

Abstract

The current U.S. energy policy is unsustainable that has become too costly, because of the irreversible changes made to the environment and the financial costs of dependence on fossil fuels. Through the use of wind power renewable energy can become a major contributor in the production of electricity. This report concentrates on how to integrate wind energy into everyday power consumption on Cape Cod by gaining public support for offshore wind farms in Nantucket Sound. We collected data from over 400 surveys administered to teachers and students in order to identify what causes opposition about wind turbines and assess how race, gender, and education level may affect those opinions. The majority of local wind energy opponents express interest in harnessing wind power from other regions in the country. Our report culminates in an advertisement focused on advocating immediate change to this cleaner and more efficient energy source.

Background

Wind turbines would provide 75% of the energy needed for Cape Cod. They provides electricity and it does not give off CO₂ like its competitors: coal, natural gas, and petroleum

Most people have this mentality of "not in my backyard" when it comes to wind turbines. Most of the opposition to wind turbines are due to the fact that it is not aesthetically pleasing and that it takes away from the natural environment.

According to "Wind power planning: assessing long-term costs & benefits" by Scott Kennedy states that "Wind power has been one of the fastest growing energy technologies of the past decade." Wind power is very popular around the rest of the world. Denmark currently has 2300 MW of power that provide up to 75% of their total power consumption.

Project Goals/Objectives

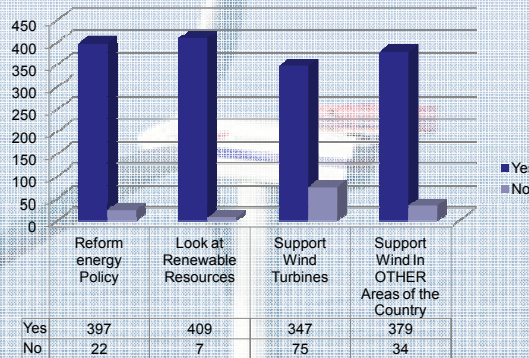
- Raise greater awareness of the benefits of wind turbine technology
- Erect wind turbines in the Nantucket Sound
- To prove that Cape Cod is a suitable location that would provide a sufficient amount of clean renewable energy

Methods/Process

To collect our data, we administered surveys to local residents. Along with their gender, age, race, and parents' education level, we asked them the following four questions to determine their level of support for wind energy:

1. Do you believe we should reform our energy policy?
2. Should we look to renewable energy sources?
3. Do you support the development of wind turbines?
4. Would you support wind turbines in other areas of the country?

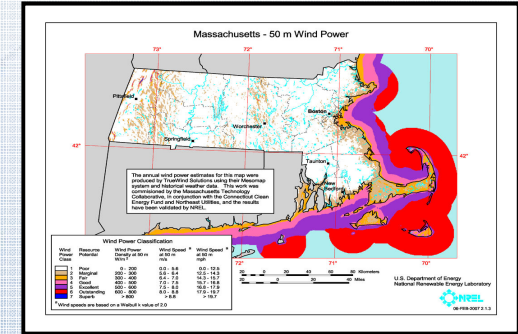
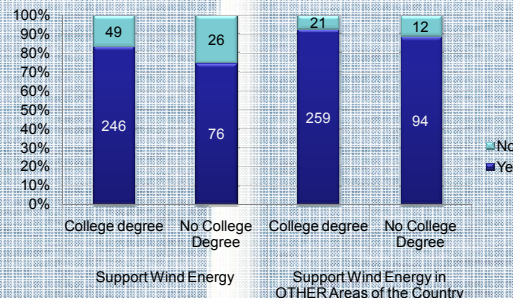
Total



Results/Outcomes

From our surveys, over 80% of the total supported wind turbines and over 90% supported them in other areas. The support from males and females was about the same. Those with a college degree supported wind power more than those without one.

Effect of (Parental) Education on the Support of Wind turbines



This graph proves Cape Cod is an excellent location for wind turbines because it has a greater wind power density and wind speed.

Conclusions/Recommendations

- Implement wind turbines in the Nantucket Sound
- Advertise benefits of wind power via local newspapers and television ads
- Educate the youth of the world about the benefits of renewable wind power.

References

- Kennedy, Scott. "Wind Power Planning: assessing long-term costs and benefits" Energy Policy. Volume 33, Issue 13, September 2005, Pages 1661-1675.
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