

Market Profile

Sector: Renewable Energy

Industry: Thin Film Solar

Trading Symbol OTCBB: XSNX.OB

Market Cap: (As of July 1, 2010, approx. \$25mm)

Share Price: (As of July 1, 2010, \$0.12)

Fiscal Year: September

52 Week High-Low: \$0.09- \$0.27

Shares Outstanding: 208,484,641

CEO: Mr. Tom Djokovich

COO: Mr. Joseph Grimes

CTO: Mr. Robert Wendt

Corporate Contact

65 Enterprise Aliso Viejo, CA 92656 T: 949-330-8060 F: 949-266-5823

Investor Relations 888-797-4527

Beckerman Media Relations cbrozek@beckermanpr.com t: 201-465-8002

Sign up for our email newsletter at <u>www.xsunx.com</u> and receive regular company updates. **XsunX, Inc.**, an established solar technology company, is developing a new hybrid manufacturing solution to produce high performance thin-film CIGS solar cells. These CIGS solar cells may soon offer a non-toxic, high-efficiency and lowest-cost alternative to the use of silicon solar cells currently used to manufacture nearly 80% of all solar modules manufactured world wide.



Our CIGSolarTM solution offers the potential to revolutionize the solar industry with the highest yield CIGS manufacturing technology available in the market today that combines robust state-of-the-art magnetic media manufacturing technologies derived from the hard disc (HD) media industry with proprietary thin film solar manufacturing processes.

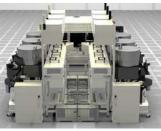
CIGSolarTM Cell

XsunX Technology Advantage

Our efforts are focused on the combination of high performance Copper Indium Gallium (di) Selenide (CIGS) evaporation manufacturing processes with state-of-the-art highly reliable, high output hard disc (HD) manufacturing technologies. We have found that HD technology provides precise process controls which can increase manufacturing output, lead to improved cell efficiency and production yields, and significantly lower the costs for the production of CIGS thin film solar cells.

This innovative approach bridges the gap between inexpensive thin-film and high efficiency silicon wafer technologies to produce a new breed of solar cells combining the best attributes of each technology. The mass production of individual, high performance solar cells – like solar building blocks – we believe will allow solar power to finally compete effectively against other sources of electrical energy by driving costs to less than \$1 per watt.

technology.



CIGSolarTM System Concept

Markets & Applications: Solar Building Blocks Tapping a World of Opportunities

High efficiency CIGSolarTM cells provide an immense opportunity to service multiple existing market segments. These high efficiency solar cells may soon become the solar building blocks for a wide variety of applications including:

• **Replacing Existing Silicon Cells**: A virtual drop in replacement for costly silicon solar cells. This is a vast market opportunity to replace aging



• Utility Scale Solar Fields: The modular building block format of CIGSolarTM cells can be tailored to deliver the needs of any size solar farm or application. The constraints of monolithic thin film technology no longer limit panel size.

• **BIPV Products**: High performance thin film CIGSolarTM cells can be designed into an array of building products including roofing materials, building facades, and glass.

• **Residential Markets**: Unlike other lower performance thin film solutions, high performance CIGSolarTM modules may

deliver the energy density necessary to make residential applications economical.

XsunX Differentiation – Eliminating the Variables

Current techniques for the production of CIGS thin films do not leverage small area, high throughput, production technologies which allow for the precise control of thin film properties. Development and production of CIGS, and many other thin films, have focused on the use of large area substrates or continuous moving roll-to-roll deposition methods. While CIGS holds the record for best thin film cell performance at nearly 20% in smaller area devices, scaling these laboratory results to large area devices have proved costly and difficult, resulting in much lower product efficiencies. Quality is sacrificed for quantity and the net results are products that deliver only fractions of the CIGS potential.

By reducing process variation and defects to the solar cell that have occurred when manufacturing processes have been scaled to large areas XsunX believes that the capability to directly transfer laboratory results and processes, or to improve and optimize processes in smaller areas, will allow commercial scale production to achieve or maintain improvements to the physical properties and efficiencies of the CIGS cell.

Using small substrates, the US National Renewable Energy Laboratories routinely achieves high efficiencies for CIGS with 19.9% peaks. Common sense then dictates that if you already have a process in place that is delivering high efficiency results you should then focus development of a method to put the process to work making millions of high performance solar cells per year per system.

Our revolutionary method combines the higher cell efficiencies that can be achieved through small area (about 5" squares) processing techniques with the high rate processing techniques developed within the hard disc media industry. We believe that

So What Has Held CIGS Back From Market Dominance?

- Inability of manufacturers to transfer laboratory results to large area processing
- All efforts have focused on large area processing or continuous moving substrates
- All efforts to date have left nearly 100% of the potential performance behind
- Primary cause are pinholes and defects to the solar cell structure caused by inability to control large area process and contamination

through the successful combination of these techniques, overall factory yields (total watts of production per day) will be increased thereby resulting in lower production costs while still delivering the full energy and low cost potential that CIGS based devices can offer.

Not New Science - Proven Formats & Manufacturing Techniques from Compatible Industries

XsunX thin film CIGS technologists and manufacturing experts have begun working jointly with Intevac, Inc., a leading producer of manufacturing equipment utilized in the hard disc market, to create a unique and proprietary process of coupling small area deposition (approximately 5X5 inch squares), material control, and material transport technologies from the disk drive industry for use in the production of thin film CIGS solar cells.



Modular Efficient Design

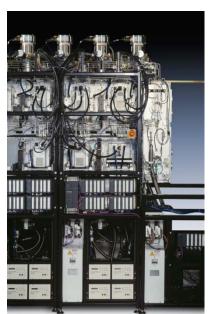
XsunX Executive Summary

We are adapting sophisticated high rate production tools from the disk drive industry with well known process knowledge from the CIGS and thin film industry. By maintaining a relatively small deposition area, we believe we can reduce a significant challenge that has faced the CIGS industry in the past: maintaining cell performance while scaling production. XsunX believes that this approach can potentially revolutionize the solar industry. Our staff experience includes nearly 15 years of thin film and CIGS experience in successful technology development, equipment design, and production of several million square feet CIGS products in a commercial production setting. Our Chief Technology Officer, Mr. Robert Wendt, has worked side by side with leading researchers at NREL and in fact shares an R&D 100 award with NREL staff for efforts related to CIGS technology development.

<u>XsunX CIGSolarTM - Leveraging Existing Technologies and Developing Partnerships to</u> <u>Minimize Risk and Expedite Time-to-Market</u>

We are working to complete an entirely new and proprietary manufacturing process that delivers high rate, high efficiency, and low cost thin film CIGS solar cell manufacturing solutions to produce low cost CIGS products. We call our new technology CIGSolar^{Im} and these systems will initially produce 125mm format (about 5" squares) solar cells, eventually scaling to 156mm and 210mm formats (about 6" and 8" squares). It is the ability of our system design to achieve exceptional per hour production rates that we believe will provide superior commercial opportunities. Our CIGSolarTM cells will be manufactured on stainless steel foil and are similar in size to silicon solar cells used in nearly 80% of all solar modules manufactured today. System features and advantages include:

- Performance: CIGSolarTM system architecture is derived from proven hard disc media deposition systems that account for the production of over 600 million disks per year – equivalent to nearly 1.8 GWp per year if this output were solar cells.
- **Factory Efficient and Flexible**: Small system footprint allows for increased Megawatt (MW) production per factory square foot. A 100MW line could be installed in the same space required for a 25MW thin film amorphous silicon production line. This represents a marketable advantage for CIGSolarTM.
- **Multi-Industry Solution**: A CIGSolarTM system, an innovative solution which can produce just solar cells or complete solar modules, offers opportunities for manufacturers seeking:
 - To provide a low cost per watt drop in replacement for Poly-Si or c-Si silicon wafers to a large group of existing solar module assemblers
 - BIPV products that require the use of small or flexible solar cells that can be adapted for use in a multitude of different shaped and sized solar BIPV products
- Low Per Watt Costs: XsunX has estimated that based on only 12% efficiency, far from the near 20% potential of CIGS, the per watt factory productions cost for solar modules could approach \$.80 cents per watt. This provides near silicon efficiencies at significantly lower cost.



Proven High Rate Systems

Revenue Generation Phase: Licensing & JV Manufacturing

The Company is adapting to evolving market conditions in the solar industry that are producing significant global demand for next generation manufacturing infrastructure to service growth stemming from unprecedented adoption of renewable energy standards by governments globally.

Executing a business model popularized by the semiconductor and electronics industries, we are focused on the development of this breakthrough solar manufacturing technology, and will license this proprietary technology to create joint venture business agreements employing the use of our CIGSolarTM technology. We believe that this approach allows for a high degree of flexibility and continued innovation while leveraging the full value of existing markets developed by our joint venture partners.

Although we focus on the development of solar technology and products, we are not a systems or a machine manufacturer. We work with select experts who have established and seasoned reputations, and can provide the necessary equipment delivery and support services to our JV manufacturing partners.

Over the next two years we plan to market and establish JV manufacturing relationships with entities in each of the American, European, and Asian regions. Our plans are to generate revenues through licensing fees and manufacturing royalties based on the production volumes.

Key Personnel & Biographical Information

Tom M. Djokovich, Chief Executive Officer

An experienced professional, Mr. Djokovich leads XsunX's business and solar technologies development efforts. Mr. Djokovich provides XsunX with over 6 years of thin film solar development experience and 30 years of executive management and entrepreneurial experience managing growth and innovation in both the high-tech and building industries. He is a veteran manager of publicly held corporations and has successfully attracted tens of millions of dollars in capital investments for business development. Mr. Djokovich's other duties include management of securities compliance, internal controls, and public relations for XsunX. He also serves on XsunX's Board of Directors.

Mr. Joseph Grimes, President & Chief Operating Officer

Mr. Grimes brings to XsunX more than ten years direct experience in thin-film technology and manufacturing. He was most recently Vice President, Defense Solutions, for Envisage Technology Company, where he directed and managed the defense group business development process, acquisition strategies and vision for next generation applications. His direct experience in thin-film technology came with Applied Magnetics Corporation as manager for thin-film prototype assembly. Mr. Grimes holds a Bachelor's degree in business economics and environmental studies, and a Master's in computer modeling and operation research applications from the University of California at Santa Barbara.

2008: Total World Market 5.95 GW

• 83% or 4.9 GW in Crystalline Wafers

2009: Global Glut Occurs

2009: US Launches Solar Incentives

2009: China Initiated "Golden Plan"

- Not significant in 2008
- 2 GW by 2012
- 20 GW by 2020

2009: India Sets Solar Mission

- Not significant in 2008
- 1 GW by 2012
- 100 GW by 2030

Tremendous Growth in 2010

• Doubling by 2012





XsunX Executive Summary

Mr. Robert Wendt, Chief Technology Officer

Mr. Wendt holds a B.S. and M.S. in Metallurgical Engineering and Material Science from the Colorado School of Mines. His responsibility encompasses technical specification of the facilities, equipment, and manufacturing processes for XsunX. Prior to joining XsunX, Mr. Wendt was Vice President of Sales, Product Development, and Engineering at Global Solar Energy. At Global Solar, Mr. Wendt has led and directed several areas including copper indium gallium diselenide (CIGS) technology development, equipment design and integration, facilities design and construction, engineering, production, and operations.

Previously, Mr. Wendt was at ITN with responsibility for the development of thin-film deposition technologies, thin-film PV, and development of charge controller/battery systems for portable solar cell powered systems. Prior to joining ITN, Mr. Wendt spent eight years with Lockheed Marietta Astronautics, Denver Division. While in this position, Mr. Wendt was program manager/principal investigator on over 20 material-based programs. During 1994/1995, Mr. Wendt was the technical lead for thin-film PV research at the Denver Division.



Mr. Marcus M. Padgett, Senior Quality & Reliability Engineer

Mr. Padgett leads the XsunX quality and reliability initiatives in product design, technology demonstration, process development, and operations. He has over 25 years experience in new product and process quality planning, control, and improvement, and in product reliability testing and validation. Mr. Padgett has consulted nationwide in statistical methods and quality improvement for 14 years in numerous industries, and has extensive experience in statistical design and analysis of experiments, process control, and yield improvement. Mr. Padgett holds a B.A. degree from Yale University, and a Master of Science in Industrial Technology from Eastern Michigan University.



"In conclusion, over the long-term future, NanoMarkets believes that CIGS is a leading candidate for the future of PV. The CIGS' value proposition offers the high efficiencies of c-Si combined with the benefits associated with TFPV and will likely take hold in the long run."

NanoMarkets, LC Report January 2009

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