

NOTES | 12/21/2007

Altamont Pass Wind Resource Area Scientific Review Committee Conference Call

Prepared by the Center for Collaborative Policy
Reviewed and Approved by the SRC 4/23/2008

Agenda Items

- Meeting Summary Approval
- SRC Ranking of Hazardous Turbines
- Monitoring Report Update
- Outline of Relocation Guidelines

Meeting Summaries Approval

The SRC approved the following meeting summaries:

[P49 SRC Meeting Summary 12-13 Sept 2007](#)

[P53 SRC Meeting Summary August 2007](#)

[P59 SRC Meeting Summary 9-24-07](#)

[S26 Summary: Question and Answer Session between Settling Parties and the Altamont SRC 10-10-07](#)

SRC Ranking of Hazardous Turbines

Related Materials

[P67 SRC Selection of Dangerous Wind Turbines \(12/11/07\)](#)

[P68 Turbine List \(Partial\) for SRC Selection of Dangerous Wind Turbines 12/7/07](#)

[P69 SRC Hazardous Rating Scale 12/18/07](#)

Background

During an October 10, 2007, question and answer session with Settling Parties, SRC members and some settling parties agreed that it would be beneficial for the SRC to conduct a site visit to the Altamont Pass Wind Resource Area (APWRA) to identify and assess hazardous turbines. The SRC conducted a site visit of selected turbines on November 29-December 1 and December 10. The field visits were conducted to evaluate and rank potentially hazardous turbines to assist Alameda County in meeting the Settlement Agreement goal of a 50% reduction in mortality of four focal raptor species. This effort was originally proposed as part of a possible alternative to the SRC's recommended 4-month winter shutdown of all turbines, as well as a possible alternative to the removal of Tier 3 turbines, as specified in the Settlement Agreement. The SRC viewed more than 500 potentially hazardous turbines at roughly 150 sites, which the monitoring team had selected based on reported raptor fatalities. SRC members also looked at some sites seen in passing that appeared to have potentially hazardous conditions. During the field visits, the SRC used its combined expertise to view and assess the configuration and physical setting of turbines associated with the reported raptor fatalities. Fatality data included all previous surveys in the APWRA to date and the WRRS data collected by the wind companies. The SRC evaluated and ranked the turbines from 2-10, with 10 being most hazardous.

The SRC has clarified its fieldwork methodology in a report, [P67 SRC Selection of Dangerous Wind Turbines Draft Report 12/9/07](#), and has reviewed and electronically compiled turbine

rankings. The list of turbines visited is available in a document called [P68_Turbine List for SRC Selection of Dangerous Wind Turbines 12/7/07](#). SRC member Joanna Burger produced the first draft of a summary report, [P69_SRC Hazardous Rating Scale 12/18/07](#), which provides information on the process used to assess relative potential hazard and the application of the ranking system. The purpose of this agenda item was to finalize P69 and discuss possible SRC recommendations for the hazardous turbines.

SRC Discussion

One SRC member noted that the Monitoring Team has verified SRC data identifying tower addresses. In addition to evaluating operational turbines, the SRC ranked towers lacking turbines or blades because the SRC did not know whether the companies intended to put these tower addresses back into service and, in many cases, installing blades would have created a hazardous situation for raptors. The SRC is also concerned about vacant lattice towers serving as perching structures adjacent to functional turbines, which is regarded as a hazardous situation.

Another hazard is the configuration of some towers, in which the space between the towers gives the illusion of being safe enough to fly through. In its rankings, the SRC considered that any gaps created through removal of hazardous turbines would be sufficient to allow raptors to fly safely through the turbine string. The SRC has recommended previously that all vacant and derelict turbines be removed.

Questions from the Public

One questioner asked about the methods used to make the rankings. An SRC member said this is a simple selection of turbines and does not represent all hazardous locations in the Altamont – the SRC did not visit all areas. Others referred to the SRC documents that summarized the methods, reviewed those methods on the call, and also pointed out that professional judgment was central to the methodology. Someone pointed out that the tier classification developed in 2005 might have been useful at the time, but the turbine configuration has changed since the time period when the 2005 classification was developed.

SRC Discussion Continued

As a first cut, SRC members agreed that they would recommend that turbines or towers at addresses ranked 8-10 be removed. Relocation versus removal is a separate issue that the SRC did not address.

One SRC member suggested expanding the recommendation to turbines ranked 7-10, saying that a four-month winter shutdown coupled with removal of these turbines might achieve a 50% reduction in mortality for this year.

In the ensuing discussion, one SRC member raised a concern that the SRC may not have looked thoroughly enough at the consequences of creating hazardous gaps in removing turbines lower on the list. Another member proposed removing half the turbines ranked 7 or 7.5 and allowing the companies to choose which of these turbines to remove based on their power generation to minimize the loss of wind-generated power.

SRC members noted that the length of the winter shutdown would affect the mortality reduction. One member suggested a conditional recommendation: if the winter shutdown is only two

months, they recommend all of the 7 and 7.5 turbines be removed. Another member supported this with the caveat that the SRC is careful to not create more dangerous situations in removing towers. The SRC agreed to make this recommendation.

One SRC member noted that there are 300 turbines ranked 8-10, but only 100 ranked 7, and 30 ranked 6. Therefore, adding turbines ranked 7 or 6 is unlikely to mitigate the impact of a two-month winter shutdown rather than a four-month winter shutdown.

It was suggested that, instead of recommending turbines ranked 7 or 6 for removal, the SRC consider turbines in the other part of the APWRA that have not been monitored. Because those sites aren't currently monitored, directly measuring the reduction in mortality isn't possible. However, if the unmonitored turbines are not ranked, then the mortality reduction due to this mitigation would be unequal between monitored and non-monitored turbines. No monitoring data exist for those sites so the SRC will have to rely on physical features to establish rankings, taking what it has learned from fatality clusters elsewhere. The SRC noted having an equal number of monitored turbines and non-monitored turbines removed is important to eliminate bias in extrapolating to the entire Altamont.

SRC Recommendations on Ranked Turbines

All towers and turbines assigned Ratings 8-10 are recommended for removal (P69).

If the winter shutdown is not extended beyond 2 months, towers and turbines assigned Ratings 7 and 7.5 are recommended for removal.

If the wintertime shutdown is not extended to 3.5 months, the SRC agrees to evaluate turbines and towers not previously evaluated for hazardous turbine removal.

Note: These recommendations were later refined. The most current language can be found in [P68 SRC Hazardous Turbine Rating List](#)

Public Comment

Brian Latta of the Monitoring Team said the setup phase of a subsequent field visit may be longer. There are no mapped data, and the MT will need to identify those sites that have similar features to those ranked 8-10 for the SRC to consider.

Joan Stewart asked if the companies will be able to get the data sheets for the hazard evaluation process.

SRC Responses

A member affirmed that the SRC will make the evaluation sheets public, but provided the caveat that the evaluation was based on SRC members' professional judgment. The SRC did not regard the information on the evaluation sheets as data, per se, but more like documentation of the reasons the SRC used to rank the turbines.

In response to a question, SRC members explained the importance of including non-monitored sites in the hazardous turbine identification process in order to eliminate any bias that would

otherwise occur by extrapolating the estimated effectiveness of the measure from the monitored to non-monitored turbines in the APWRA. Including only monitored sites could lead to an over-estimate in the APWRA-wide reduction of mortality.

SRC members also clarified how they would use the power output information if the companies provided it for specific turbines under consideration. For example, power output data for turbines of equal assessed hazard might lead to more balanced recommendations for turbine removals. Given the same hazard level, turbines with much lower power generation would be stronger candidates for removal. In another example, wind turbines with more intermittent operational status might actually kill more birds, and if that was the case then removing lower-producing turbines might more substantially reduce avian mortality.

Follow-Up on Hazardous Turbines Issue

- ✓ Revise P68 to include rankings
- ✓ MT to copy and mail data sheets to FPLE
- ✓ Future agenda item: non-monitored versus monitored hazardous turbines

Winter Shutdown Progress Report

Brian Karas gave a brief update on recent monitoring activity, saying the Monitoring Team has found no fresh new large raptors. He believes no burrowing owls have been found, and the Monitoring Team has found three American kestrel feather piles.

Monitoring Report Update

Background: The Monitoring Team has been working to develop a report on data and analysis from the 2006-07 monitoring period.

Possible SRC Subcommittee for Review

Monitoring Team members suggested that an SRC subcommittee be created to review the MT report to provide input before it is publicly released.

Brian Latta, head of the Monitoring Team, said he is not asking for input on the report content and data, but on the structure of the report, to ensure that it provides all the information that the SRC would like to see. The MT member writing the report has not attended many of the SRC meetings, and SRC recommendations on the report were made some time ago at the August and September meetings.

One SRC member expressed concern that the five SRC members have different perspectives. The facilitator suggested that the two SRC members on the subcommittee try to consider and raise questions that others might have.

Sandra Rivera said it is important that the SRC input process be transparent and suggested that the entire SRC provide input. Two SRC members and the facilitator said that might take too long.

Rivera said the County's process includes two groups of scientists, and there needs to be a distinction between them: the MT conducts the analysis, and the SRC reviews it. If the SRC members are actually working on the report, the level of separation is reduced. One SRC member

agreed that there is supposed to be a separation between the two entities. Another did not agree and questioned that the SRC and monitoring team members were not supposed to collaborate.

Another SRC member noted that papers produced for research publications are routinely circulated to peers prior to presenting to the public. Others agreed that the subcommittee could provide peer review, rather than represent the entire SRC.

Subcommittee Formation and Direction

Ultimately, SRC members agreed that the subcommittee would respond to questions about the intent of previous SRC direction. Julie Yee could answer statistical questions. One SRC member suggested that the subcommittee be composed of Julie Yee and Shawn Smallwood. The two SRC members said they were willing to serve. SRC members agreed to set a deadline for the draft. The monitoring team will make the report public by January 25. SRC members asked the monitoring team to circulate the current outline for comments. In addition, the SRC suggested the monitoring team review the August and September meeting summaries for guidance.

Rivera asked that the subcommittee keep track of its comments and make them available for the purpose of transparency.

Outline of Relocation Guidelines

Related Materials

[P70 SRC Hazardous Turbine Relocation Guidelines 12-20-07](#)

As part of its review of hazardous turbines, the SRC agreed at the request of wind companies to develop siting guidelines for turbines that are to be relocated. The guidance document will assist the companies in determining appropriate (low-hazard) relocation sites for turbines. SRC member Shawn Smallwood developed an outline for the relocation guidelines, [P70 SRC Hazardous Turbine Relocation Guidelines 12-20-07](#), to be reviewed by other members of the SRC.

Discussion

Generally, SRC members liked the outline and recommended that Shawn Smallwood move forward with the initial draft, which the SRC will discuss on January 4.

Public Comment

SRC members asked Joan Stewart when the company is going to start relocating. She said possibly in early February. FPLE has a lot of turbines on the list, and identifying new locations is an issue.

Follow-Up on Relocation Guidelines

- ✓ SRC members to simultaneously review the preliminary version of the guidelines and send individual comments to Shawn Smallwood.
- ✓ The draft document will be posted by noon on January 3.

Wrap Up and Next Steps

SRC members agreed to discuss the relocation guidelines at the January 4 conference call. The December 27 conference call, deemed unnecessary, is cancelled.

Participants

SRC

Joanna Burger
Jim Estep
Sue Orloff
Shawn Smallwood
Julie Yee

Identified Members of Public

Joan Stewart
Bill Damon
John Moorman
David Cleary

Monitoring Team

Brian Latta
Brian Karas

Sandi Rivera, County of Alameda

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