

## New York Energy & Environmental Funders'

**Project** - NYEEF

**Date** - 12 October 2007

**Time** - 8:00am - 10:00am

**Venue** - Torys LLP

**Location** - 237 Park Ave. (Enter at 466 Lexington Ave, between 45th & 46th Streets)

## Offshore Infrastructure Associates, Inc.: Generating Electricity in the Tropics with Deep, Cold Ocean Water

### Sector Expert: Pierre duPont from TwoSigma Investments, LLC

#### Regional Co-Host:

Environmental Business Association of New York State, Inc.

#### Hosting Sponsor:

Torys LLP

*The Center for Economic and Environmental Partnership, Inc., will sponsor its next New York Energy & Environmental Funders' meeting on Friday October 12th, 2007.*

Ocean Thermal Energy Conversion (OTEC) extracts electrical energy from the warm surface waters of the tropical ocean and the cold deep water that exists wherever the ocean depth exceeds 3000 feet. (The average depth of the world's oceans is 12,000 feet, providing a huge renewable energy resource.) At the cost of some \$500 million, OTEC was proven in the 1970s and early 1980s, and an installation functioned successfully at the Natural Energy Laboratory of Hawaii Authority during the 1990's.

Now, **Offshore Infrastructure Associates, Inc. (OIA)** is attempting to develop a major OTEC project in Puerto Rico. This has only become feasible recently, because of rising oil prices. OTEC is expensive, costing in the neighborhood of \$8 million for the initial unit and declining to near \$5 million per MW by the fifth unit (this compares to estimates of \$3.5 million per MW for advanced coal technology). The heat exchangers, as well as the floating structures on which they reside, are very large and have to be able to survive severe ocean conditions. (We're talking hurricanes here, since the best conditions are in the Tropics.) So while OTEC is uneconomic when oil is below \$40 a barrel, it makes sense with oil at \$80 a barrel and likely heading higher. As an additional advantage, OTEC is the only base load power technology that not only does not consume water but can readily be designed to produce large amounts of fresh water.

The market is immense, covering most populated areas between 20 degrees North and 20 degrees south of the Equator. Many thousands of units may one day be spread over the tropical oceans of the world, supplying electricity directly by cable to land and indirectly through OTEC powered factories producing ammonia, hydrogen, methanol and aluminum on plant ships located on the open oceans far from land. One hundred of these units could supply 15% of all of the US Gulf Coast States while two hundred and fifty could supply all of Mexico's electrical demand. The Department of Defense could use them for power and water for its overseas bases, many of which are located on tropical islands.

**Tom Plocek**, founder and president of Offshore Infrastructure Associates, Inc (OIA), and **José Martí**, Partner and Director, will discuss the technology and the company's two related commercialization projects. The first is to complete, through the preliminary design stage, a 15 MW (gross) OTEC Power Module (10-11 MW net output) using the largest existing GE ammonia turbine and both commercially available compact heat exchangers as well as advanced heat exchangers of OIA design. This effort is expected to be completed by the end of 2007 and can be used as the power module in 10 MW (net) land based plants as well as 40MW to 100 MW (net) floating OTEC Plants. Negotiations are underway with a major defense contractor to integrate OIA technology into its own OTEC program.

**Sector Expert: Pierre S. duPont, Two Sigma Investments**, will present an overview of ocean energy technologies, based on background work recently carried out at Two Sigma to inform their investment strategy in this area, and then discuss and evaluate OIA's technology and the company's investment outlook.

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New York City, 20th Floor

202-662-2700

**Security:** Tell the personnel at the security desk in the ground floor lobby that you are attending the Center for Economic and Environmental Partnership, Inc. meeting at Torys LLP. You will need personal ID. They will issue a pass.

**Cost:** \$50 if you pre-register.

Cash or checks (payable to CEEP) accepted. Must register or cancel by 4pm the previous day. No shows will be invoiced.

\$60 if you pay at the door.

See below for Annual Registration opportunities and other important conditions.

#### **Agenda:**

8:00 to 8:20 – Networking with Members

8:30 to 9:00 – Presentation by **Thomas J. Plocek, founder and president of Offshore**

**Infrastructure Associates, Inc (OIA), and José Martí, Partner and Director**

9:00 to 9:30 – Presentation by Sector Expert: **Pierre S. duPont** Two Sigma Investments

9:30 to 10:00 – Discussion and Networking

Thank you, and we look forward to seeing you at the next NY Funders meeting.

If you have any questions about registration or need more information about the program, please contact Gelvin Stevenson at [gelvin@optonline.net](mailto:gelvin@optonline.net).

#### **BIOGRAPHICAL SKETCHES:**

**Thomas J. Plocek** is founder and president of Offshore Infrastructure Associates, Inc (OIA), a company aiming at commercially developing Ocean Thermal Energy Conversion in Puerto Rico. Prior to founding OIA, he served in senior executive positions in the aroma and fragrance industry for over 30 years, most recently as Chairman of the Board of IFF Hangzhou and Vice President and Director of Aroma Chemical Strategic Planning for International Flavors and Fragrances. Earlier in his career Mr. Plocek was President and CEO of ChemFleur, Inc. a company which built and operated aroma chemical plants in Patillas, Puerto Rico and New Jersey for over 25 years, and which was the major world supplier of several important fragrance ingredients. He has served on a number of National and International Industry Boards of Directors and has several patents and publications in aroma chemicals. He has a BS degree in chemistry from Rutgers University College in New Jersey and is a graduate of the Owner/ President Management Program at Harvard University.

**José A. Martí, PE, DEE**, is a partner in OIA and the principal of Technical Consulting Group, a firm providing environmental engineering and planning services to industrial, government and commercial clients. He received a BSCE from UPR Mayaguez, where he also pursued graduate studies in sanitary and structural engineering. Later, he received an MSCE with major in environmental engineering from Northeastern University in Boston. Mr. Martí is also a Diplomate of the American Academy of Environmental Engineers, is licensed to practice engineering in Puerto Rico and Massachusetts, and as a professional planner in Puerto Rico.

**Pierre S. duPont, Two Sigma Investments**, graduated from Princeton University (B.Sc.E), and started his career at Bolt, Beranek & Newman as a research scientist and software engineer in computational linguistics, parallel processing, and statistical data analysis.

In 1990, he was the founding Marketing Director of Division Limited, a real-time computer graphics hardware and virtual prototyping software company in England, which went public and was later acquired by HP and PTC. In 1996, Pierre was asked by the World Economic Forum to run WELCOM, a video-conferencing service for the Forum's members, which was subsequently sold. In 1999 he co-founded the Zephyr Document Exchange, a secure online repository for managing collaborations for M&A and IPO transaction, which was bought in 2000 by Intralinks, a financial services integrator.

In the early 2000s, Pierre built a consulting practice helping large companies achieve rapid growth through embracing externally-sourced technology for their own products ([www.psdupont.com](http://www.psdupont.com) and [www.yet2.com](http://www.yet2.com)). Clients included multinational chemicals, electronics, materials, and life-sciences companies based in the US and Japan, such as GE, P&G, Fuji Film, Kraft, DuPont, Canon, Ricoh, Johns Manville and SC Johnson. For these clients he identified early-stage partners with immediately-relevant products and technologies, and guided the creation of partnership, joint ventures and strategic investments, all directed towards helping clients achieve rapid product launches and medium-term growth at a scale relevant to very large companies.

Pierre has now launched a new investment vehicle within Two Sigma Investments. Initial targets are venture capital, private equity and occasional late-stage investments in clean or 'efficient' energy, including production, distribution, storage and utilization.

Pierre is also a partner in an investment-banking firm ([www.occompartners.com](http://www.occompartners.com)) which provides advice to the owners/executives of privately-held middle-market companies on growth financings, recapitalization and exit strategies.

### **Advisory Board**

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John Cusack, Gifford Park Associates

Ira Rubenstein, Environmental Business Association of New York State, Inc.

Gelvin Stevenson, Ph.D., Center for Economic and Environmental Partnership, Inc.

### **NYE&EF Pricing Policy**

1. Cost, with pre-registration up to 4pm the day before the meeting: \$50.
2. No-shows will be invoiced.
3. Cancellations allowed until 4pm the day before the meeting.
4. Cost, with registration at the door the day of the meeting: \$60.
5. All paid registrants will be emailed any information made available electronically for that meeting.
6. An Annual Registration for NYE&EF can be purchased for \$400. It will provide admittance to all regularly scheduled meetings held during a 12-month period.
7. Annual registrants will be emailed any information made available electronically for any of the regularly scheduled meetings covered by their annual registration.

Formed in October 2001, New York Energy & Environmental Funders (NYE&EF) is a joint service of Investors Circle, the Energy & Environmental Capital Network (ECN), the Environmental Business Association of New York State, Inc. (EBA/NYS) and Investors Circle. NYE&EF provides networking, information, and other services to investors interested in energy and environmental companies. NYE&EF activities are produced by the Center for Economic and Environmental Partnership, Inc. (CEEP) in furtherance of its educational mission.