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**THE PUBLIC RELATIONS ASPECTS OF MUNICIPALITY WIND ENERGY  
DEVELOPMENT: A CASE STUDY OF WIND ENERGY IN OCEAN GATE, NJ**

by  
**Gregory Richter**

**A Thesis**

**Submitted in partial fulfillment of the requirements of the  
Master of Arts Degree  
of  
The Graduate School  
at  
Rowan University  
June 1, 2010**

**Thesis Chair: Suzanne FitzGerald, Ph.D.**

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## ABSTRACT

Gregory Richter

THE PUBLIC RELATIONS ASPECTS OF MUNICIPALITY WIND ENERGY  
DEVELOPMENT: A CASE STUDY OF WIND ENERGY IN OCEAN GATE, NJ  
2009/10

Suzanne FitzGerald, Ph.D.

Master of Arts in Public Relations

The purposes of this exploratory investigation were to (a) determine if the local government of Ocean Gate, NJ, would use communication techniques to achieve compliance, or sufficient approval, of government and citizens for wind turbine development and (b) determine if some citizens will express strong views against wind energy while the majority of Ocean Gate's citizens will favor wind turbine power generation in their municipality. This researcher used interviews with important figures surrounding the wind project. This researcher also conducted pen and paper survey research of 106 local residents of Ocean Gate and surrounding areas through a convenience sample found outside the Ocean Gate Post Office. The researcher conducted a content analysis of news headlines comprising three months before through three months after Ocean Gate's wind turbine began operation and three months before and three months after each of two wind turbines began operating in Hull, MA. A few survey respondents expressed strong negative opinions towards wind energy in Ocean Gate, but most respondents, 78%, supported wind energy in Ocean Gate. The interviews supported both hypotheses.

## ACKNOWLEDGEMENTS

This researcher would like to thank his family, Dr. Suzanne FitzGerald, Mayor Paul Kennedy, Jim Fry and all others supporting this project.

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## CHAPTER I

### Introduction

Established in 1918 of modest size (less than half of one square mile), the small municipality of Ocean Gate, New Jersey, made big news by obtaining governmental approval for wind energy development in the borough. The winner of the 2008 NJ Clean Energy Leadership Award for Municipality of the Year, the borough is also the first town in New Jersey to create an ordinance for its own wind turbine (Borough of Ocean Gate Captures the Wind-2008 Clean Energy Municipality of the Year, 2009). According to the 2000 Census, this small Ocean County town is home to 2,076 residents.

The idea for wind energy in the town began with Ocean Gate part-time resident and retired Navy engineer Jim Fry, who proposed the idea to Ocean Gate Mayor Paul J. Kennedy at a meeting of the Ocean Gate Borough Council in 2008. After using an anemometer to evaluate the area's wind speeds and adopting the (New Jersey) Small Wind Model Ordinance, the plan was put into action (Michels, Ground broken for wind turbine, 2009).

The municipality's plan includes building two, 50 kW turbines in the town; one officially inaugurated on Oct. 20, 2009 (Borough of Ocean Gate Captures the Wind-2008 Clean Energy Municipality of the Year, 2009). Ocean Gate Mayor Paul Kennedy says that the second turbine is expected to operate beginning Fall 2010 (Kennedy P. , Interview of Mayor Paul Kennedy, 2009).

From September 2007 through September 2008, a team from Rowan University's College of Engineering, led by Krishan Kumar Bhatia, Ph.D., Peter Mark Jansson, Ph.D.,

P.P., P.E., and William T. Riddell, Ph.D., measured the wind speeds of three potential wind turbine sites. The group measured wind capacity on behalf of the New Jersey Board of Public Utilities Office of Clean Energy, funded by the Department of Energy's Wind Powering America – New Jersey State Outreach grant. The project's results reported an average wind speed for the year of study at 4.3 meters per second at a height of 30 meters and 4.6 meters per second at a height of 50 meters—thus verifying the wind capacity of Ocean Gate, NJ for turbine development (Bhatia, Jansson, & Riddell, 2008).

The Rowan group included nine engineering students who placed an anemometer atop a 100-foot tower that they built to study Ocean Gate's wind capacity. Fry's idea for wind turbine development was partly shaped after attending symposiums on renewable energy at Rowan University and Rutgers University (Energy savings might be a breeze, 2007).

Kennedy says that he has no political goals from this project and anticipates retiring from his current unpaid position as Mayor soon to spend more time with his family. He insists that the plan places neither of the turbines near any homes. Kennedy's main goal from the project is to "stabilize taxes in the borough." The mayor of this small town told me that the 2008 energy bill for the municipal hall (which the first turbine will, in Kennedy's estimation, generate 80% of the electricity for), was \$25,000—a number he hopes to bring down to \$5,000 in 2009 through the turbine's use. New Jersey's Clean Energy Program supported the turbine development with nearly \$200,000. The borough is borrowing \$220,000 in loans over the next 10 years to pay for the rest of the first turbine. Operation of the two turbines is expected to reduce electricity consumption by

224,000 kWh and decrease its current level of CO<sub>2</sub> emissions by nearly 18 tons (Borough of Ocean Gate Captures the Wind-2008 Clean Energy Municipality of the Year, 2009).

The second turbine is expected to power the borough's water utility. Funding the second turbine is the NJ Infrastructure trust fund and \$489,000 in federal stimulus funds – some of which will be used to have one meter for both the firehouse and water treatment plant. Kennedy says that the second turbine is “nearly entirely free” to the borough's citizens (Kennedy O. G., 2009).

### Significance of the Study

Wind energy represents a growing part of the world's energy needs. The Wind Energy Association reports that from 1990 to 2002, wind has been the fastest growing form of energy worldwide; showing an annual average growth rate of more than 30%. The U.S. Department of Energy has set a goal of generating 6% of U.S. power from wind by the year 2020 (resources: wind web tutorial, 2009).

The United States generated 6,740 Megawatts (MW) of electricity from wind at the end of 2004. Current projects “under construction or under negotiation will add at least 5,000 megawatts” to our nation's wind power within the next five years (resources: wind web tutorial, 2009).

According to the Wind Energy Association, as of June 27, 2009, New Jersey ranked 32 (of the 50 states) in wind energy development and 29th in potential capacity (resources: U.S. Wind Energy Projects - New Jersey, 2009). This shows the valid potential for expansion of wind energy in the state. While wind energy has increased

worldwide and throughout the United States, Ocean Gate is the first municipality in the state of New Jersey to build wind turbines.

Statistics show that wind energy power generation is increasing. As the first municipality in New Jersey to generate electricity via wind turbines, Ocean Gate's communication techniques used in gaining support, if successful (in gaining sufficient support for wind energy), can serve as a model for other municipalities and other locations eager to pursue wind energy development. *The Philadelphia Inquirer* quotes Mayor Kennedy saying, 'Some people laughed at us at first, but now we get calls all the time from other municipalities interested in talking to them about what we are doing' (Urgo, 2007).

As public relations practitioners address the growing prevalence of wind energy, the importance of evaluating past communication surrounding wind energy will be helpful in developing communication plans for clients seeking support for wind energy development.

## Purpose

This study is significant because its findings supplement Ocean Gate's communication techniques in providing a relatively thorough model for future locations seeking approval from various public(s) for wind energy development.

This research study will shed light on Ocean Gate citizen opinions on wind energy and such developments in their town through survey research. The nonscientific surveys will be informal, intercept interviews (in-person, pen and paper survey research)

and views of key figures surrounding wind energy development in Ocean Gate (through interviews). The interviews will also discover some of the tactics used by Ocean Gate's government in gaining financial support for the wind energy project.

A document search of media coverage of Ocean Gate's wind energy project and the wind energy project in the municipality of Hull, Massachusetts will allow the researcher to compare and contrast aspects of the coverage after executing a content analysis of the results. Hull has two turbines in operation and hopes to have additional ones in the near future, thus offering an important case study for comparison to Ocean Gate's project.

#### **Problem Statement**

This researcher will investigate advantages and drawbacks of wind energy and how a local municipality communicates effectively with key players and other important publics to achieve its clean energy initiatives.

#### **Delimitations**

This study will not discuss forms of non-renewable energy; (coal, petroleum, gas, etc.). This study will not discuss wind energy development in any other specific locations other than Ocean Gate, New Jersey and Hull, Massachusetts.

## Hypotheses

**H1: It is expected that the local government of Ocean Gate, New Jersey, will use communication techniques to achieve compliance, or sufficient approval, of government and citizens for wind turbine development.** Although the turbines were approved without seeking a vote of Ocean Gate citizens first, citizens did not exhibit extensive objections to the project. Political support was strong for the project, evidenced by its extensive governmental funding (Kennedy O. G., 2009).

**H2: It is expected that, although some citizens will express strong views against wind energy, the majority of Ocean Gate's citizens will favor wind turbine power generation in their municipality.** In a meeting with Mayor Kennedy, he assured the researcher that minor citizen disapproval was presented in public hearings in the months before the first turbine was built. The pen and paper survey research will provide a more accurate portrayal of borough citizens' views about the turbines.

There are many positive and negative aspects of wind energy. Benefits of building two wind turbines in Ocean Gate can include many of the following, among others: increasing local energy independence, improve the borough's economic growth, increase market competition among various energy suppliers, raise property values and improve the air quality in the area. Excessive noise, a decrease in property values, producing a shadow effect by blocking sun rays from the Earth and dangers to birds are common

negative views of wind turbines (small wind: 2008 small turbine permitting handbook, 2008). Concerns over these characteristics are likely to appear in the survey research.

## Procedure

Qualitative research of this thesis will include interviews with leaders involved with the project — including the mayor of Ocean Gate, Jim Fry, and selected political representatives.

A document search of media coverage of the wind energy development in Ocean Gate, NJ will supplement the qualitative research. The researcher will also study the case history of this project — addressing key players, objectives, strategies and tactics and results of the campaign.

Quantitative analysis of this paper will include a pen and paper survey of Ocean Gate residents evaluating their thoughts on wind energy in general and their local government's plans for implementing wind energy in their area. The survey will be conducted on a non-probability convenience sample. The survey data will be evaluated through chi square, or cross tabulations, through [surveymonkey.com](http://www.surveymonkey.com). Further quantitative analysis consists of a content analysis of media coverage of Ocean Gate's wind energy development from July 20, 2008 through January 20, 2010 — including when the turbine's approval was first announced, its unveiling and through three months of operation. A second content analysis will study coverage of the wind project in Hull, MA from Sept. 27, 2001 through March 27, 2002 (three months before through three months

after the first turbine began operation) and from February 1, 2006 through August 1, 2006 (three months before through three months after the town's second turbine began operation).

### Summary

The researcher will learn Ocean Gate resident's views on wind energy and wind turbines in their town. Based on the findings, this researcher will suggest possible ways for Ocean Gate's government to improve its communication with its citizens and governmental officials.

The next chapter will present a review of literature relevant to this study including the areas of wind energy trends and wind energy in Ocean Gate, NJ.

### Terminology

**Attitude** - internal predisposition to act (Bagin and Fulginiti, 2005)

**AWEA** - American Wind Energy Association

**Channel** - outlet used to carry out a message

**Compliance** - sufficient approval permitting an action (i.e. wind energy generation in

Ocean Gate, DJ)

**Municipality** - a political unit, such as a city, town, or village, incorporated for local self-government (American Heritage Dictionary, fourth edition)

Ocean Gate, NJ - a municipality located on the east coast of the State of New Jersey

**Opinion** - outward expression of an attitude, in any form – purchase, vote, letter, speech; the effect of a temporary or lasting attitude (Bagin & Fulginiti, 2005)

**Persuasion** - motivating one to perform a desired behavior even if it apparently goes against a deeply held attitude -- the behavior can arise from even a temporary attitude a person adopts for the occasion (Bagin & Fulginiti, 2005)

**Publics** - specific audiences communicated to by the Ocean Gate, NJ government

**Public relations** - systematic communication between an entity and various publics important to that entity, aimed at increasing understanding and support of that entity and its objectives

**Strategy** - general approach to reach an objective; generally conditioning an audience to

receive the message contained in the strategy (Bagin & Fulginiti, 2005)

Tactic - specific channel technique to deliver a strategic message to a target audience comprising specific agent, cost and time frame (Bagin & Fulginiti, 2005)

Wind turbine - method of generating electricity, also known as a windmill

## CHAPTER II

### Literature Review

#### Public Affairs

The Public Relations Society of America (PRSA) defines public affairs as the “daily link between the private sector and government” (PRSA, 2009). PRSA believes that public affairs interprets one entity to the other within the ongoing social responsibility of aligning with “the openness and integrity of the democratic process” (PRSA, 2009). PRSA further states that the practice uses issues management when creating legislation and public policies.

Public affairs is, in short, defined as “an organization’s concern for its sociopolitical environment” (Lerbinger, An Overview of Corporate Public Affairs, 2006). Public Affairs Council President Douglas G. Pinkham defines the term as “the management function that interprets and works to strengthen a corporation’s business environment,” (Lerbinger, An Overview of Corporate Public Affairs, 2006).

Public affairs and public relations date back to 5000 years ago with the Ancient Egyptians. Julius Caesar was regarded as an excellent special events planner, staging his Army’s celebrations into Rome after winning battles. According to Wilcox et. al, 2000, Napoleon’s troops found the Rosetta Stone to be a “publicity release for the reign of Ptolemy V,” (p.330-331).

Cities must execute various communication strategies and tactics with various audiences in daily operations. Various city departments, including police and law

enforcement, parks and recreation, redevelopment, convention and visitors bureau, city council, mayor's office and fire department must each employ the appropriate communications strategies and tactics to fit their needs. According to Wilcox et. al, 2000, although all of these departments do not apply to all cities, they all have some similarities. Most importantly, although the flow of information varies greatly, "all have the objective of informing citizens and helping them take full advantage of opportunities," (p.337).

Wilcox et. al, 2000, also cites the International City Management Association as the organization offering the "best" analysis of why public affairs is important for municipalities saying, "the administrator must be mindful of public relations considerations at every stage of the administrative process, from making the decision to the final point of its execution," (p.338).

Public affairs, according to Wilcox et. al, 2000, includes public information, which is often the preferred term for public relations used by government agencies, the United States military and some educational institutions. In contrast from the persuasive attributes of public relations, public information focuses on a one-way communication model focusing solely on information dissemination. Social service agencies and organizations tend to use the term community relations in describing their communications operations (p.10).

## Community Relations

The Public Relations Society of America defines community relations as:

**an aspect of public relations having responsibility for building relationships with constituent publics such as school, charities, clubs and activist interests of the neighborhoods or metropolitan areas where an organization operates. Dealing with and communicating with the citizens and groups within an organization's home region (PRSA, 2009).**

In the book *Corporate Public Affairs*, author Otto Lerbinger offers strategies for engaging publics. He views community relations as a “two-way, symmetrical process” – rather than viewing it merely as one-way messages informing various publics (Lerbinger, *Interest Group Strategies*, 2006).

Lerbinger suggests using opinion surveys and personal contact with publics to gather their “concerns” which are later “integrated into the decision making of an organization and efforts are undertaken to measure the outcome of subsequent actions taken,” (Lerbinger, *Interest Group Strategies*, 2006).

The term *public participation* is typically used when discussing programs that seek support from government and/or citizens of a specific location to achieve a goal. A booklet by the Community Services Administration explained the concept of *public participation* when the phrase was first widely accepted in 1978.

Lerbinger, 2006, notes:

The decade and a half preceding our Bicentennial celebration of the establishment of representative democracy in this country witnesses the emergence of participatory democracy, referred to as ‘citizen participation.’ Today virtually all programs in which Federally appropriated funds are used require citizen access to the decision-making process...the nature of such participation is varied and is established by statute to administrative regulation, (p. 53).

In October 1997, at a “landmark” Public Participation Benchmarking Conference, Martha Crosland, acting director of the Department of Energy’s (DOE) Office of Intergovernmental and Public Accountability, defined public participation as “open, ongoing, two-way communication, both formal and informal,” (Lerbinger, Interest Group Strategies, 2006).

#### Psychology of Government Compliance

Drs. Kellermann and Shea studied threats, hints, suggestions, and promises as what they referred to as four “significant compliance gaining strategies.” They claim that literature in this area view “politeness and efficiency as bipolar opposites” in which polite actions are inefficient and efficiency is, in its very essence, impolite. These researchers concluded that hints are inefficient and are not one of the more polite strategies for gaining compliance. In addition, threats are impolite but not a very efficient method for obtaining compliance. Furthermore, direct requests are polite and among the most efficient ways of obtaining compliance. They later noted that suggestions “are neither as inefficient nor as polite” as they predicted in the study, (Kellermann & Shea, 1996).

Dr. Maria Simone analyzed studies on how governments share various information with citizens aimed to achieve citizen compliance with surveillance policies. She says that government sharing information provides “for a more efficient, less physically coercive discipline” of constituents, (Simone, 2005).

A study by Burns and DeVere researched the use of four compliance-gaining techniques (foot-in-the-door, labeling, low ball and reverse low-ball) aimed at achieving cooperation with a specific federally-funded gasoline conservation initiative.

Foot-in-the-door involves first obtaining compliance on a small item and then requesting compliance for a much more significant request—shown more effective than only asking for the more significant request.

Labeling assigns a label to a subject after communication with that individual. In this communication, the subject is told that they have various trait(s) that will help obtain compliance. For example, the study says that boosting a subject’s self-esteem leads to the subject’s decision not to cheat while playing cards with others.

Low-ball secures compliance to a request and then raises the cost of the request or decreases the benefits of the request to the subject; (ex: when car salespeople claim that the price of a vehicle was originally “misstated on the low side” after a consumer agrees to purchase the vehicle).

Reverse low-ball first offers a subject an exaggerated deal first with costs much higher than the actual costs. When the subject refuses, the subject is offered the actual deal (which is much more favorable to the subject), (Burns & Stephen, 1982).

Sociologist Amitai Etzioni concluded that organizations obtain compliance from

their members through three different methods: force, pay and conviction. Etzioni's research has been cited by more than 710 publications since 1966 (Etzioni, 1986).

### Green/Renewable Energy

Often branded as "green energy" for its positive effect on the environment.

According to the (Texas Renewable Energy Industries Association, 2009), renewable energy is defined by the legislature of the state of Texas as

any energy resource that is naturally regenerated over a short time scale and derived directly from the sun (such as thermal, photochemical, and photoelectric), indirectly from the sun (such as wind, hydropower and photosynthetic energy stored in biomass), or from other natural movements and mechanisms of the environment (such as geothermal and tidal energy). Renewable energy does not include energy resources derived from fossil fuels, waste products from fossil sources, or waste products from inorganic sources, (p. 1).

Supplying roughly the same definition, the World Resources Institute notes biomass used as boiler fuel to generate steam heat, landfill methane gas for heat, and fuel cells for vehicles are among some other examples of "green" renewable energy. The organization admits that "green" energy has a negative impact on the environment, but states that renewable energy offers a significantly better environmental option than "conventional" types of electricity (World Resources Institute).

### Wind Energy

Mankind has utilized wind energy since "ancient times...using sails to propel ships and boats" (Mathew, 2006). Wind energy was next used in powering water pumps and

grain crushers. Since then, technology has improved the scale and efficiency of wind power generation (Mathew, 2006).

No definitive, widely accepted date exists regarding when people first used wind for mechanical power. Some researchers cite Hammurabi, a Babylonian emperor who allegedly anticipated generating wind power for irrigation in the seventeenth century B.C. Some researchers look to a work written by Kautiliya in Sanskrit during the 4th century B.C. in India referencing the act of “lifting water with contrivances operated by wind (Mathew, 2006).

The “American multi-bladed wind turbine” was first used in the mid-1800s and was mostly used for pumping water to local crops. More than six million of the turbines were purchased in the U.S. from 1850 to 1930 (Mathew, 2006).

The first “modern wind turbine” for generating energy power was built in Denmark in 1890. Shortly afterward, a “17 m ‘picket fence’ rotor was built in Cleveland, Ohio” – this rotor generated a rated power of 12 kW for 20 years (Mathew, 2006).

Wind power generators began selling to the U.S commercial market by 1925. For approximately the next 45 years (especially in the 1950s), the wind turbine experienced various improvements in efficiency and design. In 1970, cost of electricity derived from fossil fuels dropped under 3 cents/kWh while electricity from wind costs were from 12 to 30 cents/kWh—thus slowing down innovation and investment in wind energy (Mathew, 2006).

Wind power experienced a “revival” in 1973, as the oil crisis increased the cost and availability of fossil fuels and safety concerns over nuclear power prevented further

development of nuclear power research. The U.S. federal government turned to the National Aeronautics and Space Administration (NASA) for assistance in developing large wind turbines through the mid-1980s.

The first step of effective wind project development is “early dialogue” with all important publics (Wizelius, 2007). Before land acquisition, detailed planning, the “early dialogue” should occur. The developer, (or in Ocean Gate’s case, the local government), should consider “making rough outlines for a few different options for a wind power installation and invite people in the surrounding area (1-2 km from the site) to an information meeting, an early dialogue.” Suggested invitees include “local and regional authorities, the grid operator and the local media,” (Wizelius, 2007).

Typically, the developer of the wind turbine discusses a general overview of wind energy generation, the expected wind capacity in the area and the upsides and downsides of wind power. Audiences, including political officials, are then shown some outlines of the project and then have the opportunity to share any opinions (Wizelius, 2007).

Early dialogues should be executed between the developer and “local community, the grid operator and other relevant authorities in separate meetings,” (Wizelius, 2007). These meetings provide a “rough outline...to adapt and modify the project to avoid unnecessary conflict” from various publics (Wizelius, 2007).

## Wind Energy in Ocean Gate, New Jersey

Ocean Gate turned down two bids on price estimates for the first wind turbine (to power approximately 80% of the municipal building's energy needs). After negotiations, one company lowered their original estimate and the council authorized Mayor Kennedy to approve a deal with J Fletcher Cramer & Son of Hackensack, NJ for \$325,000 for building and installing the first wind turbine. The construction company submitted their plans to Ocean Gate's construction office for permits. After working with the New Jersey Department of Environmental Protection, Ocean Gate received a Coastal Area Facility Review Act (CAFRA) and filed it with the Ocean County Clerk's office (Kennedy P. , Borough of Ocean Gate, New Jersey, 2009).

Jim Fry and Mayor Kennedy announced a "Name the Turbine" contest at Ocean Gate Elementary school and presented the turbine's benefits to students. The contest encouraged all children between the ages of 4 thorough 12 (either residing in Ocean Gate year round or seasonally) to come up with a name for the turbine. They provided entry forms at the municipal building for all students interested in participating. Among the prizes offered included a plaque with the winning name placed at the bottom of the turbine (Kennedy P. , Borough of Ocean Gate, New Jersey, 2009).

Ocean Gate created a model zoning ordinance for other NJ towns interested in developing wind energy initiatives (NJ.com, 2009).

## Wind Energy in Hull, Massachusetts

According to the Citizens for Alternative Renewable Energy, 2006, the town of Hull, Massachusetts, built a 40 kW wind turbine for \$78,000 (funded by the Massachusetts Department of Energy Resources) — producing energy beginning in 1985. In March 1997, wind damage ended the turbine's streak of producing energy efficiently and shut it down. The town experienced roughly \$70,000 in energy savings – almost matching its original costs.

In April 2001, the town accepted a bid from Vestas, Inc. to build a new 660 kW turbine for \$698,699 (Citizens for Alternative Renewable Energy, 2006). Favorable views toward the turbine encouraged the town to build a second turbine; this one operating beginning in May 2006. The combined power generation from the two turbines equaled approximately 10% of the town's energy needs. In 2007, the town began debate over building four additional turbines to power the entire town's electricity needs (Citizens for Alternative Renewable Energy, 2006).

## Growth Potential and Public Opinion on Wind Energy

Currently the world's fastest growing energy source (and has been for the last five years), wind had a "total installed capacity" of 39434 MW in 2004 (Mathew, 2006). A 2005 Yale University national opinion survey (1,000 adults nationwide +/- 3.1% margin of error) reported that 87 percent of respondents supported expanding wind energy in the United States (DeFusco, 2005).

The United States generated 11.6 GW of electricity from wind turbines in 2006. The Department of Energy's Office of Energy Efficiency and Renewable Energy is exploring the feasibility of the United States generating 20% of the nation's energy needs, more than 300 GW of electricity, from wind by the year 2030 (U.S. Department of Energy, 2008).

## Summary of Literature Review

Green energy is a key element of the success of many of today's businesses and other institutions. This research will describe the important role of green energy, in the form of wind, for two East Coast municipalities.

Since the Ancient Egyptians implemented public affairs activities 5000 years ago, governments have implemented similar activities to achieve various objectives. In modern society, we see municipalities perform certain actions to gain compliance from its citizens and obtain financial support from federal and state government to achieve

certain ends. In the case studies presented in this research, Ocean Gate, NJ and Hull, MA arguably cross the line between public affairs (following a one-way communication model) and public relations, executing a persuasion campaign in which the local government carries out certain strategies and tactics to gain verbal support from those affected by wind energy development.

## CHAPTER III

### Methodology

#### Data Sources

To study the public relations aspects of wind energy development in Ocean Gate, NJ, this researcher will conduct two content analyses, interviews and survey research to gain information on the attitudes and behavior of important figures and audiences involved in wind energy development in this New Jersey municipality.

#### Content Analyses

The first content analysis will evaluate media coverage of Ocean Gate's wind project and another will evaluate media coverage surrounding the further developed wind energy project in Hull, MA. (to provide context to the Ocean Gate project). The content analysis of the Ocean Gate project will include coverage from the *Asbury Park Press*, *Star Ledger* and the *Press of Atlantic City* between July 20, 2008 through Jan, 20, 2010—including when the first turbine's financial support was announced, through its unveiling and through three months of operation. The content analysis studying the Hull Wind project will review coverage by the *Boston Globe*. Media coverage of Hull's first wind turbine will be recorded (covering three-months before the town's first turbine began in operation until three months after (Sept. 27, 2001 through March 27, 2002) and three

months before the second turbine began in operation through three months after the second turbine's first operation date (Feb 1, 2006 through August 1, 2006).

### Selection of Ocean Gate

As the first municipality in New Jersey to develop a wind turbine, the small town of Ocean Gate was selected as a unique and important town for this research. Since the first turbine came into operation and the second turbine was approved, the town continues to receive inquiries from other towns interested in pursuing wind energy options in their town (Kennedy O. G., 2009).

### Survey Research

The researcher will administer pen and paper surveys, in-person, outside the Ocean Gate Post Office. The surveys will be administered on March 10, 2010.

Because there is no home mail delivery in Ocean Gate, all residents go to the town's post office to receive their mail. Therefore, this is the most effective way to gain responses. According to Mayor Kennedy, the town's older population is unlikely to respond favorably to a phone survey; thus making the selected survey method least invasive (and therefore more comfortable) for subjects (Kennedy O. G., 2009). Surveying Ocean Gate residents and surrounding community members will measure demographic

information, opinions on wind energy in general and respondents' thoughts on the implications of wind turbines operating in Ocean Gate. The survey data will be evaluated through chi square, or cross tabulations, through surveymonkey.com. The surveys cannot ensure external validity because a non-random, convenience sample will be selected.

### In-depth and E-mail Interviews

In-depth, in-person interviews of five important persons key to Ocean Gate's wind energy development will be conducted on March 10, 2010. The interviews of Ocean Gate Mayor Paul Kennedy, retired Engineer Jim Fry, selected Board of Public Utilities officials and other key representatives will reveal insight from those closely involved in taking the project to fruition or presenting the greatest challenges to the project. If any significant events occur during the period in which the researcher conducts the surveys, those events will be recorded to help ensure internal validity. The interview with Mayor Kennedy and Jim Fry will be an in-depth, in-person, interview and the others will be conducted via E-mail.

### Data Analysis

This researcher will use cross tabulations to analyze survey results. Survey results will be reported in text and charts. Results of content analyses will be shown in charts. Interviews will be reported in the text. Transcripts of interviews, content analyses and

survey instrument will be included in appendix. Research results will be reported in Chapter IV.

## Chapter IV

### General Findings

All interview respondents favored wind development in Ocean Gate, NJ. Each interviewee represents an important aspect of gaining compliance for wind energy development from government, local media and town residents.

### Interviews

This researcher conducted four interviews of various important people in Ocean Gate's wind development:

Paul J. Kennedy (Mayor of Ocean Gate, NJ and Jim Fry (Ocean Gate resident and retired U.S. Navy engineer)

When asked at what point the wind project is officially successful, Mayor Kennedy said, "In five years from now, as long as the machines are generating electricity like they have started to in the beginning, and we can look forward to the five more years where the machines will be paid off, that would be success to me."

Alma Rivera (Administrative Analyst, New Jersey Board of Public Utilities)

Rivera worked with Rowan University professors and students while the

engineering team measured Ocean Gate's wind capacity at Ocean Gate. Ensuring sufficient wind speeds is a vital early step towards planning the turbines.

Chelsea Michels (Toms River Bureau of the Asbury Park Press)

When asked for advice on how other towns interested in wind energy development can communicate more effectively with her, Michels suggests that they should "first speak with Ocean Gate Mayor Paul Kennedy, since he was the first to pave the way through administrative and environmental red tape in building this turbine." Michels aims to maintain objectivity, recommending that towns also "speak with residents living near the turbines, so that they can possibly learn from the mistakes of their predecessors." Michels has "specific towns" that she reports on, so she might not write about other towns interested in wind energy development.

Joseph Fiordaliso (Commissioner, New Jersey Board of Public Utilities)

Commissioner Fiordaliso supports alternative energy and assured municipalities that "his phone is always open" (to assist with wind development inquiries) and Fiordaliso says, "Obviously the more projects like the one in Ocean Gate that are built move us closer to our goals in the Energy Master Plan. To meet those goals, however, off shore windmills are a must and we are pursuing those as well."

### In-Person Intercept Survey

More than 60% of survey respondents were at least 50 years old and only 14.9% were less than 36 years old. Of the 101 survey respondents reporting their specific gender, 58% percent of respondents were male and 42% were female. Males' answers to the survey questions roughly matched the results of female respondents' answers.

### Research Supporting the Hypotheses

H1: It is expected that the local government of Ocean Gate, New Jersey, will use communication techniques to achieve compliance, or sufficient approval, of government and citizens for wind turbine development.

### In-person Intercept Survey

Table 1: Government Communication and Citizen Compliance

From the proposal of wind energy in Ocean Gate through today, how satisfied are you with communication from Ocean Gate's government on the following:						
Answer Options	Highly Satisfied	Satisfied	Somewhat Satisfied	Unsatisfied	Highly unsatisfied	Response Count
Events about wind energy in the town	39	33	12	8	11	103
News about Ocean Gate's wind energy in the media	32	32	20	7	7	98
Safety issues or any complaints surrounding the wind turbine	27	31	19	9	12	98
Estimated financial and/or environmental benefit from wind energy	39	27	19	4	12	101
<i>answered question</i>						<b>105</b>
<i>skipped question</i>						<b>1</b>

In each of the four communication options listed, the largest portion of respondents selected “highly satisfied” or “satisfied.” The majority of respondents favored the local government’s past communication in all four examples.

Table 2: Communication tactics and Citizen Compliance

How satisfied are you with the use of the following communication tactics by Ocean Gate's government to communicate wind energy information?						
Answer Options	Highly Satisfied	Satisfied	Somewhat Satisfied	Unsatisfied	Highly Unsatisfied	Response Count
Website	18	37	16	6	14	91
Reprints of media articles	19	34	20	7	12	92
Town Meetings	18	37	16	4	14	89
School Programs	17	30	23	3	8	81
<i>answered question</i>						<b>102</b>
<i>skipped question</i>						<b>4</b>

Twenty-one percent of respondents were unsatisfied or highly unsatisfied with the local government's wind turbine communication on its web page. Nineteen percent were unsatisfied for highly unsatisfied with the use of reprinting media articles for resident use. Eighteen percent were unsatisfied or highly unsatisfied with the use of town meetings to educate the public on wind energy in town and eleven percent were unsatisfied or highly unsatisfied with the use of wind energy-themed school programs. Although there were a few negative responses, responses were generally positive for all four tactics.

#### Content Analysis of Ocean Gate News Headlines

The content analysis revealed two neutral headlines and fourteen positive headlines from July 20, 2008 through Jan, 20, 2010 (three months before and three months after the wind turbine began operating in Ocean Gate) about wind energy in Ocean Gate.

#### In-depth Interview with Mayor Kennedy and Jim Fry

Mayor Kennedy and Jim Fry ascertained opinions from citizens regarding the wind turbines through "several meetings," according to Kennedy. Kennedy said that turnout for town meetings on the issue were sometimes filled, "standing room only meetings, where people did come and ask questions. He noted media coverage on the

issue spanned print, television and radio. Kennedy says, “there were no secrets to this whole process.”

#### Interview with Alma Rivera

When asked about Rivera’s experience working with Mayor Kennedy and others in adopting a model ordinance for wind turbine installation and the importance of the process, Rivera said,

I think working with municipalities and industry was very helpful in understanding top impediments for the development of wind energy. Land use and economic barriers were top impediments at the local level. Members of the NJ Small Wind Working Group including folks from Ocean Gate provided valuable input into the draft Wind Model Ordinance.

Rivera discussed how the Wind Model Ordinance marks a significant step in overcoming many challenges to wind energy development faced by other NJ municipalities; such as regulations on land use.

#### Interview with Chelsea Michels (Toms River Bureau of the Asbury Park Press)

When asked about why her role is important, Michels said, “I think there is a lot of misinformation or myths surrounding wind turbines, and it is important for townships and residents to know as much information as they can before deciding on such a large investment.”

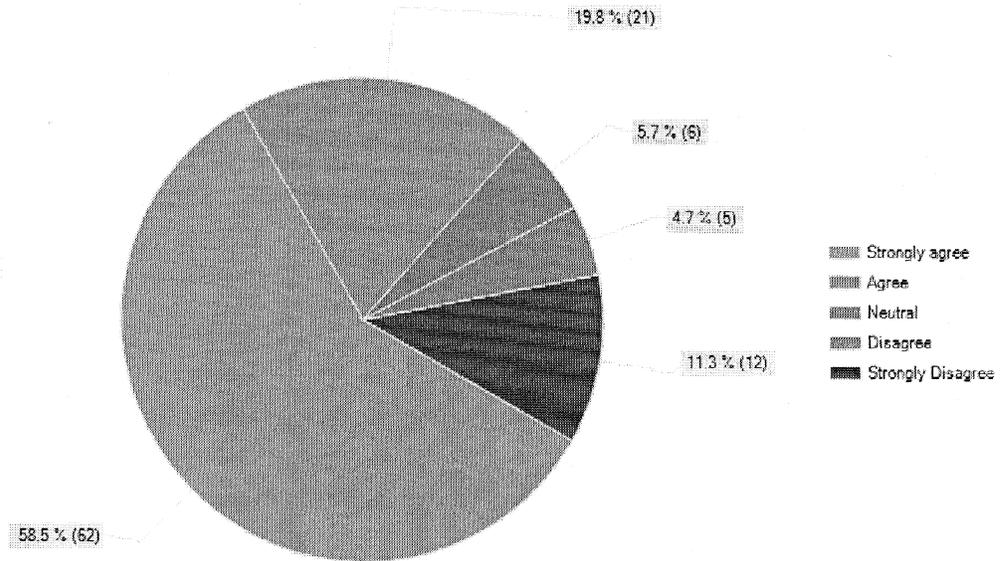
H2: It is expected that, although some citizens will express strong views against wind energy, the majority of Ocean Gate's citizens will favor wind turbine power generation in their municipality.

### Content Analysis

News coverage of the wind turbine in Ocean Gate revealed some negative opinions toward wind energy in the town. However, coverage was generally positive. From three months before, to three months after, the first turbine began operation (July 20, 2008 through Jan, 20, 2010), only two of sixteen print articles about the turbine included neutral or negative headlines.

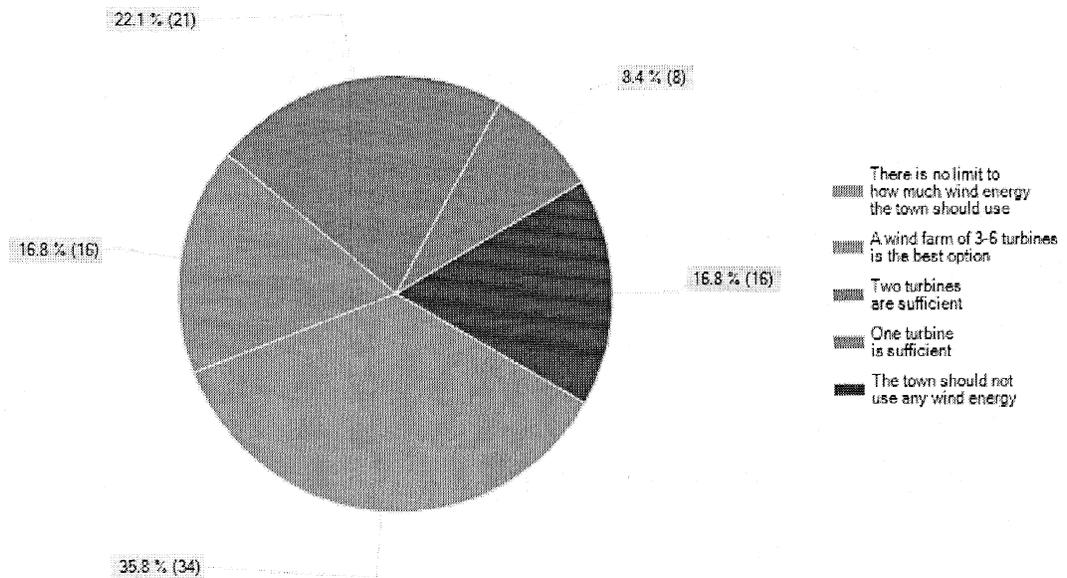
### In-person Intercept Survey

Figure 1: Support of wind energy development in Ocean Gate, NJ



Seventy-eight percent of respondents either agreed or strongly agreed with the statement. Fifty-eight percent strongly agreed. Therefore, the majority of respondents support wind energy in Ocean Gate.

Figure 2: Preferred number of turbines in Ocean Gate



Nearly 36% of respondents reported that there is no limit to how much wind energy Ocean Gate should use. Twenty-two percent of respondents said that two turbines are sufficient for Ocean Gate and nearly 75% of respondents favored at least two turbines in Ocean Gate.

#### Interview with Mayor Kennedy and Jim Fry

Responding to questions regarding the level of input from residents, Kennedy said,

To be honest with you, in the ten-plus years I've been involved in government here in the town, there have been more people in the past several years coming to meetings, getting up and speaking about certain issues, and voicing their opinions than in the seven to eight years prior to that...for the majority of them I would say, in all the meetings that we held publicly here and the opportunities that they did have, I would say we may have had two to three people at tops be against it (the wind turbine) for one reason or another.

## Summary

Responding to growth trends in wind energy, this researcher studied how Ocean Gate, NJ used communication techniques to achieve compliance from citizens and government for wind energy development. Since they obtained approval for one turbine, plans for the second turbine are set for the second one to begin operation in Fall 2010.

This research should be helpful to various towns seeking information on the first town government in NJ to successfully operate wind turbines. The in-depth interview with Mayor Kennedy and Jim Fry, published in the appendix, takes a relatively comprehensive look at the interaction between various partners in wind energy development.

The content analyses provided context to the Ocean Gate project for those concerned about the potential long-term support for the town's second turbine. Hull, MA's wind coverage, much like Ocean Gate's, was generally positive throughout the period studied. Therefore, the content analyses suggest that coverage for Ocean Gate's second turbine should be comparable to coverage seen of the first turbine.

## CHAPTER V

### Discussion of Findings

#### Summary

Although males and females answered the survey similarly, this researcher found some differences when comparing the survey answers of various age groups. Although older respondents held less favorable views towards wind energy than younger respondents, they rated communications tactics by Ocean Gate's government more favorably than their younger counterparts did.

In addition to shedding light on communications techniques used by Ocean Gate's government, the in-depth interview with Mayor Kennedy and Jim Fry provided helpful, candid insight on their relationship with others involved with the wind project.

The winner of the town's "Name the turbine" contest was 9-year-old Jenna Collins. Collins named the turbine "Gale," also meaning a gust of wind, and serving as an acronym for "Great Americans Love the Environment" (Michels, Ocean Gate erects wind turbine to power offices, treatment plant, 2009). The turbine stands true to the town's dedication to that affection for the environment.

Table 3: Survey respondents' views on preferred number of turbines in Ocean Gate (cross tabulation)

One turbine operates now and another will operate in Fall 2010. Which of the following best describes your views on options for wind energy in town?								
Answer Options	Age					Response Percent	Response Count	
	under 21	21-35	36-49	50-65	over 65			
There is no limit to how much wind energy the town should use	1 (33.3%)	7 (58.3%)	7 (30.4%)	10 (33.3%)	9 (33.3%)	35.8%	34	
A wind farm of 3-6 turbines is the best option	0 (0%)	1 (8.3%)	5 (21.7%)	6 (20%)	4 (14.8%)	16.8%	16	
Two turbines are sufficient	1 (33.3%)	2 (16.7%)	6 (26.1%)	4 (13.3%)	8 (29.6%)	22.1%	21	
One turbine is sufficient	1 (33.3 %)	2 (16.7%)	3 (13%)	1 (3.3%)	1 (3.7%)	8.4%	8	
The town should not use any wind energy	0 (0%)	0 (0%)	2 (8.7%)	9 (30%)	5 (18.5%)	16.8%	16	
Other (please specify)								13
							<i>answered question</i>	95
							<i>skipped question</i>	6

Understandably, younger residents rated wind energy development more favorably than older residents, as it takes a number of years to earn a significant return on the initial investment of building the turbines. All age groups supported wind energy in Ocean Gate. Of the 50-65 age group, 66.6% supported at least two turbines in Ocean Gate. Most surprisingly, 77.7% of the over 65 age group supported at least two turbines in Ocean Gate.

#### Conclusion

H1: It is expected that the local government of Ocean Gate, New Jersey, will use

communication techniques to achieve compliance, or sufficient approval, of government and citizens for wind turbine development.

Although some of their communication tactics were required by law (such as posting information about the town meetings in public places), Mayor Kennedy and Jim Fry went to great lengths to successfully secure compliance from citizens and other audiences.

Many respondents to the survey seemed overwhelmingly against wind energy while the researcher administered the surveys. After recording the results, the researcher found that those complaints were fewer than expected. There was little to no reason for the majority of residents to complain because they were pleased with the course of action in regard to wind energy in Ocean Gate.

H2: It is expected that, although some citizens will express strong views against wind energy, the majority of Ocean Gate's citizens will favor wind turbine power generation in their municipality.

Several respondents to the written intercept study said the turbine was too noisy. Some respondents verbally told the researcher that the turbine was too noisy. Other than these noise complaints and miscellaneous complaints here and there, the response was overwhelmingly positive for wind energy in town.

## General Findings

To the survey question regarding how many turbines to operate in Ocean Gate, three people suggested using solar energy. This is especially noteworthy as solar was never an option in the question and was never mentioned throughout the survey. A few respondents asked if this researcher was working for the Mayor Kennedy of Ocean Gate and wanted to know if Kennedy was getting the results. The researcher told nearly all of the respondents (and all those who asked), that he was not working for Kennedy, but that Kennedy would get the results.

## Further Research

Ocean Gate's wind energy development is only half-complete. Studying media coverage and citizens' perceptions of wind energy around when the second turbine goes up would provide further insight into how opinions might change when exposed to different levels of wind energy during an extended period of time. Further research should consider interviewing additional representatives from the NJ Board of Public Utilities, reporters and influential community members for additional views on wind energy development.

## Contribution to the Field

This research should be an invaluable tool for the increasing number of businesses and governments seeking “green” initiatives, most notably wind energy. Since Ocean Gate began operating its first turbine, plans were created to begin operating another one in town in fall 2010. In addition, the town received inquiries from other municipalities seeking wind energy development. Municipalities should use this research when analyzing the feasibility of wind turbine development in various locations.

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APPENDIX A

Survey Instrument

1. I support wind energy in Ocean Gate, NJ

- a. Strongly agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree

2. How significant are the following aspects of wind energy to you?

	Very significant	Significant	Somewhat significant	Not significant	No effect
Environmental impact					
Financial impact					
Impact on Ocean Gate's reputation					
Safety impact					

3. From the proposal of wind energy in Ocean Gate through today, how satisfied are you with communication from Ocean Gate's government on the following:

	Highly satisfied	Satisfied	Somewhat satisfied	Unsatisfied	Highly Unsatisfied
Events about wind energy in the town					
News about Ocean Gate's wind energy in the media					
Safety issues or any complaints surrounding the turbine					
Estimated financial and/or environmental benefit from wind energy					

4. How satisfied are you with the use of the following communication tactics used by Ocean Gate's government to communicate wind energy information?

	Highly satisfied	Satisfied	Somewhat satisfied	Unsatisfied	Highly Unsatisfied
Website					
Reprints of media/news articles					
Town meetings					
School Programs					

5. One turbine operates now and there are plans for another turbine in town. Which of the following best describes your views on wind energy options for Ocean Gate?

a. There is no limit to how much wind energy the town should use

b. A wind farm of 3-6 turbines is the best option

c. Two turbines are sufficient

d. One turbine is sufficient

e. The town should not use any wind energy

f. Other (please specify)

6. What else should the government of Ocean Gate do to communicate the town's wind energy development?

7. Gender

a. Male

b. Female

8. Age

a. Under 21

b. 21-35

c. 36-49

d. 50-65

e. Over 65

## APPENDIX B

### INTERVIEWS

In-Depth Interview with Ocean Gate Mayor Paul Kennedy and Ocean Gate Resident Jim Fry:

Richter: So, how does it feel to have Ocean Gate serving as a symbol of alternative energy for other small towns in New Jersey? We talked about the model wind ordinance that Ocean Gate developed with the BPU that other towns are expected to use in developing their wind energy plans. How does it feel to be at the center of this excitement?

Kennedy: To me it's a great feeling. Do I feel that it's a personal achievement? I think it's not really personal; it's a town achievement, a municipality achievement, in this goal that we set for ourselves. Everybody has been in it together, throughout this past two-and-a-half year process. Maybe a little more work for Jim Fry and myself, but throughout, the council has been there with different members changing, and the surrounding community has been there as well, more anxious to learn about it and possibly do it and how to do it and anything else. That's the most rewarding, because it's not just for Ocean Gate, it's for everyone.

Richter: Let's switch to you now, Jim. How do you feel about all this excitement and being at the center of renewable energy in New Jersey?

Fry: I think it's great for Ocean Gate. I mean, we're a small community. When people look at small communities and hey what do they do for everyone, well it's very obvious what Ocean Gate has done. It's put wind power within reach for most municipalities in the state and also being the first municipality to actually have an ordinance and following through with the turbine right behind it. I got to give credit to the mayor and council for pursuing it as much as they have. And I think something the mayor didn't mention as well is that we've had approximately eight or nine votes on different aspects of everything and every vote has been unanimous and bi-partisan. I think the irony of the thing is, Ocean Gate was mentioned in an article in New Zealand. It's amazing how the notoriety of this has spun off far beyond the state of New Jersey. I lived in Pennsylvania and it's funny the people who get all the excerpts from Pennsylvania are saying, "you guys are crazy."

Richter: Now back to the mayor, here. We talked about the town meetings. How did you get input from the residents? Was that mostly through town meetings?

Kennedy: We have had several meetings. Some packed houses, standing room only meetings, where people did come and ask questions, and public information sessions

about it in the past two years. Obviously the media has covered it as well, through articles in the newspaper, on the TV, on the radio. There were no secrets to this whole process. It's been going on for two-plus years, more intensified in the last year and a half as far as meetings go, votes go and media coverage. It hasn't been a secret to anyone in the town unless they don't read the newspaper or pay attention to the media. It's been posted at our post office, by law, and it's also been posted here in the (municipal) building, it's also news that's not only just in Ocean Gate, its been in Ocean County, the State of New Jersey has covered us, and into the Philadelphia area has covered us as well.

Richter: How do you feel about the level of input from the residents? Was it about as much as you expected, more or less?

Kennedy: To be honest with you, in the ten-plus years I've been involved in government here in the town, there have been more people in the past several years coming to meetings, getting up and speaking about certain issues, and voicing their opinions than in the seven to eight years prior to that. Nobody used to ever come to meetings. We would have one or two people, it'd be the same ones, usually complaining about the same things. The summer people would complain about the beach during the summer meetings or during the winter you'd get one or two coming in complaining about spending money. That's pretty much how it went. Their input is always welcome. Every meeting is a public meeting. The few sessions we did have where people did come up and speak was

constructive questions and answers. For the majority of them I would say, in all the meetings that we held publicly here and the opportunities that they did have, I would say we may have had two to three people at tops be against it (the wind turbine) for one reason or another.

Richter: And you're saying a lot of these are pretty packed, and if only two or three people are against it, that's pretty remarkable.

Kennedy: Right, there were several meetings. There was one meeting where it was standing room only and another that was pretty full too that we had to have hearings because people actually asked questions. Out of the few that did get up that were against it, so to speak, one was because of money, he just didn't want to spend money and the other one, they just didn't want to see it, they didn't want to look at it. It was a resident close to the building, and to be honest with you, it was actually decided upon after a couple of the public meetings that we move the location of the turbine from where we were originally going to put it because of consideration for the (nearby) residents. And that actually increased the cost of the turbine itself; by moving it further from the building.

Richter: Now I know you both have an active role in talking to people in the town and various other audiences about wind energy in Ocean Gate. How do you characterize the

feelings of the people you've spoken with, people living in the town?

Fry: Generally it's been extremely positive. A lot of the people say it's a sign of progress. It's putting Ocean Gate on the map. Some people are against putting it (Ocean Gate) on the map because they like to keep it quiet. But, basically speaking, I think it's been extremely well received. Like the Mayor said, we actually advertised on the bulletin board that there would be an information night. That's how we started, almost three years ago, we had an information night. We brought in experts from the State (of NJ), we sat down, we brought up the good, the bad and the ugly. We brought up all the scenarios that we knew of that were presently out there and we put them out on the table. The fact is, it was brought up then, it was noise, the way the noise issue was handled, one of the residents in town got up and he's holding something and he's walking around with something in his hand, and I think I told you this before, with the razor, and he says "can you hear this, can you hear, can you hear this" and everyone thought he was crazy, but the bottom line was, he had his razor running, he said "that's what you're gonna hear." Realistically speaking, that's a pretty close number...the number of that razor is probably about the same number (in decibels) of noise that you would hear external here (with the turbine). All in all though, I think it's been very positive. There has been a lot of positive support. The people who are concerned, they have legitimate concerns that we are trying to answer. We are trying to work with the company. Even though, right now the Ocean County Health Department has basically said the levels are within New Jersey Noise

Nuisance Laws...we have a meeting scheduled with the company in April and we are going to try to lower it (the turbine's noise). The people who are against it, and you said you had some inquires down there (by the post office), but anyone past a 500-foot radius of this building (the municipal building that the turbine stands next to) should not have anything to say because the levels are so low. Their home air conditioners are noisier than this is; and most of the people who are complaining are outside that 500-foot radius. 1300 foot away, woman says it sounds like a helicopter landed in her backyard. Well, either she's never been in a helicopter or she doesn't know where her backyard is. So, I think those are the kinds of things you have to look at.

Kennedy: We had an informational wind summit, we called it, right here in town, two years ago, in February. Where we probably had 75, 80 people here that day. It was an all-day session where we had speakers; spoke about all different facets of wind energy in the morning and then we broke for lunch and then we had in the afternoon with a question and answer period as well probably until about four 'o clock in the afternoon. Very informational, a lot of different officials, superintendents and so forth throughout the county, as well as the public were here and were very informational and at that particular session, there was no negativity there that day either.

Fry: None. About 17 municipalities were here for that day.

Kennedy: Right. I can tell you this too, when you talk about the noise, I don't know how much you're going to get into it. Last Wednesday, was it two Wednesdays ago, a couple weeks ago, whatever it was, we were here speaking with the Star Ledger (newspaper).

Fry: He read the article.

Richter: I have it with me.

Kennedy: Well, we were speaking with them, and yeah well, that article is a real doozy, she did not represent what we did. I wasn't happy about it, but of course they're not going to respond. But anyway, we were speaking with her (reporter Abby Gruen), ya know, underneath the turbine and blah blah blah and we started walking over to the police station area and the air conditioner came on for the police station but I couldn't hear her talking. I said, ya know, we couldn't hear each other talk, and the turbine was running, "we better go back over there (to the turbine) where I can hear you talk." That's literally what we did, and that's right on site. You're gonna get it, like Jim (Fry) said, you're gonna get to people, the eight or nine of them that are complaining and went to the Board of Health, they don't want to hear no for an answer and they're just gonna keep going, going, and going. And we know we're never gonna get rid of them. So, whatever, as long as the majority of the public is okay with it, and we're okay with it, and as long as the Board of Health tells us that the sound levels are fine, and we're still looking into

something. It's not like we're just saying ya know, forget about it, we know we're okay, we're not doing anything. We're still looking into it. Do we have to? No. But, we are.

Richter: Right. Well, I talked to you about the difficulties in obtaining support from different governmental officials or people in the town. What would you say was the toughest audience to convince?

Kennedy: Jim will probably say the same as me. But the toughest was the DEP. That was the toughest. Dealing with all the different angles that we've had from start to finish on this project and still now. This project is not finished; it's only half-way through as far as we're concerned.

Fry: DEP really had no regulatory statutes on the books to cover wind energy. They are now in the process of writing some, but they were holding us to other guidelines which mostly centered around air pollution, which we still had to comply with it.

Richter: What response do you have to residents who complain about the noise of the turbine or light reflecting off of it, or other concerns?

Fry: First of all, on the noise. If anyone has ever lived in a city anywhere or in a town near an interstate highway, the noise there is far greater than it would be here. In general,

noises of this type, which are tonal noises, which are noises that are not very discreet, they are mostly in the lower frequency range and, like most other places, when you first hear it, it becomes a nuisance and could be considered an annoyance. However, once you're used to it, it becomes part of your background noise and consequently you don't really hear it or see it. I think one quote in the newspaper is (paraphrasing) "I know sooner or later it'll go away, but that doesn't really make any difference to me, ya know"

Kennedy: That was in the Asbury Park Press three weeks ago.

Fry: The issue is, the people that don't want it, just don't want it. Noise was the easy target because you hear certain things. The issue, when it comes to flicker, the pulsing that they see, the disco-effect. It does flicker, no one's arguing with that. However, people say it flickers all day long. Well, ya know, the laws of physics say that we'd all be dead by now because the Earth would not be rotating. In the Winter, the shadow is in one location and in the Summer, the shadow will be in another location, because of the rotation of the Earth and all that. So flicker basically is not a substantial issue. I don't believe it's been on anyone's home more than an hour, hour-and-a-half a day, if it's been that. (Rowan professor) Dr. Bhatia might be able to give you some details on that if you wanted the real technical part of it. That's one issue. The other issue is we've had a person complain that he can't sleep at night so he is starting to dose himself up with Nyquil and then as he leaves town, the tone re-lingers with him for an hour. To me, I'll

use this term, psychosomatic. There is a term called psychoacoustics, and psychoacoustics is when the human body, the human ear hears something different and your mind focuses on it; and over a period of time it blends into background noise that exists in your head and everywhere else. The other issue is (the idea) that we're going to kill birds. First of all I don't believe we have any protected species of birds. So, the avian issue, we don't consider that to be an issue at all. The swishing sound which people say they hear and it bothers them. It's fine. People also say "it drives me crazy because it keeps changing speed." It's impossible to change speed because it has to be synchronized with the power grid in order to put power to the grid. The unit runs at a constant speed; within the tolerance of the electrical grid. So there's nothing behind that at all

Richter: Seems like they came up anything they can possibly complain about.

Fry: I expect a half a dozen more. I think the one they may come back with is saying there are health issues. Almost every bit of information the public has come back and objected to has been literature for wind farms the size of (the one in) Atlantic City or bigger. Nothing has been for the scale of what we have here. They constantly say, "well, it has to be 1000 foot away," that is a weak guideline used by some people to make decisions on whether they are going to consider it or not. But, it's for a 250 to 300 foot tower, it's for a one-and-a-half megawatt generator, not a 50 kilowatt generator. So all that needs to be taken under consideration. The other issue that came up is property

values. We've always had people come in and want their taxes reduced because they're losing property value on their house. A study in December 2009, the executive summary said that there is no apparent impact on property values due to the proximity of wind turbines. And they looked at the big turbines, not the small ones...another one is in Hull, Massachusetts. (In) Hull Massachusetts they have a turbine smack in the center of town the size of Atlantic City's and we have not seen anything negative. I'm not saying that we've seen the most negative things here. But, I'm sure in those towns you still have those 10 to 15 people who are raising a stink and the rest are saying "get a life."

Richter: Where do you see the project going within the next few months? We talked about a few people challenging the second turbine.

Kennedy: The second one, we have a contract, signed, sealed. We have officially closed on the funding end of it as well. The mechanisms are in place for the contract and the funding for the project to begin. We've had a pre-construction meeting as well. It's just a matter of when I tell them to start.

Richter: The Star Ledger loves that. (laughs)

Kennedy: I could call them right now in front of you and say "when can you start, Fred" and he would give me a date, and that that's when he would start. He wants to start in the

Spring, but we probably won't do anything until late Summer or early Fall. The company is actually going to get the turbine on hand themselves...but they'll have it in one of their warehouses in New Jersey and work with us, with our engineer, to try to come up with some device to cover it, to make it wider, while it's still on the ground. That's the intent. Have I said that publicly? No. But it's going to come to that, I can see it. Basically, publicly I told them we're working on it and that the company will be here beginning of April to do the first preventative maintenance on the unit. And then they will tell us if there's anything wrong with the machine at that particular time. We have had conference calls with the manufacturer to quiet it down. The plan from the boro is that we probably won't do anything until late Summer or early Fall.

Richter: Of this calendar year?

Kennedy: It's got to be done within 400 days from signing the contract, which was December 31, 2009, or we lose the funding; which is \$229,000 from the American Recovery and Re-Investment Act of 2009 and \$97,000 from the New Jersey Clean Energy Program. So the clock is ticking.

Richter: Does that completely cover the cost of the turbine?

Kennedy: Well, the turbine is \$386,000. So what are we talking about \$80,000?

Fry: Basically we're getting the next turbine for \$80,000 out of town pocket.

Richter: I see. So, what recommendations do you have for other towns looking at the model wind ordinance that Ocean Gate helped develop, when they're talking about developing wind energy in their towns?

Fry: I've spoken to about probably six towns in the area. We've testified before their zoning boards, listened to them. The towns that have adopted it; it's been adopted reluctantly. There's a certain skepticism of waiting to see what happens. Most of them have been set up for commercial or borough use only. Ocean Gate's is the most lenient wind zoning ordinance in the entire state of New Jersey at this point and time. There's approximately 15 municipalities in the state that actually have a zoning ordinance now. We are the most lenient when it comes to our setbacks, even in some cases our height restrictions. A good percentage of the ordinances, if you don't have three or four acres of ground, you're not going to be able to put a turbine up. Well, my question to the municipalities has always been, well, how many people in your town have three or four acres? And the answer is basically none. In our ordinance, about five to seven percent of the ground owned by people is eligible for wind turbines. It's much more lenient than others.

Fry: Again, I think it's a wait-and-see. Obviously, this will hold up for a little bit and

strike a match for the next one. I've made some public comments about it, you know, "Why can't you do it, if someone the size of Ocean Gate can do it, why can't you do it?" And I think that has been the battle cry of the State (of NJ) too. The State is still 200% behind us, Board of Public Utilities is behind us, and if you end up talking to some of the people up there, I think they will tell you the same thing. It opened the door for a lot to happen in the State.

(Discussing further interview contacts)

Fry: (BPU Commissioner) Fiordaliso has been here at least five times. He came here the night we signed the model ordinance.

Kennedy: When the room was full.

Fry: When the room was full.

Richter: And that gives you a lot of confidence from your standpoint.

Kennedy: Oh yeah.

Fry: Positively. We have gotten very fine support from the Board of Public Utilities. Even the former Commissioner Jean Fox has been here three times. We've had some

people out of the Clean Energy office. Scott Hunter, they've been here. Because of what we're doing it's making their job easier for them to get that public knowledge out there.

Kennedy: We've had representatives from the League of Municipalities here. New Jersey Conference of Mayors here. The League of Municipalities did a story on us. NJLOM is their website. That month was January.

Fry: They gave us an award for the ordinance and going through with it; getting the turbine.

Kennedy: New Jersey Monthly (wrote about the turbine) was in March. Conference of Mayors covered us, I believe in September. It's not like the organizations haven't been behind us, because obviously they have. You've read the New Jersey Monthly one?

Richter: I did, I read that online.

Kennedy: That was a good one.

(Richter suggests that he contact Chelsea Michels of the Asbury Park Press for an interview)

Fry: She's covered us for two-and-a-half or three years. She's a good one to talk to. She has the best knowledge base. She was even here I think for the night we had the public meeting.

Richter: I'll see if I can get in touch with her.

Kennedy: Just don't talk to (Star Ledger reporter) Abby (Gruen). She's not happy with me either, because I went to her editor. Well, you know, you should show two sides of a story when it's the first time it hits the newspaper. If you see it online, it's a little bit of a different story, because you see the video. The video was done the day we erected the tower back in October. She comes a few weeks ago because of complaints, but whatever.

Richter: Looking back five years from now or so, how would you measure success as mayor in terms of this wind project? Is it two turbines operating? Is it two turbines running with a certain amount of public support?

Kennedy: At this point, I think that the percentages are that the public is more favorable towards it than against it. So, that to me is not really a measure of success. Success measured to me is to know that the two turbines, because there will be two, will be generating electricity and the residents of the borough of Ocean Gate will be seeing, hopefully a tax stabilization at least in their utility costs; for the Borough and not for their

own because some people have a misconception that these turbines are going to save them money. If you're a taxpayer, it'll save the Borough utility costs, which ultimately is passed unto the taxpayer because we won't have the electric bill for this (municipal) building and other buildings. Obviously with the things going on in Trenton the last few days, it's going to be a little harder for the years to come. But I would say, in five years from now, as long as the machines are generating electricity like they have started to in the beginning, and we can look forward to the five more years where the machines will be paid off, that would be success to me.

(Discusses how the turbine is functioning lately)

Fry: You said what measures success. Well, success can be measured a lot of ways. Let's get away from the tangible ones, the money ones and let's look at it. Will it help the educational process? Central Regional High School can adopt it into their science programs if they want to. The Borough has already agreed that they would give them read-only access to look at the data. The grade school here...they even started a big program this year, go green in the school, and a lot of that centered around the turbine. I think the educational benefits of it or just the fact that we are trying to do something to help the environment. The other factor, and I don't think Paul (Kennedy) said anything about it too is, this is not a short-term issue. This is a 30-year project and as the years go along, we'll see greater and greater cost savings. And the reason I'm saying we'll see

greater and greater cost savings is because if you believe that your electric rates aren't going to go up, the fine, you can have that belief. However, the electric rates will continue to go up and everything that we generate will save what the increase in rates will be.

Richter: And how challenging is that for either of you to convince those who have been in town for 30-plus years, have always seen this one way, and many of whom are senior citizens and won't see the greatest benefit of the cost savings, that this is a good idea?

Fry: Bottom line is, first of all, most of the people who have been saying things and not saying things too, they want instant satisfaction and it's not going to be there. Just an example from last month, we usually pay about \$1,900 on electric costs for this (municipal) building and our electric bill last month was \$500. However, the hardest concept for most people to grasp is the fact that we have a turbine running out there. All they see it is, every month we have to make a bond payment against the turbine. They don't look at that you may have made a bond payment, but you also haven't paid the same electric bill. So there's an instantaneous savings as such. Now, is it equal to the bond payment? Right now, some months it will be some months it won't be. But again, that's this year. What happens next year, when the rate goes up, you get the same amount of power out of it? We have a bond payment that's locked in for 10 years and that bond payment won't change. We don't pay that increase in what we generate, so the cost

savings are there.

Fry: If you look at it over 30 years, for the first ten years, we would have a bond payment. We have only said that we would generate approximately 80% of this bill (electric bill for municipal building). And they were the conservative numbers.

Kennedy: It's always been conservative (with estimates on cost savings).

Fry: We said a 5% increase in electrical charges; and over the previous five years, it averaged 12%. But we're using 5% and we got that information from JCP&L and they told us for at least 10 years it would be in the ballpark of 5%. If you throw those numbers in there over 30 years, you're looking at a tax stabilization of about one and a half million over 30 years. If the second turbine goes up, the numbers are even better.

Kennedy: It's not if it goes up but when it goes up. The cost differential between that one and this one for this building is a lot less because of the fact that the bond on that unit is roughly \$80,000 as opposed to the \$220,000 that this one is.

Fry: And the other unit, the bond interest rate is 0.

Kennedy: So we're only going to make payments on a principle on the other unit. There's

no interest whatsoever on the 60 or 80 thousand, even if it's 100, because we're planning on doing some additional electrical work to incorporate not just the water treatment plant, but the fire house and the community center. We going to try to incorporate three buildings all in one and do all the electrical work on one meter. The electrical work needs to be done anyway, it's old. We do not have an actual official cost as to what it would cost. The electrical, when I had said before, that when we did change the (original) location, which was right out back of this building, the wire would only have to run right into the (municipal) building. But, we had to run all the way across the street, under sidewalks, the whole nine yards. I was told the conservative number was \$25,000 to \$30,000 more to do that, but it was kind of taking into the profit for the contractor, not for us. The location didn't matter in the contract. The other one is going to be very close to where the electric is going to be; because it's going to be right out in the back. It's going to be within 50 feet.

Fry: It's a bond that the town is taking on that pays itself off. These concepts are very difficult to come across for people to understand.

Kennedy: It's very hard to comprehend for the general public. They don't see it that way. You're still paying a loan, you're paying a note is what they tell you and you still have an electric bill. You can't tell them that well, the electric bill is lower and the interest on this is low or none. You just can't tell them that, it just doesn't sink in and it's just not worth

going on and on about it. You can't tell the people that the Board of Health was here and told you that there's no noise problem, but you (the residents will) still say there's a noise problem. You know it's the same principle.

Richter: And these people have these convictions that cannot be changed...

Kennedy: And people are going to have convictions about anything; anything that's new. There's one came up last night at a meeting I was at and it was said that, if these people in this general area are against it, or their friends are against it because of the noise, what do the people on the water think during the summertime when 6 o'clock in the morning there's jetskis in the water and there's boats going back and forth and all that traffic, do they get their properties devalued because of all that noise, because it's a lot louder than this machine is.

Fry: I'll even throw you another curveball. Central air units are noisier than this turbine.

Kennedy: Absolutely. There's a lot of things that are a lot louder. And that's a constant noise.

(Discussion of how Ocean Gate is talking with other towns to develop wind energy)

Fry: What they are saying now, (in an article last Monday in the Press of AC by Michael Miller), is that there's a greater potential for wind energy (on the Jersey Shore) than there

was ten years ago. That was done by the National Renewable Energy Lab, that's a DOE (Department of Energy) lab. Our whole focus has been just get the right information out there. If there's something negative out there, we want to know about it, but get the right information out there and know what you're looking at. I've talked to some of these people, and they don't care where you get your information. Their information is right no matter where they got it and what they're using it for.

Richter: That actually covers the main points for me.

Fry: The whole issue is, something has to be done, and it's got to start somewhere; and we have started it. And I'm sure the next town that makes the next step to do it, it will be a little bit easier and will continue to get easier. We're in it for the long haul—that's the bottom line.

Kennedy: It's a 30-year plan like Jim said. And the little bit of negativity does not stop progress; because in this town it's a little bit. Does it stop it elsewhere? Here I think our problems are minor.

## APPENDIX C

### E-Mail Interviews

#### **Alma Rivera**

Administrative Analyst, New Jersey Board of Public Utilities

RICHTER: I understand you worked with Drs. Bhatia, Jansson, Riddell and others at Rowan with the Wind Powering America State Outreach grant. What was your role in this process?

RIVERA: Under the general direction of the Supervisor and Director in the Office of Clean Energy, I supervise college administrators in the implementation of the New Jersey Regional Anemometer Loan Program through subcontract agreements made with each of the State's Program Partners including Rowan University. The following are key functions I perform:

- Supervise program partners in their implementation of the Anemometer Loan Program by providing clear, written guidelines for program deliverables consistent with US Department of Energy, Wind Powering America regulations
- as well as the State of NJ's Electric Discount and Energy Competition Act (EDECA).

- Supervise Anemometer Loan Partners deliverables consistent with the grant contract agreement including Scope of Work and terms and conditions. I provide guidance to college administrators for compliance with federal and State program policies and procedures. I also am responsible for tracking progress by anemometer loan partners on a quarterly basis and providing reports to the appropriate federal and state agencies.
- Responsible for direct supervision of all the Wind Energy Symposia held by all the Anemometer Loan Program Partners (State Colleges), for the purpose of educating municipal and zoning officers on wind energy as well as providing municipal officials with available financial incentives. Supervise and provide guidance to colleges in developing an agenda, invitation, guest speakers, target audience and evaluation.

See <http://www.njcleanenergy.com/main/event-listings/clean-energy-council-committees/wind-working-group/meeting-notes-archive/wind-wo> for agenda and handouts at the wind symposiums.

RICHTER: How do you expect wind energy to progress within the next 5-10 years (popularity, technology, etc.)?

RIVERA: The United States Department of Energy in partnership with NREL (National Renewable Energy Lab) has reported significant increases in wind capacity since 1999.

To view the Installed Wind Capacity from 1999 - 2009 Animated Map visit the link here:

[http://www.windpoweringamerica.gov/wind\\_installed\\_capacity.asp#current](http://www.windpoweringamerica.gov/wind_installed_capacity.asp#current)

As of December 31, 2009, 34,863 MW of wind power have been installed across the United States. The animation shows the progress of installed wind capacity between 1999 and 2009. As reported by The Global Wind Energy Council (1996-2009), there are 157,899 MW of cumulative installed wind capacity in over 50 countries nationwide. See <http://www.gwec.net/>

Regarding technology, we rely heavily with our United States Department of Energy and NREL for continued research on technology advancement. See

[http://www1.eere.energy.gov/windandhydro/wind\\_research\\_test.html](http://www1.eere.energy.gov/windandhydro/wind_research_test.html)

Also see the NY Times report regarding wind growth at:

<http://www.nytimes.com/2010/01/26/business/energy-environment/26wind.html>

RICHTER: How was your experience working with Mayor Kennedy and others in adopting a model ordinance for wind turbine installation? How important is this recent ordinance in promoting wind energy development in New Jersey?

RIVERA: I think working with municipalities and industry was very helpful in understanding top impediments for the development of wind energy. Land use and economic barriers were top impediments at the local level. Members of the NJ Small Wind Working Group including folks from Ocean Gate provided valuable input into the draft Wind Model Ordinance. The ordinance was instrumental in providing a strategy to help overcome land use barriers in municipalities. Also, the Wind Model Ordinance is consistent with the State's Energy Master Plan goals and complies with the Electric Discount and Energy Competition Act for wind energy development in the State. The Small Wind Working Group also addressed economic barriers. The Wind Symposium was another helpful strategy to municipalities to educate them on the myths, facts and economic benefits of wind energy. See agenda and handout at:

<http://www.njcleanenergy.com/main/event-listings/clean-energy-council-committees/wind-working-group/meeting-notes-archive/wind-wo>

RICHTER: What advice can you offer to towns hoping to work with BPU to install a wind turbine?

RIVERA: Visit our website at [www.njcleanenergy.com](http://www.njcleanenergy.com) or call 1 866 NJ Smart. We have Market Manager to help answer questions regarding wind potential and available financial incentives. I recommend download the wind pre-application to determine the wind resource at the particular site. If the wind resource is greater than 11 mph, I

recommend working with a developer that can guide the municipality. They may need to do an on-site feasibility study depending on the size of their proposed system.

**Chelsea Michels**

Toms River Bureau, Asbury Park Press

RICHTER: Why are your articles and other media pieces important for the future of wind energy in New Jersey?

MICHELS: I think many people are scared of trying new things, and many people may not know or understand much about wind power. Everyone seems to know and understand solar panels, but on-land wind turbines are still relatively new in New Jersey. Writing articles about this type of renewable energy can inform readers about what turbines entail and what the pros and cons are, as well as provide another option for towns or residents to go green. I think there is a lot of misinformation or myths surrounding wind turbines, and it is important for townships and residents to know as much information as they can before deciding on such a large investment.

RICHTER: Writing on the controversial topic of wind energy, how do you stay objective and write the most informative story possible?

MICHELS: On a topic like this, I sometimes find it difficult to stay objective since I am definitely in favor of going green and finding sources of renewable energy. However, I leave my opinion out of it, and make sure to tell both sides of the story, by providing quotes and information given by pro-turbine people, as well as writing stories telling the side of residents who may not be in favor. For example, many of the stories leading up to the construction of the Ocean Gate wind turbine were favorable, simply because I had not spoken to anyone who disagreed. However, several months after the turbine was running, I wrote a story about residents who live near the new turbine and are very unhappy with the sound and the flickering light on the blades. It is only fair to tell the other side of the story, since I have written many stories describing the benefits of wind power, as quoted by professionals in the wind power industry.

RICHTER: What advice do you have for other towns interested in wind energy development on how to communicate more effectively with you?

MICHELS: I would advise other towns to first speak with Ocean Gate Mayor Paul Kennedy, since he was the first to pave the way through administrative and environmental red tape in building this turbine. Towns should also speak with residents living near the turbines, so that they can possibly learn from the mistakes of their predecessors, and build the turbine away from residential homes, etc. As far as contacting me, I have specific towns that I cover in my coverage area, so I wouldn't necessarily

cover another wind turbine story, but I could always pass information on to the correct reporter. For example, I believe Brick is contemplating building a turbine, and my co-worker is following that story since he covers Brick.

**Joseph Fiordaliso**

Commissioner, NJ Board of Public Utilities

RICHTER: How do wind energy projects, like the one in Ocean Gate, help the NJ Board of Public Utilities fulfill its mission (including providing a better quality of life for citizens of this State)?

FIORDALISO: Obviously the more projects like the one in Ocean Gate that are built move us closer to our goals in the Energy Master Plan. To meet those goals, however, off shore windmills are a must and we are pursuing those as well.

RICHTER: How important is it to inform the public about the benefits of wind energy? Do you think the majority of citizens of this State have a sufficient understanding of wind energy?

FIORDALISO: I think it is important to educate our residents in renewable energy generally. It is important that our citizens are aware of the benefits of renewables and of energy efficiency. Our dependence on fossil fuels is not only dangerous to our environment but also to our national security as a nation.

RICHTER: The BPU played an active role in making Ocean Gate's wind energy aspirations come to fruition; (for example, helping in developing a model wind ordinance). Please explain the role that the BPU played in helping Ocean Gate's plans and the BPU's role in helping other municipalities with their wind energy plans.

FIORDALISO: As you noted, the model ordinance was important, but also the guidance in going through the red tape was important. I think we also provided a degree of encouragement.

RICHTER: What advice do you have for towns interested in wind energy development on how to communicate effectively with the BPU?

FIORDALISO: All towns have to do is call. My phone is always open to assist and the knowledge Ocean Gate gained through this process is also a great resource for other towns.

APPENDIX D

Content Analyses

<b>Ocean Gate coverage: July 20, 2008 through Jan, 20, 2010</b>				
Article Title	Date published	Name of newspaper	Author	Tone of Title
Beachwood on way to wind power	18-Sep-08	Asbury Park Press	Chelsea Michels	Positive
Ocean Gate feted; found answer was blowing in the wind	20-Oct-08	Asbury Park Press	Chelsea Michels	Positive
Pioneers power the way forward	5-Jan-09	The Star Ledger	Kristin Bucci	Positive
Ocean Gate mayor wants wind turbines to power borough hall	10-Mar-09	Asbury Park Press	Chelsea Michels	Positive
Ocean Gate set to build wind turbine	27-Mar-09	Asbury Park Press	Chelsea Michels	Positive
It beats licking your finger: Galloway tests wind / Data from anemometers to show whether conditions right for turbine	6-Apr-09	Press of Atlantic City	Michelle J. Lee	Neutral
Ocean Gate plans ceremony for wind turbine groundbreaking	13-May-09	Asbury Park Press	Chelsea Michels	Positive
Ocean Gate Officials prepare to build wind turbine	13-May-09	Asbury Park Press	Chelsea Michels	Positive
Ocean Gate generates contest for children to name wind turbine	9-Jun-09	Asbury Park Press	Chelsea Michels	Positive
Ground broken for Ocean Gate wind turbine	29-Jun-09	Asbury Park Press	Chelsea Michels	Positive
Ocean town reaping winds--and praise	30-Jun-09	Press of Atlantic City	Ben Leach	Positive
Gust of energy fuels Ocean	6-Jul-09	Asbury Park Press	OPINION	Positive

Gate				
Ocean Gate unveils wind turbine	20-Oct-09	Asbury Park Press	No author	Positive
Ocean Gate erects wind turbine to power offices, treatment plant	20-Oct-09	Asbury Park Press	Chelsea Michels	Positive
Harnessing the wind	22-Oct-09	Asbury Park Press	OPINION	Positive
NJ coastal windfarms prompt wildlife concerns	25-Oct-09	The Star Ledger	Brian T. Murray	Neutral

<b>Hull coverage:</b> Sept. 27, 2001 through March 27, 2002 (3 months before and after the first turbine) and Feb. 1, 2006 through August 1, 2006 (3 months before and after the second turbine).				
Article Title	Date published	Name of newspaper	Author	Tone of Title
Town ready to put a fresh spin on energy huge windwill could trim residents' bills	4-Oct-01	The Boston Globe	Emily Shartin, Globe Staff Correspondent	Positive
Wind picks up still a minor source of electricity turbines gain ground as energy option	19-Dec-01	The Boston Globe	Mac Daniel, GLOBE STAFF	Positive
Creating a stir windmill energy proposal hits a snag when some dover neighbors step in	2/2/2002	The Boston Globe	Eric Moscovitz, Globe Correspondent	Negative
Tower signals changes in the air: Mattapoisett tests for wind turbine	5-Feb-06	The Boston Globe	Paul E. Kandarian, Globe Correspondent	Positive
Wind turbines gaining power: smaller communities, colleges plan projects	24-Feb-06	The Boston Globe	Stephanie Ebbert, Globe Staff	Positive
A bright idea for blighted property: City to take lead with solar energy	11-May-06	The Boston Globe	Carolyn Y. Johnson, Globe Staff	Positive
In new windmills, a whiff of the future	18-May-06	The Boston Globe	Joan Wilder, Globe Correspondent	Positive
Mass. is urged to lead the way on wind farms. State can reap jobs, backers say	3-Jun-06	The Boston Globe	Rick Klein, Globe Staff	Positive
Windmills Don Quixote never imagined	18-Jun-06	The Boston Globe	John Stilgoe	Positive