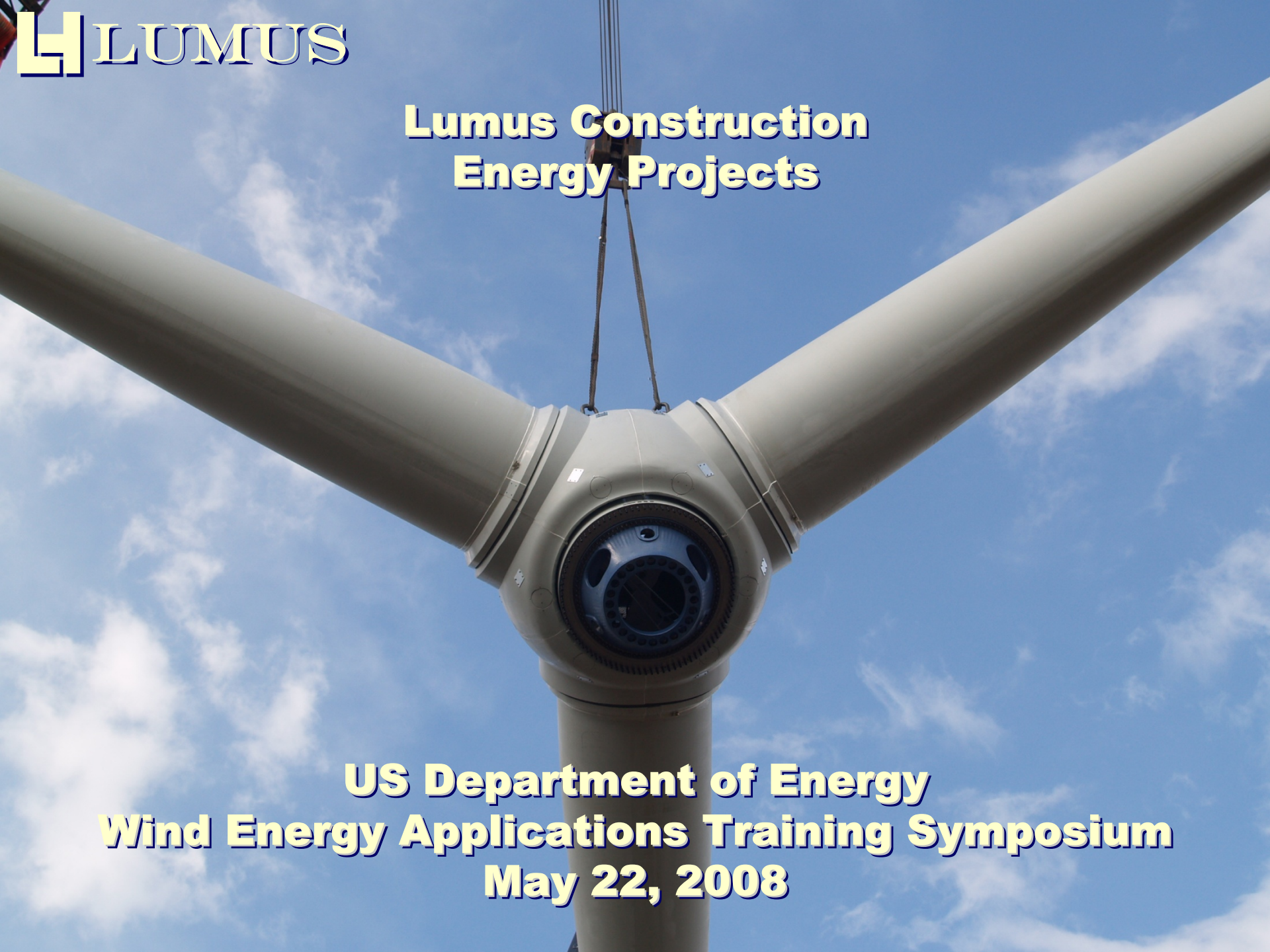
LUMUS
Lumus Construction
Energy Projects
US Department of Energy
Wind Energy Applications Training Symposium
May 22, 2008

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Agenda

- About Lumus and our General Experience
- Lumus' Renewable Energy Experience
- Key Members of Our Project Team
- Our role in the energy business
- Contracting with Lumus

Overview of Lumus Construction

Lumus Construction

- Designs, constructs, or renovates public and commercial facilities
- Is backed by over five generations of expertise
- Has completed over 400 federal contracts
- Has won numerous awards including the “Prime Contractor of the Year”, the SBA’s “Award of Excellence”, and several safety awards.
- With nearly 200 employees, Lumus can self perform most major trades including carpentry, mechanical and electrical work.

Market Segments

- Historic Restoration
- Military & Homeland Security
- Healthcare & Science
- Facilities Management
- Renewable Energy

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Historic Restoration

Federal Hall, New York City

Bunker Hill Monument, Boston

USS Constitution, Charlestown, MA

Train Station, Harper's Ferry, WV

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Historic Restoration

Vanderbilt Mansion, Hyde Park, NY

John Adams Estate, Quincy, MA

Longfellow House, Cambridge, MA

Olana Mist System, NY

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Historic Restoration – Hamilton Grange

- Alexander Hamilton's home in Harlem, NY was in need of a new setting, where it could be given the prominence that it deserves.
- Unfortunately, the new site is several blocks away with a church in its path.
- Using oak beams for support and hydraulic jacks to do the heavy lifting, the house is being hoisted over the church and then driven to its new residence.

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Historic Restoration – Hamilton Grange

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Historic Restoration – Hamilton Grange

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Military Projects

Navy MACC, Newport & Groton

Navy Housing, Maine

US Air Force Hangar

Natick Army Labs

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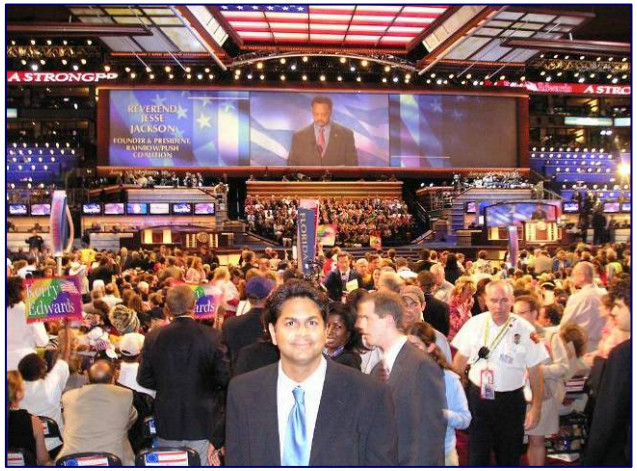
Homeland Security Projects

US Coast Guard IDIQ Contract

FEMA Emergency Bunker

FAA Control Towers



Secret Service Infrastructure, DNC

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Facilities Management

GSA Federal Buildings

US Postal Service

Springfield Federal Courthouse

Providence Federal Courthouse

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Healthcare & Science

Hospital Power Systems

Nashua Fish Hatchery

Hospital Construction

Science Research Laboratories

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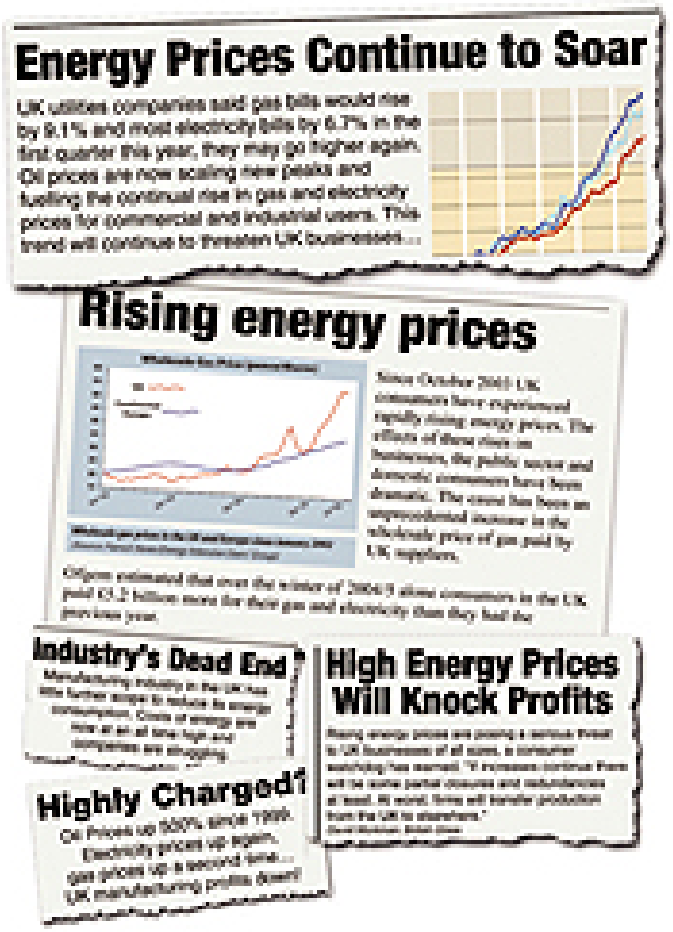
Why are we working on Renewable Energy?



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Why are we working on Renewable Energy?

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Renewable Energy Projects By Lumus

- **Lumus has focused on renewable energy and energy efficiency projects since 2000**
- **Lumus first teamed with others for wind construction projects and wind feasibility studies in 2004**
- **Today energy projects represent over 50% of our total business**
- **We are focused on the following types of energy projects:**
  - Geothermal HVAC
  - Energy Efficiency (Lighting & HVAC Controls)
  - Solar
  - Fuel Cells
  - Wind Turbine
- **We have over 12 MW of renewable energy projects currently under construction.**

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Geothermal HVAC Projects

Project Place, Boston

USCG Geothermal Installation

- Utilizes constant underground temperature to reduce HVAC energy demand
- Systems are installed with shallow wells <400 feet or deep wells >1200 feet
- Lumus has installed geothermal systems for the US Coast Guard at the Massachusetts Military Reservation, the Project Place Transitional Home, historic homes, and other locations.

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Energy Efficiency Projects

Williams Federal Building Lighting

HVAC Controls Upgrades

- New light fixtures are more efficient than conventional fixtures and significantly reduce electricity demand. These projects are simple to execute with ample utility rebates available.
- Computerized controls monitor temperatures for more efficient heating and cooling.

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Solar Power Projects

WGBH (Channel 2) Boston

Williams Building Solar

- Photovoltaic solar panels convert the sun's energy directly into electricity.
- Lumus has installed photovoltaic systems at the offices of WGBH TV offices in Brighton, MA; at the Williams Federal Building in Boston, MA; and for other federal clients.
- Solar projects can be funded with rebates, renewable energy certificates, & tax incentives

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Fuel Cell Projects

Cabela's Sporting Goods

Windham Hospital, CT

- A fuel cell is an electrochemical device that combines hydrogen and oxygen to produce electricity and hot water. These systems can be installed using natural gas.
- Clean, quiet and highly efficient.
- Lumus has designed and installed 2 MW of fuel cells for Cabela's and Windham Hospital.

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Wind Power Projects

Princeton Municipal Light Dept

US Air Force - MMR

- Lumus currently has 9 MW of wind power under contract, with many more projects expected in the near future.
- Princeton Municipal Light Department's two 1.5MW turbines will generate 40% of the town's electrical needs.
- Otis Air Force Base plans to install one 1.5MW turbine to power their water treatment plant - is a "two-for".
- We're working on community projects in Fairhaven, MA; for the Commonwealth of Massachusetts at the Cape Cod Community College and for the University of Maine.


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Wind Projects Are Involved

- **Turbine Selection is Critical**
  - One Size Does Not Fit All
  - Wind Resources
  - Size & Height
  - Budget
  - Reliability
  - Service
- **Beyond Turbine Selection:**
  - Wind Studies & Permitting
  - Financial Modelling
  - Transportation & Logistics
  - Rigging
  - Crane Selection
  - Electrical Interconnection
- **Like all projects with the federal government, planning is key**
- **Having a great team is also critical**

Key Members of Our Wind Team

- President: Sumul Shah
  - Sumul manages all contractual and financial matters, including investor relations. Sumul is 5th generation in construction with degrees in engineering from Brown University and MIT. Lumus began 10 years ago with 5 employees.
- Project Manager: Joseph Currie
  - Joe is responsible for the overall management of wind projects. Joe has over 20 years experience in the management of electrical and energy projects.
- Project Manager: Bill Rogers
  - With his experience as construction manager for Interstate I-93 section of the “Big Dig” project in Boston, Bill manages site & foundation construction as well as logistics and rigging planning.
- Project Superintendent: Jean Cormier
  - Jean is a project supervisor with over 20 years of experience on federal and state projects.
- Electrical Project Superintendent: Ed Perry
  - Ed is responsible for supervision of the erection and system commissioning of the wind turbines. Ed has over 20 years of experience as a supervisor on electrical projects.

Our Role in the Energy Industry

LUMUS = innovation?

- Energy is everywhere
- New technology is important, but successful implementation is critical


Our Role in the Energy Industry Can be Compared to the Automobile Industry

The Energy Industry Can Be Viewed Similar to the Automobile Industry

- Innovation Through Implementation
  - Mass-production made the automobile accessible to all
  - Lumus has succeeded by focusing on quality production and new means & methods
  - We measure success by winning projects, but losing has allowed us to consistently improve our delivery methods.
- Being a better builder isn't the only way to innovate in this industry

The Energy Industry Can Be Viewed Similar to the Automobile Industry

- **The Automobile Industry offers more than just cars:**
  - Vehicle financing & leasing has made automobiles further accessible & affordable to all
  - Dealers offer one stop shopping
  - Well defined process already in place which greatly speeds up transaction time (and costs)

- **Similarly, Lumus offers more than just capital construction:**
  - Financing & Leasing services allows more projects to move forward
  - Lumus offers one stop shopping including financing & maintenance services.
  - Transaction times can be greatly reduced through a well established process

Our Services – One Stop

- ***Pre-Development*** – We provide state, local, and federal permitting. Lumus will conduct public outreach events to keep the community informed about the goals, benefits, and impact of the project
- ***Capital*** – We are responsible for arranging the financing of the project through debt and/or equity as required.
- ***Design and Equipment Selection*** – Lumus would be responsible for the complete design and selection of wind turbines.
- ***Construction*** – Would be performed by Lumus
- ***Operation and Maintenance Program*** – We provide a complete preventative maintenance program to ensure the long term health of the turbines.
- ***Insurance*** – All required insurance would be provided including business interruption insurance to ensure a steady stream of revenue from the project.
- ***Energy Credits*** – Lumus will manage all energy credits and tax incentives available for use on this project.

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Why Lumus?

- We have an experienced and talented team with a wide range of expertise.
- We have multiple wind projects on-going
- We have completed many significant and complex projects, including experience working at many federal government facilities
- Most of the project will be self-performed allowing for greater control and lower costs
- We have good working relations with turbine suppliers and other key vendors
- We are in the process of developing a wind turbine service center to provide quick response to keep the wind turbines turning.

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Contracting Methods

- **Design/ Bid/ Build**
- **Bid/ Design-Build**
  - Similar to MMR
- **Direct contract through the SBA 8(a) program**
  - Allows maximum flexibility under an “open book” contracting mechanism
- **Build-Own-Operate-Transfer**
  - Government agency leases land to Lumus
  - Lumus would provide the capital funds, install, own, and operate the wind turbines for a fixed period of time
  - In exchange Lumus enters into a long term power purchase agreement with the agency for the wind energy

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Benefits to Property Owner

- ***Predictable Power Costs*** – We are offering fixed 20 year rates, increasing at inflation which is significantly less than the projected rise in electric rates which are fuel cost driven.
- ***Double Credit Under EPACT***– On site wind generation doubles the credit that the agency gets for achieving renewable energy goals.
- ***Energy Costs Savings*** – Costs savings begin from the minute the turbine begins operation. With electricity rates expected to rise dramatically in the long term, the savings to government become even greater.
- ***No Rate Discrimination*** – Behind the meter generation from the wind turbine will reduce the number of kilowatt hours. Federal law (PURPA) requires this reduction to be at current rates for regular service from a utility
- ***Option to Buyout the Project*** – We would provide the government the option to buying the project in the future.
- ***Air Quality Improvements*** – The increased supply of clean electricity will displace existing fossil-fuel based electrical generation from the grid. This will contribute to improvements in regional air quality by reducing greenhouse gases: carbon dioxide, nitrous and sulfur oxides and particulates.

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Contact Information

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