

Shane Smith

09-6-4

## California Air Resource Board "Cool Cars" Board Meeting

**Shane Smith**  
 Sr. Manager, Glass Coating Products  
 CARB Meeting  
 Sacramento, CA  
 June 25<sup>th</sup>, 2009



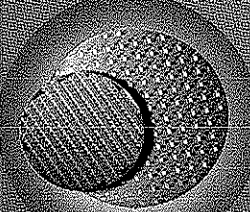
think it. apply it.

APPLIED MATERIALS

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## Applied Materials is the Nanomanufacturing Technology Leader

### FIRST




Cost per wafer

1974	2004
4 trillion	1,400,000 trillion
10 cents	5 nano-dollars

**20,000,000x Cost Reduction**

Source: SIA, IC Knowledge LLC

### THEN




Cost per area

1995	2005
0.3 million m <sup>2</sup>	25 million m <sup>2</sup>
\$30,000 / m <sup>2</sup>	\$1,500 / m <sup>2</sup>

**20x Cost Reduction**

Source: Display Search, Niker BP, Applied Materials

### NEXT



Cost per watt

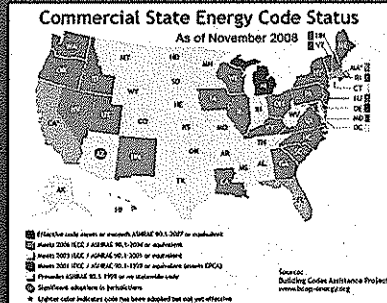
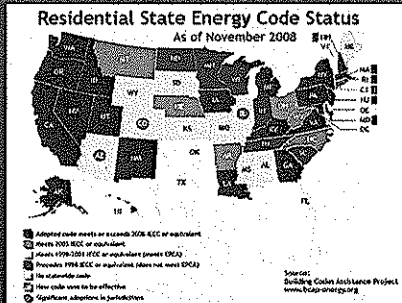
2005	2010	2012
300MW	2GW	4GW
\$1.50/W	<\$1.00/W	<\$ 0.85/W

**2x Cost Reduction**

Applied Materials has accelerated cost reduction across multiple technologies

APPLIED MATERIALS

## Regulations drove glass coating technology in the architectural markets



- Glass coating technology has been used for over 30 years to conserve energy
- California continues to adopt and implement the latest International Energy Codes (IEC) / ASHRAE ahead of the other states

*Existing architectural coating equipment technology is used to serve the automotive sector too*

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## Installed Production Coating Systems



### WORLDWIDE INSTALLATIONS Glass Production Systems

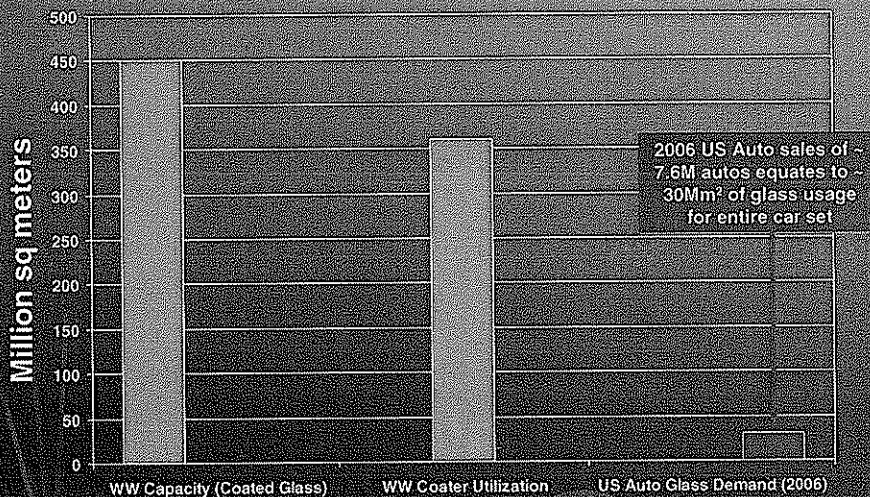


Seven(7) new coating lines to begin production in 2009

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## CY2009F WW Coating Capacity & Utilization



Auto Glass accounts for < 10% of the WW Flat Glass Demand

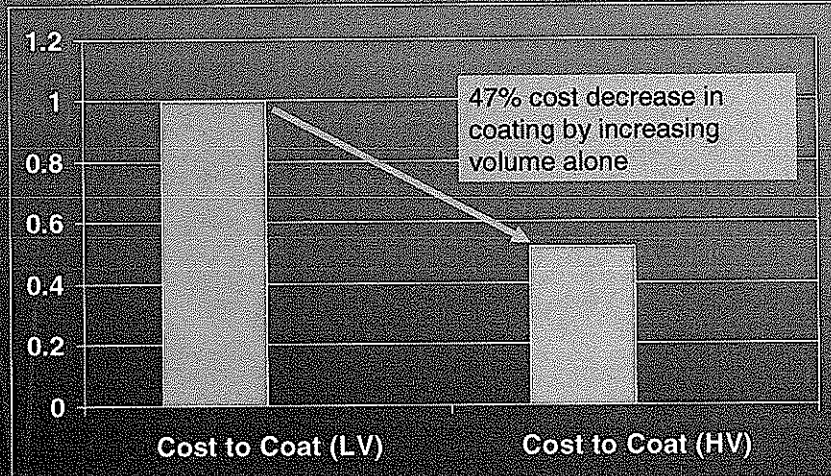
Source: US 2007 Freedonia Flat Glass (2006), Applied Materials Marketing



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## Reduction in cost is driven by VOLUME



LV = ~ 1.7Mm<sup>2</sup>/yr of triple Ag product

HV = ~ 5.2Mm<sup>2</sup>/yr of triple Ag product



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## Glass Coating Capability for Global Auto Suppliers



Glass Suppliers	Coating Capability	Auto Coating Technology to serve EU market
Supplier #1	Yes	Yes
Supplier #2	Yes	Yes
Supplier #3	Yes	Yes
Supplier #4	Yes	Yes
Supplier #5	Yes	Yes
Supplier #6	Yes	No
Supplier #7	Yes	No
Supplier #8	No	No
Supplier #9	No	No

Source: Applied Materials, Supplier websites

*More than 70% of the auto suppliers today are supplying markets with glass coating technology*

