

Case Studies – Successful Current Projects in the Northeast
Community Energy, Inc. Wind Power Project Development



Energy in the Northeast
Resource Adequacy & Reliability
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Community Energy, Inc. (CEI) Background

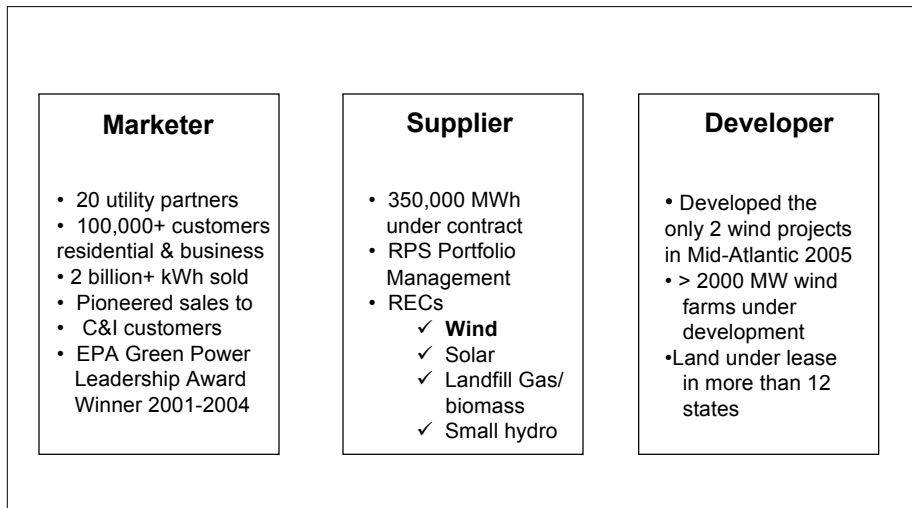
- Founded in 1999, by environmental leaders, headquartered in Wayne, PA
- Leader in U.S. wind energy sales – over 2 billion kilowatt-hours, 100,000 residential and business customers, and sales through 18 electric utilities or suppliers
- Sales responsible for over 250 MW of new wind projects where none existed before
- Development division building new wind projects to address customer demand – 31.5 MW built in 2005 and over 2,000 MW planned for next 5 years
- New England office in Madison, CT
- Recently purchased by Iberdrola, a Spain-based utility that is the world's leading owner and operator of renewable & wind energy projects. Community Energy remains a U.S.-based company.



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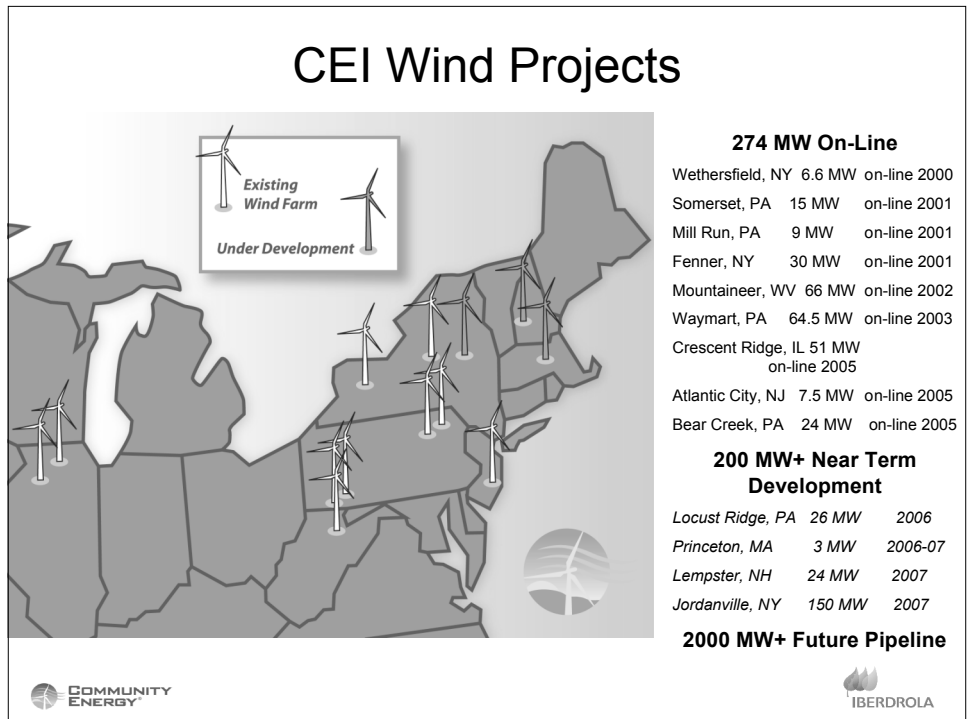
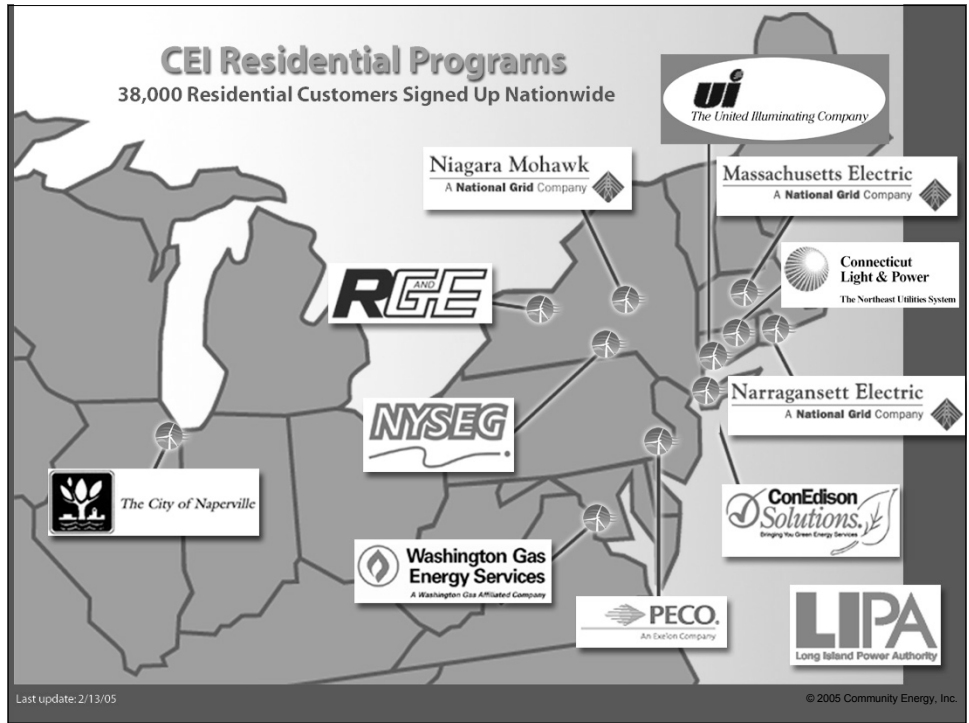


CEI Business Model: Harnessing Demand to Create New Supply



CEI Marketing – Large Customers





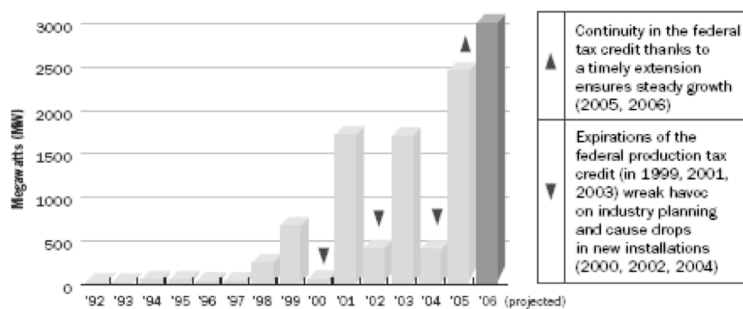
Wind Energy Overview

- Wind power is the fastest growing energy generation technology in the world
 - Costs have come down dramatically over last 20 years: US 40 cents/kWh in 1980 to 4-7 cents/kWh today
 - R&D advances, turbine size, manufacturing improvements
 - Large, established companies enter the business – GE, Siemens
 - Clean energy demand from consumers, utilities, governments skyrockets
 - Environmental & energy independence combined with economics

U.S. Windpower Growth

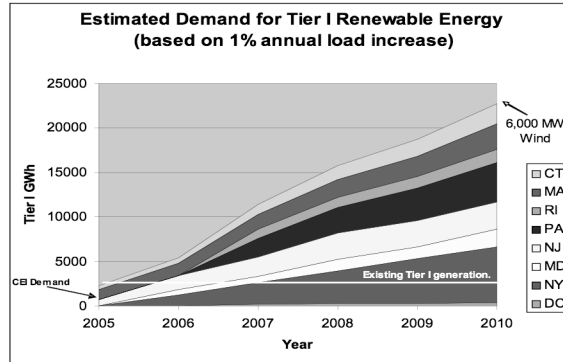
- U.S. wind installations have reached 10,000 MW
 - Equivalent to serving 2.5 million homes
 - 10x since 1985, and doubling since 2003
 - Still less than 1% of U.S. total generation

Annual Installed Wind Energy Capacity



Market Drivers in The Northeast U.S.

- RPS Demand Exceeds Supply
 - 6,000 MW/\$6+ Billion needed in eastern US by 2010, mostly wind
 - Long-term REC contracts may be available to satisfy demand



Case Studies – Success Stories

- Jersey Atlantic Wind Project (Atlantic City, NJ)
 - First in New Jersey, and a model for coastal and industrial sites
 - 7.5 MW project with 5 GE 1.5 MW turbines
 - \$12 million financing closed 9/05
 - ½ Commodity sold to ACUA; ½ Sold merchant to PJM
 - ¼ RECs sold into NYSERDA; ¾ RECs sold at retail



Case Studies – Success Stories

- Challenges:
 - Agreement with NJ Audubon: settlement including post-construction radar monitoring with some state funding; model for coastal development
 - Permitting – last minute re-permitting of foundations required to account for hurricane standards
- Positives:
 - Enthusiastic & willing host
 - Supportive state & local government



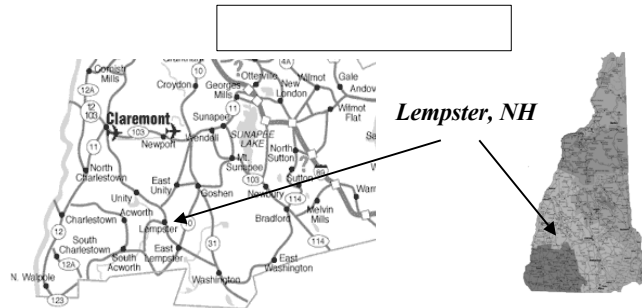
Case Studies – Success Stories

- Bear Creek Wind Farm, Bear Creek, PA
 - 24 MW Project, using 12 Gamesa G87 2 MW turbines
 - First use of 2 MW scale turbine in eastern U.S.
 - Partners in ownership include Babcock & Brown, Central Hudson
 - Long-term economic development now part of the picture: project was critical in getting Gamesa to invest \$85 million in new facility, 300 new jobs for PA



Case Study – Development in New England

- Lempster Mountain Wind Power Project, Lempster, NH
 - First major wind project proposed for New Hampshire
 - Proposed 24 MW Project, using 12 Gamesa G87 2 MW turbines
 - Working closely with Public Service New Hampshire on interconnection and power purchase



Case Study – Development in New England

- Lempster Project Challenges
 - Clearing the educational hurdle – battling mis-information and fear of the unknown
 - Very limited Town Government - no zoning or approval process
 - State Permitting for first wind project
 - NH Site Evaluation Committee - gray area under 30MW
 - Process more suitable to large fossil fuel or nuclear plants
 - Local “petition” process
 - Federal Permitting
 - Wildlife issues – US Fish & Wildlife “recommendations” become more like regulation
 - U.S. Army Corps of Engineers individual wetlands permitting – jurisdiction unclear, based on June 2006 Supreme Court decision
 - Developing Something “new” in New England & battles in surrounding states

Case Study – Development in New England

• Lempster Project – Example of Studies Performed

Performed	Possible in 2006 and 2007
<ul style="list-style-type: none">• Wildlife & Environment<ul style="list-style-type: none">– Breeding Bird Study, 2005– Raptor Migration Survey, 2005 & 2006– Bat Survey, 2005 & 2006– Radar Survey for Migratory Birds, 2006– Mammal Survey, 2006– Plant Survey, 2006– Phase 1 Environmental Survey, 2006• Historic Resources (in consultation with SHPO)<ul style="list-style-type: none">– Archaeological site survey– Historic viewshed survey• Visual Impact Survey<ul style="list-style-type: none">– Photosimulations, 2005 and 2006– Shadow Flicker Survey 2006• Communications Survey, 2006• Noise Assessment, 2005 and 2006	<ul style="list-style-type: none">• Wildlife & Environment<ul style="list-style-type: none">– Radar Survey – Spring 2007– Refinement/update to breeding bird study – Spring 2007– Birds – plan for post-construction monitoring and study• Noise Assessment<ul style="list-style-type: none">– Additional assessment of existing ambient noise conditions• Ice Throw<ul style="list-style-type: none">– Assessment of potential ice throw ranges

Case Study – Development in New England

• Lempster Project Challenges

- Opposition
 - NIM(S)BY – main opponents in Lempster are not full time residents
 - National and Regional Groups becoming very organized and effective – National Wind Watch, Industrial Wind Action Group, “Ridge Protectors” (VT)
 - “What to do if your community is *targeted*...”
 - “Promoters of *big wind* are unable to show even minimal benefit. The giant turbines do not reduce the use of other fuels -- such as coal and nuclear, let alone gasoline and heating oil...”
 - “We do not support the push for *industrial wind* power, seeing it as a destructive boondoggle that distracts people from the issues they think they are solving.”
 - Together, these groups work to oppose or delay everything at the local, state and federal level
 - Same issues showing up at other CEI projects, and other wind projects across the Northeast

Case Study – Development in New England



- Lempster Project Challenges
 - Timeline for commercial operation in 2007
 - December 31, 2007 – current federal tax credit expiration date
 - Turbine availability situation:
 - Good news/bad news: Iberdrola has Gamesa turbines, but project must fight for allocation with other projects in US and abroad
 - Interconnection – 9 months of non-winter construction time – decision needed ahead of permitting
 - Permitting – will approvals come with enough lead time for construction/equipment orders to commence in May/June 2007?

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Additional Resources:

www.lempsterwind.com

www.communityenergy.biz

U.S. Department of Energy
Wind Powering America
New England Wind Forum
www.eere.energy.gov/windandhydro/windpoweringamerica/newengland.asp

American Wind Energy Association
www.awea.org

National Renewable Energy Laboratory
www.nrel.gov/wind