



THIN EDGE OF THE WEDGE

The 2005 SEFI Selection A Showcase of Successful Companies Creating the Climate *for* Change

Can our economy profit now from actions to prevent unpredictable climate change?

Do we have the technology today to grow our economies cleanly over the next 50 years while stabilising greenhouse gas emissions at current levels?

The 2005 SEFI Selection shows clearly the answer to both questions is a definite “yes”.

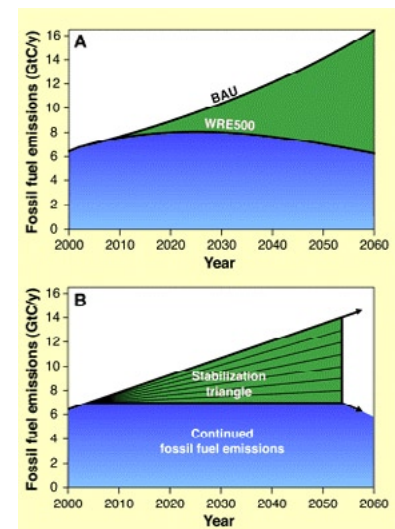
These companies are the “thin edge of the wedge” that can lever an economic and industrial evolution to profitably deploy low-carbon energy.

The Sustainable Energy Finance Initiative is proud to present the 2005 SEFI Selection of successful enterprises demonstrating an innovative approach to clean energy finance. These companies mobilized commercial capital, created wealth for shareholders, and contributed substantial environmental and social benefits. They each represent thin edges of stabilization wedges – clean energy sectors – positioned to reduce the growth in greenhouse gases emissions while fostering economic growth, employment, and community prosperity.

The Stabilization Wedge

A triangular “stabilization wedge” can help visualise the difference in CO₂ emissions between the currently predicted ‘business as usual’ path and the flattened path from the present date to the year 2054, a total of nearly 200 billion tons of carbon. Developed by Prof. Robert Socolow* from Princeton University, this “stabilization triangle” can be divided into seven triangles—or “wedges”—of equal area. Each wedge represents a technology option that could mitigate 1 billion tons of carbon emissions per year by 2054.

A portfolio of technologies now exists that could meet the world’s energy needs over the next 50 years, while avoiding the predicted tripling of preindustrial atmospheric CO₂ concentration. Every element in this portfolio has passed beyond the laboratory bench and demonstration project phase; and some such as windpower are already at a full industrial scale.



* <http://www.princeton.edu/~cmil/resources/stabwedge.htm>



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ORMAT
www.ormat.com

Over the past four decades, ORMAT has combined ecology and economy in ways that make business sense. ORMAT develops, manufactures, and markets innovative renewable energy power systems in modular power plants with a capacity of 200 kW to 130 MW. ORMAT® Energy Converter (OEC) units

generate electricity using locally available heat sources, including geothermal energy (steam and hot water), recovered energy generation, biomass and solar energy. The Company, which holds more than 70 US patents, was listed on the NYSE in November 2004 with a market capitalization of \$660 million. ORMAT has supplied renewable energy plants to many electric utilities around the world and also owns and operates more than 300 MW on its own behalf. It employs 700 people, with sales in 2004 of US\$ 220 million. Company innovations include the first private geothermal power plant in Kenya - the Olkaria III project. The first

phase, including drilling of five appraisal wells and the construction of a 13.6 MW plant, is owned by ORMAT and entirely financed from ORMAT's own funds (100% equity). Since then, a further 4 wells have been drilled for the main plant with electricity sold to Kenya Power & Lighting Company. The plant is in commercial operation since August 2000.

ORMAT Industries Ltd also operates a high-tech incubator, from which other successful companies such as Orbotech and OPTI Canada have emerged.



Primary Energy
www.primaryenergy.com

Primary Energy Ventures, based in Oak Brook, Illinois, develops, owns and operates energy recycling projects serving industrial, commercial and institutional customers throughout North America. Energy recycling involves the capture and conversion of otherwise wasted energy streams to heat and power and

the deployment of combined heat and power facilities that displace boiler fuel by harnessing by-product heat of various industrial processes including electric generation, steel, chemical, and petroleum refining. The company manages and has ownership interests in fourteen energy recycling projects in five states with the capacity to generate roughly 900 MW of electricity and almost 4 million pounds per hour of steam. The majority owner of Primary Energy Ventures is American Securities Capital Partners, LLC (ASCP), a New York private equity firm (www.american-securities.com). ASCP is the merchant-banking arm of American

Securities, L.P., which was founded in 1947. In August of 2005, Primary Energy raised more than \$600 million through proceeds from the Canadian initial public offering of its wholly owned Canadian subsidiary Primary Energy Recycling Corporation (US \$237 million), and the creation of a new senior credit facility (US \$150 million) in conjunction with a new term loan (US \$150 million). These funds are being used to replace several capital and operating leases, various project financings and an existing loan associated with Primary Energy Venture's purchase of the 14 energy recycling projects.



Horizon Wind Energy
www.horizonwind.com

Horizon Wind Energy, formerly Zilkha Renewable Energy, is a Houston-based

developer of wind projects. Currently Horizon is operating and developing projects in more than a dozen US states and is part of the fastest growing sector of the energy industry. Wind energy capacity has grown by more than 20% in 2003 and 2004 and is projected to account for nearly 50,000 megawatts of capacity by the end of 2005. In the past two years, Horizon has built or announced construction of more than

800 megawatts of wind power and generated more than 77 million megawatt-hours of clean electricity for US homes, offices and factories. Horizon Wind Energy has recently been acquired by Goldman Sachs, an investment banking firm.



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World Energy Alternatives
www.worldenergy.net

As a US national supplier of biodiesel, biodiesel blends and biofuels, World Energy operates the largest, most comprehensive biodiesel distribution network in the U.S. With multiple production facilities and distribution points across the country, World Energy is the only biodiesel company licensed to sell blended fuel in all its service territory. Biodiesel fuel, which is a blend of vege-

table-based fuel with standard petroleum diesel fuel, offers a unique fuel alternative that burns cleaner with lower emissions, causes less wear-and-tear on the vehicle's engine and fuel system, reduces the environmental impact and lessens the dependence on foreign oil. The National Biodiesel Board estimated that in 2003, approximately 25 million gallons of biodiesel were sold in the U.S.. However, this number appears to be just a small fraction of overall potential. The Energy Department recently concluded that the U.S. is producing enough oil from plants and animal fats to increase volume to 1.6 billion gallons annually.

World Energy supplies blended B20 (a diesel blend of 20% biodiesel) to

top vehicle fleets nationwide, including branches of the U.S. Military, school bus fleets, the U.S. Postal Service, state-based transportation departments, and private utilities. World Energy supplies biodiesel and biodiesel blends to more fleets and distributors than all of suppliers in the bioenergy market, combined. The Company can custom blend fuel, provide guaranteed national delivery and handle all tax, storage and hauling logistics.

Established in 1998, World Energy is privately held and headquartered in Chelsea, Massachusetts, with sales offices in California and Texas. Since its foundation, the company has experienced annual growth rates of over 50% every year.



Renewable Energy Corporation
www.rec-pv.no

Renewable Energy Corporation (REC) is a major global player in the solar energy industry. From their headquarters and technology center at Høvik outside the Norwegian capital of Oslo, the company operates subsidiaries on three continents and aims to become the most cost-efficient solar energy company in the world.

As the major shareholder in ScanWafer, REC has a proven track record of

reducing costs through management and technical innovation. With three factories in Norway producing 110 MW of PV cells at an efficiency rate of 14%, ScanWafer has become one of the largest and most cost-efficient suppliers of multicrystalline silicon wafers for the PV industry.

REC has also established Solar Grade Silicon (SGS), a joint venture with Advanced Silicon Materials LLC (ASiMI), a wholly owned subsidiary of the Japanese industrial group Komatsu. Based in the USA, SGS intends to become the world's most profitable supplier of solar grade silicon, the raw material for all solar crystalline silicon modules. With SGS, REC is the first and only solar energy company with its own production of silicon cell feedstock.

REC is also active at the downstream end of the value chain with emphasis on SolEnergy, a company operating with a concession to install and maintain 50,000 solar home systems in rural parts of South Africa. By focusing on technical innovation, economies of scale and creating synergies along the value chain, REC is offering high performing PV components and systems at continuously decreasing prices. REC has a capitalisation of approximately \$400 million with a majority of shares held by nine institutional investors. In the most recent quarter, revenues grew 29% to over \$60 million. The company plans a stock market offering in 2006.