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**Wind Energy Plan Offshore Work Session
Held on June 22, 2010, 5 p.m.
In the Stone Building
33 New York Avenue, Oak Bluffs, MA**

8 **IN ATTENDANCE**

9
10 Wind Energy Plan Work Group members:

11 MVC Commissioners

- 12 - Doug Sederholm, appointed Chilmark member (Chairman of Work Group)
- 13 - Christina Brown, elected member from Edgartown
- 14 - Holly Stephenson, elected member from Tisbury

15 Appointees

- 16 - Mike McCourt, Edgartown Planning Board
- 17 - Richard Toole, Oak Bluffs Energy Committee
- 18 - Chris Fried, Tisbury Energy Committee
- 19 - Sander Shapiro, West Tisbury Energy Committee
- 20 - Bruce Rosinoff, Vineyard Conservation Society
- 21 - Paul Pimental, Vineyard Energy Project (technical support)
- 22 - Tyler Studds (technical support) Alan Wilson, Edgartown Planning Board
- 23 - Richard Knabel, West Tisbury Board of Selectmen

24
25 MVC Staff:

- 26 - Mark London, Executive Director
- 27 - Jo-Ann Taylor, Coastal Planner/DCPC Coordinator
- 28 - James Kupfer, Intern

29
30 **1. Materials Presented and Distributed**

31 The following items were handed out and are appended to these minutes:

- 32 • Offshore Resources (draft – June 9)
- 33 • Nomans (draft – June 15),
- 34 • Offshore Compensation notes (dated June 17).

35 Mark London presented a PowerPoint which included a series of maps, which were also handed
36 out. The PowerPoint is also appended to these minutes.

37 **2. Resources**

38 The group went discussed each of the resources that could be used in the analysis of the suitability
39 of wind energy development, discussing the sources and reliability, identifying how possible
40 deficiencies in the data could be resolved, and then prioritizing the resources for consideration. In

41 all cases, we will look at state waters as well as federal waters when the data are available. We
42 can use data which had been compiled for the Massachusetts Ocean Management Plan (MOMP),
43 from other sources, or collect new data.

44

45 **Airport:** This is a low priority as the areas within three miles of the Vineyard's airport and
46 airfields don't reach very far offshore.

47

48 **Avian:** There was considerable discussion about this issue.

- 49 • The MOMP only used a couple of rare and endangered species for their final analysis.
50 Data about other species are available.
- 51 • Jo-Ann Taylor noted that there is data available for adjacent federal waters, in the Rhode
52 Island Ocean Special Area Management Plan (SAMP) and from National Centers for
53 Coastal Ocean Science (NCCOS), suggesting that there is need for concern for migratory
54 birds.
- 55 • There is some concern about the data on avian resources close to our shores used in the
56 MOMP. It would appear that much of the information compiled by Mass Audubon for our
57 area comes from two sources whose completeness and accuracy is questionable.
 - 58 - Mass Audubon conducted systematic flyovers of Nantucket Sound providing
59 relatively good information for that area, but little or no information for the western
60 part of Martha's Vineyard and Gosnold.
 - 61 - Much of the information for Massachusetts was self-reported, and for various
62 reasons, it would appear that information about Dukes County is significantly
63 under-reported.
- 64 • Impacts appear to be predominantly found in displacement rather than individual collision
65 impacts, although fog conditions might change that.
- 66 • One approach would be to require a prospective developer to carry out avian studies as
67 part of their proposal. It is already their responsibility to demonstrate that there is no
68 environmental impact. Concern was expressed that once a project is underway, there
69 would be political momentum that would make it hard to stop, notwithstanding what the
70 avian studies say. Concern was raised about whether a small developer would be able to
71 carry out these studies, but apparently this is a MEPA requirement.
- 72 • The MOMP used avian data to help define what areas were and were not suitable for
73 wind energy development. If we think that these data could be improved, shouldn't we do
74 so even if it means redefining what areas are designated as suitable for wind energy?
- 75 • The three Vineyard bird experts who contributed to MVC comments on the draft MOMP
76 had suggested a minimum buffer of 1 mile from Nomans Land.
- 77 • We need both siting standards and performance standards.
- 78 • The MOMP has proposed carrying out additional avian studies, but this is low on their list
79 of priorities.
- 80 • The group concluded that it would be desirable to have the Vineyard bird experts meet the
81 experts from Mass Audubon and the Commonwealth in order to get a better
82 understanding of the quality of the data that exists, what is missing, how it can be
83 obtained, and what it means in terms of siting wind turbines. It would also be useful to

84 involve people who had worked on the Rhode Island SAMP and people from the Fish and
85 Wildlife who had worked on their comment letter about the draft MOMP.
86

87 **Cable Areas:** This appears to be a minor factor, except as it affects fishing (next item).
88

89 **Commercial Fishing:** This is a high priority.

- 90 • Jo-Ann Taylor had worked with the Martha's Vineyard / Dukes County Fishermen's
91 Association to compile data about fishing resources and access. Though these data were
92 submitted to the group working on the MOMP, they were not included because they did
93 not exist state wide. Jo-Ann has reviewed the information and it appears to be compatible
94 with the mapping that was used in the MOMP. The yellow lines on the MOMP map don't
95 seem to adequately represent movement up the coast and to Martha's Vineyard.
- 96 • Vineyard Power is also working with the Martha's Vineyard / Dukes County Fishermen's
97 Association to prepare a map of fishing areas in state and federal waters. The key areas
98 are within 12 to 20 fathoms.
- 99 • We have to clarify how compatible the presence of wind turbines is with commercial
100 fishing. Care needs to be taken to restrict impacts to the fishing resources as well as to the
101 fishing access and activities. Draggers and cables don't mix. There is particular concern
102 about construction impacts. However, it may be that once built, having turbines in an area
103 is not incompatible with commercial fishing. Concerns were expressed about fog
104 conditions and possible security restrictions (see below).
- 105 • Commercial fishermen made extensive comment on the Cape Wind proposal, which
106 should be relevant.

107
108 **Eelgrass:** This is a minor factor for offshore wind in that it doesn't extend more than two miles
109 offshore, where it is unlikely that there would be any wind energy development.
110

111 **MREC:** This is a low priority in that it is not a definitive designation and is not necessarily
112 incompatible with wind energy.
113

114 **Navigation:**

- 115 • The possible impacts and strategies need further investigation. As with fishing, it is not
116 known for sure how restricted navigation will be in a large windfarm.
- 117 • There is a shipping route through Vineyard Sound and a pilot pick-up and maneuvering
118 area at the southern end of the sound, some of which is included in the MOMP
119 commercial wind energy area adjacent to Cuttyhunk. Presently, there is access from the
120 open ocean to the western end of this shipping route; however if a wind farm were to be
121 built there, it could block access to the shipping route unless there was an extension of the
122 shipping route through the wind farm. It was agreed to contact the Army Corps of
123 Engineers, which is responsible for defining the shipping route, to find out about the
124 implications of having a wind farm in this location and about the possibility of extending
125 the shipping route in a way that is compatible with the maneuvering area needed for big

126 ships as they pick up their pilots and tugs. This could require a reconfiguration of the
127 southern limit of the Cuttyhunk commercial Wind Energy Area.

- 128 • There remains ambiguity regarding the feasibility of development within the Nomans
129 prohibited area, where no one may enter or remain without permission of the Navy. This
130 area represents a significant part of the MOMP Nomans commercial Wind Energy Area.
131 It was included in the final plan despite the fact that the MOMP Transportation,
132 Navigation, and Infrastructure Work Group had recommended that it be excluded. Further
133 investigation appears to be warranted.

134
135 **Recreational Fishing and Boating:** This is an important factor. Many of the issues raised
136 about commercial fishing and about security also apply here.

137
138 **Scenic and Cultural:** These factors will be discussed at a separate meeting.

139
140 **Sea Bottom:** The complexity of the sea bottom – rugosity – is a good indicator of the richness of
141 habitat.

142
143 **Security:** There is a concern that, notwithstanding current intentions to keep the waters between
144 the turbines in an offshore wind farm open to fishing and boating, a decision could be made
145 sometime in the future to close off access to the entire area for national security reasons. We
146 should see how this issue was addressed with Cape Wind.

147
148 **Tidal:** This is a minor factor, in that the fact that a few small areas have been designated for
149 potential tidal development doesn't necessarily mean that there cannot also be wind energy
150 development. However, the designated tidal areas would appear to be unlikely areas for wind
151 turbines.

152
153 **Whales:**

- 154 • Jo-Ann Taylor noted that NCCOS data extend offshore in our vicinity, and indicate whale
155 habitat nearby. The NCCOC data were used for the MOMP, but the adjacent federal
156 waters were not included in the MOMP.
- 157 • The Massachusetts Clean Energy Center is in the process of developing data for the
158 federal area south of Martha's Vineyard.
- 159 • The possible impacts of the development of a wind farm on cetaceans (whales, dolphins,
160 etc.) are not well known.
- 161 • Sounds moving through water could impact this habitat; sound propagates at long
162 distances underwater, and could have an impact hundreds of miles away. Apparently, the
163 Navy has data about this but it is not public. Paul Pimentel is looking at European data
164 about this.
- 165 • This is a highly technical area that potentially affects large areas, and we will need
166 outside expertise to deal with it.

167
168 **Wind Speed:** There was some discussion of the significance of wind speed.

- 169 • Power production is proportional to the cube of speed, so what appears to be minor
170 differences have a big impact. Going from an area with an average wind speed of 8.0
171 meters per second (18mph) to one with a speed of 9.4 meters per second (21 mph) results
172 in a 62% increase in power production.
- 173 • A wind speed of 6.5 meters per second is the minimum needed for sustainable operation.
174 Once the speed reaches the rated capacity, the turbine will generate the full amount until
175 the wind speed reaches 45 or 50 mph, at which time the turbine will shut down for safety
176 reasons.
- 177 • Going farther offshore will require greater construction and maintenance costs, and there
178 is greater risk. Paul Pimentel says that these will be more than offset by the greater
179 steadiness and speed of the wind.
- 180 • Technology is well known to depths of 140'. There is a transmission loss in cables a rate
181 of about 1% for every 5-6 miles.

183 **3. Next Meetings**

- 184 • Next meeting of the work group will be Thursday, July 15, 5:00 p.m. (note different
185 Thursday, in order to avoid Tisbury's street fair).
- 186 • There was a suggestion to consider meeting again before July 15, with no consensus.
- 187 • There was a reminder of the USFWS public hearing on Nomans management on June 23.

188 The meeting was adjourned at 6:50.

189 Notes prepared by Jo-Ann Taylor and Mark London