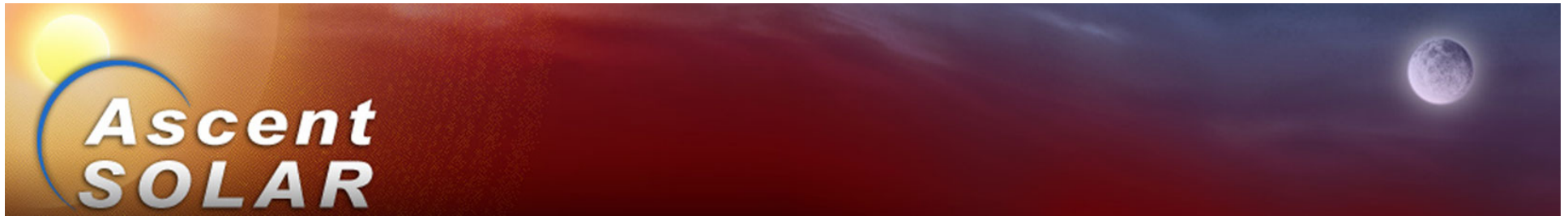




Ascent Solar Technologies, Inc.

(NASDAQ: ASTI)



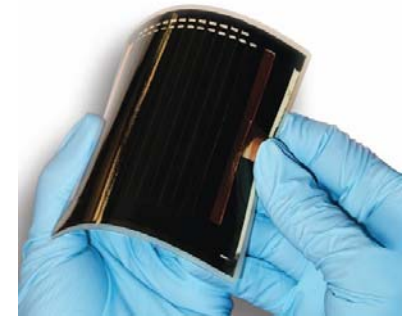
Safe Harbor:

Statements, data and information in this presentation that are not statements of historical or current fact constitute "forward-looking statements." Such forward-looking statements, data and information involve known and unknown risks, uncertainties and other unknown factors that could cause the Company's actual operating results to be materially different from any historical results or from any future results expresses or implied by such forward-looking statements, data or information. In addition to statements that explicitly describe these risks and uncertainties, readers are urged to consider statements that contain terms such as "believes," "belief," "expects," "expect," "intends," "intend," "anticipate," "anticipates," "plans," "plan," to be uncertain and forward-looking. The forward-looking statements, data and information contained herein are also subject generally to other risks and uncertainties that are described from time to time in the Company's filings with Securities and Exchange Commission.

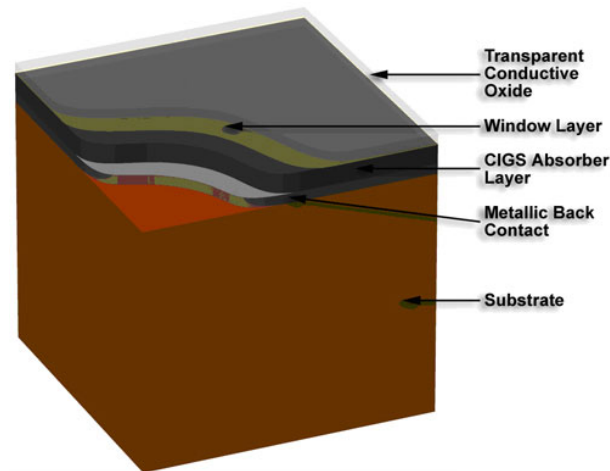


Innovation

Ascent Solar - a developer and manufacturer of state of the art, thin-film photovoltaic materials and modules.



- High efficiency polycrystalline PV on **Plastic**
- First to take monolithically integrated PV on **plastic** into production
- Eliminate Discrete Solar Cell Manufacturing Costs
- **NO Silicon!**
- Cost Effective
- Lighter
- Flexible and Compact



Ascent Solar modules incorporate only micron-level amounts of semiconductor material - about 1% of the semiconductor material used in typical crystalline silicon solar modules

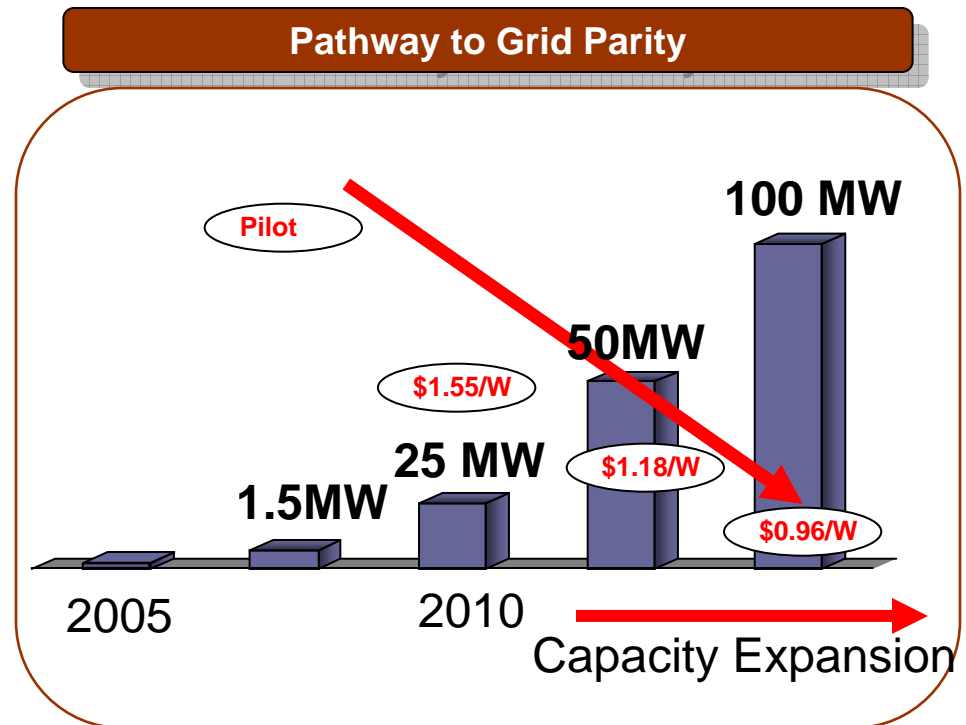


Ascent Solar Growth

Formed to develop a technology and superior manufacturing platform capable of becoming a low cost change agent in all markets by disruptive means




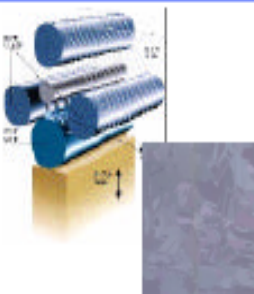
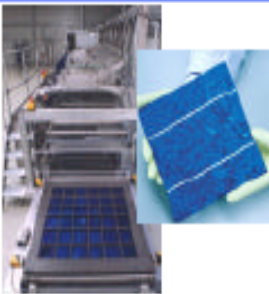
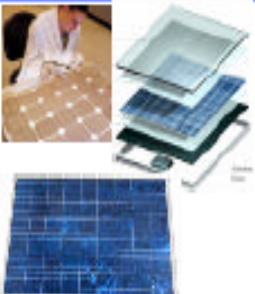

Key Milestones:

- Thin Film PV Development began in 1990 at Martin Marietta Aerospace
- ITN Energy Systems formed in 1994
- Over \$60 Million in R&D Funding
- Ascent Solar formed in 2005
- Initial Public Offering, July 2006
- Norsk Hydro Partnership, March 2007
- Hydro \$10M Follow on Investment, Aug. 2007
- 1.5 MW Pilot Plant Production 2008



Note: Cost modeling projections based upon certain capacity, capex, yield, and efficiency assumptions and reflect 2007 year dollars

Cost breakdown – Cost of p-Si in c-Si Solar PV System

Polysilicon	Furnace	Ingot	Wafer	Solar PV Cell	Module Assy	Integration
						
<ul style="list-style-type: none"> Raw material used in furnace 	<ul style="list-style-type: none"> Ingots in raw form are pulled (sc-Si), or cast (pc-Si) in furnaces 	<ul style="list-style-type: none"> Ingots are cropped and cut into individual ingots 	<ul style="list-style-type: none"> The individual ingots are sliced into wafers using a wire saw 	<ul style="list-style-type: none"> Wafers are processed into solar PV cells 	<ul style="list-style-type: none"> The solar PV cells are assembled into solar PV modules 	<ul style="list-style-type: none"> The modules are installed on roof tops and open fields
<p>Source: Deutsche Bank</p>					<p>Module ASP: ~\$3.50/Wp</p>	
						<p>Installed cost: Resid. ~\$7.50/Wp Comm: ~\$5.50/Wp</p>



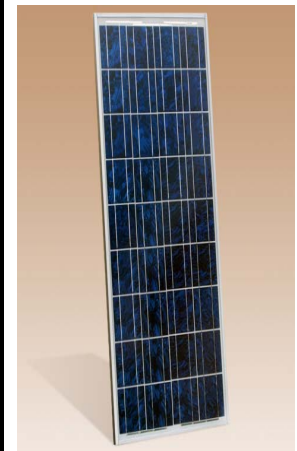
Today's Commodity Market



2006			
Rank	Company	MWs	Share %
1	Sharp	434	17%
2	Q-Cells	253	10%
3	Kyocera	180	7%
4	Suntech	158	6%
5	Sanyo	155	6%
6	Mitsubishi	111	4%
7	Motech	110	4%
8	Schott Solar	96	4%
9	Deutche/Shell	86	3%
10	BP Solar	86	3%
11	SunPower	63	2%
12	Isofoton	61	2%
13	First Solar	60	2%
14	CEEG Nanjing	60	2%
15	Ersol	40	2%
	<u>Other</u>	<u>568</u>	<u>23%</u>
	World Total	2521	100%



CELLS



Modules

Source: Prometheus Institute

Keep it Simple



Copper (Cu)



Indium (In)



Gallium (Ga)

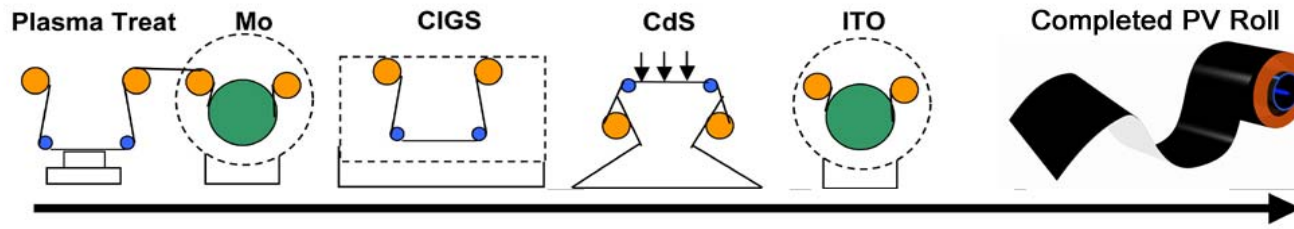


Selenium (Se)

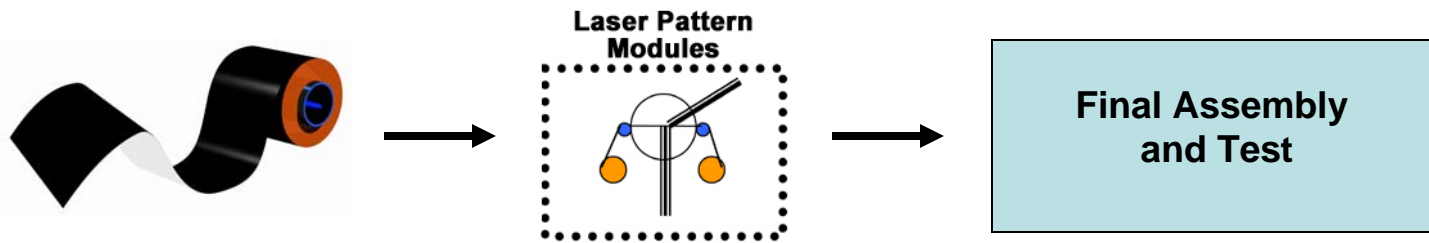
Base metal feedstock



Plastic Roll (substrate)



1. Manufacturing processes produce rolls that are identical for every market



2. Multiple modules can be printed on each roll to serve a multitude of applications



3. Product platform is able to address much more than a commodity marketplace



ASTI Thin Film Advantage

- Monolithically integrated photovoltaic (PV) modules on flexible plastic.
- Versatile format modules enable new market applications.
- Direct integration into building materials and consumer electronic packages.
- 99% reduction in high-cost semiconductor material – No Silicon!
- Unique, roll-to-roll manufacturing processes.
- Lower cost /watt* ...two to three times lower than traditional silicon.
- Monolithic integration eliminates entirely the labor intensive, back end assembly of discrete cells into modules.

* Note: Based upon cost model projections with certain assumptions for capacity, capex, efficiency and yield.



The ASTI Solar Market

Terrestrial Applications: BIPV (Roof Tiles, Roofing Membranes, and Building Facades)



Consumer Electronics and Automotive

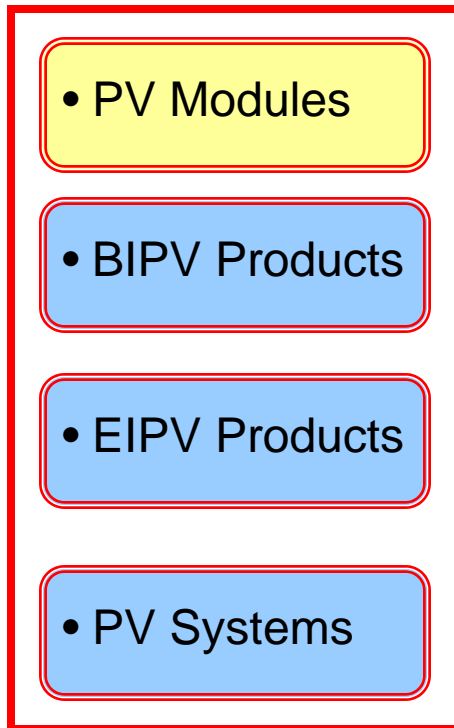
Space & Defense Applications



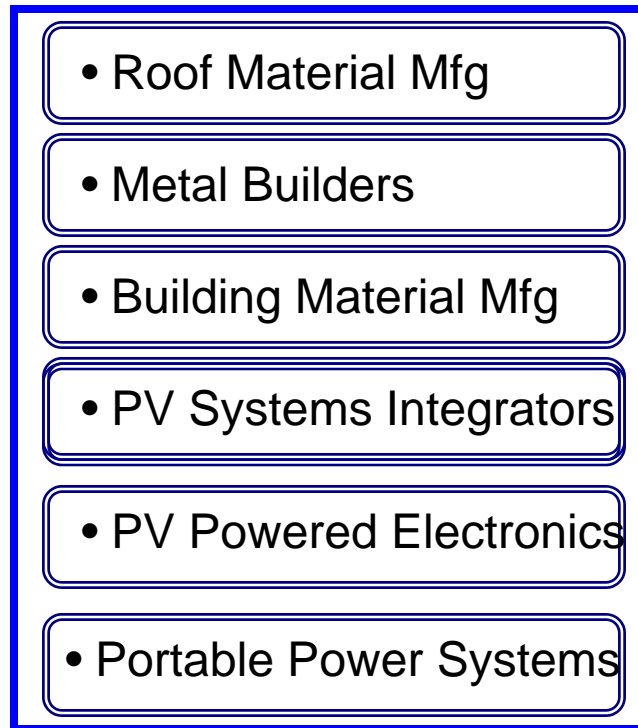
Photos Courtesy: Hydro, Unisolar, Evalon

The Value Chain

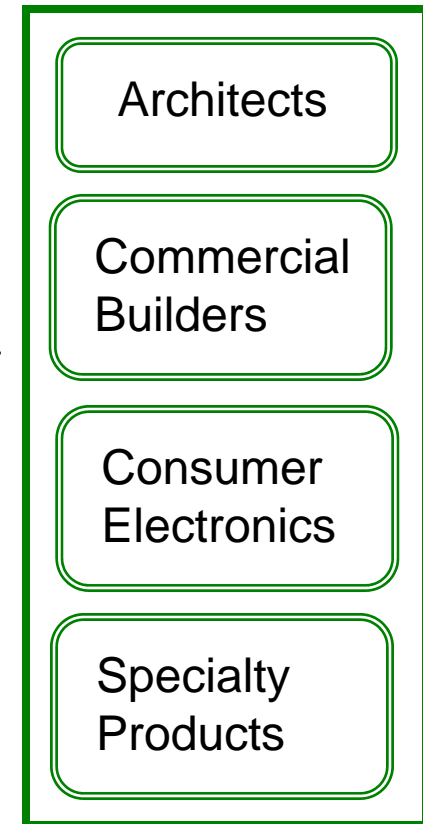
PV Products



PV Systems



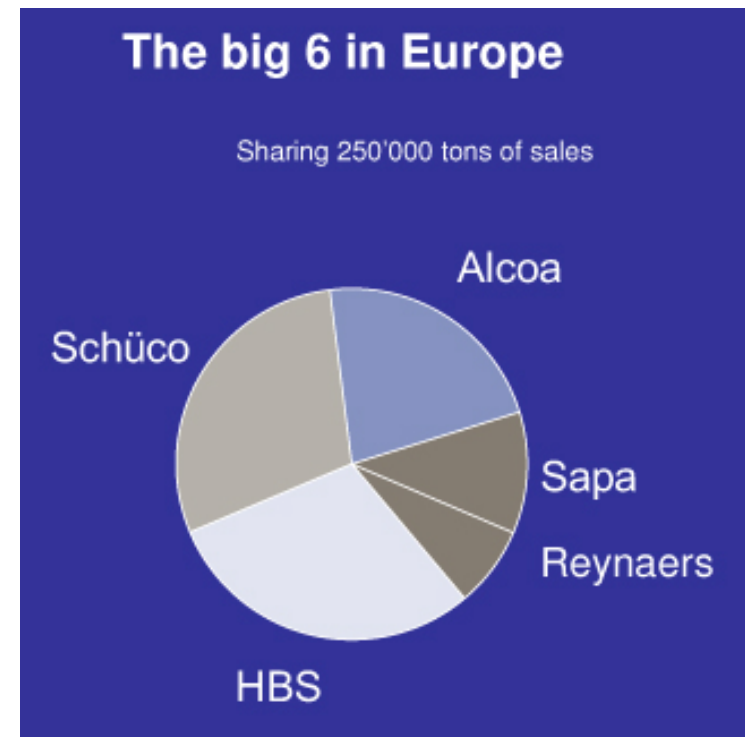
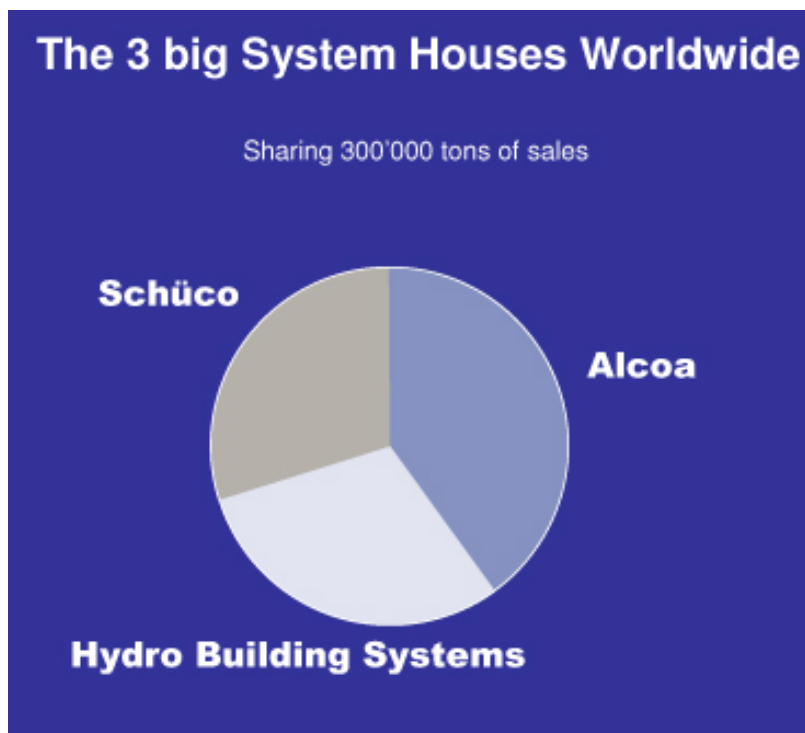
Customers



← ASCENT SOLAR →

← STRATEGIC RELATIONSHIPS →

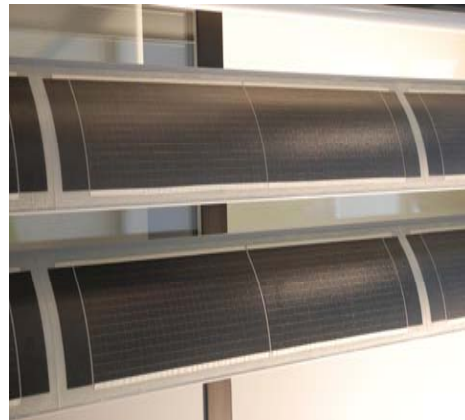
- Norsk Hydro
- Hydro Building Systems
 - Significant Presence in the Building Systems Market



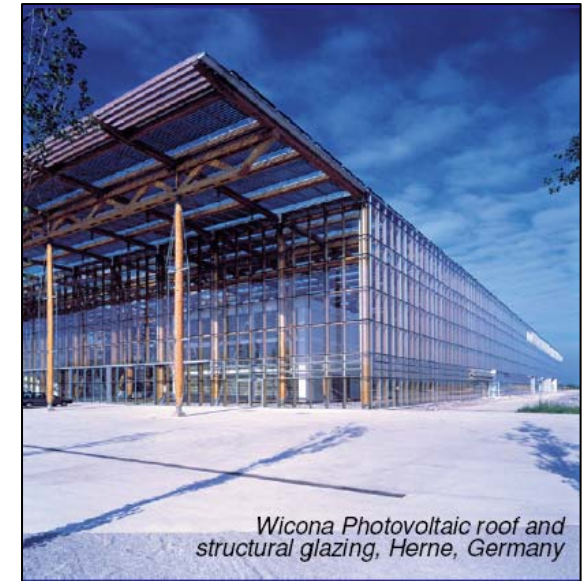


Hydro Building Systems

Brise Soleil Product Line



Wicona Brand

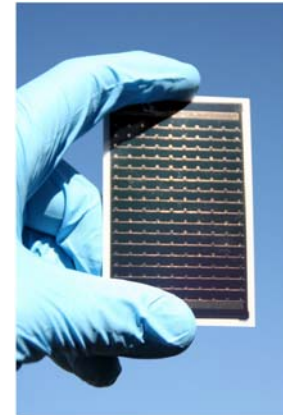


- Energy cost savings of 60%
- Significant increase over 60% in savings with Ascent integration
- Simple, elegant and architecturally attractive BIPV solution for buildings
- Become part of the building not a “bolt on solution”
- Multiple product opportunities across all HBS and Aluminum product lines
 - Curtain walls, facades, casement shutters, window systems

- Enables Electronic Integrated PV (EIPV) products
- Monolithic integration allows for high voltages in very small packages
- Significant reduction in size and cost
- Readily available power
- “Made-to-order” capability enables custom packaging and integration

OR

- Commodity portable power solutions
 - Handheld pocket power
 - One package, multiple applications





Manufacturing Expansion Plan

	2008				2009				2010			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Capacity Expansion	Yellow											
1.5 MW Pilot Plant	IOC	LRIP	Yellow		Full Scale Production (FSP)				Yellow			
25 MW Plant	Engineering		Construction		Construction				IOC	LRIP	FSP	
100 MW Expansion	Grey						Engineering		Construction			

Complete construction of pilot production plant 4th Qtr 2007

Complete end-to-end manufacturing process validation 4th Qtr 2007

1.5 MW plant Initial Operating Capability (IOC) 1st Qtr 2008

1.5 MW plant Low Rate Initial Production (LRIP) 2nd Qtr 2008

25 MW plant engineering complete & construction begins 3rd Qtr 2008

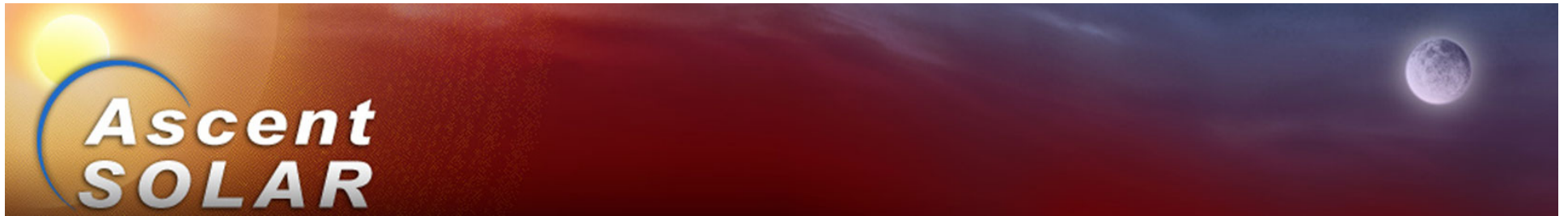
25 MW plant Initial Operation Capability 1st Qtr 2010



The Future

“The AST vision is to see the day when BIPV and EIPV will become pervasive in the everyday lives of peoples throughout the world by delivering affordable solutions for all to benefit from renewable low cost electricity.”

*Ascent Solar President and CEO
Matthew Foster*



Contact Information

ADDITIONAL INFORMATION

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