

Alternative Silicon Materials for Solar

*Emerging Markets and Technologies TechXPOT
Semicon West 2007
July 19, 2007*

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Key Topics

- Dow Corning's commitment to Solar
- Dow Corning® PV 1101 SoG Silicon
 - Launch success
 - Continued progress
- Future plans



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Dow Corning Corporation

The Leader in Si-based Chemistry

Founded in 1943 as a 50/50 joint venture between *The Dow Chemical Company* and *Corning, Inc.* to develop, manufacture and market **Si-based** material solutions.

- Fully integrated along the Si material supply chain
- \$4.4 billion in sales
- 9,000 employees worldwide
- 7,000 products
- 25,000 customers
- Majority owner in Hemlock Semiconductor Corporation
- R&D Investment approximately 4-5% of sales

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Dow Corning Solar Solutions

The PV Market Is a Top Corporate Growth Priority

- The PV market is a huge market opportunity for Si-based materials:
 - Silicon
 - Encapsulant
 - Sealants
- Focused on expanding supply options
 - Support rapid expansion in JV with HSC
 - Metallurgical-grade route

packaging experts

technical advisors

profitability maximizers

contract manufacturers

cost reducers

commercialization specialists

process streamliners

potential realizers

imagination stimulators

custom formulators

dream realizers

equipment suppliers

silicone suppliers

need fulfillers

technology innovators

efficiency experts

possibility expanders

product developers

inventory managers

productivity increasers

analytical testers

global expanders

future inventors

September 2006: Dow Corning® PV 1101 launch

Open up the possibilities...

... to a world where solar energy is a widely accessible, self-sustaining energy alternative.

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Dow Corning® PV 1101 SoG Silicon

- First commercially available feedstock derived from metallurgical silicon using large scale manufacturing processes.
- Complementary product to polycrystalline silicon
 - Faster ramp-up of capacities
 - Better environmental footprint
- Feedstock that can be blended with polycrystalline silicon
- Just the beginning – next generation under development

Dow Corning® PV 1101 Status

Launch Exceeds Our Expectations

Goals:

- ✓ • **Improve supply/offer options to the industry**
 - First manufacturing line was sold out on Day 1
- ✓ • **Learning curve and customer collaboration**

Learnings:

- ✓ • Production process stabilized
- ✓ • Yield/Throughput has improved
 - (batch size has doubled within 4 months)
- ✓ • Blending ratios vary from customer to customer

Future Plans



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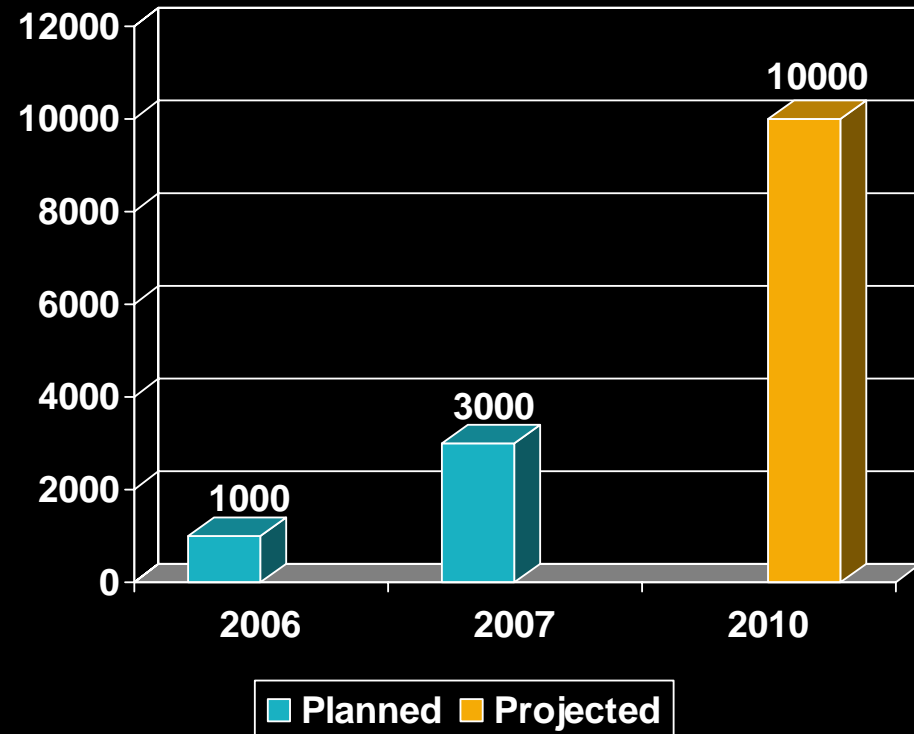
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MG-Silicon Capacity Growth

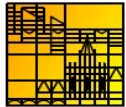
Building Capacity in Line with Customer Demand

- 3,000 MT capacity by YE 2007
 - Most capacity expansion is contracted
- 10,000 MT capacity consideration by 2010
- DCC also supports HSC with its largest Poly expansion ever



Product Performance

Continued Performance Improvements Through R&D



University of
Konstanz

Industrial solar cells



Solar cell results in comparison with reference material

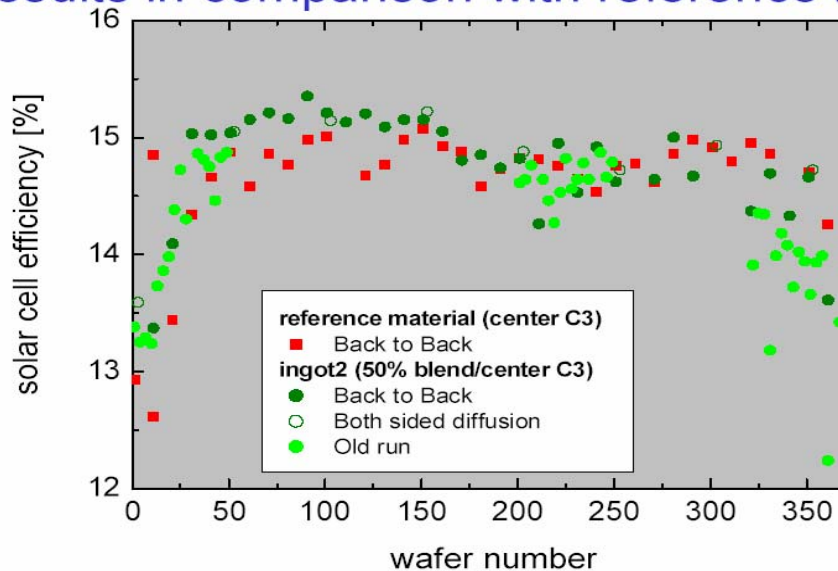


Fig. 6: Solar cell efficiency as a function of the wafer number for SoG-Si wafers from ingot 2 and the reference material.

Source: University of Konstanz

Developmental product

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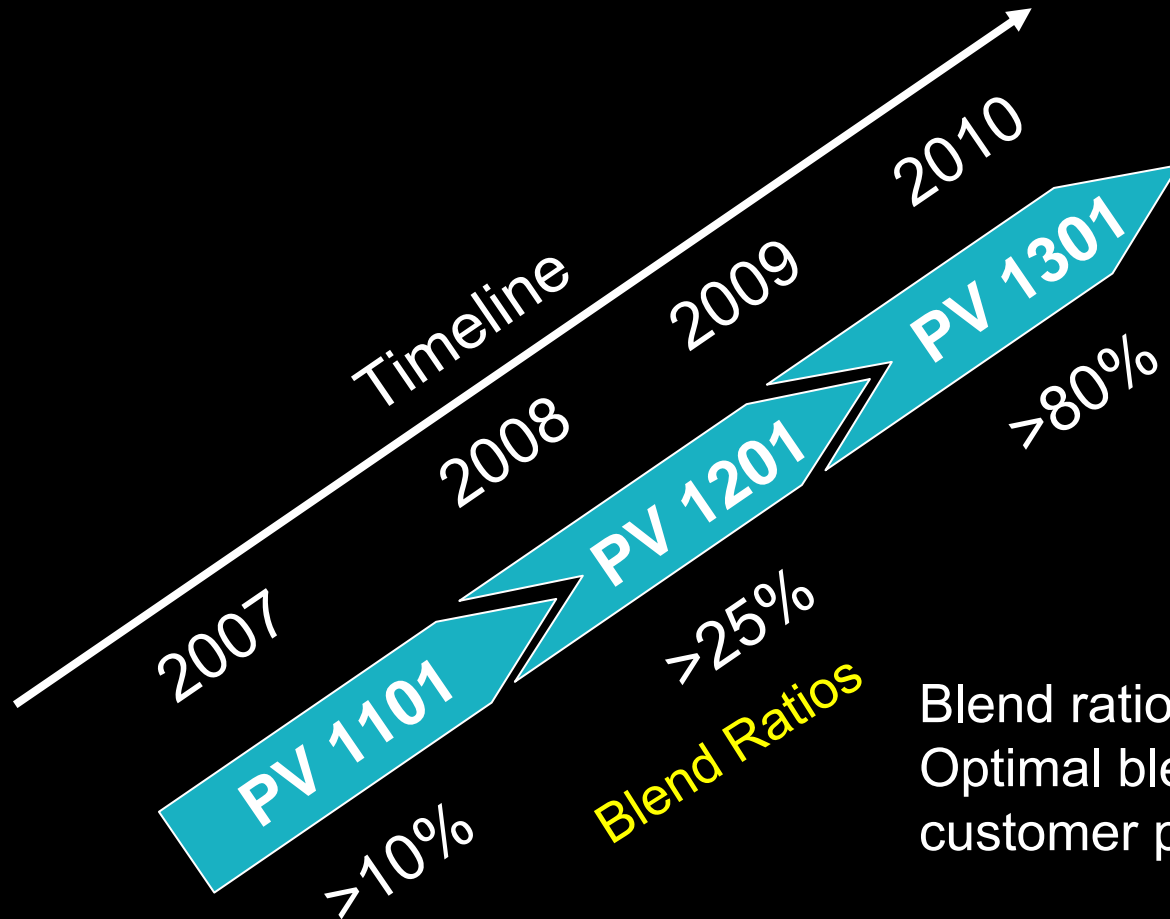
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Projected Product Launch Timeline

Plan to Launch Next-Generation Product in 2008



Blend ratios are estimated.
Optimal blend % based on
customer proprietary processes.

Continued Innovation

New Si-based Solutions for PV devices

- R&D investment in new solutions:
 - Encapsulation, coatings and other Si-based solutions across the PV value chain
- Focused on delivering improvements in Cost/Wp
- By unleashing the benefits of Silicones and Silanes in PV:
 - Optical properties
 - Dielectric performance
 - Proven durability/UV Stability
 - Flexible processing options

Takeaways

- Committed to PV industry growth
- Dow Corning intends to remain the Si material leader for the PV industry with investment in MG Si and Poly at HSC
- Based on initial success, we are expanding to 3,000 metric tons of capacity of PV 1101 by year end 2007
- Considering 10,000 metric tons of capacity by 2010 and the introduction of next-generation products
- Developing total solution packages across the value chain from sand to sun...

Thank you!

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