Department of Energy

Renewable Trade Mission

Company profile

Applied Materials:

Applied Materials' strategy is to accelerate grid parity photovoltaic (PV) production by decreasing customer time to market, lowering production and installation costs, and offering solutions that enable customers to scale faster than the competition. With a fully-integrated production line, it is much easier to control direct material and operational costs. Applied Materials' solution is the only solution that is designed around the 5.7m2 substrate which is 4X the size of the largest substrates used today. Scaling to this size can help drive lower production costs. In addition, because of this large form factor, Applied can significantly reduce the balance of systems costs. Because an installation takes less panels, uses less cables, less clips, and requires shorter install time, the overall cost of the system that uses SunFab modules can be reduced to industry leading levels.

The Thin Film SunFab lines and wafer based solutions targets businesses that want to set up PV module manufacturing facilities in the region.

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Calera :

To reverse or even to slow the global warming trend of the last century will require enormous reduction in the emissions of carbon dioxide and other green house gasses. Carbon dioxide is the GHG which has received the most attention and investment. The Carbon Capture and Sequestration (CCS) technologies most often discussed – Biological Sequestration or Geological Sequestration – require very costly investment of first separating CO2 from flue gases and then finding a long-term solution to store CO2.

Calera has developed a novel approach for CO2 capture and sequestration in a permanent mineral form. Calera process utilizes flue gas from power plants, cement plants, foundries and other large point sources as feedstock for production of carbonate mineral forms to be used as cements and aggregates for making concrete. The carbonate materials produced are forms of limestone, containing morphologies that provide for cementicious properties comparable to conventional portland cement. The resultant product is a premix for cement, which has the permanent structural integrity and stability of the limestone which forms 10% of the earth's crust. Calera products can be used as a cement or a SCM (supplementary cementicious material) as part of a concrete blend.

A significant advantage of this particular mineralogical sequestration process is that it does not require the separation of CO_2 from the flue gas, which is a highly cost and energy intensive step. Further, the process draws its minerals from water sources, including seawater. The result is a demineralized seawater stream that may be used as more efficient feedstock for desalination processes.

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Cherokee Investment Partners:

1) An energy pay-back fund supporting uncommercialized technologies
2) A distribution debt fund to channel attractive, uncommercialized and carbon-reducing technologies to organizations suitable under prescribed underwriting criteria.
3) A green building vertical fund integrating uncommercialized, carbon-reducing technologies into brownfield redevelopment projects.
4) Distressed and environmentally impaired opportunistic real estate investment in the US.

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Asemblon Inc. :

The Company has developed a method of storing , releasing and transporting hydrogen in an organic carrier at ambient temperatures and pressures. This product has worldwide implications in the energy sector. The Company needs financing participants, participants in pilot operations and ultimate licenscing partners. Currently there are no competitors for this specific type of organic carrier. The major advvantage is that the liguid can be used to replace fossil fuels in transportation and be used for peaking capability in electrical grids. The technology is price competitive with fossil fuels.

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Piper Jaffray & Co.

Piper Jaffray is a middle markets investment bank. We specialize in emerging growth companies and clean technologies and renewable energy. We believe that we are a leading investment bank in the renewable technology sector. On the trade mission we are looking to meet companies and investors that are interested in investing in next generation energy technologies.

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Plextronics, Inc.

Plextronics, Inc. is an international technology company that specializes in printed solar, lighting and other electronics. Our conductive polymer inks can be used with traditional printing processes so that, ultimately, anywhere that you can print ink, you can have lighting, power and circuitry.

Our focus is on organic solar cell and OLED (Organic Light Emitting Diode) lighting, specifically the conductive inks and process technologies that enable those and other similar applications. Our technology will enable the mass production of printed devices, such as low-cost organic solar cells and high-efficiency lighting.

Plextronics is leading the way through the development of its materials and process technology. Plextronics is now making this technology available to accelerate commercialization of printed solar power. Printed solar power — where printed inks replace silicon — enables new uses of solar power in portable and off-grid products, as well as the ultimate goal of low-cost, on-grid energy.

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Serious Materials, Inc.

QuietRock line of high acoustic and radio frequency drywall, windows, doors and accessory products – achieves very high levels of sound dampening in buildings where drywall (or sometimes known as “dry lining” or “sheet rock”) are used for interior demising walls. Our products provide easy, reliable and cost-effective noise reduction in commercial and residential construction. These products reduce materials needed on a project and support denser, more sustainable construction.

ThermaProof line of super insulating windows and doors - represent a many-fold improvement over today’s dual-pane, aluminum-frame commercial windows, and can potentially make windows as good as walls. These windows can deliver up to R-20 (u=0.05) at center-of-glass, along with improved comfort and architectural freedom. 39% of all energy and CO2 is tied to building operations, of which 38% is used for heating and cooling. Super-efficient R-8 to R-14 windows can reduce that energy cost up to 40%, resulting in a 5% savings in national energy use.

EcoRock line of virtually zero carbon emission and zero embodied energy drywall is a revolutionary new product line replacing old line gypsum drywall. No heaters or dryers are used in production, nor calcining processes – resulting in zero CO2. EcoRock also uses 85% post-industrial recycled content and is fully recyclable. A plant built for EcoRock is a true ‘no-smokestack’ plant, and burns no fossil fuels.

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SHEC Enegy Inc.

The world's most efficient solar thermal technology for application in:

1) Power Generation
2) Alternative fuel production
3) Process heating
4) Desalination

SHEC's technology has a significant efficiency advantage allowing solar systems to generate more heat at a more cost effective level, lowering costs and improving reliability.

SHEC has developed proprietary mirror manufacturing technology that is 30 times faster than other technologies, making very large scale deployment practical.

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SEMPRIUS. INC

Semprius is developing unique, patented technology that allows transfer printing of high performance semiconductors onto virtually any surface, including glass, flexible or rigid plastic, metal or other semiconductors.

Semprius technology offers an unparalleled ability to create novel devices and systems by liberating the semiconductor from its traditional rigid substrate. Very tiny circuits are efficiently and cost effectively transferred by the hundreds, and even thousands at a time.

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