

HELPING CLIENTS MAKE IMPORTANT DECISIONS



Development and Financing Support for Renewable Fuel and Power Generation Technologies

Concerns over the impact of global climate change, energy security issues, and ever increasing energy prices have created a supporting environment and the rapid development of renewable energy technologies and projects. The breadth of renewable fuel and power generation technologies continues to grow while the complexity of market, regulatory, financing, and tax structuring increases. Together these factors make navigation of the development process more challenging than ever.

Pace understands these challenges and offers a comprehensive suite of advisory services geared toward bringing renewable energy projects to market. Our decades of experience supporting energy infrastructure development and broad expertise across engineering, finance, energy and environmental markets, regulatory, and asset management allow us to offer valuable support to the developers of and investors in renewable energy projects.

OUR CAPABILITIES

- Due Diligence and Valuation
- Owner's and Independent Engineering
- Technology Evaluation
- Project Structuring and Financing Support
- Equity and Debt Solicitation
- Power and REC Market Forecasting
- Asset Management
- Fuel Supply Planning and Feedstock Assessment



The pace of technological innovation is accelerating in response to the global demand for carbon friendly, renewable energy sources. Pace is uniquely positioned to assist clients in evaluating their options as current or prospective consumers, producers or investors in renewable energy resources. Our combination of technical, institutional, market, and financial expertise provides us the integrated knowledge to assist clients in evaluating multiple technologies, applications, and project investment or contractual structures to effectively distinguish among and harness emerging solar, wind, biomass, biofuels, hydro, and geothermal resources currently or potentially under development to meet this demand.

Pace has actively assisted in the development of over 60,000 MW of generation capacity in the last ten years. During that time we have supported over \$50 billion in successful power & fuel transactions and due diligence projects.

OUR EXPERTISE

Pace provides support to clients on many types of renewable generation technologies..

- Solar Generating Technologies
- Wind Generation
- Biomass Generation
- Biofuels
- Hydroelectric Generation
- Geothermal
- Clean Technologies

“Pace provides complete development and financial structuring services to support the commercialization of renewable energy projects.”

Client: Biomass Energy LLC



Commercial Offshore Wind Generation Advisory Services to Municipal Utilities

CLIENT NEED

To address state mandates to include renewable energy in their supply mix, Northeastern and Mid-Atlantic municipal utilities are considering proposals from offshore wind developers and must consider the financial impact of such long-term purchase contracts on their rate base, as compared to other supply options.

OUR ROLE IN PROJECT

On behalf of three municipal utility clients, Pace performed separate comprehensive commercial evaluations of offshore wind proposals that had emerged victorious from formal utility Request for Proposal processes. Pace reviewed all aspects of these bids to determine the likelihood of commercial development success; exposure to development and construction risks including schedule and cost escalation; all-in cost and impact on customer rates; and comparison of alternative supply options including onshore wind projects, alternative generation projects and market power purchases.

In all three cases, the proposed offshore wind proposals were determined to not offer the lowest cost available supply option, even when considering renewable energy credits and the prospect of greenhouse gas regulations. Pace determined target prices for the wind developers and proposal revisions were received, some with highly creative means of attempting to provide power that met the target price. The doors remain open to the offshore wind power developers as they continue to wrestle with the significant challenges of permitting, turbine availability and escalating capital costs. In parallel, Pace continues to pursue alternative renewable and conventional power options for our clients.

**PACE HAS SUPPORTED
PROJECTS IN MORE
THAN 40 COUNTRIES ON
SIX CONTINENTS**



Peanut Oil Biodiesel Refinery Development Support

CLIENT NEED

A small, undercapitalized entrepreneur sought project development and financial structuring support for a biodiesel refinery in the early stages of development that utilized genetically engineered peanuts from Central America as feedstock.

OUR ROLE IN PROJECT

Pace deployed a project team to assess the current status of development of the biodiesel refinery, evaluate resource needs, and prepare a plan to achieve financial close and commercial operation. Pace supplemented the entrepreneur's development team with technical, financial, and logistics expertise that accelerated the project development efforts.

Pace's engineers evaluated technology and vendor options for the biodiesel refinery, maintained mass balances, and estimated cycle performance. Further, Pace maintained updated capital and operating cost estimates in support of the project pro forma.

Pace evaluated the feedstock yield expectations and developed a model and cost estimate for the transportation logistics of the feedstock from Central America to the refinery site on the U.S. Gulf Coast.

Pace's financial services group led the due diligence of the partially developed project, evaluated funding requirements to complete development, and solicited debt and equity funding sources. Additionally, Pace developed and maintained a finance-quality project pro forma.



Financial Structuring of a 55 Million Gallon Ethanol Facility

CLIENT NEED

A project developer required financing and development assistance for a 55 million gallon ethanol facility.

OUR ROLE IN PROJECT

Pace acted as lead financial advisor in the arrangement of financing for the development, construction, and operation of a 55 million gallon per year corn-to-ethanol manufacturing plant in California. In this role, Pace successfully arranged for the private placement of \$60 million in equity and \$55 million in debt. This effort included the complex structuring of multiple classes of equity and mezzanine equity capital to maximize returns for the developer. In addition, Pace negotiated financing terms with the debt provider on behalf of the developer. Pace's efforts further extended to project development advisory services on EPC, fuel, off-take, and hedging contracts to obtain the most attractive terms from the financial markets.

Development of Natural Gas-Fueled Transit Facilities

CLIENT NEED

This Northeastern metropolitan transit agency required assistance in the structured development and implementation of a “clean fuel” natural gas-fueled transit bus program to include on-site fueling, storage, and maintenance facilities.

OUR ROLE IN PROJECT

Pace’s assistance to this client was and remains comprehensive in nature. Commencing with the initial evaluations and comparisons of conventional transit fuels with alternative fuels, Pace provided real-world experience that yielded a realistic perspective of the options available. Once the decision to utilize natural gas had been made, Pace developed a detailed technical specification for the construction of a natural gas fueling facility, provided procurement documentation for use by the client in soliciting bids for the requisite technological goods & services, and assisted in the evaluation of bids and subsequent contracting for the construction of the fueling facility. Pace also served as owner’s engineer to guide the project, including interactions with local governmental (permitting) and federal transit entities (funding) through construction and into operations.

Employing a similar approach, Pace then developed and implemented an approved plan, based upon a unique combination of experience and innovation, for the extensive upgrade of all facilities to permit the safe and efficient storage and maintenance of this transit bus fleet. This integrated natural gas fueling, storage, and maintenance program continues to serve as a successful example of the proper conceptualization, adoption, and integration of clean fuels technology in the field of public transit.

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Development of a 200MW Biomass Generation Facility

CLIENT NEED

A project developer required financing and development assistance for a 200MW biomass generation facility.

OUR ROLE IN PROJECT

Pace was retained in the very early stages of this project by the project developer to act as lead financial, engineering, and fuel advisor for the largest wood-fired biomass development project in North America. In these roles, Pace has worked closely with and on behalf of the lead developer on multiple fronts including:

- Developing a detailed 1.4 million ton per year wood-waste fuel plan, which has been reviewed and commended by two independent fuel consultants hired by the lead senior debt provider
- Engaged multiple EPC contractors on behalf of the developer and is in the process of negotiating final cost, delivery, and LD terms with the leading EPC candidate
- Engaged and negotiated indicative terms with the lead bank lender
- Worked in concert with the developer and the developer's attorneys to create a detailed information memorandum which will be used to solicit tax equity investment
- Managing the power off-take and financial hedge negotiation process
- Led discussions with O&M service providers, insurance providers, and state REC compliance offices

Pace expects this project to reach financial close in the fourth quarter of 2008 and will remain involved as owner's advisor and asset manager to ensure its commercial success.



Landfill Gas-to-Energy Contracts

CLIENT NEED

One of the largest operators of landfills in the U.S. required assistance in business development associated with landfill gas (LFG) to energy opportunities.

OUR ROLE IN PROJECT

Pace assesses opportunities for the sale of electrical capacity and energy, fuel, and/or renewable energy credits (REC) originating from the landfill operations of our client from New England to California. Pace provides market pricing and market assessments for proposed projects, supports new or renegotiated terms for expiring power contracts as needed, and seeks to maximize asset value by leveraging evolving state renewable portfolio standards and carbon markets. Pace has deep technical experience with LFG power generation, including patents associated with dual fuel flow control and fuel co-firing. Hence, Pace is able to assess market opportunities, define and develop fuel or power infrastructure to convert LFG to saleable products and facilitate energy and financial market transactions to capture maximum value.

Solar Development Strategy for Energy Company

CLIENT NEED

As part of a low carbon growth strategy, a diverse international energy and utility client retained Pace to craft a business strategy and plan for a comprehensive, national solar development business.

OUR ROLE IN PROJECT

Pace developed a two-pronged strategy supporting our client's desire to position as a major developer of grid-scale Concentrating Solar Power assets, as well as a distributed Photovoltaic generation-based retail energy service business. For both components of the solar business strategy Pace evaluated generation technology options, industry trends, power and environmental market characteristics, and regulatory conditions.

The commercial strategy for a grid scale concentrating solar power (CSP) development business targeted large capacity and modular moderate capacity unit sizes in south western locations. Pace evaluated technology alternatives, their manufacturer's performance, cost, configuration, size, and utility requirements. Further, Pace incorporated the regulatory environment and regional market characteristics at the utility level to further refine the project penetration strategy and economics.

In support of the Photovoltaic (PV) based "Eastern Strategy," Pace targeted locations with sufficient potential for a retail clean energy services provider to achieve scale economies across the targeted markets tapping large customers with replicable operational environments. Within this context, Pace performed similar assessments of technology options, power and environmental market conditions, and State and Federal regulatory incentives. At this time, the business plan is under review for funding.



Renewable Generation Studies for Federal Agency

CLIENT NEED

A Federal Agency sought to investigate the feasibility of installing renewable generating facilities on underutilized parcels of land that it controls.

OUR ROLE IN PROJECT

Pace performed comprehensive assessments of the technical and economic feasibility of deploying solar generating facilities on large, federally-owned land areas in Hawaii, Northern California, Virginia, Florida, Kentucky, and Rhode Island.

The technical component of these studies focused on the viability of efficiently siting clean and renewable generation technologies, including wind, solar, biomass, biofuels, and coal gasification facilities, at these locations based on local resources (wind speed, solar intensity, biofuel feedstock, etc.), site conditions, and access to required infrastructure.

The commercial component of these studies consisted of developing a project pro forma to evaluate the financial performance of the most viable renewable energy generation opportunities. This involved developing technology based estimates for capital cost, operating costs and plant performance. Key financial drivers for renewable energy projects also include valuing the electrical capacity and energy or fuel production, the renewable energy credit (REC), as well as Federal and State tax incentives. Pace is a recognized leader in providing such energy market intelligence and forecasts. Ultimately, confirmed project opportunities were considered for their potential attractiveness to third-party developers.

