

Falmouth Wind Turbine Mitigation Report Review Report of the Consensus Building Institute

Overview

The Town of Falmouth Board of Selectmen has solicited the input of residents and other stakeholders on the Wind Energy Facility Mitigation Alternatives Analysis, prepared for the town by Weston and Sampson. The Town is now exploring the potential for a collaborative process to seek a medium- and longer-term plan for the operation or removal of the turbines and the impacts of those decisions on the town's budget. The Consensus Building Institute (CBI) was hired by the Town of Falmouth, through a contract with the Massachusetts Clean Energy Center, to assist in collecting initial responses to the mitigation alternatives report, and if appropriate, developing and facilitating a collaborative process.

This report includes compiled results from confidential interviews and focus groups conducted by CBI with a representative sample of key stakeholders to understand their thoughts and concerns on the results of the mitigation report and possible steps forward.

The Consensus Building Institute is a not-for-profit [501 c(3)] organization based in Cambridge, Massachusetts. CBI provides facilitation and mediation services to help public, private, and non-governmental organizations nationally and internationally reach agreement on complex public policy matters. The assessment team consisted of Stacie Nicole Smith, Senior Associate, and Carri Hulet, Associate.

Background¹

The Town of Falmouth owns two 1.65 megawatt Vestas V82 wind turbine, known as Wind 1 and Wind 2, which are located at the Falmouth Wastewater Treatment Facility (WWTF). Soon after Wind 1 began operations on March 23, 2010, the town began receiving complaints from abutting neighbors about noise concerns. Since that time, there have been a number of public meetings, curtailment decisions, studies, and other efforts to address the situation. Among these was an analysis of the costs and benefits of a variety of steps that could be taken to address concerns about noise, flicker, and ice throw from the Wind 1 Turbine (the "Mitigation Analysis"), that was completed by the town's consulting team, Weston and Sampson Engineers and subcontractor HMMH, as requested by the Town. In December, the Board of Selectmen agreed to bring in a neutral facilitation firm to recommend a process for productive discussion about the potential options suggested in that mitigation report. The Massachusetts Clean Energy Center (MassCEC) offered a grant to provide facilitation services, with a choice from the four neutral facilitation firms that had been screened previously by MassCEC through a competitive RFQ process.

¹ The purpose of our background section was to provide sufficient context to the core questions about how to move forward, rather than to offer a full history of events leading up to the current situation. Feedback

Methodology

The scope of this assessment included confidential interviews, focus groups, and email exchanges with 53 individuals representing abutters, elected and appointed officials of the town, town employees, town meeting members, wind turbine supporters, other interested residents, MassCEC, and technical experts in wind turbines and sound mitigation. The list of interviewees started with suggestions from the Town based on individuals who had expressed interest in the issue (from all perspectives) and grew as interviewees were asked to identify others who should be included. Some interviewees were contacted by the Board of Selectmen or CBI; others self-identified and asked to participate. CBI spoke with every individual who expressed an interest in being interviewed, and continued to interview until a high level of confidence was reached that the full range of perspectives on the issue(s) had been expressed. All interviews took place between February 6 and March 6, 2012. A list of interviewees is attached as Appendix A. In the interviews, CBI asked stakeholders questions about their:

- connection with and views about the turbines;
- opinions about the accuracy of the analysis, and the desirability of the mitigation alternatives identified in the Weston and Sampson report;
- suggestions regarding other options or analysis that should be considered;
- perceptions of the value of a collaborative process to bring together representatives of a range of views to seek a consensus on resolutions to the current conflict, and
- their thoughts about how to ensure any such process is fair, inclusive, and effective.

CBI staff used the attached interview protocol as a general guide for conducting the interviews (Appendix B). The interviewers followed the general structure of the protocol, while allowing each conversation to follow the interests and comments of each interviewee.

A draft version of these findings were sent out to all interviewees on March 14, 2012, with a request to provide comments and feedback to ensure that the views of all interviewees were reflected accurately, and that errors or omissions which might affect the recommendations or lead to a mistaken view of the situation could be corrected.

The assessment team's role is to provide an overall, impartial view of the general situation in order to develop recommendations on how to best proceed with a process that can engage stakeholders in developing an acceptable future for the Town of Falmouth with regard to Wind 1 (and Wind 2, although it was not operating before the interviews occurred). The facilitators are not advocates for any particular outcome or interest and are bound to conduct their work in a fair, deliberate, and non-partisan fashion. The Assessment team is bound by the Association for Conflict Resolution (ACR) Code of Ethics: "The neutral must maintain impartiality toward all parties, maintain freedom from favoritism or bias either by word or by action, and commit to serve all parties as opposed to a single party" (Attachment B).

Please note that this assessment is not a legal document, technical report or planning study, nor a comprehensive study of all the concerns of individuals and organizations with a stake in the Falmouth turbines. The assessment is based on the opinions and views of the individuals gathered in the interviews we conducted and our interpretation of that information. Any errors or omissions are the sole responsibility of CBI.

Organization of the Report

In an attempt to make this report as practical as possible for future decision-making for all stakeholders, we seek here to 1) describe the existing situation from the range of perspectives, 2) summarize the range of views on the full set of options that stakeholders see as promising, and 3) state the considerations stakeholders feel might play into developing a process to move forward.

These views are laid out here under “Findings,” and include opinions on the accuracy, feasibility, and desirability of the options examined in the report, as well as stakeholder suggestions and views on additional options that were not included in the report.

The final section of the report consists of *Draft Process Recommendations*. CBI looks forward to input and feedback from all interested stakeholders in a public meeting to be scheduled as soon as possible.

Findings

Views on the current situation

Individuals and groups, all of whom have an interest and a stake in the outcome of this situation, are 1) impacted very differently, and 2) finding it difficult to truly accept where others who have different experiences are coming from.

- One set of stakeholders are neighbors living near the turbines who report significant impacts to their health, well-being, and quality of life. Most of the affected neighbors describe these impacts as “profound,” impairing their health, sleep, and enjoyment of their homes and properties.² Some of these neighbors also express serious concerns for their safety, citing threats from ice throw and any emergency that might require an evacuation of the densely populated radius surrounding the turbines. In the view of these stakeholders, these overwhelming personal impacts should supersede other considerations, from broad environmental concerns to direct fiscal priorities, as the outcome of this situation will affect their everyday lives.

² Detailed personal statements of personal suffering as well as letters from stakeholders’ physicians regarding patient’s physical and emotional distress were offered during the 2011 town wind forums, as well as at Board of Selectmen and Board of Health meetings, in on-line media and blogs and letters to the town. All are available via video for anyone who has not directly heard these experiences.

- Some interviewees living near the turbines were not experiencing impairment to their health or well-being but did have significant concerns about economic impacts for their homes and businesses, and infringement on their property rights. One particular concern was the potential impact of the turbines creating an “industrial overlay” on the landscape in a historic district, where business owners’ livelihoods depend on preservation efforts to ensure historic areas’ unique aesthetics and character.
- A number of stakeholders were primarily concerned the about increasingly negative local and national impacts to the public at large from fossil-fuel emissions (including health effects from local air quality to rising sea levels due to global climate change). Several of these stakeholders have devoted their life’s work to promoting renewable energy and combatting climate change, and feel that it would be a tremendous failure to not do all they can for this cause in their own community. Some stakeholders were deeply involved in the planning, procurement, and implementation of the Falmouth Wind turbines, and for them the stakes include their personal and/or professional identities. Generally, these stakeholders don’t see the negative impacts to neighbors to be 1) as devastating as is stated, 2) really caused by the turbines, and/or 3) widespread enough to justify dramatic mitigation.
- For many stakeholders, the fiscal impacts on the town are of primary significance, either because of their positions with/for the town, or as citizens and taxpayers. They feel the benefits to a great number of citizens outweigh the negative impacts to the relatively few individuals and families who are affected, and that all public services have downsides. They also tend to have doubts about the real harm being caused by the turbines. Several interviewees suspect that the real concern of neighbors is actually aesthetics and/or property values.
- There are many individuals whose perspectives cross stakeholder lines. Many people believe and empathize with the suffering neighbors. Some of these prioritize the neighbors’ well-being over whatever their own interests might be, while others seek a solution that responds to affected individuals’ concerns while still considering the balance of costs and benefits for the town as a whole.
- Among those who have trouble accepting the severity of the situation faced by the complaining neighbors, several cited the graph in the Weston and Sampson report that compared the turbine noise to the noise of a refrigerator. Some also related trips to the turbine area in which they “could barely hear it.” Many cited stories of other noisy annoyances they or their families had faced (i.e. railroads, highways, other turbines), which they later acclimated to or else took personal responsibility to resolve (often by moving away). Some interviewees noted that the turbines are located on town land, which neighbors should have anticipated to be used for public purposes. Several interviewees stated that all public projects produce annoyances that affect people differently, but they are nonetheless necessary or desirable for communities on the whole.
- Most stakeholders, whether directly affected or not, accept that the impacts of the turbines are highly individual – that some people are more sensitive than others.

There are many people who live very close to the turbines who are not seriously troubled (or even bothered at all) by their operation. Different people use this understanding in different ways, depending on their perspective. Some use it to defend and legitimize the claims of personal harm, while others use it to question the veracity of people who say they are affected.

- There was a strong desire among stakeholders to talk about the story of “how we got here” in order to explain or justify their views. All parties agreed that there was little opposition to the initiative before the turbines were erected. For those who oppose the turbines, it was noted how different the reality of living with the turbines has been from what was anticipated or agreed upon before the turbines were built, and about any possible missteps in the process that made it impossible to appropriately evaluate the decision in advance. People who support the turbines, on the other hand, emphasize the quantity of public discussion the project received before construction, and insist that “due process” was followed. These different views on the history of the project lead to very different conclusions about what “the problem” is that needs to be fixed.

As a result of the differences of opinion and experiences described above and communication challenges that have occurred since the complaints began, relationships and trust have frayed terribly. Interviewees from all sides expressed skepticism about the motivations, behaviors, and legitimacy of those with different views. All shared a view that direct and effective communication has eroded, and that people either suppress or fear voicing their views lest they provoke negative reactions from those who disagree. Across the board, there is anger and frustration at being misunderstood, threatened, or distrusted, and many acknowledge that the tenor of public rhetoric on all sides has been prohibitive to effective collaborative problem-solving. This mistrust extends to all of the consultants hired by the Town or the MassCEC, both of whom are believed, by some, to have an interest in keeping the turbines running at maximal operational capacity in the locations where they have been built.

Views on the options and analysis within the Wind Energy Facility Mitigation Alternatives Analysis report by Weston and Sampson (W&S)

The overall accuracy and quality of the analysis of the options examined by the Mitigation Alternatives report, as well as the assessment of the feasibility and desirability of these options, received mixed reviews. Most interviewees acknowledged that the consultants were limited by the set of options they were asked to consider, which the interviewees said were not comprehensive. Some interviewees saw the entire report as illegitimate and intentionally misleading, some saw it as somewhat biased in its focus on economic impacts for the town, rather than on solving the neighbor’s problems, and others felt it was fairly accurate. Several interviewees expressed concern about the cost estimates, with some saying they should have included a cost value of people’s health, well being, and enjoyment of (or value of) property, some saying it should have included the costs of continued conflict (including all the costs of litigation), and others saying it should have included the costs of greater pollution and fossil fuel pollution.

- The W&S option that had the greatest amount of support from interviewees across multiple stakeholder groups was moving the turbines to the Massachusetts Military Reservation or another location away from neighborhoods and homes. Many interviewees saw this option as the best middle ground – a solution that would allow the turbines to function at their full capacity, without imposing on adjacent home and business owners. Some felt that the cost stated by Weston & Sampson was manageable and worthwhile, while others suggested they could live with this option only if energy revenues were maintained and/or the cost was not borne by the Town³. Several people suggested that this option might be most cost effective, given the likely curtailments and other costs involved in gaining approval to keep the turbines where they are. However, there was also strong opposition to this option from those who felt it was unnecessary or that the move might not be feasible. Even among supporters, all agreed that pursuit of this option would require more investigation before its feasibility, costs, and benefits could be fully determined.
- For those who feel that moving the turbines is the best option, the next best is to dismantle them. Beyond these two, many saw no other acceptable solution because they say that there is no other mitigation step that will address the health impacts. However, this option was just as strongly opposed – even dismissed completely – by many other interviewees, who are concerned with the costs involved, achieving the town’s goal to reduce fossil fuel consumption and emissions by 10%, and fulfilling the town’s revenue needs.
- All mitigation options to mitigate sound impacts at the neighbor’s residences received lukewarm support at best, and solid opposition at worst. Impacted neighbors were generally skeptical of any structural changes to their homes, both on principle – as it places the burden of mitigation on the homes/homeowners rather than the source of the offense – and in terms of efficacy, as it seemed unlikely to really reduce the damaging effects (including low-frequency and infrasound). Their view is that even if building a wall, or updating windows and/or air-conditioning actually worked to reduce the noise impacts, these measures would imprison them in their homes. No one supported building sound barriers. Those least persuaded by the severity of neighbors’ annoyance generally supported these options as the limit to acceptable mitigation costs the public should bear. There was also concern that none of the sound mitigation options sufficiently addressed low-frequency and infrasound.
- While many interviewees were open to some type or amount of curtailment, particularly at night, most stakeholders across the spectrum felt that noise abatement via curtailment, on its own, was unlikely to be acceptable, and/or cost effective. However, many interviewees felt that it was a viable short-term option, if agreement could be reached on a curtailment plan based on the reality of impacts at different wind speeds, time of day, seasons, etc.

³ Several interviewees expressed that MassCEC or Vestas should be responsible for the cost of *any* mitigation efforts, rather than the Town.

- Numerous interviewees showed interest in a serious inquiry into technological or mechanical options to reduce the noise of the turbines themselves, which were either not discussed in the report or not offered with much detail. Some had high hopes that such options do or could exist. Several interviewees felt that it would be irresponsible not to exhaust exploration of these options before moving to more “dramatic” options such as moving and dismantling the turbines. At the same time, others felt deeply skeptical – even hopeless – that any technological fixes could sufficiently reduce the negative impacts on suffering abutters, and some consider even exploring these to be a waste of time. Additional technological options mentioned include: changes to the braking system, changes to the blades to alter pitch, tuning or adding feathering, and software that would allow greater control to change or curtail operations in the conditions that cause the greatest disturbance.⁴
- While several interviewees were open to options to curtail operation of the turbines at certain times or wind speeds, they felt it would first be necessary to establish 1) the most problematic times/speeds for the neighbors and 2) the cost implications as compared to other options (such as moving them to a location allowing unfettered operation.) Many interviewees expressed skepticism that operating the turbines within a curtailment schedule acceptable to/responsive to the needs of abutters could possibly be cost-effective, since some of the concerns intensify at higher wind speeds and at night, which are also times when the turbines are most economically beneficial. It was also stated that abutters are conscious of the possibility that when they are least affected, their neighbors located in opposite locations may be most affected.
- While few interviewees disagreed with the efficacy of the suggested methods for minimizing shadow flicker and ice throw, the desirability of implementing these was met with the same diversity of opinions. Some people dismiss both concerns as issues that do not require mitigation, on the grounds that people all over the world live near turbines and get used to the flicker, and that ice throw is a very rare problem. Others felt that these were clear and easy to fix and therefore should be done. For those who live near the turbines, both of these issues are important to address, but no one felt the report did an adequate job of offering solutions.

Views on additional options and considerations not reflected in the existing report

As previously stated, interviewees felt that the mitigation options analyzed in the report did not reflect the comprehensive range of possible solutions. In particular, interviewees suggested 1) additional technical/mechanical options (mentioned above), and 2) a range of economic options, including purchasing noise easements, buying the homes of affected stakeholders at fair market value, sharing profits from energy savings with impacted neighbors, and offering compensation for the loss of home or business value. These

⁴ DNV/KEMA, a wind turbine and control system expert consultant, and Acentech, an acoustic measurement, modeling, analysis, and mitigation expert consultant, are currently exploring some of these potential options in greater detail in separate analyses to be submitted to the Town.

technical and economic options were raised repeatedly by a range of different stakeholders, many of whom pointed to their success in other situations or places and felt very optimistic that they could be viable in Falmouth. For many people, the economic options, including purchasing a limited number of homes, seemed both more promising and more appealing than moving the turbines. Some interviewees also recommended exploration of noise and neighborhood mitigation plans used for other valuable or necessary public services (roads, airports, incinerators, other energy generators, etc.).

For all of these additional options, interviewees noted that more analysis was needed to explore what they would cost, whether they would be cost-effective as compared to other options, and whether and how they could be implemented fairly and efficiently.

Suggestions for short-term decisions

Views on what the town should do with the turbines between April and July varied widely. The most suggested recommendations for the short-term were:

- keep the turbines off, other than for testing;
- turn them off at night during high winds, or;
- run them only at times that are least troublesome to abutters.

However, some interviewees opposed any operation, even for further testing, and some felt they should run with only minor curtailment. Others mentioned the possibility of keeping wind 2 running if the effects turned out to be less problematic for neighbors. Some saw no need for short vs. long term, and wanted to see the turbines moved, taken down, or put back into full operation immediately.

For the medium term (July 2012 – June 2013), if long-term decisions cannot be completed by then, some interviewees suggested that stakeholders seek agreement on an operation plan that allows the town to break even.

Considerations for a potential collaborative process

Many interviewees generally supported the idea of bringing stakeholders together to explore or determine next steps that addressed people's needs and concerns. However, almost all interviewees were also concerned and/or uncertain about the feasibility of the full range of stakeholders reaching consensus about a mitigation approach. In their comments, interviewees raised a number of considerations about any collaborative process that might be pursued.

Clarification of Goals and Problem to be Solved:

As interviewees have different views about the severity, cause, and municipal responsibility to respond to the impacts of the turbines on neighbors, they also do not see the problem to be solved in the same way. Among interviewees, some were interested only in a process that sought to make all impacted neighbors whole, and emphasized that

health should not be negotiable. Some looked for a solution that sought to reduce disruption to neighbor's lives to acceptable levels, while others sought a balance between the costs and the benefits of the turbines as a public resource, and a process that explored the appropriate level of action and responsibility of the range of participants. Some have framed the question as one to determine how much harm is reasonable, or how should the costs to some neighbors and benefits to the town be balanced. A few interviewees don't consider the turbines to be the problem at all, but rather the political pressure created by the abutters as the issue that needs to be solved. The framing of the purpose and goals of the process would dictate the range of potential options and the criteria for evaluating them.

Role of New Sound and Health Studies:

Most interviewees pointed to gaps or limitations in knowledge and understanding of the problem, and the question of the need for additional studies arose across stakeholder groups. Some interviewees felt that clarification of facts could help to move the discussion away from emotion and closer to something objective, which would also be necessary to generate financial support from taxpayers or the state for the costs of any mitigation.

Several interviewees mentioned that The Department of Environmental Protection (DEP) had previously committed to collecting additional sound data and wondered why this had not yet been done⁵. Some stakeholders are concerned that the sound studies thus far have not accurately assessed Wind 1's compliance with existing DEP and town noise regulations. There is also skepticism about the results because some analyses were based on modeling rather than sound readings, and often the conclusions from the models conflicted with neighbor's experiences. The results of DNV/KEMA's analysis of the HMMH study will likely increase interest in re-evaluating these questions. The data on the noise is considered valuable information for setting levels at which mitigation and/or compensation are required.

Interviewees also mentioned the uncertainties added by Wind 2, which had not started running at the time of the interviews. (Several Wind 2 abutters who have experienced impacts since Wind 2 has started have since expressed similar concerns to those about Wind 1.)

Many questions also exist about low-frequency and infrasound, as well as the impacts of amplitude modulation – whether these are properly accounted for and measured, what their health impacts are, and whether regulations effectively address their problems. Some interviewees across stakeholder groups suggested that a health study be done to clarify or quantify the medical symptoms that some abutters are experiencing. Some felt that the Falmouth Board of Health had a responsibility to document health impacts and mandate mitigation, whereas others stated that the Board of Health could only intervene based on clear, peer-reviewed health literature. A few interviewees felt it was important to identify the causes of each individuals' health problems, in order to distinguish

⁵ As it appears that this investigation is now underway, new data and analyses are likely to be forthcoming and require additional public conversation to explore and digest.

between those caused by stress or pre-existing conditions as opposed to the operation of the turbines themselves. This is important to those who feel the Town should only be required to mitigate direct, proven impacts. A few interviewees thought it would be important to know exactly how many people are being negatively affected.

Several interviewees on various sides of the issue felt none of these studies should be undertaken as efforts to resolve disputes. They predict that a continued focus on trying to quantify and prove suffering would be a waste of time and money, since new data would probably be disputed and would not change neighbor's subjective experiences, which need to be resolved in order to come to an acceptable resolution. Nonetheless, most of these interviewees could support new studies whose purpose was diagnostic, to better identify conditions that contributed to neighbor's discomfort or levels of discomfort so that mitigations could be tailored to address those concerns.

Room for investigation and experimentation:

Several interviewees felt that there were a number of potential mitigation options that should be explored before any long-term decision should be made. They feel that the Mitigation Report was not comprehensive regarding feasibility and/or costs of what they see as the most promising mitigation options (some of which were not evaluated in the W&S analysis), and feel that more research and investigation would be necessary before selecting any. Some interviewees also felt that options that might be desirable for the long-term might not be available in the medium-term, and hoped for further exploration of other medium-term options. Other interviewees felt skeptical that any new options or variations were feasible, feared wasted time and money, and expressed concern about a process that would include additional research or experimentation rather than resolve the issues once and for all. Some have expressed clear opposition to any process not centered around moving or removing the turbines. Some have also mentioned concerns about deadlines and timeframes inherent in the legal system that must be taken into consideration in case they cannot reach an acceptable resolution together, while others shared concerns that simultaneous legal actions limit the potential for dialogue.

Participants in the process:

Several interviewees raised concerns about how people qualified as stakeholders, and how the range of stakeholders could be categorized and represented. Some interviewees questioned the legitimacy of participation of other stakeholder groups, or felt concerned about how to fairly include stakeholders across different levels of impact, different numbers/percentages of population, without over-emphasizing or disempowering anyone. Interviewees also mentioned the need to ensure that the process and meetings be widely accessible and transparent while still safe and productive. Some suggested bringing in civic bodies that are respected in the community and have not taken any stand on turbines, like the League of Women Voters. Interviewees generally felt that the Board of Selectmen needed to participate, and that MassCEC and Vestas should also be engaged to help open up options, but shouldn't contribute to the decision-making. (As the ultimate decision-makers, the Board of Selectmen would take action based on recommendations from a collaborative process, but not vote within that process.) Some felt that their State representatives in the House and Senate should be engaged. Some also suggested the

need for a technical planner who could help translate between engineers and decision-makers.

Creating a "Safe Space" for Dialogue:

Given the mistrust and poor communications that have evolved since Wind 1 started running, almost all interviewees raised concerns about ensuring that all participants can respectfully speak their minds without intimidation during any process. These concerns are shared by all stakeholder groups, each of which related experiences of people who were criticized or insulted after voicing their opinions, as well as stories of people afraid to express their perspectives. At the same time, some interviewees affirmed a strong interest and need for dialogue between turbine opponents and town officials, which they felt had never occurred. Others raised concerns about the limitations of dialogue in the face of on-going lawsuits. For some, there is also some suspicion about the neutrality of the facilitation firm and technical experts, as they were selected and are paid by MassCEC, which has an interest in promoting renewable energy.

Draft Process Recommendations:

Based on the findings above, our analysis, our review of comments on the draft report, and our experience with bringing groups together for collaborative problem solving, we offer the following process recommendations to the Town of Falmouth Board of Selectmen.

We were asked to explore the opportunities for collaborative engagement of stakeholders to seek a short-term (April – June), medium term (July 2012-June 2013), and long-term (July 2013 and beyond) plan. For the purpose of these recommendations, these time frames are significant because each has distinct potential for useful collaborative engagement that could produce meaningful results. For example, we understand that decisions about what to do with the turbines in the short term (April –June) must be made immediately, before any collaborative group could be organized to lend input into that decision. Therefore, we are not able to offer the Board of Selectmen any recommendations about how to make decisions about turbine operation for this period. Nevertheless, we hope that the findings above have been helpful, at a minimum, in providing the Board of Selectmen with a comprehensive understanding of the range of views on this topic.

Furthermore, the Selectmen must make decisions about the 2013 fiscal budget by the end of June, which limits the amount of time available to adequately explore many of the most promising options for resolution. In our view, many of the options that have been discussed to this point would be supported by some stakeholders but opposed by others, based on current information, experience, and opinion. Our findings suggest that stakeholders would be unlikely to sufficiently explore and reach agreement on any full resolution by July 1.

We see the most promising opportunity for collaborative engagement to be around recommendations for a long-term decision regarding the turbines. While we cannot say that a collaborative group could reach agreement on the most desirable long-term option, we do believe that the Town would benefit from collaborative exploration of the options and the many questions that need to be answered about each one. These options might include some combination of: moving one or both turbines to another location, in a manner that would maintain environmental and town/taxpayer benefits; implementing technical/mechanical changes to the turbines to reduce their noise and health impacts, possibly in combination with a curtailment plan for certain times or wind conditions, and/or implementing one or more economic options to relocate or compensate impacted neighbors. As detailed in our findings above, the feasibility, cost, and benefits of all of these options remain unknown, and require significant additional information before it could be determined whether they might address the core underlying concerns of stakeholders. We believe a collaborative process to answer these questions prior to making a long-term decision, using information that is broadly legitimate, credible, and salient, would contribute significantly to effective and informed public decision making.

KEY RECOMMENDATION

We recommend that the Town of Falmouth Board of Selectmen, with assistance from a neutral facilitator, convene a Falmouth Wind Turbine Option Analysis Committee (the Committee), made up of themselves and representatives from adversely affected neighbors, renewable energy supporters, taxpayer representatives (from non-affected homes), relevant town government departments, and relevant state agencies (as technical advisors), to meet as needed to clarify the range of potential long-term options, identify the questions for investigation, determine legitimate methods for answering those questions, jointly review the information, and re-evaluate the options given the new information.

The tasks of the Committee would be to:

- Clarify the range of potentially acceptable long-term options
- Identify the questions that would need to be answered about each of those options in order to evaluate their feasibility, costs, and benefits
- Determine legitimate methods for gaining answers to those questions
- Jointly review and interpret the data that comes back, and
- Evaluate the options based on the new information.

Two additional Committee goals would be to:

- Improve relationships and effective communication among the Town officials, affected families, and other members of the town
- Provide an arena for public information and input and transparent deliberation and evaluation

The goal of the group would NOT be to reach agreement on a long-term decision for the wind turbines, but rather to provide the Board of Selectmen with a clear, comprehensive, and inclusive analysis of the range of options, their costs and benefits, and their impacts, based on stakeholder input and interests. Participants in the Committee could disagree about the ultimate criteria that the Board of Selectmen should use to make their decision, but still work together to uncover information that can help inform that decision. In this context, data collection would center around information that will be widely perceived as legitimate in the eyes of stakeholders, credible in technical terms, and (perhaps most importantly) salient to the resolution of the issues.

Representation on the Committee: There are many benefits of developing a representative committee, rather than holding open public forums, to achieve the task described above. Development of a formalized, standing Committee helps facilitate the inclusion and balance of the range of interests – core, underlying concerns – that stakeholders bring to this issue. It also allows for responsibility and accountability of all members to a set of ground rules that can create a safe space for discussion. Nonetheless, while dialogue at meetings would center around the Committee, the process and the meetings should also be open to the public, information about it should be widely publicized, and each meeting should include some time for public comments, questions,

and discussion.

In order to balance among the range of concerns on this issue, the Committee should seek to include a diverse set of participants from Falmouth who can represent the following interests:

- 3-4 adversely affected neighbors of the turbines (both residential and commercial)
- 1-2 supporters of renewable energy
- 2-3 taxpayers who are not adversely affected by the turbines
- 3-4 Relevant Town Departments

The first Committee meeting should address any public concerns about representation, allowing the group to evaluate the concerns of any members of the public who do not feel that their interests are sufficiently represented. Members of the Committee would serve as liaisons and ambassadors for the groups they represent, provide detailed input, and help guide the development of the options analysis. The Committee would advise on the analysis as well as be a conduit for information out to, and input back from, their constituencies. One or two members of the Board of Selectmen should participate actively in the discussion and dialogue of the Committee, but refrain from joining in any Committee decision-making, since they will be receiving the final analysis of the group and will have to act on it as part of and with the full authority of their elected position.

To the extent feasible, constituents in these groups should collectively identify individuals to represent their interests, with assistance from a neutral facilitator if helpful. In cases where self-selection is infeasible, the Board of Selectmen could initiate an open and transparent nomination process. In either case, Committee representatives should possess qualities that support thoughtful, inquiring, and open-minded discussion, such as:

- Capacity to represent and articulate the diverse range of interests and concerns of the constituencies they represent, seek input from constituents, and keep them informed about the discussions and proceedings of the Committee;
- Willingness and interest in attending all meetings and participating actively in discussions, and;
- Willingness to engage in respectful and constructive dialogue with other stakeholder group representatives, and seek creative resolutions of differences that meet the interests of their own and other groups.

Retain a neutral facilitator: We recommend that the Board of Selectmen retain an experienced, neutral facilitator to assist with the work of the Committee. The facilitator should be acceptable to and work equally for all parties, and abide by the Ethical Standards of the Association for Conflict Resolution (Attached as Appendix C). The role of the facilitator could include the following:

- Drafting operating protocols & ground rules to ensure clear and effective communication, gaining agreement from the group on these protocols, and ensuring compliance with the agreed protocols.

- Helping to develop and refine the process so that it runs smoothly and effectively, drafting meeting agendas, preparing any presenters, and facilitating meetings to ensure that the agenda is followed and that all participants are able to contribute.
- Working with participants during and between meetings, as necessary, to clarify interests and concerns, identify and synthesize points of agreement and disagreement, and elicit and clarify potential options that might “bridge” those differences.
- After each meeting, prepare a summary of meeting proceedings and outcomes, without attribution, for the Committee and wide public distribution.
- When appropriate, prepare a single text draft on the deliberations to date, including areas of agreement and disagreement, and circulate it for review and discussion.

Enlist support from one or more Technical Advisors: Given the technical nature of some of the questions, the Board of Selectmen should retain one or more technical advisors to the Committee who could attend Committee meetings, prepare and deliver educational presentations to the Committee members and public on technical issues, and respond to questions, concerns, and ideas of the group. This may include MassCEC, DNV/KEMA and Acentech, each of whom has technical skills to offer the Committee, provided they can be acceptable to the Committee as a whole.

Committee Work Plan: We suggest the need for six meetings, each three hours in length, which would take place over the period of six to nine months. One possible structure for these could be:

Meeting one: Establish operating protocols, overview of process goals and workplan, clarify options for analysis, member and public Q&A

Meeting two: Identify questions to answer about the options, explore methodologies for collecting information, public comment

Meeting three: Finalize information-gathering protocols, public comment

BREAK FOR DATA COLLECTION

Meeting four: Mid-point evaluation of information gathering and initial findings, public Q&A and comment

BREAK TO FINALIZE DATA COLLECTION

Meeting five: Review, evaluate, and interpret new information, public comment

Meeting six: Finalize analysis of feasibility, cost, and benefit of options, public comment

Publicize Committee meetings broadly and invite all interested citizens: Press releases, flyers in newspapers, and announcements in public places should all be used to get the word out. Local newspapers and radio should be strongly encouraged to attend.

If it is feasible, recording meetings for distribution to public access television may also be a way to increase visibility and transparency. All materials from the discussions should be made available on a website accessible from the Town's Wind webpage. Updates should be made at all relevant town events and town Selectmen meetings, as appropriate. Representatives should also make themselves available to provide updates and receive input from the people they represent.

CBI believes that applying the actions above will provide the Falmouth Board of Selectmen a thorough and inclusive evaluation of long-term options, to greatly improve their decision-making about this highly contentious and challenging issue.

**Appendix A:
List of Interviewees**

The following individuals were interviewed (or responded to interview questions by email) for this report.

Megan Amsler	Heather Harper	Linda Ohkagawa
Neil Anderson	Ed Hobart	Chris Polloni
Dave Bailey	Sue Hobart	Jonathan Polloni
Jim Barnes	Dave Jewett	Maurice Rawe
Nils Bolgen	Sia Karpus	Christina Rawley
Bill Borden	Rolf Kleuver	Douglas Reichwien
David Braga	Dick Koehler	Sheryll Reichwien
Carl Bowin	Robbie Laird	Tony Rogers
Mark Cool	Sheldon Lowenthal	Pam Ruggles Ross
Malcolm Donald	Hilde Maingay	Julian Suso *
Todd Drummey	Peter McConarty	Peggy Szuplat
Brian Elder	Matthew McNamara	John Waterbury
Katherine Elder	Day Mount	Dan Webb
Mary Pat Flynn	Kathy Mount	Eric Wood
John Ford	Kristin Moritz	Larry Worthington
Melissa Freitag	Colin Murphy	Mary Zawoysky
Barry Funfar	Kevin Murphy	Ron Zweig
Joe Hackler	Loretta O'Brien	

* Julian Suso did not participate in a formal interview

APPENDIX B

Falmouth Wind Turbine Mitigation Report Review Interview Protocol

The Town of Falmouth Board of Selectmen has committed to soliciting the input of residents and other stakeholders on the Wind Energy Facility Mitigation Alternatives Analysis, and exploring the potential for a collaborative process to seek a medium- and longer-term plan for the operation of the turbines and responding to impacts on the town's budget. The Consensus Building Institute (CBI) has been hired to assist in collecting initial responses to the report, and if appropriate, developing an appropriate process and facilitating that process. CBI is conducting confidential interviews and focus groups with a representative sample of key stakeholders to understand their thoughts and concerns on the results of the mitigation report and possible steps forward.

On completion of the confidential interviews, CBI will prepare a draft summary of our findings, without attribution, along with a set of recommendations for the process, which we will circulate to interviewees for comment. Once the comments have been incorporated, the final recommendations will be given to the town of Falmouth for consideration and implementation.

INTERVIEW QUESTIONS

Following are the questions we will be using to guide the interview process.

You and the Wind Turbines

- Please tell me about yourself and/ or your connection to the wind turbines. How do the wind turbines most affect you?
- How far is your home from the wind turbines? View of the Mitigation Report
- What are the one or two strongest impressions you took away from your review of the mitigation report?
- Options explored by the report include:
 - Dismantling one or both turbines;
 - Relocating one or both turbines;
 - Minimizing sound impacts by:
 - soundproofing homes
 - building noise barriers
 - curtailing speed at certain hours (midnight to 3 am or 11pm-5 am)
 - replacing blades with noise-reducing ones, if and when available;
 - purchasing software to allow the town more control of wind turbine operations
 - Mitigation methods for shadow flicker, and;
 - Mitigation methods to minimize ice throw.

What is your view of the desirability of each of these options?

What is your view of the credibility of the analysis of these options?

Are there any specific questions or concerns you have about the report that you would like to have answered?

- Are there other mitigation options that you think need to be considered? Other resolutions you would support?

The town has retained outside experts in acoustical engineering (Acentech) and wind turbine engineering (DNV). Is there data or information that you would like them to provide?

What ideas do you have about outcomes that might meet your needs as well as the needs/concerns of others in the community?

Our goal is to capture the range of perspectives on this issue. Are there important voices that might have been missing thus far? Is there anyone else you think we should interview, and why?

Short-term Recommendations

By April 2, the stop-gap measure halting operations of Wind 1 will conclude. At that time, the Board of Selectmen need to make a decision about the operation of Wind 1 and Wind 2 for at least the period of April – July. What would your recommendation be on that decision?

A Collaborative Process?

- What suggestions do you have on a collaborative process for problem-solving both medium- and longer-term next steps for the operation of the wind turbines and corresponding budget implications? What would need to occur to ensure that such a process is fair, inclusive, and effective?
- What individuals or groups do you think need to be involved in this process?
- How should representatives of viewpoints be selected to participate in a collaborative process?
- What kinds of information would be helpful to have in order to seek recommendations together?
- How frequently and for what lengths of time do you think such a group should meet? What time of day /days of the week do you think meetings should be held?
- What other logistical considerations should be addressed?

Appendix C **Association of Conflict Resolution Code of Ethics**

Staff of the Consensus Building Institute, a not-for-profit, located in Cambridge, Massachusetts, adhere to the following ethical standards to ensure the delivery of the highest quality and fairly and impartially conducted professional services.

The Association for Conflict Resolution (ACR) was established in 1972 to promote the peaceful resolution of disputes (formerly known as the Society of Professionals in Dispute Resolution – SPIDR). Members of ACR believe that resolving disputes through negotiation, mediation, arbitration and other neutral interventions can be of great benefit to disputing parties and to society. In 1983, the ACR Board of Directors charged the ACR Ethics Committee with the task of developing ethical standards of professional responsibility. The Committee membership represented all the various sectors and disciplines within ACR. This document, adopted by the Board on June 2, 1986, is the result of that charge.

The purpose of this document is to promote among ACR Members and Associates ethical conduct and a high level of competency, including honesty, integrity, impartiality and the exercise of good judgment in their dispute resolution efforts. It is hoped that this document also will help to (1) define the profession of dispute resolution, (2) educate the public, and (3) inform users of dispute resolution services.

Application of Standards

Adherence to these ethical standards by ACR Members and Associates is basic to professional responsibility. ACR Members and Associates commit themselves to be guided in their professional conduct by these standards. The ACR Board of Directors or its designee is available to advise Members and Associates about the interpretation of these standards. Other neutral practitioners and organizations are welcome to follow these standards.

Scope

It is recognized that ACR Members and Associates resolve disputes in various sectors within the disciplines of dispute resolution and have their own codes of professional conduct. These standards have been developed as general guidelines of practice for neutral disciplines represented in the ACR membership. Ethical considerations relevant to some, but not to all, of these disciplines are not covered by these standards.

General Responsibilities

Neutrals have a duty to the parties, to the professions, and to themselves. They should be honest and unbiased, act in good faith, be diligent, and not seek to advance their own interests at the expense of their parties'.

Neutrals must act fairly in dealing with the parties, have no personal interest in the terms of the settlement, show no bias towards individuals and institutions involved in the dispute, be reasonably available as requested by the parties, and be certain that the parties are informed of the process in which they are involved.

Responsibilities to the Parties

1. **Impartiality.** The neutral must maintain impartiality toward all parties. Impartiality means freedom from favoritism or bias either by word or by action, and a commitment to serve all parties as opposed to a single party.

2. **Informed Consent.** The neutral has an obligation to assure that all parties understand the nature of the process, the procedures, the particular role of the neutral, and the parties' relationship to the neutral.

3. **Confidentiality.** Maintaining confidentiality is critical to the dispute resolution process. Confidentiality encourages candor, a full exploration of the issues, and a neutral's acceptability. There may be some types of cases, however, in which confidentiality is not protected. In such cases, the neutral must advise the parties, when appropriate in the dispute resolution process, that the confidentiality of the proceedings cannot necessarily be maintained. Except in such instances, the neutral must resist all attempts to cause him or her to reveal any information outside the process. A commitment by the neutral to hold information in confidence within the process also must be honored.

4. **Conflict of Interest.** The neutral must refrain from entering or continuing in any dispute if he or she believes or perceives that participation as a neutral would be a clear conflict of interest and any circumstances that may reasonably raise a question as to the neutral's impartiality. The duty to disclose is a continuing obligation throughout the process.

5. **Promptness.** The neutral shall exert every reasonable effort to expedite the process.

6. **The Settlement and its Consequences.** The dispute resolution process belongs to the parties. The neutral has no vested interest in the terms of a settlement, but must be satisfied that agreements in which he or she has participated will not impugn the integrity of the process. The neutral has a responsibility to see that the parties consider the terms of a settlement. If the neutral is concerned about the possible consequences of a proposed agreement, and the needs of the parties dictate, the neutral must inform the parties of that concern. In adhering to this standard, the neutral may find it advisable to educate the parties, to refer one or more parties for specialized advice, or to withdraw from the case. In no case, however, shall the neutral violate section 3, Confidentiality, of these standards.

Unrepresented Interests

The neutral must consider circumstances where interests are not represented in the process. The neutral has an obligation, where in his or her judgment the needs of parties dictate, to assure that such interests have been considered by the principal parties.

Use of Multiple Procedures

The use of more than one dispute resolution procedure by the same neutral involves additional responsibilities. Where the use of more than one procedure is initially contemplated, the neutral must take care at the outset to advise the parties of the nature of the procedures and the consequences of revealing information during any one procedure which the neutral may later use for decision making or share with another decision maker. Where the use of more than one

procedure is contemplated after the initiation of the dispute resolution process, the neutral must explain the consequences and afford the parties an opportunity to select another neutral for the subsequent procedures. It is also incumbent upon the neutral to advise the parties of the transition from one dispute resolution process to another.

Background and Qualifications

A neutral should accept responsibility only in cases where the neutral has sufficient knowledge regarding the appropriate process and subject matter to be effective. A neutral has a responsibility to maintain and improve his or her professional skills.

Disclosure of Fees

It is the duty of the neutral to explain to the parties at the outset of the process the basis of compensation, fees, and charges, if any.

Support of the Profession

The experienced neutral should participate in the development of new practitioners in the field and engage in efforts to educate the public about the value and use of neutral dispute resolution procedures. The neutral should provide pro bono services, where appropriate.

Responsibilities of Neutrals Working on the Same Case

In the event that more than one neutral is involved in the resolution of a dispute, each has an obligation to inform the others regarding his or her entry in the case. Neutrals working with the same parties should maintain an open and professional relationship with each other.

Advertising and Solicitation

A neutral must be aware that some forms of advertising and solicitations are inappropriate and in some conflict resolution disciplines, such as labor arbitration, are impermissible. All advertising must honestly represent the services to be rendered. No claims of specific results or promises, which imply favor of one side over another for the purpose of obtaining business, should be made. No commissions, rebates, or other similar forms of remuneration should be given or received by a neutral for the referral of clients.