

Clean Technology
Energy Generation - Solar

Ascent Solar Tech. (NASDAQ: ASTI)

Initiating Coverage: A Rare Pure Play on Thin Film and Building Integrated PV

Initiating Coverage

Rating: HOLD
Price: \$12.41
Price Target: \$14.00
Bloomberg: NASDAQ: ASTI

Market Data

52-Week Range: \$28.35-\$6.50
Total Entprs. Value (MM): \$115.4
Market Cap. (MM): \$175.0
Insider Ownership: 32.5%
Institutional Ownership: 51.9%
Shares Out. (MM): 14.1
Float (MM): 7.6
Avg. Daily Vol.: 395,198

Financial Summary

Net Debt (MM): (\$59.6)

USD	2006A	2007A	2008E	2009E
Rev. (MM)	—	1.0	1.9	4.4
EV/Rev.	NM	NM	60.7x	26.2x

EPS

Mar	(0.41)	(0.24)	(0.23)A	—
Jun	(0.52)	(0.19)	(0.18)	—
Sep	(0.30)	(0.19)	(0.18)	—
Dec	(0.33)	(0.12)	(0.24)	—
FY Dec	(1.56)	(0.70)	(0.81)	(0.82)
FY P/E	NM	NM	NM	NM

Source: Bloomberg, Capital IQ

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Investment Summary

Ascent has a promising technology and manufacturing platform and is targeting strong potential end markets. Yet development risk in the coming 18 months remains high, in our view, as the company is just beginning to operate its pilot line and commencing initial planning for its first 30 MW commercial line.

Event

We are initiating coverage on Ascent Solar with a Hold rating. Jefferies acted as co-manager of ASTI's recent secondary offering of 4.37MM shares (May 2008), netting \$56m in proceeds for expansion.

Key Points

- **Rare pure-play.** Ascent is a rare public pure-play on thin film and the BIPV (building integrated photovoltaics) and EIPV (electronics integrated) markets. It is targeting a set of attributes (thin, lightweight, flexible, CIGS, and monolithic) that have thus far proved elusive in the sector and could make its modules well-suited for a variety of value-added applications in new markets. ASTI's use of CIGS (copper indium gallium selenium) technology and roll-to-roll production processes hold promise for a high-throughput, low-cost manufacturing platform and comparatively high conversion efficiencies. Ascent's streamlined manufacturing steps also avoid some duplicative steps required in other processes.
- **Key investor and partners could create opportunities.** Norwegian aluminum giant, Norsk Hydro ASA, owns a 27% interest in Ascent, retaining an option to lift its stake to 35% by June 15, 2009. While much of Norsk's motivation for its investment in Ascent appears financial, the two are also pursuing development activities to integrate Ascent's PV products into certain products manufactured by Norsk's building products division. A stake by a much larger, well-established company may help Ascent's credibility with suppliers and potential customers. Strategic relationships with other parties (ITOCHU and Icopal) could open low-cost distribution channels for its BIPV and EIPV applications.
- **Early-stage risk profile. Ascent has a promising technology/manufacturing platform and is targeting strong potential end markets.** Yet development risk in the next 18 months remains high, in our view, as ASTI is just beginning to operate its 1.5 MW pilot line and commencing initial planning for its first 30 MW commercial line (fully funded). Subsequent ramp plans call for ASTI to reach 110 MW of capacity by end 2011, which will likely require additional equity (in '09, we believe). Several CIGS manufacturers have already built much larger lines than ASTI's pilot line but experienced production issues, highlighting the difficulty of working with CIGS materials and potential for delays/missteps before reaching commercial success.

Valuation/Risks

We base our \$14 PT on a five-year DCF valuation (20% discount rate, 6% terminal FCF growth rate). Our terminal growth rate is based on our expectations for FCF growth in the subsequent years of our model. Risks include ASTI's early stage of development, additional capital needs to fund growth, lack of profitability, technology risk, and reliance on subsidies for end user adoption, among others.

Company Description

Ascent Solar Technologies, Inc., a development stage company, engages in the commercialization of certain photovoltaic (PV) technology developed by ITN Energy Systems, Inc. for space satellite, near-space, and terrestrial markets. The Company's PV modules use a thin film copper-indium-gallium-selenide semiconductor material on a flexible plastic substrate. Ascent Solar is based in Littleton, Colorado.

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In May 2008, Jefferies acted as co-manager in a follow-on offering of equity for Ascent Solar Technologies Inc.

A member of David Paek's family owns shares of Energy Conversion Devices common stock.

Jefferies makes a market in Ascent Solar Technologies, Inc.

Jefferies makes a market in Energy Conversion Devices, Inc.

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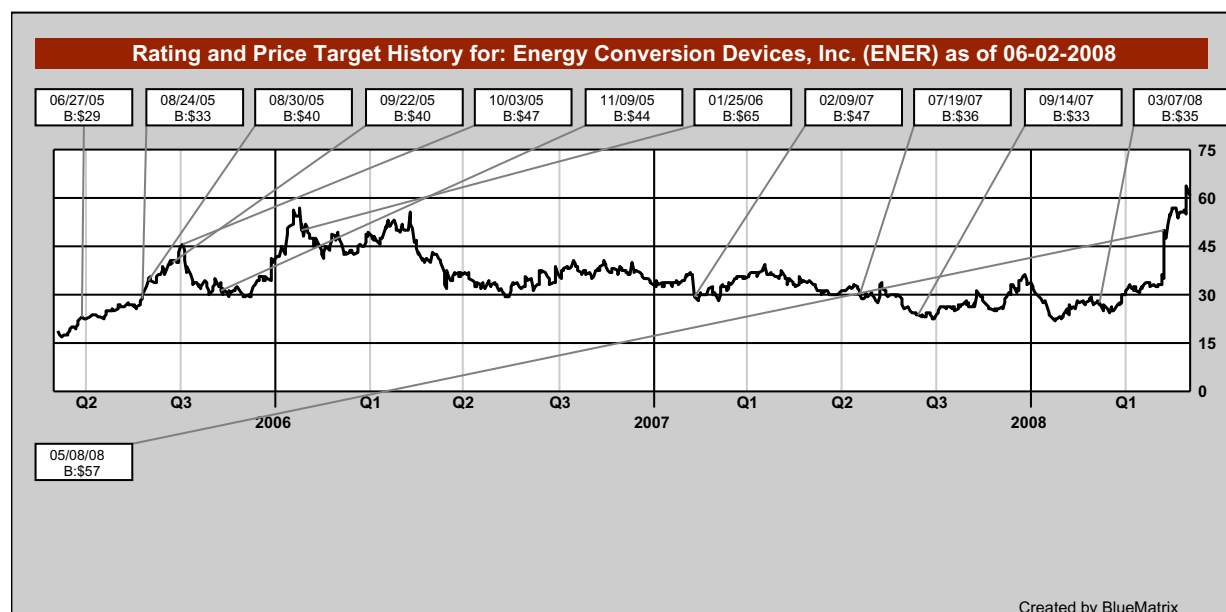
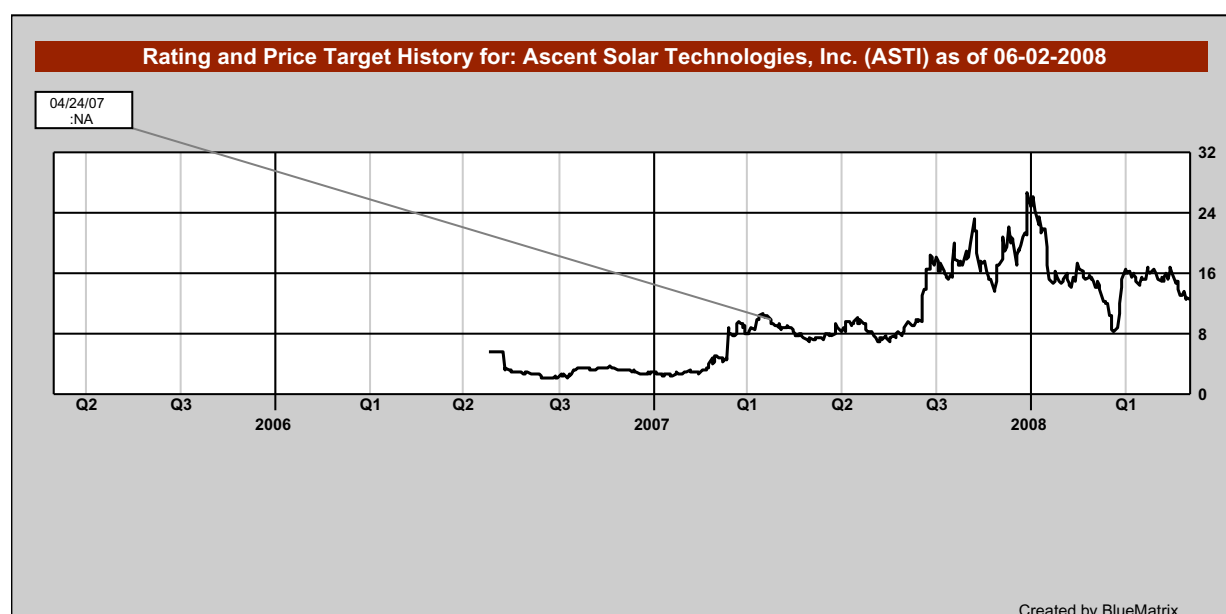
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			Count	Percent
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HOLD [HOLD]	306	37.55	30	9.80
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