

# Wind Energy Potential in MA



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# The Need for Renewable Energy

- To prevent catastrophic warming we need to reduce CO2 emissions by 80-90% by 2050
- Reduces the health care costs associated with traditional energy sources
- Creates employment in both manufacturing and service economies

# Wind Power in the US

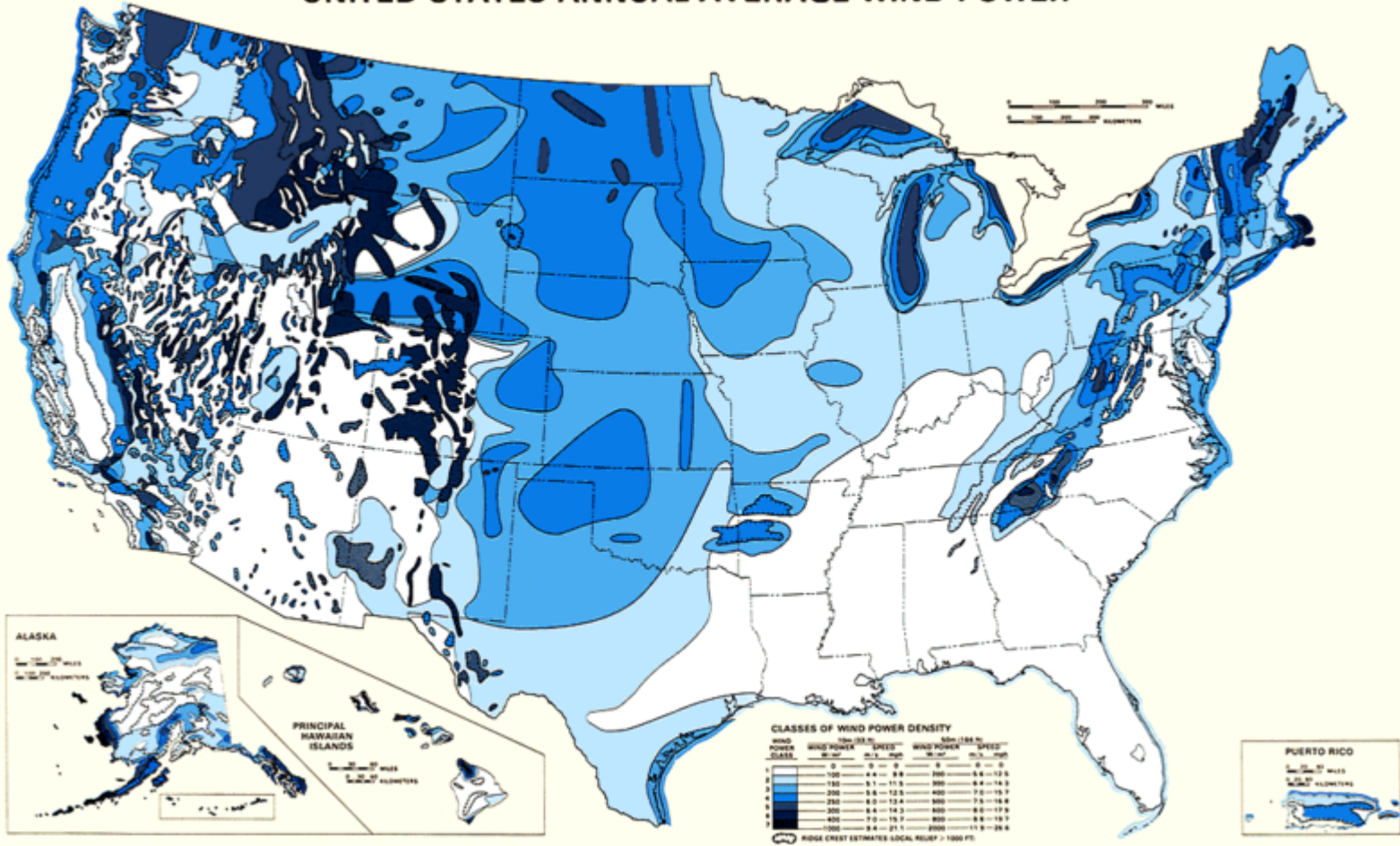
- Currently, 6,740 MWh used by 1.6 million households (4.3 million people)
- Wind energy receives less than 1% of federal subsidies

[http://www.crest.org/articles/static/1/binaries/wind%20issue%20brief\\_FINAL.pdf](http://www.crest.org/articles/static/1/binaries/wind%20issue%20brief_FINAL.pdf)

[http://www.ifnotwind.org/pdf/Subsidy\\_10-6-06.pdf](http://www.ifnotwind.org/pdf/Subsidy_10-6-06.pdf)

# US Potential

UNITED STATES ANNUAL AVERAGE WIND POWER



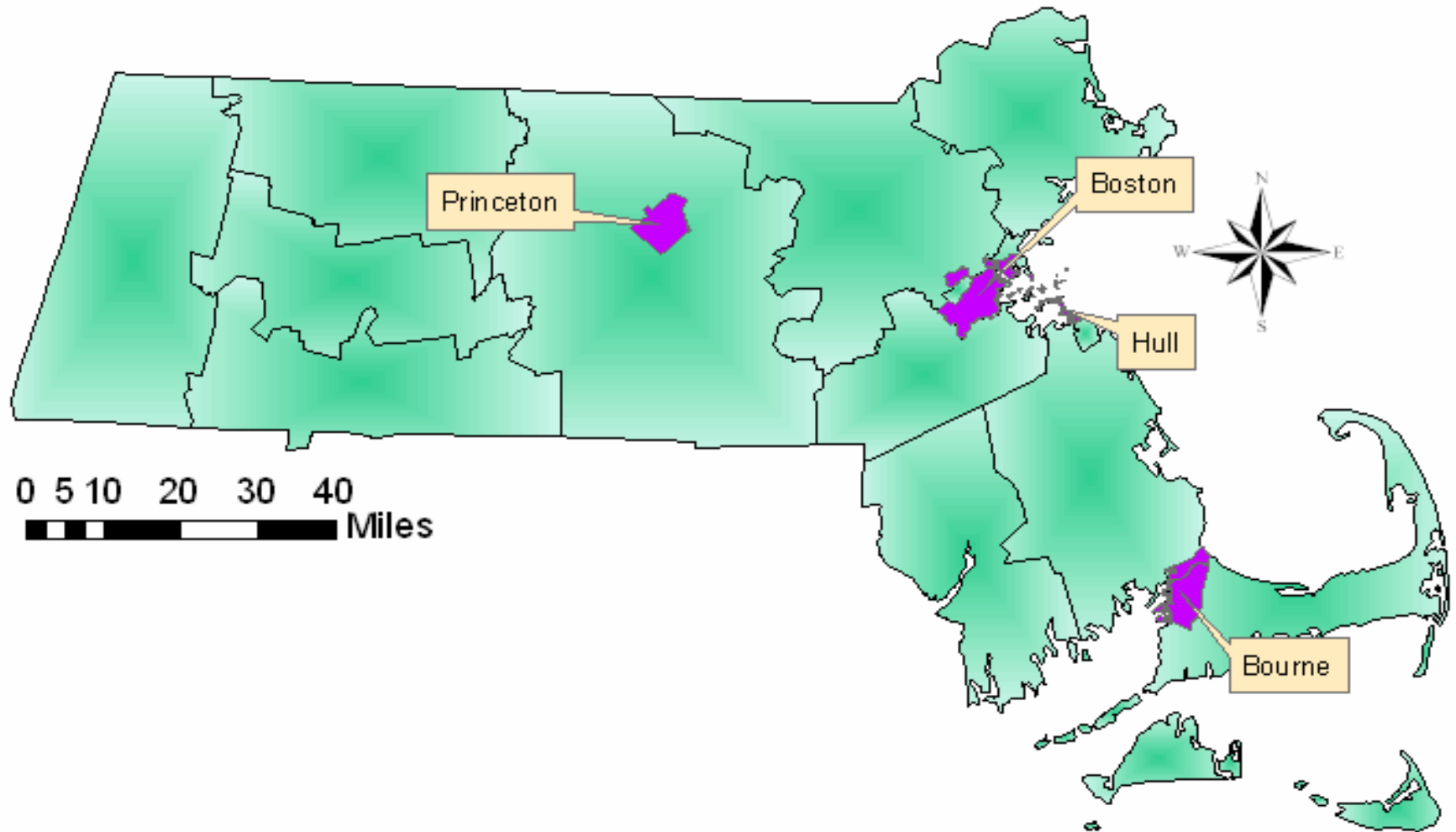
# Wind Power in Massachusetts

- Ranks 25<sup>th</sup> out of 30 states for installed wind capacity
- Installed 4 MWh, with 519 planned
- Potential capacity of 2,880 MWh

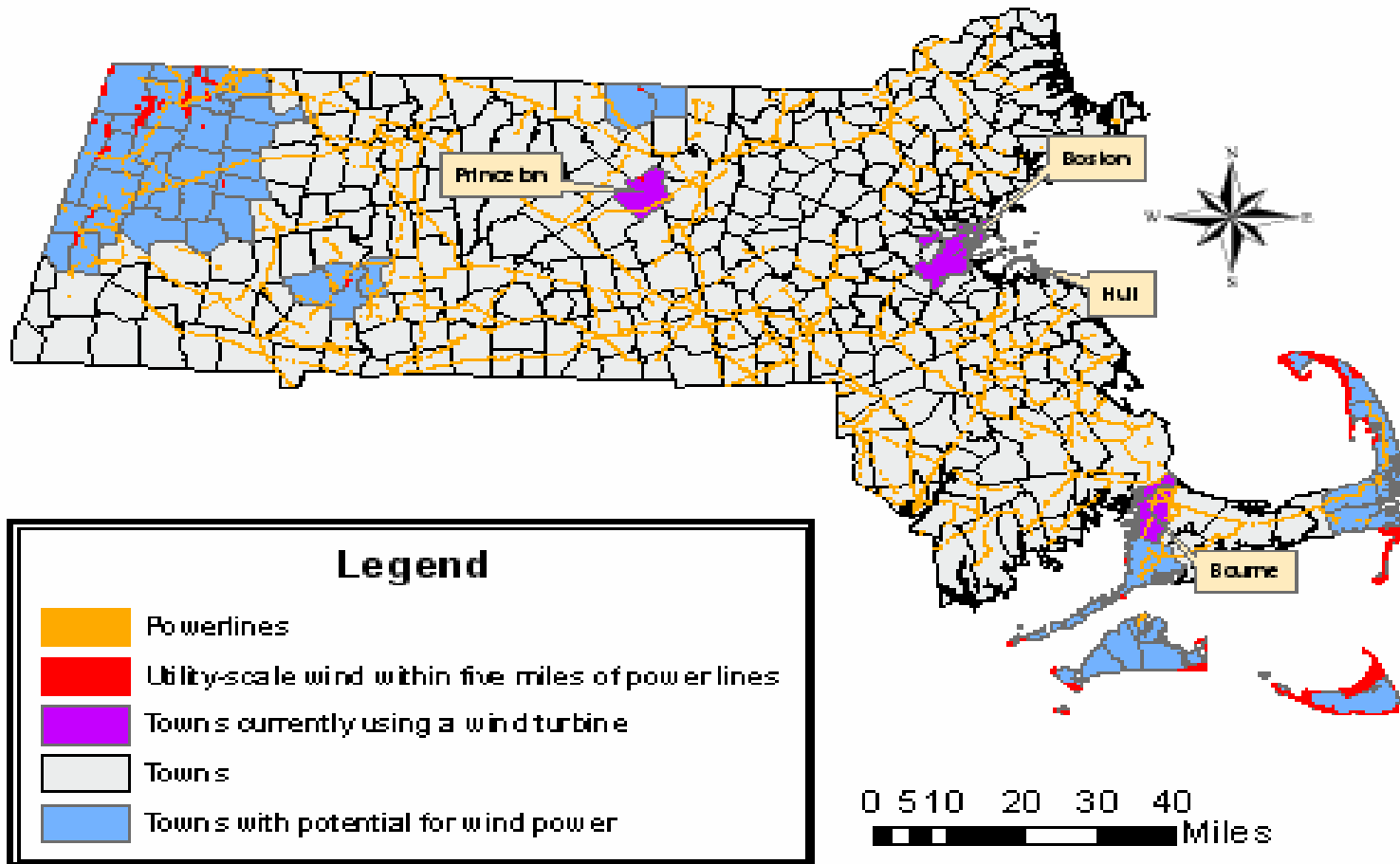
<http://www.awea.org/projects/massachusetts.html>



# Currently installed wind power



# Potential Capacity in MA



# Additional References

- Peston, Robert. "Report's stark warning on climate." 29 Oct 2006. BBC News Online database, cited 15 Nov 2006.  
<http://news.bbc.co.uk/2/hi/business/6096594.stm>
- "The True Cost of Electricity." Cape Wind online database. [Cited November 15th, 2006.] Available from the World Wide Web  
at:<http://www.capewind.org/modules.php?op=modload&name=Sections&file=index&req=viewarticle&artid=32&page=1>
- Rodman, Laura C.; Meentemeyer, Ross K. "A Geographic analysis of wind turbine placement in Northern California. *Energy Policy*, Oct2006, Vol. 34 Issue 15, p2137-2149
- Wiser, Ryan; Bolinger, Mark. "Can deployment of renewable energy put downward pressure on natural gas prices?" *Energy Policy*, Jan2007, Vol. 35 Issue 1, p295-306
- Stauffer, Nancy. "MIT Team Analyzes Wind Energy Potential in the Northeast." 21 Dec 2005. Laboratory for Energy and the Environment, MIT online database, cited 15 Nov 06. <http://web.mit.edu/newsoffice/2005/wind-1221.html>
- Kobos, Peter H.; Erickson, Jon D.; Drennen, Thomas E. "Technological learning and renewable energy costs: implications for US renewable energy policy." *Energy Policy*, Sep 2006, Vol. 34 Issue 13, p1645-1658
- History of Hull's Wind Project, 2006. Cited 15 Nov 06 from Hull Wind's online database: [www.hullwind.org](http://www.hullwind.org)

