

# High Performance Solar Concentration for Commercial Rooftops

- **25+% module efficiency**
- 600 watt module
- Industry best energy density



## **Corporate Value Through Solar and Technical Expertise**

- Soliant's Mission:
  - To profitably deliver the highest energy density and highest margin solar modules to our service partners and commercial customers.
- Solar concentrator company founded in 2005, located in Pasadena, CA
- Our approach:
  - Take a systems view towards design, manufacturing, installation, and reliability to deliver the lowest cost of energy
  - Leverage an array of partnerships to minimize technical and market risks
    - Be capital efficient through outsourcing and experience
      - ▼ Utilize a qualified team of Sharp Solar, Shell Solar, Schlumberger, and NASA experience
- 11 patents pending with more in process
- Funding: \$8M venture and \$4M DoE Solar America Initiative

"[Soliant] has defined a potential pathway to higher value, lower cost solar electricity."

- Jigar Shah, SunEdison CEO, 2007

## **Key Management\***

### Art Buckland (CEO)

Led 5 successful startups (2 IPOs) NASDAQ Entrepreneur of the Year (1996) BSEE, MBA (HBS)

### Marc Cortez (EVP, Sales and Marketing)

Director of Marketing, Sharp Solar, Shell Solar Extensive entrepreneurial experience BSME, MBA (Pepperdine)

### Michael Deck (Founder, EVP and CFO)

IBM, Cleanroom Software Engineering BA Mathematics, MS (Maryland)

### Charles Haythornthwaite (VP, Prod. Mgmt)

Director of Bus. Dev, Biral MBA (Berkeley), PhD (Southampton, UK)

### Brad Hines (Founder and CTO)\*\*

Chief Architect at NASA JPL VP Engineering, Energy Innovations BSEE, MSEE (MIT)

### Rick Russell (EVP, Engineering)

TRW Automotive Engineering Manager, Rainbird Extensive entrepreneurial experience MS (MIT), PhD (USC)

### Derek DeScioli (VP, Supply Chain)

Alpha Technologies (Solar Group) 3 years – China BS, MS (MIT)

\*Soliant's team has 215 years of engineering and 110 years of sales and marketing experience

\*\*Soliant's core technical team has worked together for 10+ years at NASA's Jet Propulsion Lab

## Investors (\$3B)

RockPort Capital

Chuck McDermott

#### Nth Power

Tim Woodwood

Trinity Ventures Fred Wang

Rincon Ventures Jim Andelman

Leader Ventures Patrick Gordon

### Solar America Initiative Partners

U.S. Dept. of Energy Sandia National Lab Spectrolab/Boeing MIT SunEdison



## Demand for Solar is Highly Elastic when Commercial System Paybacks are < 5 Years

- And yet:
  - Solar today is too expensive <u>with</u> extensive government incentives
  - Existing silicon-based modules are technology-limited
    - Maximum silicon efficiencies are limited and not able to generate enough energy/\$ cost to reach grid parity
  - Many solutions focus on a subset of the problem, not lowest energy costs
    - Can't address system and installation costs (half of total system costs)
    - Thin-film: has lower costs BUT lower energy yield



The solution: Soliant leverages proven, highly efficient & effective technologies to overcome existing limitations



## Soliant: 500x Concentrator in a Familiar Rooftop Platform



- Soliant's concentrating module:
  - Features a compact, low-profile, lightweight design
    - Tracks the sun to maximize energy output
      - Intra-module tracking is compact, proven, and eliminates wind flutter found in ground-mounted applications
  - Uses existing racks and components for standard commercial rooftop installation
  - Designed for 25-year reliability using proven components, and is suitable for automated manufacturing and testing

## Highest Energy Density = Lowest Cost of Energy from the Same Footprint

- More electricity delivered from the same roof footprint equates to significant economic benefits for customers and partners
  - Commercial customers:
    - Higher ROI
    - Cheaper electricity
  - Installers:
    - Cost savings fewer modules to install
    - Better profits
  - PPA Providers:
    - More power, more revenue from the same rooftop
    - Greater capital efficiency



## Soliant's Path to Grid Parity: Maximizing Energy Output while Minimizing Total System Costs





## **Our Target: Commercial Rooftops Through Existing Sales Network**

 Soliant will deliver low cost solar electricity to commercial customers – through existing sales channels



"Ultimately, PV industry will exhibit multiple commodity categories with suppliers exploiting diversified product designs for different applications."

- Department of Energy, 2007

## Investing in Solar's "Third Wave"





EV = Earnings Value (debt + equity)

## Financials: First Revenue in 2009 and Positive Net Income by 2010

| \$ in 1000's      | 2008           | 2009           | 2010         | 2011    | 2012    |
|-------------------|----------------|----------------|--------------|---------|---------|
| TOTAL REVENUE     | -              | 2,190          | 45,618       | 98,878  | 127,067 |
| Gross profit      |                | 314            | 11,454       | 29,777  | 43,420  |
| Gross margin      |                | 14%            | 25%          | 30%     | 34%     |
| Operating Expense | 5,713          | 7,865          | 10,948       | 23,731  | 30,496  |
| DOE income        | 935            | 1,787          | 850          | -       | -       |
| Cash from Ops     | <u>(4,778)</u> | <u>(5,764)</u> | <u>1,356</u> | 6,046   | 12,924  |
| Capital Expense   | (1835)         | (3,523)        | (2,381)      | (2,102) | (1,834) |
| Headcount         | 25             | 35             | 48           | 89      | 110     |





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