

Fri 2/15/2013 3:35 PM

-----Original Message-----

**From:** Larry Goodman [mailto:larrygoodman4@gmail.com]

**Sent:** Friday, February 15, 2013 2:59 PM

**To:** Drew, Tim

**Subject:** Industrial Wind

Hi Tim,

Happy Friday!

With the possibility that Iberdrola may submit an application to the SEC for 37 four hundred fifty foot wind turbines overlooking Newfound Lake, I would like to submit the enclosed PP for "the file" on behalf of [www.nhwindwatch.org](http://www.nhwindwatch.org).

As always, I appreciate your time and help, Tim.

Have a great weekend.

Larry

PS. I lived in Manhattan for too long.....I didn't move to NH to be surrounded by 45 story structures again.

I know you can't comment but I couldn't resist adding that. The PP is factual unlike my more emotion based comment above.



# **Industrial Wind Power: NOT Right For New Hampshire's Mountain Ridges**

*Image of Newfound Lake (1.15.13) courtesy Gene Bank, Newfound Photography*

# New England's Changing Energy Market

The economic and environmental dynamics of New England's Power Market have evolved significantly over the past few years.

- De-regulation leading to competitive energy markets
- Aggressive Renewable policies: RPS Mandates, RGGI
- Marked decline in load demand since 2008 with growth expected to be flat throughout the next decade<sup>[1]</sup>.
- Improved energy efficiency, demand response, slowed economy, overall change in consumption patterns.

# Meeting New England's Renewable Mandates

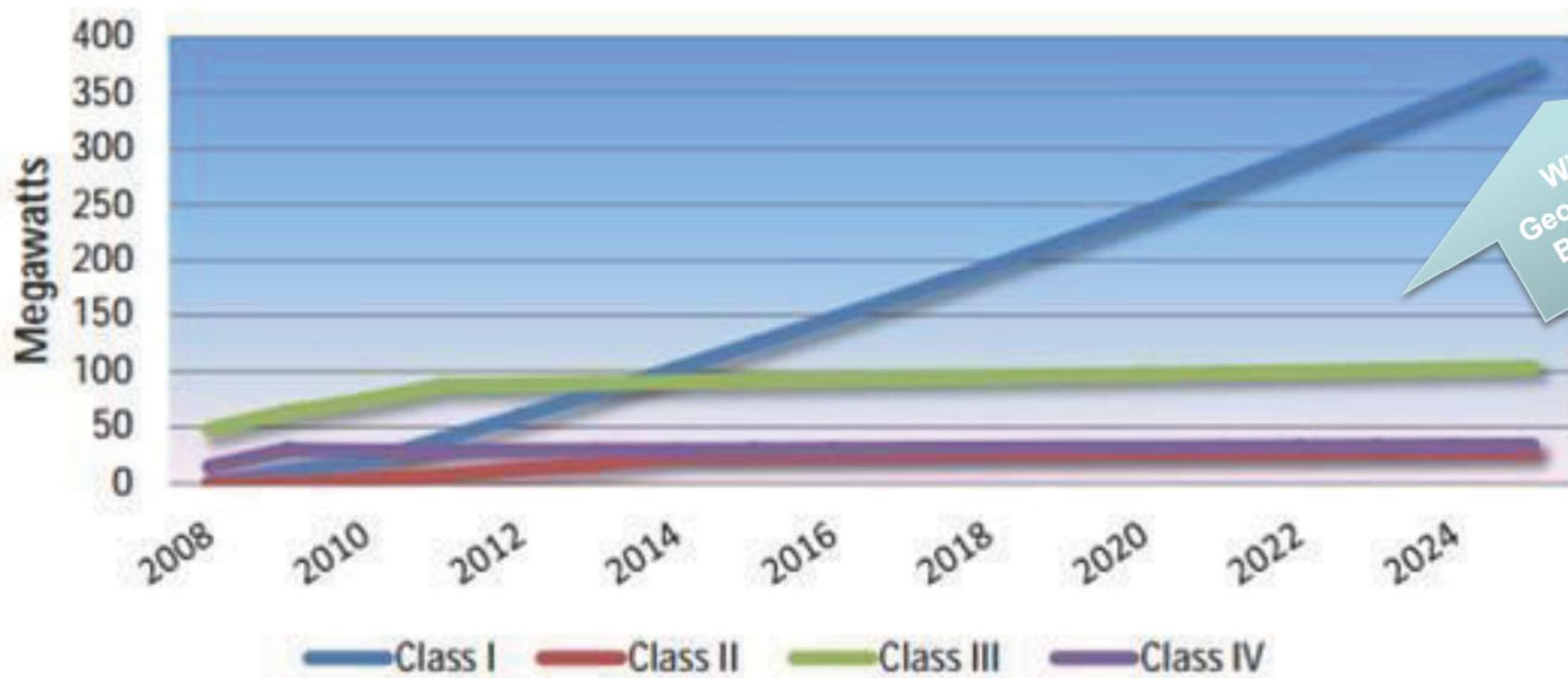
**Industrial wind  
represents 85% of  
the proposed  
generating capacity  
for all renewable  
energy projects in  
New England**



*Image: Rollins Wind – Lincoln Lakes region, Maine*

# Meeting NH's RPS Mandates

NH RPS Requirements 2008 to 2025



Wind,  
Geothermal,  
Biomass,  
etc

# NH's 25x25 Mandate (Class I)

Existing,  
approved  
projects

2025 Class I RPS  
obligation :

***ALREADY MET!***

Project	Megawatt Hours per year
Lempster Wind (24 MW)	63,072
Granite Reliable Wind (99 MW)	260,172
Groton Wind (48 MW)	126,144
Shiller Biomass (50)	320,000
Berlin Biopower (68MW)*	544,000
*under construction	Total
	1,313,388

***Most Class I RECs sold outside NH***

1.24 million  
MWh  
needed

*Assumes 10 million MWh RPS load in 2025; Class I of 12.4%*

# Wind Energy and Fossil Fuel Redundancy

“The drawback for wind is its reliability and intermittent nature...”

*Michael Skelton<sup>[2]</sup> PSNH- NH Sunday News- January 6, 2013*

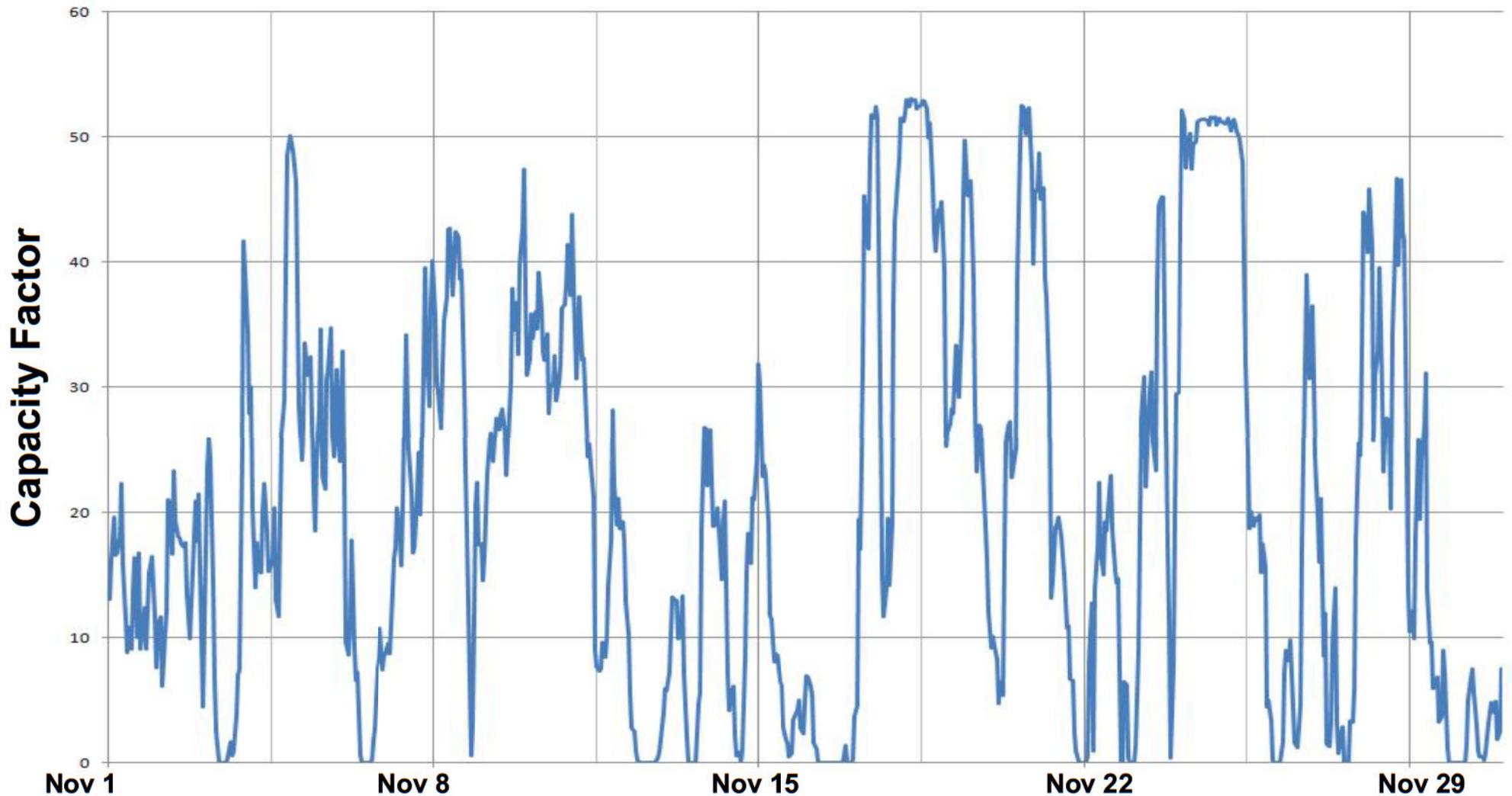
*What the US Department of Energy<sup>[3]</sup> says about wind energy:*

- Wind energy is being installed to generate, low-emissions energy, not to meet load growth requirements.
- Wind power cannot replace the need for many ‘capacity resources’ (power plants needed to meet peak load)
- Any capacity value for wind is “a bonus, but not a necessity”.

*What the 1<sup>st</sup> Circuit Court of Appeals says:*

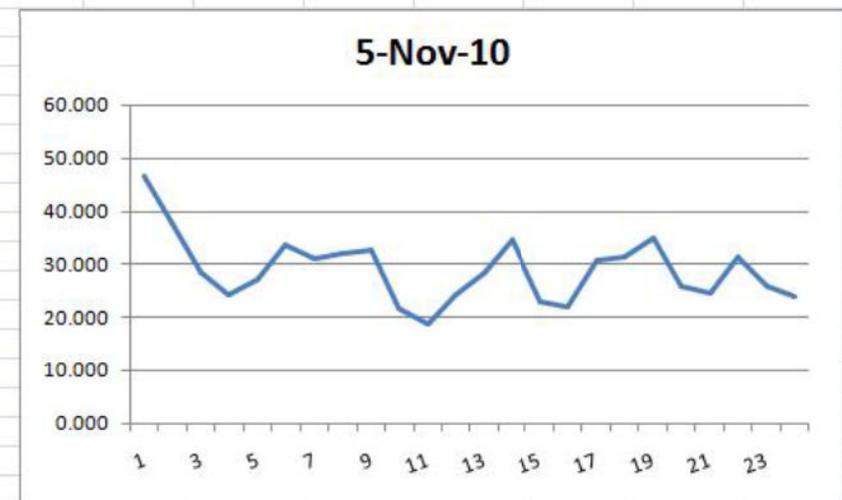
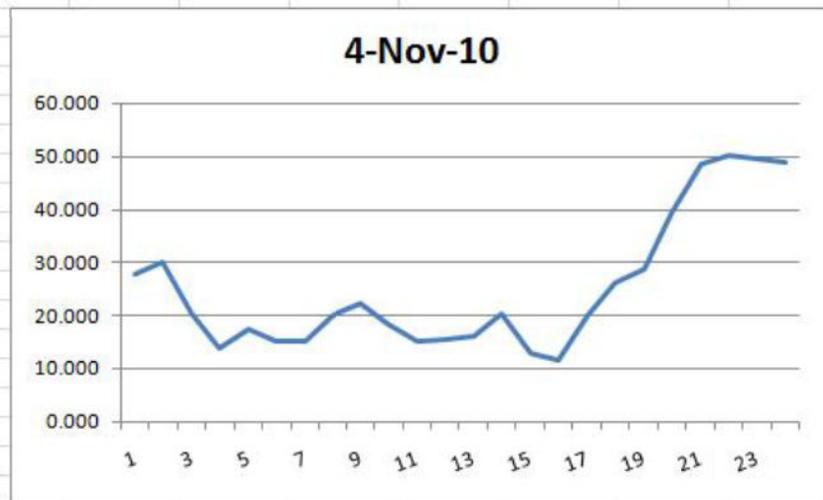
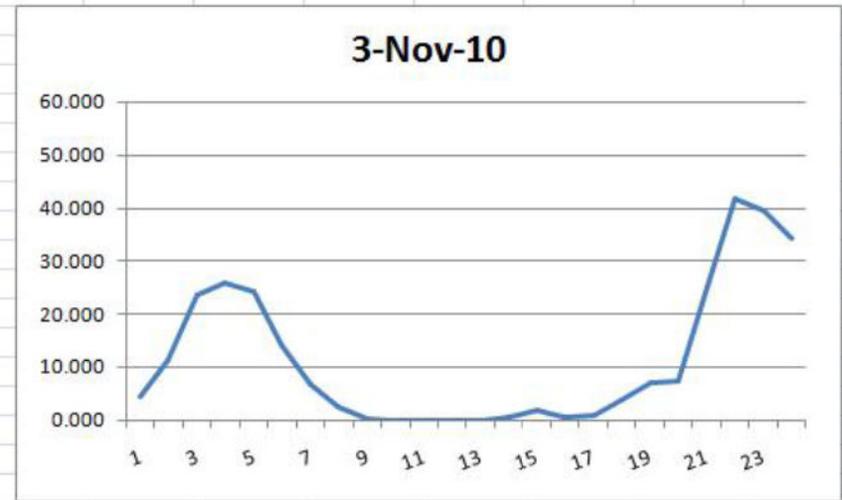
- Wind energy cannot serve as an alternative to baseload electricity without effective energy storage mechanisms <sup>[4]</sup>

# When the wind blows ...is it Usable?



Highly variable hourly production at Stetson I (57MW) wind plant in Maine

# Energy you can't rely on



# Environmentally Sensitive?

***...Let's just say,  
there are issues***

***“Wind turbine “farms” are  
devastating populations of  
rare birds and bats across the  
world, driving some to the  
point of extinction.” [5]***

***--Clive Humber-Zoologist Oxford University***



***Image: Kibby Mountain, 75-foot ledge cuts - Maine***

# Emission reductions?

New England can reduce CO<sub>2</sub> emissions by 25% with wind if [6]:

- 9,000 MW of wind were installed\*
- Over 4,000 miles of new transmission added (estimated cost \$11-15 billion)
- Fleet of existing capacity generation remains (limited retirements)
- Energy prices increased for wind

\*approx. 700 MW wind installed today in NE

**There are cheaper, more effective ways to lower emissions.**



# Wind turbines next door

*Ice, blade throw*

*Turbine collapse, fire*

*Shadow flicker*

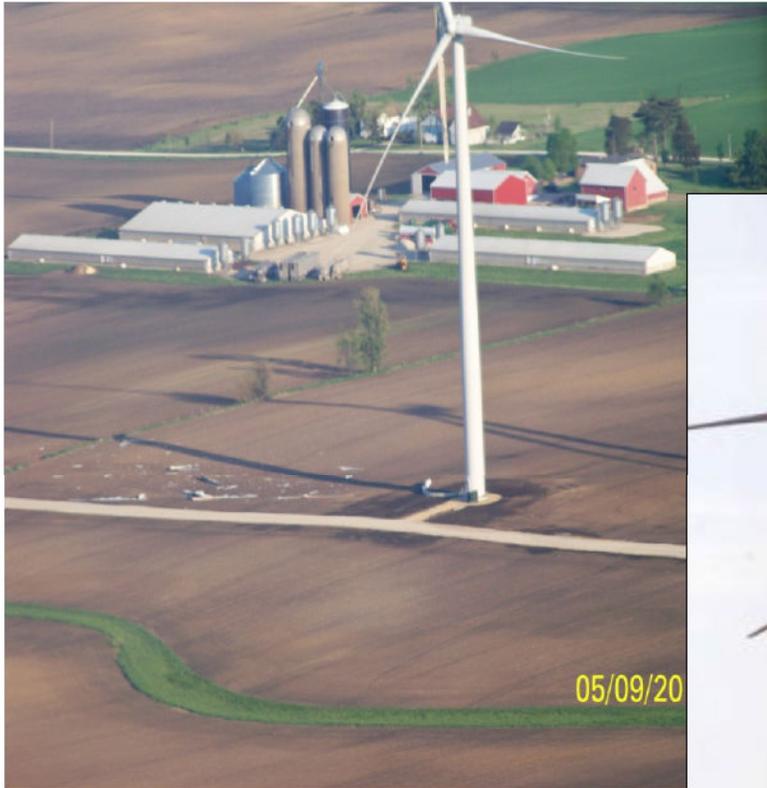
*Noise*

*Viewshed*

*Economics*

*...the impacts are real!*

# Ice/Blade throw – Fire Turbine collapse



# Shadow flicker

“In the evening during sun set, a flicker of light can be seen in my bedroom, computer room, living room, and family room. I am unable to rest, read books, or even watch television during this time. The shadow flicker creates headaches and eye pain. I am unable to remain in those rooms during shadow flicker hours.”

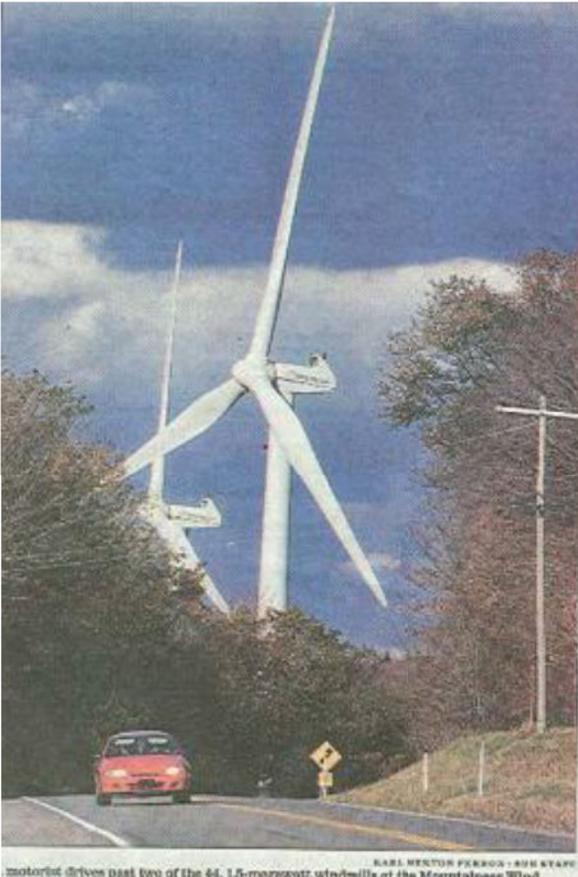
*Invenergy's New Sheldon (NY) wind - 75 GE 1.5 mw turbines standing 397 feet.*

# Noise

“It’s like living next to an airport”

*-- Lempster Wind participating landowner on tax abatement request<sup>[7]</sup>*

# Viewshed



**Aesthetics matter!**

# Impacts on property values

- **Studies not conclusive**

“There were very few transactions within a very close distance to the turbines, and also very limited sales of properties with views of turbines, so some caution must be used in interpreting these results.” [7]

*-- Matthew Magnusson, MBA, Impact of the Lempster Wind Power Project on Local Residential Property Values*

“...less than 10% of the sales transactions had any view of turbines; only 2.1% had a view rated greater than minor. The study is dominated by transactions where no influence [from the turbines] is reasonably likely.”[8]

*-- Albert L. Wilson PhD on to LBNL property value study that showed no turbines produced no negative impact on values*

- **Listening to those who know**

“Wind farms here will have a substantial effect on fair-market property values. If you eliminate even a few of the pool of potential buyers for a particular property, it hurts property sales and therefore values.”[9]

*-- Woody Miller, a realtor at Coldwell Bank and Old Mill Properties in Bristol, NH*

# Impacts on Tourism

- Tourism is the **#2** component of our state economy.

Meeting New England's renewable mandates means **thousands** of industrial wind turbines erected all along NH's most scenic ridgelines and over **4,000 miles of new high-voltage transmission lines.** [6]



*Groton Wind power lines along Tenney Mountain Hwy*

# Impacts on Job Creation

- “Billions of dollars have flooded the coffers of overseas firms while the evidence of permanent jobs here in the U.S. market is scarce.”

*--House Energy & Commerce Committee Report-January 2013*

- The Groton Wind project will receive a cash grant (approx \$30m) and promised 5 full-time employees\*.
- Brookfield's Granite Reliable project received a cash grant (\$62m) and promised 6 full-time employees\*.
- Groton Wind and Granite Reliable sell their energy and RECs out-of-State at contract prices well above wholesale market rates. Higher energy prices lead to slower economic growth and fewer jobs – *Is this good policy?*

*\*Job creation measured in full-time equivalents.*

# What are we building and Why?

**In 2010 NH produced 22 Million MWh of power and used 10 Million MWh of power. NH is a net exporter of electricity.**

Who is benefiting from this surplus? Not the consumer who pay rates 30% higher than the US average. Not NH industry who pays rates 70% higher than the US average\*.

Is more expensive and redundant energy needed? Not according to ISO NE which has asked wind turbines to "curtail" production. <sup>[10]</sup>  
*Berlin Daily Sun - Brookfield Renewable Statement*

*\*The U.S. Energy Information Administration*

# NH must do better than this!



# Where do we go from here?

- **Don't fall for the wind developer propaganda**
- Heed recommendations of the SB361 Commission and the EESE Board to update NH's comprehensive energy plan prior to any large new projects being approved.
- Support a moratorium on new wind energy projects until stakeholders are involved and appropriate siting rules are established.
- Refine Statute RSA 162-H to ensure cumulative impacts are addressed; a clearer interpretation of findings.

*"While it is true that there have been successes in advancing the recommendations of the first {2002} plan, it is also true that much has changed in the energy and environmental landscape."<sup>[11]</sup>*

*--The Nature Conservancy's Jim O'Brien*

# References

- [1] ISO New England CELT reports 2008-2012
- [2] <http://www.unionleader.com/article/20130106/NEWS02/130109521>
- [3] <http://www1.eere.energy.gov/windandhydro/pdfs/41869.pdf>
- [4] <http://www.windaction.org/?module=uploads&func=download&fileId=2363>
- [5] <http://www.spectator.co.uk/features/8807761/wind-farms-vs-wildlife/>
- [6] [http://www.iso-ne.com/committees/comm\\_wkgrps/prtcpnts\\_comm/pac/reports/2010/index.html](http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/reports/2010/index.html)
- [7] [http://www.nhsec.nh.gov/2012-01/documents/120131appendices14a\\_18.pdf](http://www.nhsec.nh.gov/2012-01/documents/120131appendices14a_18.pdf)
- [8] <http://www.arwilson.com/pdf/newpdfs/WindFarmsResidentialPropertyValuesandRubberRulers.pdf>
- [9] <http://www.unionleader.com/article/20130211/NEWS05/130219893>
- [10] [http://www.berlindailysun.com/index.php?option=com\\_content&view=article&id=44276:county-in-dispute-over-wind-park-pilot-payments&catid=103:local-news&Itemid=442](http://www.berlindailysun.com/index.php?option=com_content&view=article&id=44276:county-in-dispute-over-wind-park-pilot-payments&catid=103:local-news&Itemid=442)
- [11] <http://www.nhbr.com/businessnews/opinion/989711-290/its-time-to-revise-new-hampshires-energy.html>