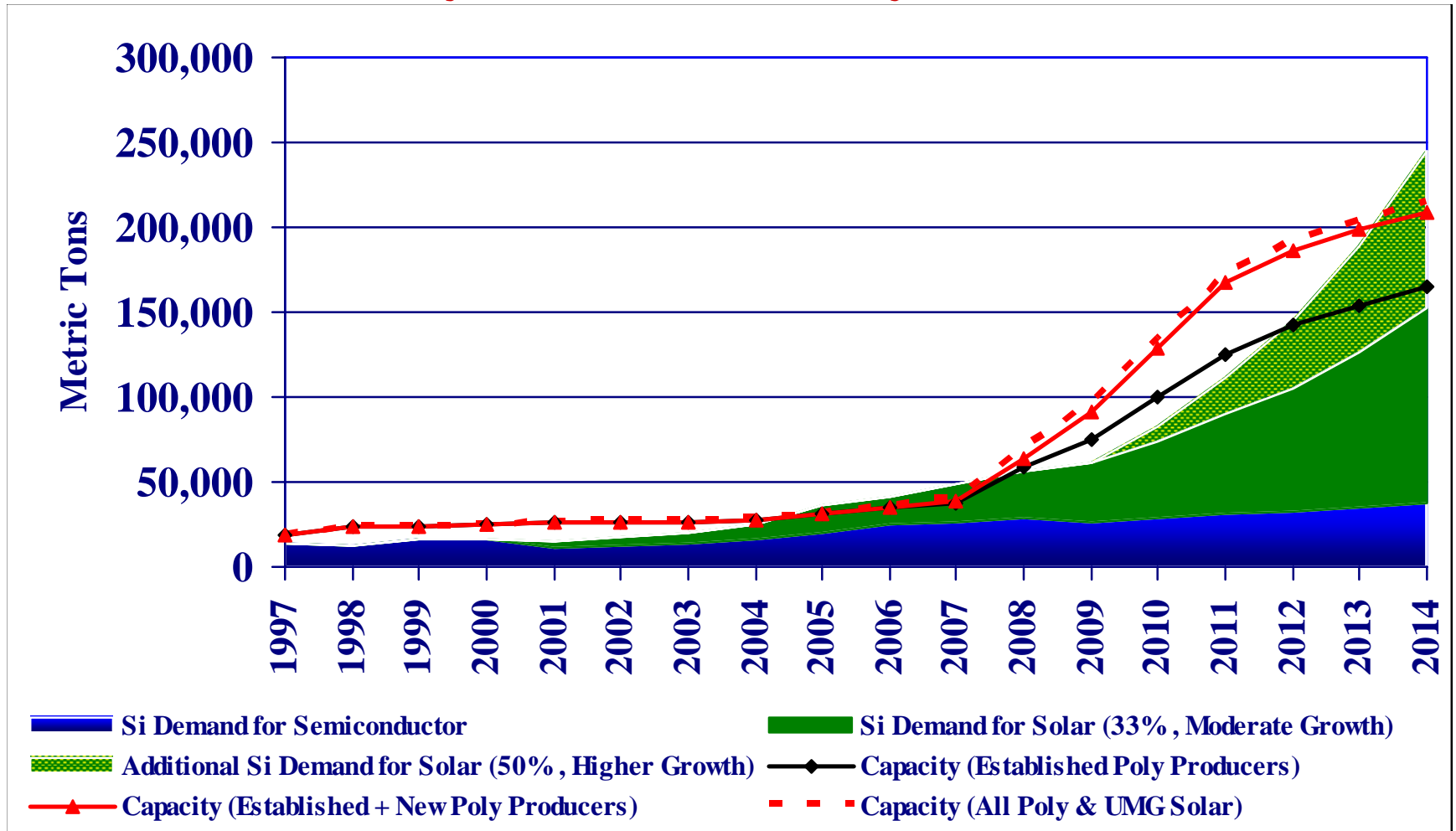


*Source: Public information and internal research by HSC

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HSC's Global Polysilicon Supply/Demand Forecast

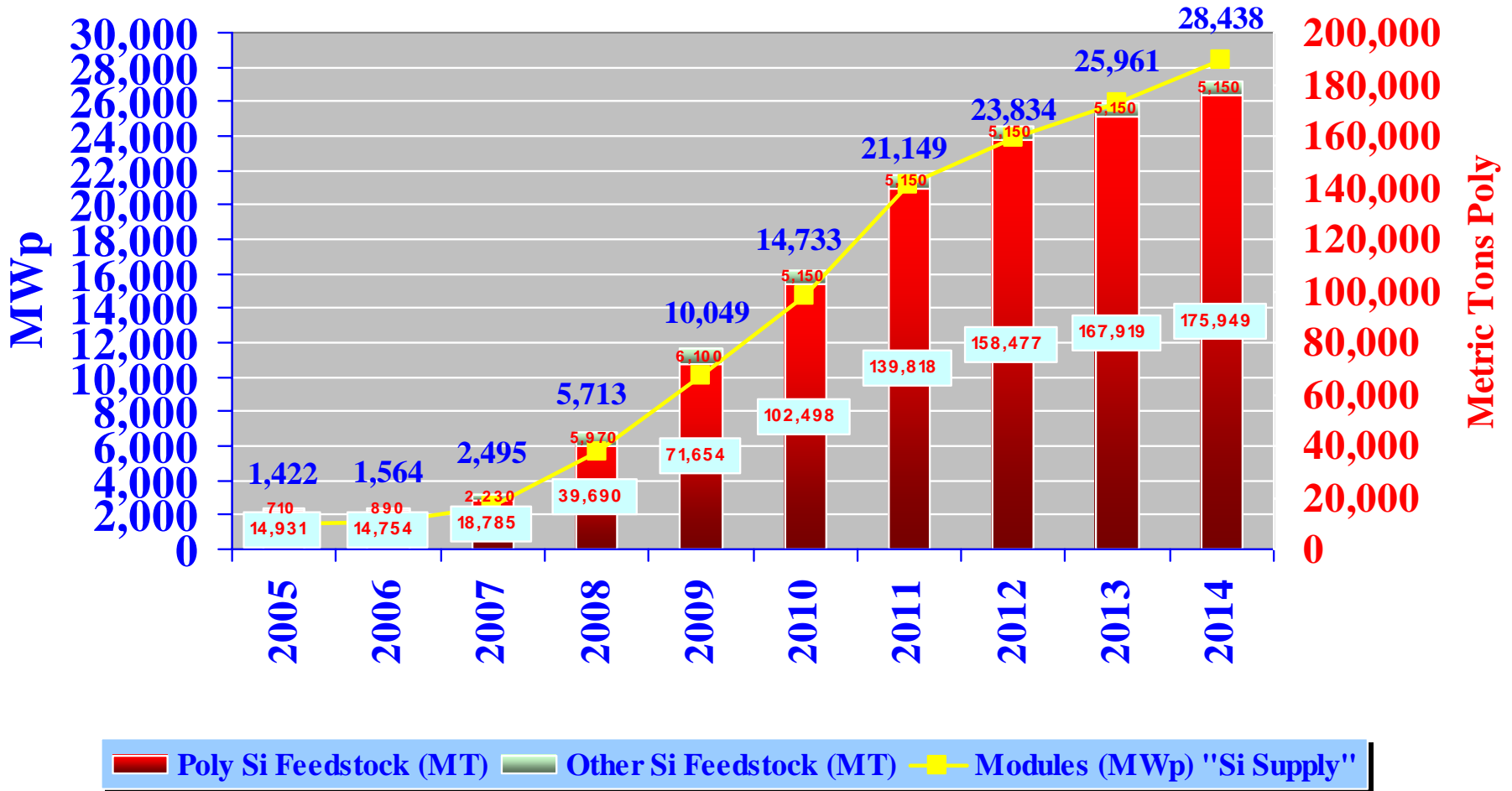
*Adjusted for Grid Parity Costs**



The Global Solar Energy Market

Solar Module Growth Potential based on Silicon Supply

“Excludes thin film/amorphous and Silicon Inventory”



Summary

- The polysilicon supply situation has improved
 - *Many new polysilicon producers and capacity expansions*
- Lower polysilicon costs (CoO) should:
 - *Allow the industry to achieve grid parity sooner*
 - *Market attractiveness vs. alternative technologies*
- There is enough silicon feedstock to support 10 GWp solar production in 2009 (*100% growth vs. 2008*)

Hemlock's Expansion Strategy

- Committed to increase HSC's polysilicon capacity by >55,000 metric tons from 2005 through 2014.
- HSC capacity will be 26,000 metric tons in 2009, 40,000 metric tons in 2011, and 63,000 metric tons before 2014.
- Expansions underway at our new site in Tennessee
- Work with our customers to ensure crystalline Si-based PV remains the preferred solar technology
- Continue to pursue further expansion opportunities

Thank You for Your Attention



Gary Homan
June 2009