

# Town of Narragansett Clean Energy Survey Results



I. Executive Summary.....	Page 1
II. Background.....	Page 3
III. Survey Design.....	Page 3
IV. Survey Process.....	Page 4
V. Survey Description .....	Page 4
VI. Survey Response.....	Page 4
A. General Questions on Renewable Energy .....	Page 4
B. General Views on Siting Wind Turbines in Narragansett.....	Page 5
C. Questions on Siting Wind Turbines at Specific Sites .....	Page 7
D. Views on Specific Issues Concerning Wind Turbines.....	Page 8
E. Views on Ownership of Turbines.....	Page 9
F. Personal Attributes .....	Page 10
Attachment A – Narragansett Survey .....	Page 11
Attachment B – Letters to Residents .....	Page 200

## Tables

Table 1 - DEM/Town Survey Assumptions .....	Page 3
Table 2 - General Questions on Renewable Energy .....	Page 5
Table 3 - General Question on Siting Wind Turbines .....	Page 6
Table 4 - Opinions on Wind Turbines at Specific Sites .....	Page 7
Table 5 - Impact of Wind Turbines on Issues .....	Page 8
Table 6 - Ownership of Turbines Questions .....	Page 9
Table 7 - Employment status .....	Page 10
Table 8 – Age .....	Page 10
Table 9 - Approximate household income in 2008 .....	Page 10
Table 10 - Educational background .....	Page 10
Table 11 - Property Ownership of Survey Respondent.....	Page 10

## **I. Executive Summary**

The town of Narragansett was one of the two land-based areas in Rhode Island that was identified in the RIWINDS Report that had wind speeds that would support the construction of wind turbines. Because of this, DEM discussed the idea of forming a partnership with the town concerning possible sites for the installation of wind turbines. In March of 2009, DEM developed a draft attitudinal survey with a 95% confidence level and a sampling error of +/-5% that was designed to assist DEM and the town to understand the public sentiment concerning the siting of sources of clean green renewable energy. The survey was sent to 778 residences and that resulted in approximately 430 responses. This number of responses constituted a sample size that was considered statistically significant. The survey questions were divided into six main areas.

Some of the important findings from the survey include:

### **General Questions on Renewable Energy**

- 97% thought moving away from fossil fuels and to use more clean energy was an important issue.
- 96% responded that clean energy technology was good for the environment, important to reducing foreign oil dependency and to lower electric bill.
- 91% thought that clean energy would be good for the Rhode Island economy.
- 44% said that noise was an issue for not supporting clean energy technology.
- 89% of the survey respondents were positive concerning the use of wind turbines to generate electricity.

### **General Views on Siting Wind Turbines in Narragansett**

- 77% of the respondents indicated they had seen a modern wind turbine in operation.
- 71% indicated they used the beach more than 10 times a year.
- 83% indicated the presence of a wind turbine would not make a difference in going to the beach.
- The majority of people (58%) thought the wind turbines were neither attractive nor non-attractive.
- 69% supported the placement of wind turbines outside of Narragansett.
- There was between 75-78% support for land-based wind farms in Narragansett; wind turbine development that were limited to one or two structures on a parcel of land; three to five wind turbines being located in town.
- 75% of the respondents supported wind turbines if they could **not** see them from their house, and 7% did not support the proposal.
- If the wind turbines could be seen from the house, the support dropped to 61% of the responders, and 18% did not support the project.
- 71% of the responders supported wind turbines if they could **not** hear them.
- 38% of responders supported wind turbines if they could be heard, while 41% did not support wind turbines if they could be heard.

### **Questions on Siting Wind Turbines at Specific Sites**

There is support for all five sites in Narragansett. The range of support was from 78% to 82%, with the Port of Galilee having the highest support and Black Point having the lowest. The opposition to the proposal varied from 9% to 14% with the Port of Galilee and the Scarborough Treatment facility having the smallest opposition (9%) and Black Point having the greatest opposition (14%).

### **Views on Specific Issues Concerning Wind Turbines**

The survey identified the following issues where wind turbine projects in Narragansett would have a positive impact on residents:

- 78% thought the wind turbines would have a positive impact on residents from an overall view of the project.
- Electricity rates (71%)
- Creation of new jobs (55%)
- General environmental considerations (54%)
- Air Pollution levels (44%)

The survey identified the following issues where wind turbine projects in Narragansett would have a negative impact on residents:

- Noise levels (33%)
- Impact of the turbines on the landscape (28%)
- Property values (23%) and
- Bird/bat life (16%)

Of the 16 categories, there were six issues that were identified by the majority of the respondents indicating wind turbines would have no impact and included the following issues: public safety (81%); use of public beaches (77%); enjoyment of property (73%); traffic at turbine sites (72%), fishing activities (71%) and tourism and related businesses (68%).

### **Views on Ownership of Turbines**

The responses indicated 72% of the people were more likely to support the project if the town owned it. The support dropped to 49% if the state or a developer owned the project.

### **Personal Attributes**

- 60 % of the responders were male and 40% female.
- 29% of the responders indicated they could see one of the wind turbines from their property, 53% could not see a turbine from their property and 18% were not sure.
- 38% of the responders were retired, 37% employed by others and 22% were self-employed
- 56% of the responders were older than 60, 11% were in the age range 20 to 44.
- 35% of the responders had an average household income greater than \$100,000.
- 70% of the responders had at least a Bachelor's degree.
- 77% of the responses were from home owners.

## II. Background

Narragansett was one of the two land-based sites in Rhode Island identified in the RIWINDS Report as having wind speeds that would support the construction of wind turbines. DEM operates a number of state beach, camping and port facilities that use large quantities of energy to run the facilities. In addition the town of Narragansett has involvement with two wastewater treatment facilities that use significant amounts of energy. For these reasons, DEM discussed the idea of forming a partnership with the town concerning possible sites for the installation of wind turbines. These discussions lead to the idea of a joint DEM/town attitudinal survey to determine people's viewpoints on the siting of wind turbines in five locations in Narragansett.

## III. Survey Design

In March of 2009, DEM developed a draft attitudinal survey that was designed to assist DEM and the town to understand the public sentiment concerning the siting of sources of clean green renewable energy. The survey can also be a good tool to educate the public on any issues they may have concerning renewable sources of energy. This draft survey was tested on a voluntary focus group of DEM employees during a lunch hour. Changes were made to the survey in order to clarify ambiguities that were identified by the participants. The town was also given a copy of the survey and they provided DEM with additional comments. The survey questions were then finalized.

In order to provide the people who would be receiving the survey an idea of the size of the turbines at the locations, DEM hired a company, based on competitive bidding, to depict photo simulations of the five sites. These pictures were then incorporated into the survey and the finished product was copied. (Attachment A is a copy of the final survey that was used for this exercise.)

DEM and the town were interested in developing a survey that would provide statistically significant results. The following assumptions were used in the development of the survey protocol. According to the referenced book the survey should achieve a 95% confidence level and a sampling error of +/-5%.

<b>Table 1 DEM/Town Survey Assumptions*:</b>	<b>Number</b>
Narragansett Population:	26,000
Design Sampling Error:	+/- 5%
Design confidence level	95%
Population is varied, therefore sample size needed is:	378
% of valid addresses:	90%
% return rate:	60%
% illegible or incomplete surveys:	10%
Mailing addresses needed = $378 / (.9 \times .6 \times .9)$	778

\*"How to Conduct Your Own Survey" by P. Salant and D. Dillman

#### **IV. Survey Process**

The following process was used to elicit responses to the survey. Based on the above assumptions 378 responses were needed for a statistical sample to be collected:

- Narragansett selected a random number of residence owners to generate 778 mailing labels.
- The town provided DEM with a list of residence owners.
- DEM, with comments from the town, developed letters for mailings (Attachment 2).
- A first contact letter was mailed out July 7, 2009 to the 778 residences that told recipients the survey was coming, stated briefly why the survey was being done, and requested their participation in the survey.
- A second mailing was sent July 17, 2009 and contained the survey, a personalized letter with signature, and a stamped return envelope with postage.
- The third mailing was sent on July 27, 2009 and consisted of a reminder postcard that was sent to everyone.
- A fourth mailing, if needed, was slated to be sent three weeks after the second mailing to people who had not yet responded to the survey. This mailing was not sent because the 378 sample size had been reached. In all over 430 people responded to the survey. The sample size according to the referenced source constituted a statistical sample of the town concerning the survey.

#### **V. Survey Description**

The survey was broken up into six categories that included:

1. A general section that queried residents on their views of renewable energy;
2. General questions concerning the siting of wind turbines in Narragansett;
3. Specific questions concerning siting of wind turbines on three state owned and two town owned properties;
4. Questions on specific issues concerning wind turbines;
5. Questions concerning ownership of the wind turbines, and
6. Personal questions concerning educational, age, gender and home ownership of the respondents.

#### **VI. Survey Response**

##### **A. General Questions on Renewable Energy**

There were 12 questions that queried resident's viewpoints on renewable energy. The majority of the questions in this area required responses to questions that indicated the issues were: very important, important, neither important nor non-important, unimportant or very unimportant. There was clear support for moving away from fossil fuels and to use more clean energy. 97% of those responding thought this was at least an important issue. When asked to rate the importance of being good for the environment, reducing foreign oil dependency, and lowering electric bills, 96% people responded these were key considerations. 91% though that clean energy would be good for the Rhode Island economy.

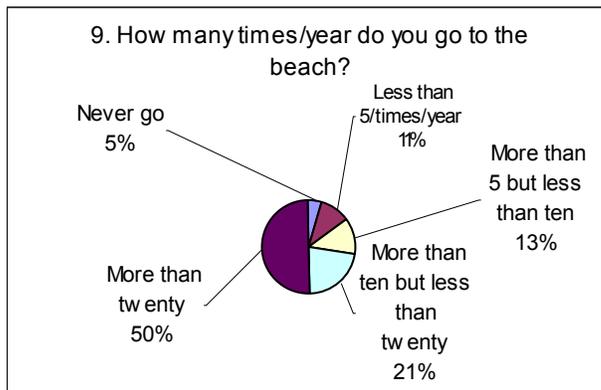
Another question asked people about reasons for not supporting clean energy technology. 50% thought that expense was at least important and 44% that noise was an issue. The issue of

turbines being esthetically pleasing indicated that 30% thought this was at least important and 36% thought it was not at least an important issue.

People were asked their thoughts on the state’s goal to generate energy from clean renewable resources. 38% thought it was about right, 40% thought it was too low and only 4% thought it was too high. The next question queried people on their general attitudes concerned using wind turbines to generate electricity. At least 89% were positive and only 4% had negative views. Table 2 below is a summary of the responses.

<b>Table 2 General Questions on Renewable Energy</b>	<b>Very Important (%)</b>	<b>Important (%)</b>	<b>Neither Important nor non- important (%)</b>	<b>Unimportant (%)</b>	<b>Very Unimportant (%)</b>
How important do you think it is for Rhode Island to move away from fossil fuels like gas, oil and coal and use more clean energy?	76	19	4	1	0
Some people support clean energy technology. How important are the following reasons for using clean energy technology?					
a. Good for the environment.	74	23	3	0	0
b. Reduce dependency on foreign oil	83	13	3	1	0
c. Lower electric bills	69	27	4	0	0
d. Good for Rhode Island’s economy	63	28	7	1	1
How important are the following reasons for not supporting clean energy technology?					
a. They are too expensive and not cost-effective.	18	32	21	18	11
b. They are too noisy	14	30	23	21	12
c. They are not esthetically pleasing	10	20	24	23	23

**B. General Views on Siting Wind Turbines in Narragansett**



The next series of questions dealt with the impact of wind turbines on beach use and placement of turbines in unspecified locations in Narragansett. 77% of the respondents indicated they had seen a modern wind turbine in operation. The survey tried to determine the frequency of beach use by respondents. The chart to the left summarizes the responses to that question. As is indicated 71% indicated they used the beach more than 10 times a year.

When asked if the presence of a wind turbine that could be seen from the beach would have an impact of going to the beach, 83% indicated the presence of a wind turbine would not make a difference in going to the beach. 12% of the responses indicated the presence would make them less likely to go to the beach. People were asked to describe the visual appearance of wind turbines on the landscape. The responses were the same for people describing wind turbines either attractive or unattractive (19%). The majority of people (58%) thought the wind turbines were neither attractive nor non-attractive. When asked to describe the visual appearance of wind turbines on a landscape after having seen one, 20% thought it was positive and 16% thought it was negative and 54% were neutral.

The next series of questions asked respondents about the placement of wind turbines that would be located in Narragansett. Table 3 is a summary of these responses.

<b>Table 3 General Question on Siting Wind Turbines</b>	<b>Strongly Support (%)</b>	<b>Support (%)</b>	<b>Neither Support nor Object (%)</b>	<b>Do Not Support (%)</b>	<b>Strongly Do Not Support (%)</b>	<b>Don't Know (%)</b>
Generally speaking, how do you feel about the placement of wind turbines at sites that are not located in the Town of Narragansett?	33	36	23	3	1	4
Generally speaking, how do you feel about the placement of multiple wind turbines in a wind farm on appropriately zoned land in Narragansett?	38	39	8	7	5	3
Generally speaking, how do you feel about the placement of wind turbines if they were limited to one or two structures on a parcel of land?	31	46	12	5	3	3
Generally speaking, how do you feel about a limited number (perhaps 3-5) of wind turbines located in the Town of Narragansett?	38	40	10	5	5	2
Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you <b>can not</b> see them from your house?	41	34	18	3	4	0
Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you <b>can</b> see them from your house?	29	32	19	8	10	2
Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you <b>can hear</b> them from your house?	15	19	19	22	19	6
Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you <b>can not hear</b> them from your house?	37	34	19	4	4	2

Major findings of these responses included:

- 69% supported the placement of wind turbines outside of Narragansett.
- 77% supported land-based wind farms in Narragansett.
- 77% could support wind turbine development if they were limited to one or two structures on a parcel of land.
- 78% supported a limited number of wind turbines (3-5) being located in town.
- 75% of the respondents supported wind turbines if they could not see them from their house, 18% neither supported nor objected and 7% did not support the proposal.
- If the wind turbines could be seen from the house, the support dropped to 61% of the responders, 19% neither supported nor objected, and 18% did not support the project.
- 71% of the responders supported wind turbines if they could **not** hear them.
- The support dropped to 38% if they could be heard while 41% did not support them if they were heard.

### C. Questions on Siting Wind Turbines at Specific Sites

The next series of questions asked people’s responses of siting wind turbines at five sites in town. Three sites (Camp Cronin, Galilee and Black Point) are on sites controlled by DEM and two of the sites (Scarborough and the Regional Treatment Plants) are controlled by the town.

Table 4 Opinions on Wind Turbines at Specific Sites						
Location	Strongly Support (%)	Support (%)	Neither Support nor Object (%)	Do Not Support (%)	Strongly Do Not Support (%)	Don't Know (%)
Camp Cronin	46	35	7	5	5	2
Port of Galilee	47	35	7	4	5	2
Black Point	43	35	6	7	7	2
Scarborough Treatment Plant	46	35	7	4	5	3
Regional Treatment Plant	43	36	7	5	5	4

As can be seen from Table 4, there is support for all five sites in Narragansett. The range of support was from 78% to 82%, with the Port of Galilee having the highest support and Black Point having the lowest. The opposition to the proposal varied from 9% to 14% with the Port of Galilee and the Scarborough Treatment facility having the smallest opposition (9%) and Black Point having the greatest opposition (14%).

**D. Views on Specific Issues Concerning Wind Turbines**

One question asked the residents their views on how they thought the wind turbine project would impact them on 16 specific issues. People were given the opportunity to indicate if wind turbines had a positive or a negative impact in Narragansett. They were also given the choice that the project either had no impact or they were not sure of the impact of the project. Table 5 below summarizes the responses:

<b>Table 5 Impact of Wind Turbines on Issues</b>	<b>Positive Impact (%)</b>	<b>No Impact (%)</b>	<b>Negative Impact (%)</b>	<b>Not Sure (%)</b>
1. Tourism and related businesses	14	68	9	9
2. Creation of new jobs	55	28	2	15
3. Property values	9	48	23	20
4. Electricity rates	71	12	3	14
5. Will turbines affect the landscape	8	47	28	17
6. Air Pollution	44	43	2	11
7. Noise Levels	4	33	33	30
8. Bird/Bat life	2	42	16	40
9. Fishing Activities	3	71	4	22
10. Public Safety	2	81	3	14
11. Use of Public Beaches	4	77	10	9
12. Enjoyment of use of your property	4	73	11	12
13. Traffic at turbine sites	2	72	5	21
14. Taxes	30	29	5	36
15. General environmental considerations	54	26	6	14
16. What is your overall view of the project?	78	6	8	8

The responses were reviewed and it would appear that the wind turbines had an impact on people both from a positive and negative standpoint on primarily four or five issues. From a positive standpoint the following issues were rated highly:

- 78% indicated the siting of wind turbines would have a positive impact on residents from an overall view of the project.
- Electricity rates (71%)
- Creation of new jobs (55%)
- General environmental considerations (54%)
- Air pollution levels (44%)

The survey identified the following issues where wind turbine projects would have a negative impact on residents:

- Noise levels (33%)
- Impact of the turbines on the landscape (28%)
- Property values (23%) and
- Bird/bat life (16%)

Of the 16 categories, there were six issues identified by over half the respondents indicating wind turbines would have no impact and include the following issues:

- Public safety (81%)
- Use of public beaches (77%)
- Enjoyment of property (73%)
- Traffic at turbine sites (72%)
- Fishing activities (71%)
- Tourism and related activities (68%)

The next two questions asked people to rank three issues that had the most positive or negative impacts on Narragansett. These were issues the responders chose. The responses closely tracked the results of the responses to table 5. The issues they identified that had the highest positive response rate included:

- Electricity rates (30%)
- Job creation (19%)
- General environmental considerations (17%) and
- Air pollution (13%)

These four issues represented 79% of the positive responses of the 16 issues.

The issues with the highest negative response rate were:

- Noise levels (31%)
- Property values (18%)
- Turbine impacts on the landscape (12%), and
- Bird/bat life (9%).

These four issues accounted for 70% of the negative issues noted in the survey.

## E. Views on Ownership of Turbines

The next three questions focused on the ownership of the turbines. The survey was interested in determining people’s opinions on their support of the project if it was owned by the state, a developer or the town. The responses indicated 72% of the people were more likely to support the project if the town owned it. The support dropped to 49% if the state or a developer owned the project. Table 6 below summarizes the responses.

<b>Table 6</b> <b>Ownership of Turbines Questions</b>	<b>More Likely to Support (%)</b>	<b>Less Likely to Support (%)</b>	<b>No Impact on Decision (%)</b>
If a wind power project was <b>owned by the state</b> and provided an economic benefit to the state, would that make you more or less likely to support it?	49	18	33
If a wind power project was <b>owned by a developer</b> and provided an economic benefit to the town, would that make you more or less likely to support it?	49	22	29
If a wind power project was <b>owned by the town</b> and provided an economic benefit to the town, would that make you more or less likely to support it?	72	7	21

## F. Personal Attributes

The last section of the survey provided personal information of the responders. Approximately 23% of the responders did not provide information concerning household income. The response rate in Table 9 is a summary of the responders who provided this information. The following are major findings from the survey. The tables after this section provide detailed information concerning the responses:

- 60 % of the responders were male and 40% female.
- 29% of the responders indicated they could see one of the wind turbines from their property, 53% could not see a turbine from their property and 18% were not sure.
- 38% of the responders were retired, 37% employed by others and 22% were self-employed.
- 56% of the responders were older than 60, 11% were in the age range 20 to 44.
- 35% of the responders had an average household income greater than \$100,000.
- 70% of the responders had at least a Bachelor's degree.
- 77% of the responses were from house owners.

Table 7 Employment Status	Response Rate %
Self-employed	22
Employed by others	37
Retired	38
Unemployed	1
Homemaker	2
Student	0

Table 8 Age	Response Rate %
Under 20 years	0
20 to 24 years	0
25 to 34 years	1
35 to 44 years	10
45 to 54 years	21
55 to 59 years	12
60 to 64 years	19
65 to 74 years	24
75 to 84 years	10
85 years and over	3

Table 9 Approximate Household Income in 2008	Response Rate%
Less than \$10,000	1
\$10,000 to \$14,999	1
\$15,000 to \$24,999	0
\$25,000 to \$34,999	3
\$35,000 to \$49,999	9
\$50,000 to \$74,999	20
\$75,000 to \$99,999	20
\$100,000 to \$149,999	25
\$150,000 to \$199,999	8
\$200,000 or more	13
Prefer not to answer	-

Table 10 Educational Background	Response Rate %
Less than 9th grade	0
9th to 12th grade, no diploma	0
High school graduate (includes equivalency)	9
Some college, no degree	14
Associate's degree	7
Bachelor's degree	26
Graduate or professional degree	44

Table 11 Property Ownership of Survey Respondent	Response Rate %
I own the house	77
I live in a rented house	0
I own the house, but rent it on a yearly basis	3
I live in the house part of the year and rent it the other part of the year	7
I live in the house part of the year and it is vacant the other part of the year	13

Attachment A – Narragansett Survey

**Town of Narragansett Clean Energy Survey**



Sponsored by:  
The Rhode Island Department of Environmental Management and the Town of Narragansett

Return survey to:  
Ms. Leanne DeCosta  
Office of Customer and Technical Assistance  
235 Promenade Street  
Providence, RO 02908

401- 222-4700 Extension 7218

The Town of Narragansett and Rhode Island Department of Environmental Management would like your input on clean energy issues and your viewpoint on the possible siting of wind turbines in the Town. We greatly appreciate your time in filling out this survey.

At the back of the survey are some photo simulations of what the turbines may look like if they are built in the sites mentioned.

**Please look at these photos at the back of the survey before you respond to the survey.**

**Please check only one box for each question.**

Q1. Have you heard of the term clean or renewable energy?

- 1  Yes
- 2  No

Q2. Clean or renewable energy is power that comes from non-polluting sources such as the sun, water, and wind.

How important do you think it is for Rhode Island to move away from fossil fuels like gas, oil and coal and use more clean energy?

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

Q3. Some people support clean energy technology. How important are the following reasons for using clean energy technology?

a. Good for the environment.

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

b. Reduce dependency on foreign oil

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

c. Lower electric bills

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

d. Good for Rhode Island's economy

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

Narragansett Clean Energy Survey

Q4. Some people do not support clean energy technology.

How important are the following reasons for not supporting clean energy technology?

a. They are too expensive and not cost-effective.

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

b. They are too noisy

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

c. They are not esthetically pleasing

- 1  Very important
- 2  Important
- 3  Neither important nor non-important
- 4  Unimportant
- 5  Very unimportant

Q5. What is your opinion of the state's goal to generate 15% of its energy from clean, renewable sources?

- 1  It is too high.
- 2  It is about right.
- 3  It is too low.
- 4  Don't know

Q6. What is your general attitude concerning wind turbines used to generate electricity?

- 1  Very positive
- 2  Positive
- 3  Neutral
- 4  Negative
- 5  Very negative

Q7. Have you ever seen a modern wind turbine in operation?

- 1  Yes
- 2  No

Q8. If you could see a wind turbine from the beach would it make you more or less likely to visit the beach?

- 1  More likely to visit the beach
- 2  Less likely to visit the beach
- 3  Would not make a difference

Q9. How many times a year do you go to the beach in Narragansett?

- 1  Never go to the beach
- 2  Less than five times a year
- 3  More than five times but less than ten times a year
- 4  More than ten times but less than twenty times a year
- 5  More than twenty times a year

Q10. How would you describe the visual appearance of wind turbines on a landscape?

- 1  Very attractive
- 2  Attractive
- 3  Neither attractive nor non-attractive
- 4  Unattractive
- 5  Very unattractive
- 6  Have never seen a real wind turbine.

Q11. If you have seen a wind turbine, how would you describe the visual appearance of wind turbines on a landscape?

- 1  Very positive
- 2  Positive
- 3  Neither attractive nor non-attractive
- 4  Negative
- 5  Very negative

Q12. Generally speaking, how do you feel about the placement of wind turbines at sites that are not located in the Town of Narragansett?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q13. Generally speaking, how do you feel about the placement of multiple wind turbines in a wind farm on appropriately zoned land in Narragansett?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Narragansett Clean Energy Survey

Q14. Generally speaking, how do you feel about the placement of wind turbines if they were limited to one or two structures on a parcel of land?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q15. Generally speaking, how do you feel about a limited number (perhaps 3-5) of wind turbines located in the Town of Narragansett?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q16. Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you **can not** see them from your house?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q17. Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you **can** see them from your house?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q18. Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you **can hear** them from your house?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q19. Generally speaking, how do you feel about the placement of wind turbines in Narragansett if you **can not hear** them from your house?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q20. The state owns a number of parcels of land in Narragansett. Three possible locations of the wind turbines would include (1) the Camp Cronin Fisherman's Access area; (2) near the Port of Galilee, on the south west side of the Galilee Escape Road and (3) the southern portion of Black Point. (Refer to simulations at the back of the survey.)

a. Would you be supportive of a wind turbine being located on the Camp Cronin Fisherman's Access (**Figure 1**) parcel of land?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

b. Would you be supportive of a wind turbine being located near the Port of Galilee on the south west side of the Galilee Escape Road (**Figure 2**) ?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

c. Would you be supportive of a wind turbine being located on the southern portion of Black Point (**Figure 3**) ?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

**Narragansett Clean Energy Survey**

Q21. The Town is considering two possible locations of wind turbines, (1) at the Scarborough Treatment Plant on Ocean Rd, adjacent to the State's Scarborough Beach, and (2) at the Regional Treatment Plant located on Westmoreland St., approximately ½ mile east of Mariner Square. (Refer to simulations at the back of the survey.)

a. Would you be supportive of a wind turbine being located at the Scarborough Treatment Plant (**Figure 4**) ?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

b. Would you be supportive of a wind turbine being located at the Regional Treatment Plant (**Figure 5**) located on Westmoreland St.?

- 1  Strongly support
- 2  Support
- 3  Neither support nor object
- 4  Do not support
- 5  Strongly do not support
- 6  Don't know

Q22. Do you think a wind turbine project in Narragansett would have a positive, negative or have no impact on the issues below? (**Circle the one impact that reflects your view on the question.**)

<b>Issues</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1. Tourism and related businesses	Positive Impact	No Impact	Negative Impact	Not Sure
2. Creation of new jobs	Positive Impact	No Impact	Negative Impact	Not Sure
3. Property values	Positive Impact	No Impact	Negative Impact	Not Sure
4. Electricity rates	Positive Impact	No Impact	Negative Impact	Not Sure
5. Will turbines affect the landscape	Positive Impact	No Impact	Negative Impact	Not Sure
6. Air Pollution	Positive Impact	No Impact	Negative Impact	Not Sure
7. Noise Levels	Positive Impact	No Impact	Negative Impact	Not Sure
8. Bird/Bat life	Positive Impact	No Impact	Negative Impact	Not Sure
9. Fishing Activities	Positive Impact	No Impact	Negative Impact	Not Sure
10. Public Safety	Positive Impact	No Impact	Negative Impact	Not Sure
11. Use of Public Beaches	Positive Impact	No Impact	Negative Impact	Not Sure
12. Enjoyment of use of your property	Positive Impact	No Impact	Negative Impact	Not Sure
13. Traffic at turbine sites	Positive Impact	No Impact	Negative Impact	Not Sure
14. Taxes	Positive Impact	No Impact	Negative Impact	Not Sure
15. General environmental considerations	Positive Impact	No Impact	Negative Impact	Not Sure
16. What is your overall view of the project?	Positive Impact	No Impact	Negative Impact	Not Sure

Q23. Based on your response in number 22 above, rank the three issues you think have the most **positive** impact on Narragansett if the turbines were built.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

Narragansett Clean Energy Survey

Q24. Based on your response in question number 22, rank the three issues you think have the most **negative** impact on Narragansett if the turbines were built.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

Q25. If a wind power project was owned by the state and provided an economic benefit to the state, would that make you more or less likely to support it?

- 1  More likely to support.
- 2  Less likely to support.
- 3  No impact on my decision.

Q26. If a wind power project was owned by a developer and provided an economic benefit to the town, would that make you more or less likely to support it?

- 1  More likely to support.
- 2  Less likely to support.
- 3  No impact on my decision.

Q27. If a wind power project was owned by the town and provided an economic benefit to the town, would that make you more or less likely to support it?

- 1  More likely to support.
- 2  Less likely to support.
- 3  No impact on my decision.

This next section contains personal questions about you. The information is being collected for statistical purposes. Completion of this section would help in the analysis of this survey. Your assistance in completing this section would be appreciated.

Please check off the box that applies to you.

Q28. Are you?

- 1  Male
- 2  Female

Q29. What is your current employment status?

- 1  Self-employed
- 2  Employed by others
- 3  Retired
- 4  Unemployed
- 5  Homemaker
- 6  Student

Q30. Do you live close enough to one of the sites depicted in the figures at the end of the survey to see one of the turbines from your property?

- 1  Yes
- 2  No
- 3  Not Sure

Q31. What is your age?

- 1  Under 20 years
- 2  20 to 24 years
- 3  25 to 34 years
- 4  35 to 44 years
- 5  45 to 54 years
- 6  55 to 59 years
- 7  60 to 64 years
- 8  65 to 74 years
- 9  75 to 84 years
- 10  85 years and over

Q32. What is your approximate household income in 2008?

- 1  Less than \$10,000
- 2  \$10,000 to \$14,999
- 3  \$15,000 to \$24,999
- 4  \$25,000 to \$34,999
- 5  \$35,000 to \$49,999
- 6  \$50,000 to \$74,999
- 7  \$75,000 to \$99,999
- 8  \$100,000 to \$149,999
- 9  \$150,000 to \$199,999
- 10  \$200,000 or more
- 11  Prefer not to answer

Q33. How would you describe your educational background?

- 1  Less than 9th grade
- 2  9th to 12th grade, no diploma
- 3  High school graduate (includes equivalency)
- 4  Some college, no degree
- 5  Associate's degree
- 6  Bachelor's degree
- 7  Graduate or professional degree

Q34. How would you describe the current use of the property where the survey was sent?

- 1  I own the house
- 2  I live in a rented house
- 3  I own the house, but rent it on a yearly basis
- 4  I live in the house part of the year and rent it the other part of the year
- 5  I live in the house part of the year and it is vacant the other part of the year
- 6  Other \_\_\_\_\_

**Photo Simulations of Potential Wind Turbine Sites**

Photo simulations were produced to give the reader an approximate idea of how a wind turbine would look at each location. If the turbines are to be built, actual heights will be based on the request for proposal to build the turbines. All locations except Galilee used turbines having an 85 meter (279 feet) post and a 77 meter rotor diameter (253 feet). The Galilee photo used a 65 meter (213 feet) post. The heights chosen are typical of commercial applications of wind turbines.

**Figure 1 - Camp Cronin Fisherman's Access (From Shore Rd looking south east)**



**Figure 2 - Galilee Escape Road (From Basin Rd. looking south west)**



**Figure 3 - Black Point (From Sakonnet Blvd. looking northeast)**



**Figure 4 - Scarborough Treatment Plant (From the DEM Pavilion looking south)**



**Figure 5 - Regional Treatment Plant (From Thayer St. looking south)**



**Narragansett Clean Energy Survey**

Thank you for taking the time to complete this survey. This survey is a joint effort of the Rhode Island DEM and the Narragansett Town Council. The survey results are important in determining the Town of Narragansett viewpoints on clean renewable energy.

**Please return the survey in the stamped envelope and return it to:**

**Ms. Leanne DeCosta  
RI DEM  
Office of Customer and Technical Service  
235 Promenade Street  
Providence, RI 02908**

**Narragansett Clean Energy Survey**

Your comments would be appreciated either on this page, or you can send them in a separate envelope.



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Send Comments to:

Ms. Leanne DeCosta  
RI DEM  
Office of Customer and Technical Service  
235 Promenade Street  
Providence, RI 02908

**Attachment B – Letters to Residents**

**First Letter**



**Narragansett**  
**Rhode Island**



Department of  
Environmental  
Management

Date

Name

Address

Narragansett, RI ZIP

Dear Name:

You have been selected to complete a survey. Within the next few days, you will be receiving it. We are mailing it to you in an effort to find out how residents of the Town of Narragansett feel about renewable energy and the possible installation of three to five wind turbines on state and/or Town properties in Narragansett.

This survey is being conducted to collect information from you and others to better inform state and local officials on concerns raised by the possible construction of these wind turbines.

We would appreciate your taking about ten to fifteen minutes to complete and return this survey.

We are thanking you in advance for your participation in this project.

Sincerely,

Jeffery Ceasrine  
Narragansett Town Manager

W. Michael Sullivan  
Director, DEM

**Second Letter**



**Narragansett**  
**Rhode Island**



**Department of  
Environmental  
Management**

Preliminary studies have identified several land-based sites where wind turbines could be built that would generate cost-effective energy in Narragansett. This survey will help determine how you feel about building three to five wind turbines on state and/or Town property in Narragansett.

The Town of Narragansett and the Rhode Island Department of Environmental Management are conducting the survey to learn your views about clean energy and its impact on the Town. Your household was one of a limited number selected at random from a list of property owners in the town to receive this survey. It is very important that you participate.

You can be assured that your responses will remain completely confidential. The survey does have an identification number that will be used for mailing purposes. Your name will **not** be placed on the survey itself.

***Your response to the enclosed survey is extremely important to us. Please complete and return your survey*** in the enclosed postage-paid envelope addressed to Leanne DeCosta by July 20. Results of the survey will be important factors to consider when determining where best to locate the on-shore wind turbines. Results from the survey will be available in approximately three months on the DEM website: [www.dem.ri.gov](http://www.dem.ri.gov).

Should you have any questions regarding the survey please feel free to contact Leanne DeCosta at DEM at (401) 222-4700 extension 7218 or e-mail at [Leanne.DeCosta@DEM.ri.gov](mailto:Leanne.DeCosta@DEM.ri.gov)

The survey is a tool that will benefit all Narragansett residents. Take this opportunity to let your voice be heard!

Sincerely,

Jeffery Ceasrine  
Narragansett Town Manager

W. Michael Sullivan,  
Director, DEM

**Narragansett Clean Energy Survey**

**Third Correspondence (Post Card)**

Last week, a survey was sent to you seeking your opinion regarding the installation of wind turbines in Narragansett. Your household was one of a limited number selected at random from a list of property owners in Narragansett.

If you have already completed and returned the survey, please accept our sincere thanks for taking the time and effort to complete it.

If you did not receive the survey or possibly misplaced it, please call me at (401) 222-4700 extension 7218 and I will mail you another one today.

Your response and comments are very important to us. Be assured that your survey is completely confidential.

Sincerely

Leanne DeCosta  
DEM Office of Customer  
& Technical Service