

Ascent Solar Technologies, Inc.
Form FWP
March 22, 2006

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Filed Pursuant to Rule 433

Issuer Free Writing Prospectus dated March 21, 2006

Relating to Preliminary Prospectus dated March 13, 2006

Registration No. 333-131216

Ascent Solar Technologies, Inc.

The issuer has filed a registration statement (including a prospectus) with the Securities and Exchange Commission (Commission) for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the Commission for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the Commission s website at www.sec.gov. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by calling toll-free 1-800-433-9045.

Ascent Solar Technologies, Inc.

Matthew Foster

President and CEO

Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995.

Forward-looking statements describe future expectations, plans, results or strategies and are generally preceded by words such as future, plan or planned, will or should, expected, anticipates, draft, eventually or projected. You are cautioned that such statements are subject to a number of risks and uncertainties that could cause future circumstances, events, or results to differ materially from those projected in the forward-looking statements, including risks that our products may not achieve customer acceptance or that they will not perform as expected, and other risks identified in our prospectus and other filings with the SEC. You should consider these factors in evaluating the forward-looking statements included herein, and not place undue reliance on such statements. The forward-looking statements are made as of the date hereof and Ascent Solar Technologies Inc. undertakes no obligation to update such statements.

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 PV on plastic into production

CIGS technology for space application is:

cheaper

lighter

flexible and more compact

ENABLING NEW FRONTIERS AND NEW MARKETS

EXPERIENCE

Thin film photovoltaic development began in 1994 at ITN Energy Systems, Inc.

Over \$60 million invested in R&D with key civil and government customers

Air Force

NASA

Department of Energy

Current contracts total over \$3.0 million

Developer of PV roll-to-roll manufacturing with intelligent process controls

Second generation technology READY TO ROLL

MARKETS

High Altitude Airship

(70,000 to 100,000 ft.)

Defense

Homeland Security

Commercial Communications

Spacecraft

Terrestrial

HAA OPPORTUNITY

Lockheed Martin wins \$180 Million HAA Development Program

Lockheed Martin requested Ascent Solar to submit a PV proposal

Multiple supplier awards anticipated in June 2006

\$4 Million initial development program begins October 2006

Follow-on production order of 1MW of photovoltaic modules

Operational High Altitude Airships each require 1MW of power

1MW = 1 million watts

1MW x \$50-100/Watt = **\$50 Million to \$100 Million per airship**

Government and commercial demand to exceed 10 airships per year

Ascent Solar is uniquely positioned to meet challenging power demands

Lockheed requires a minimum of 400Watts/kg and 125Watts/m² for HAA

PV on plastic is 50% lighter than metal foils

Ascent Solar has a Super High Efficiency technology in the pipeline

HIGH MARGIN BUSINESS

[CHART]

SOLAR IS HOT

[LOGO]

SUNPOWER CORPORATION

Symbol: SPWR

Market Cap.: \$2.44 B

52 Week Range: \$24.30 - \$45.09

Recent Price: \$40.78 (2/14/06)

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DAYSTAR TECHNOLOGIES

Symbol: DSTI

Market Cap.: \$81.0M

52 Week range: \$5.15 - \$17.50

Recent Price: \$12.90 (3/17/06)

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SUNTECH POWER HLDGS

Symbol: STP

Market Cap.: \$5.09B

52 Week Range: \$19.00 - \$45.95

Recent Price: \$35.20 (3/17/06)

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ENERGY CONV DEVICE

Symbol: ENER

Market Cap.: \$1.31B

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52 Week Range: \$16.27- 57.84

Recent Price: \$42.45 (3/17/06)

KEY MILESTONES

IPO Closing	April 2006
Lockheed Martin HAA Award	June 2006
Lockheed Martin HAA Program Start	Oct 2006
R&D Contracts Transfer to Ascent Solar	4th QTR 06
New R&D Contracts Submitted/Awarded	Ongoing
Equipment Delivery (500kW/shift/yr)	1st QTR 07
Plant Commissioning	2nd QTR 07
Initial production deliveries	1st QTR 08

Management Team

Executive Officers:

Matthew B. Foster, President & CEO,

≈ 20 plus years with Lockheed Martin

Joseph Armstrong, Ph.D., VP & Chief Technology Officer

10 plus years with Lockheed Martin and 10 plus years with ITN managing Photovoltaic Division

Janet Casteel, Treasurer & Controller

9 plus years with ITN managing Business Operations & Contract Administration

Board of Directors:

Mohan Misra, Ph.D., Chairman

19 years with Lockheed Martin, Space Systems Company, Materials & Structures Group manager

Founded ITN in 1994, since then ITN has spun off 4 companies

T W Fraser Russell, Ph.D.

co-inventor on four U.S. patents for thin-films and photovoltaic

serves on photovoltaics R&D committee of the National Renewable Energy Laboratory (NREL)

Stanley Gallery

Mark Waller

Ashutosh Misra

Technical Advisory Group:

Rajeewa R. Arya, Ph.D.

18 years with BP Solar, led their establishment of BP Solar's thin-film photovoltaic manufacturing line

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Bruce Lanning, Ph.D.

25 years of professional experience in materials research specializing in thin film devices and processing

Robert W. Birkmire, Ph.D.

Director of the University of Delaware's Institute of Energy, managing research and development of thin-film PV solar cells and other photonic devices. Dr. Birkmire is the co-author of more than 100 technical papers and holds five U.S. patents.

OFFERING

Offering:

3,000,000 Units:
One Common Share
One Redeemable A Warrant
Two Non-Callable B Warrants

Expected Price:

\$5-6 per Unit

Timing:

March/April

Shares Outstanding:

5,290,909 shares

(Post Offering)

Proposed Symbols:

ASTIU, ASTI
ASTIW, ASTIZ

» *Nasdaq Small-Cap*

ADDITIONAL INFORMATION

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