

Meeting Summary | March 25, 2013

Altamont Scientific Review Committee

Developed by the Center for Collaborative Policy
Reviewed and approved by the SRC

All SRC Members Present:

Joanna Burger
Jim Estep
Mike Morrison
Sue Orloff
Julie Yee

Key Outcomes

The Altamont Pass Scientific Review Committee (SRC) met in Oakland on March 25, 2013. The following summarizes action items and SRC recommendations from the meeting.

1. 2005-2011 Bird Fatality Report

The SRC reviewed the Monitoring Team's draft bird fatality report incorporating data from the 2011 bird year (Oct. 1, 2011-Sept. 30, 2012).

The Monitoring Team will be conducting a database audit, the goal of which is to identify and resolve errors throughout the entire database.

The SRC recommended the following additional next steps:

- Mike Morrison will join Julie Yee on the SRC Analysis Subcommittee;
- The Analysis Subcommittee will review the Monitoring Team's analytical framework and report to the SRC;
- The final report will incorporate the outcomes from the audit and Analysis Subcommittee review.

Separate from the final report, the SRC asked the Analysis Subcommittee to broadly consider Shawn Smallwood's March 2013 fatality analysis.

2. Seasonal Shutdown

SRC Member Julie Yee presented the framework for her seasonal shutdown models.

The SRC agreed that the model has value as an approach to potentially identify a seasonal shutdown signal.

The SRC agreed that Julie will include bird use as a variable in her model runs. She will pursue inclusion of other variables as time and resources permit, including:

- Whether fatalities spike when shutdown turbines are turned on

- Underlying seasonal effects
- Geographic variation at the BLOB level
- Whether or not blades are locked down when the turbine is not operating
- Differences in megawatts

3. SRC Input on AWI Proposed CUP Modifications Draft Environmental Impact Report

The SRC reviewed the Draft Environmental Impact Report for AWI’s proposed CUP modifications. Alameda County has asked the SRC to provide input on the report’s methodology, assumptions and proposed mitigations.

The SRC agreed on the following consensus input:

- Monitoring Team data includes winter shutdown, so the impact of the project would actually be higher. The report needs to include a disclaimer and consider changing the analysis so that it includes winter shutdown months as an operating month in the analysis.
- Given that fatality trends are at or about 45%, removing seasonal shutdown as a management action can’t be justified at this point. The SRC agrees with the report’s conclusion that the proposed project would result in a significant impact as per CEQA guidelines.
- The report should explore or discuss other mitigations, such as hazardous turbine removals and other US Fish and Wildlife Service mitigations for golden eagles, which could further reduce the magnitude of the impact.

Action Items & Meeting Follow-Up

Party	Due Date	Action
SRC	August 19-20, 2013	Next In-Person Meeting – 1 or 1.5 days
Monitoring Team	August 5, 2013	Release of Final 2005-2011 Monitoring Report
Monitoring Team	For final report	<ul style="list-style-type: none"> ▪ Complete database audit - expected by April 18, 2013 <p><i>SRC recommendations for final report:</i></p> <ul style="list-style-type: none"> ▪ Include table: Analysis of core 60% turbines and whether results are similar to or different from full sample ▪ Consider whether to display BLOB information in tabular form ▪ Table 3-4: Correct non-raptors 2005 rates ▪ Review other tables for errors ▪ p 1-1: Edit text "many of these species" to "almost all of these species" are protected
Julie Yee, Mike	June, or for final report	Analysis Subcommittee review of Monitoring Team analytical approach

Party	Due Date	Action
Morrison		
Monitoring Team	June	Develop straw proposal on BY2013 Monitoring Program
Julie Yee, Mike Morrison		Analysis Subcommittee to broadly consider Smallwood fatalities analysis (P267), checking in with full SRC & Alameda County if review could take significant time
Julie Yee		Develop and run updated seasonal shutdown model incorporating bird use and potentially other variables, as time/resources allow
SRC, Facilitator	April 15	SRC members can submit individual written comments on the AWI CUPS modification DEIR to CCP for compilation. CCP will submit as individual comments to Alameda County.

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Meeting Account

Announcements

Sandra Rivera of Alameda County had two major announcements:

1. Schedule for the repowering programmatic EIR (Environmental Impact Report):
The Draft EIR is scheduled for public release in December and scheduled to be finalized in July 2014. The SRC will provide their input on the draft.
2. Alameda County received an application from FloDesign for repowering 40 turbines at its Sand Hill Wind Project. A scoping meeting for public input on environmental review was held on March 13, 2013. Final public comments are due by April 6, 2013.

2011 Bird Year Fatality Study Presentation & Discussion

Related Documents

[M96 APWRA 2005-2011 Draft Bird Fatality Report](#)

[M97 March 2013 Presentation Slides](#)

Introduction

Sandra Rivera of Alameda County provided context to the SRC in its consideration of the draft report ([M96 APWRA 2005-2011 Draft Bird Fatality Report](#)). At the last meeting in December 2012, the Monitoring Team's analysis had indicated a 51% overall reduction in avian fatalities. The SRC at that meeting did not come to a consensus agreement on whether the 50% reduction was achieved. The County considered multiple implications if the 50% reduction had not been met: wind energy companies would need to remove turbines, the environment and monitoring parameters would be altered, and this could significantly disrupt a California Energy Commission-funded study. Given the information available at that time, the County made the decision that the 50% reduction in avian mortality had been achieved. However, the most recent bird fatality study analysis identified a 45% reduction in avian fatality for the four focal species. County staff consulted with the Monitoring Team and believe there will continue to be fluctuations in the future as many wind companies are in a transition stage of removing and/or replacing older generation turbines. The County is committed to maintaining the 50% reduction standard, but currently there is not an apparent protocol for additional management measures.

SRC Comments on the 50% Issue

SRC members raised the following issues:

- The SRC should be prepared to discuss what more it could do, if fatalities stay below 50%. And going forward, if there are wind company requests for modifying current operating parameters and agreements, the SRC should consider the implications of its recommendations.
- The on-going role for the SRC is unclear in the wake of the 50% determination.

In response, Sandra Rivera acknowledged that, once the 50% determination was made, there is no longer a clear process spelled out for the SRC. However, the SRC would continue to review EIRs and monitoring studies, providing their expertise and recommendations to the County to maintain a 50% reduction.

Draft 2005-2011 Bird Year Fatality Study Presentation

Doug Leslie, the Monitoring Team Project Manager, gave a presentation on the draft report, which incorporates data from the 2011-12 bird year into the analysis of avian fatalities since 2005 at the Altamont Pass Wind Resource Area (APWRA). In addition to the new data, this report includes an expanded methods section, an expanded dataset for the QAQC study, and, at the request of the SRC, BLOB (Base Layer of Operating Group Boundaries) characteristics in Appendix D were tabulated rather than provided in graphical form.

Key points in his presentation included:

Changes in Results since the December 2012 Fatality Study (M87)

- Installed capacity (defined as the total rated megawatt capacity of each turbine string based on the number of functioning turbines each year) increased for the whole

APWRA (Fig. 1-3), partly because the turbines for the Vasco Winds project came online (Figs. 1-2, 2-1, and 2-2 illustrate the distribution and abundance of turbine types, which turbines were monitored, and when they were monitored).

- Bird use (defined as the relative abundance of various avian species seasonally and annually) for all four focal species increased in the 2011-12 bird year.
- Total fatality estimates have decreased for the two larger focal species – golden eagle and red-tailed hawk – but increased for the two smaller focal species – American kestrel and burrowing owl.
- The overall reduction in fatalities among the four focal species is now estimated at approximately 45% rather than the 51% presented at the last in-person meeting based on the earlier dataset.

Doug Leslie said the Monitoring Team has noted some errata that will need to be corrected in the report.

Corrections and Errata:

- Table 3-6, Estimated annual total fatalities, page 3-12: The red-tailed hawk estimate of “764” in 2006 is incorrect and should be “433.” Table 3-6 is incorrect, but Figure 3-7 expressing the same information graphically is correct.
- For all estimates, the confidence intervals are too narrow.
- The estimated number of American kestrel fatalities is suspected to have errors.
- Additionally, a few erroneous fatalities were included in the analyses that should have been omitted. These should not significantly alter the results.

Additional Fatality Study Results

- The average unadjusted fatalities and bird use on a seasonal basis did not change significantly from year to year (Fig. 3-2). For kestrels, bird use and fatalities were highly correlated, but that relationship did not occur for the other three species.
- The rates for the two larger focal species (golden eagle and red-tailed hawk) decreased, while there was an increase for the two smaller focal species (burrowing owl and American kestrel) (Fig. 3-5).
- The trends in the annual estimated fatalities correlate with bird use, except for golden eagle (Fig. 3-7). Golden eagle appeared to have an inverse relationship, where fatalities decreased while bird use increased.
- In the latest bird year, there was an increase in the estimated annual fatalities for all four focal species combined using the 3-year rolling average approach (Fig. 3-8).
- Using the 3-year rolling average method, red-tailed hawk surpassed the 50% reduction in fatalities (58.1% reduction), and golden eagle was close (48.2%). American kestrel and burrowing owl, however, respectively had a 36.4% and 38.7% fatality reduction. The percentage fatality reduction for all four species combined was 45.3%.
- If the seasonal shutdown was effective, there should be a decrease in winter percentage of annual fatalities as the seasonal shutdown duration and intensity increased from 2005 to 2011. Golden eagle and red-tailed hawk fatalities decreased in the winter, but winter fatalities increased for American kestrel and burrowing owl (Fig. 3-9).
- The Monitoring Team explored the possibility that the larger focal species were predated on the two smaller focal species, especially burrowing owls. Using feather

spots as an indicator for predation, they found a higher proportion of fatalities composed of feather spots in the winter period than the non-winter period for the smaller focal species (Fig. 3-10).

- Circumstantial evidence exists on avian predation during seasonal shutdown months (See [M97 March 2013 Presentation Slides](#)). In the last three years (when there was universal turbine shutdown), the majority of the total raw fatalities during seasonal shutdown were feather spots (N = 43, PPT Slides 18 and 19). The Monitoring Team also explored the possibility that many of the birds saved during seasonal shutdown were killed when the turbines were turned back on in February. They found this was not the case (PPT Slides 20 and 21).

Monitoring Team Announcements

Doug Leslie announced that Jesse Schwartz from the Monitoring Team would no longer be on the APWRA project, but would be available to provide information as needed.

He is confident the analytical framework is now in place, and most processes for generating estimates are now programmed into the database. The Monitoring Team's new database manager is conducting a database audit back to 2005. It is scheduled for completion on April 18, 2013.

SRC Questions on the Draft Fatality Study

The SRC had the following inquiries:

- Had there been a change in the land use around the APWRA in the 2010-2011 bird year? In response, The Monitoring Team said there had been some landfill expansion, but not much change beyond that.
- The Monitoring Team clarified that the average percentage reduction in fatalities was calculated using the raw numbers for all four species combined rather than taking an average of the percent reduction for each species (not taking the average of averages).

SRC and Monitoring Team Discussion

SRC and Monitoring Team members raised the following questions and issues:

Seasonal Shutdown

- While the Monitoring Team's seasonal shutdown circumstantial evidence had not gone through statistical analyses, a few SRC members said the information could be useful. If a larger proportion of fatalities in winter were due to predation (and possible increases in predators) and not wind turbines, that might have potentially driven up the fatality rates.
- Brian Karas of the Monitoring Team suggested the analysis of seasonal shutdown predation include all scavenged carcasses and use discovery dates rather than back dates, given problems with accurately identifying date of death.

Issues around Fatality Trends

SRC members discussed whether the trend in fatality reduction was distorted by data from a particular year.

- If 2006 was omitted, it appeared as though all four species were fluctuating around constant fatality rates (Fig. 3-5). This would imply there had been less of a decrease in fatalities from 2005 to 2011.
- If 2005 was omitted, there would be a large decrease in fatality rates during this period (2006 to 2011) . This was possible because wind companies were still removing bird carcasses in 2005 and the carcasses would be unavailable for monitors to find.
- Identifying outliers in these early years is difficult due to many co-occurring management actions, such as the cross-over shutdown experiment and removal of high-risk turbines.
- Figure 3-7, which displays estimated total fatalities, might be more appropriate for some of these points. Figure 3-5, which displays fatalities per MW, may not be pertinent because variables such as turbine removals and seasonal shutdown would not be reflected in the adjusted fatality rates. These rates reflect the number of fatalities per megawatts, so only active and operating turbines would be represented in these rates.

An SRC member suggested that a fatality analysis by former SRC member Shawn Smallwood might be helpful to the discussion. It was agreed that, while there were undoubtedly going to be differences in analytical approaches, it would be useful for the SRC Analysis Subcommittee to consider the document.

SRC members asked for clarification from the County and Settling Parties about how the 50% reduction goal relates to non-turbine caused mortality, given that a substantial portion of winter fatality rates for the smaller focal species could be due to predation. They asked County representatives and the Settling Parties if the 50% reduction in fatalities called for in the Settlement Agreement was intended to include non-turbine caused mortality.

- In response, Sandra Rivera of Alameda County said the intention was to include only turbine-related fatalities, but she was unsure how the Settlement Agreement approached secondary mortality.
- Joan Stewart of NextEra, one of the Settling Parties, said she did not believe the Settlement Agreement addressed secondary mortality.
- Representatives of the California Department of Fish and Wildlife (CDFW) were asked if they have a prioritized concern among the focal species. Elliot Chasin of CDFW said the CDFW is concerned about them all, but burrowing owls are a State Species of Special Concern. The Department does not believe the burrowing owl population is going to crash because of secondary mortality, so it is less concerned about predation in this situation. Danielle Roach of CDFW added that American kestrels were decreasing nationally and the Department is concerned about this species.
- Asked how the SRC might address the issue of management actions that help one focal species while potentially harming another, one SRC member said he would not be comfortable making any management recommendations without a focused study.

Doug Leslie requested that the SRC Analysis Subcommittee conduct a review of the Monitoring Program's analytical framework once the database audit is complete, and the SRC agreed.

Summary of SRC Feedback on Draft Report

- Some SRC members commended the improvements in the report since December.
- Address an error in the calculation of adjusted fatality rates for non-raptor species (Table 3-4, pp. 3-8 to 3-11).
- On page 1-1, suggest a wording change: change the text "many of these species" to "almost all of these species" are protected.
- An SRC member expressed concern over the spatially balanced and randomized rotating panel design, requesting that the Monitoring Team continue to periodically check that the rotating panels are not producing dissimilar results from the fixed monitored turbines.
- One SRC member appreciated the BLOB info in tabular form, but also would like the graphical form in the final report.

Public Comment on the Draft APWRA Bird Fatality Study

Renee Culver of NextEra Energy Resources asked whether, given the database audit and other potential corrections, there are plans to produce another draft before the report was finalized. She expressed concern over the implications of making suggestions or having intense debate over less-than-confident results. She was not necessarily demanding a product, but was trying to make a point. In response, Sandra Rivera of Alameda County clarified that the SRC was not making any new management decisions that day.

Renee Culver of NextEra asked if the e-mailed report sent by Shawn Smallwood would be made available to the public. In response, facilitator Ariel Ambruster said it would.

SRC Recommendations for the Draft APWRA Bird Fatality Study

SRC members agreed to the following recommendations on fatality analysis:

- Mike Morrison will join Julie Yee on the SRC Analysis Subcommittee;
- The Analysis Subcommittee will review the Monitoring Team's analytical framework and report to the SRC; and
- The final report will incorporate the outcomes from the audit and Analysis Subcommittee review.

Next Steps

- The Monitoring Team expects to complete the database audit by April 18th and will share audit findings with the SRC Analysis Subcommittee.
- The Analysis Subcommittee will then undertake a review of the Monitoring Program analytical framework. They expect to complete their analysis within three months, or before the next in-person SRC meeting (August 19-20, 2013).
- The Analysis Subcommittee will also broadly consider Shawn Smallwood's March 2013 fatality analysis, checking in with the full SRC and Alameda County if the review could take significant time.
- The Monitoring Team will consider and incorporate SRC comments into the final version of the report.
- CCP will post Shawn Smallwood's document on the SRC website for the public to view.

Seasonal Shutdown Model Analysis

Related Document

[P265 Seasonal Shutdown Model Description](#)

Background

It has been challenging to develop an analytical approach to identify the effectiveness of the seasonal shutdown management action, given that it is only one of multiple management actions being implemented, and shutdown periods have changed. After the December 2012 meeting, SRC member Julie Yee said she believes a modeling approach she first developed in 2007 might be an effective analytical approach and offered to revisit the model.

Discussion

Doug Leslie of the Monitoring Team provided a review of the seasonal shutdown. He said the most recent data suggests it significantly affects fatalities for the four focal species. Determining the efficacy of the seasonal shutdown has been problematic due to many overlapping activities. SRC member Julie Yee developed a regression model framework that could calculate to what extent various factors significantly affected avian mortality during seasonal shutdown.

Julie Yee described the model framework's assumptions, limitations, and potential to identify statistically significant factors affecting avian fatalities during the seasonal shutdown (See [P265 Seasonal Shutdown Model Description](#)). The model incorporates the observed number of fatalities and detection probabilities to compare fatality rates during operating and non-operating periods. The model can explore multiple factors, which has the benefit of accounting for more types of variation. She asked other SRC members which factors should be prioritized, listing six:

1. Fatality rates on a per megawatt basis – Do fatality rates increase when turbines operate more intensely?
2. Fatality rates relative to bird use and abundance – Are fatality rates varying in relation to population fluctuations?
3. Start-up effect – Do fatality rates increase when turbines are turned back on at the end of the seasonal shutdown period?
4. Feathering vs. locked blades – Do non-operating turbine blades that are free to move affect fatality rates?
5. Seasonal differences – Would the observed patterns during the wintertime shutdown occur in winter regardless of whether there was a shutdown?
6. Geographic differences – Are fatality rates higher in some areas due to their geographic characteristics?

SRC Discussion on Seasonal Shutdown Model Analysis

SRC members raised the following issues:

- The model assumes that fatality rates are constant over search intervals. In response, Julie Yee said she reasoned that although fatality rates experience seasonal variation, within an interval there might be a relatively constant rate.
- For the smaller species especially, it is difficult to accurately pinpoint a carcass's fatality date. However, the model can account for that uncertainty with confidence intervals and standard errors.

- Turbines in the Diablo Winds area, which are new generation turbines and do not shut down in the winter, can be used to compare seasonal differences.
- Several SRC members said bird use was important to incorporate into the model.
- The model can compare geographical variation at the BLOB level.
- Even if turbine blades are not locked down and can “feather,” or spin slowly, it is a technical constraint beyond management options.
- Numbers and types of towers may also be a variable to look at

Public Comment

- Joan Stewart of NextEra noted that the SRC had taken a field trip to the turbines a few years ago, and the SRC determined feathering was not an issue for consideration. It was a factor that management would not be able to change. SRC members had decided at that time that they weren't going to concern themselves about it.

SRC Recommendations on Julie Yee's Seasonal Shutdown Model

The SRC agreed that the model has high value as another approach to potentially identify a seasonal shutdown signal, and encouraged SRC member Julie Yee to pursue her analyses.

The SRC recommended that the models include bird use as a variable. As time and resources permit, include the following other variables:

- Whether fatalities spike when shutdown turbines are turned on
- Underlying seasonal effects
- Geographic variation at the BLOB level
- Whether or not blades are locked down when the turbine is not operating and
- Differences in megawatts.

Next Steps for the Seasonal Shutdown Model Analysis

- Julie Yee will pursue the model, including other variables as time and resources permit.
- The SRC will consider the results at a future meeting.

Altamont Winds, Inc. EIR Draft Review & Input

Related Documents

[P262 AWI CUP Mods Notice of Availability](#)

[P263 AWI CUP Modification DEIR](#)

[P264 Alameda County Memo on Questions for AWI DEIR Review](#)

[P265 Yee Seasonal Shutdown Model Description](#)

[P266 SRC Comments on AWI DEIR](#)

[P267 ICF AWI DEIR Presentation Slides](#)

Background

The County's consultant, ICF, has developed a Draft Environmental Impact Report (DEIR) to analyze the environmental impact of a proposal by Altamont Winds, Inc. (AWI) to modify its current Conditional Use Permits (CUPs). Alameda County is seeking the SRC's best scientific judgment on questions it posed (see [P264 Alameda County Memo on Questions for AWI DEIR Review](#)) on report assumptions, methodology and proposed

mitigations. The SRC could develop consensus input at this time, and SRC members can submit more detailed individual comments after the meeting, which CCP will compile and submit to Alameda County.

Presentation by ICF on the Draft Environmental Impact Report

Alameda County determined AWI's proposed modifications to the company's Conditional Use Permits (CUPs) required an EIR under the California Environmental Quality Act (CEQA). Susan Swift of ICF presented an overview of the CEQA process and the proposed project by AWI. Key points included:

- The DEIR is currently going through a public review that ends on April 19, 2013, and all public comments must be received by that time. A final EIR and a Mitigation Monitoring and Review Program will be released in the summer, with County approval or denial of AWI's proposed project expected in the fall.
- AWI is proposing to modify the schedule for permanent turbine shutdown required in its CUPs. The existing requirements that could change are the annual winter shutdowns (November 1 – February 15) and the phased decommissioning of existing turbines through 2018. The proposal would continue operations for all existing turbines until December 2015, rather than shutting down 25% of the original 920 turbines in fall 2013, and would eliminate the annual winter shutdown requirement. Under the proposal, all turbines would be shut down at the end of 2015.
- The DEIR evaluates a baseline ("No Project Alternative"), set as the existing CUP requirements, and three alternatives it developed to the proposed project. The alternatives include the seasonal shutdown but use various operation termination dates and have no phased removal.

Brad Schafer of ICF presented the DEIR's avian impact analysis. Key points included:

- Significance: Since avian impacts have been determined as significant historically, any action that increased fatalities would also be considered significant. Compared to the baseline, the proposed project would increase fatalities for most avian species (including all focal species), and therefore have a significant effect.
- The DEIR lists two mitigation measures: 1) implementing the seasonal shutdown (MM BIO-16), and 2) retrofitting electrical facilities to mitigate loss of golden eagles (MM BIO-18). The mitigation measures would reduce the number of fatalities estimated to be caused by the proposed project, but there would still be more fatalities compared to the baseline (Table 3.2-5, p. 3.2-31).
- The DEIR concludes that the avian impacts would be significant and unavoidable for the proposed project and alternative options.

SRC Discussion of the DEIR

SRC members had the following comments and questions:

- SRC individual comments should be submitted as individual comments clearly stating they do not reflect the entire SRC panel's opinion
- An SRC member said the report was well-written and balanced.
- Do the shutdown deadlines mean the date by which turbines should be removed?
 - In response, Sandra Rivera of Alameda County said the turbines had to be turned off by their shutdown date; however, the companies would have more time to complete turbine removal.

- Because the seasonal shutdown can reduce mortality, removing the seasonal shutdown is likely to increase golden eagle mortality. Removing the seasonal shutdown may violate laws such as the Bald and Golden Eagle Protection Act.
- Since the avian impact was concluded as significant and unavoidable, additional mitigation measures should be explored that might further decrease the impact. The report should explain the mitigation options' feasibility/infeasibility. If a measure's effectiveness cannot be quantified, conduct a qualitative analysis.
- Mitigation Measure BIO-17 requires retrofitting 29 utility poles to mitigate loss of individual golden eagles (based on a US Fish and Wildlife Service recommendation of 29 utility poles for each eagle). One SRC member questioned whether retrofitting 29 utility poles would be adequate in mitigating loss of individual golden eagles, and said mitigation should occur on site.
 - Brad Schafer of ICF said USFWS has a protocol for handling what they define as the local population, which would require mitigation within an area 160 miles of the proposed project.
- In response to a question, ICF clarified that the EIR must choose either the proposed project or one of the alternatives as the Environmentally Superior Alternative, even if the No Project Alternative had a less significant environmental impact.
- One SRC member requested that ICF clearly state in the report that the No Project Alternative did have the least significant environmental impact compared to the other options.
- Failure to shut down would result in further problems with data analysis of overall fatality rates

SRC and Monitoring Team Discussion on the DEIR Avian Impact Analysis

SRC and Monitoring Team members raised the following issues to consider:

- Since the proposed project and alternative scenarios have different time schedules and shutdown dates that vary at the month level, then total MW varies at partial year intervals. ICF can calculate total MW-years by aggregating portions of MW-years (such as MW-months).
- Since the DEIR analyses used constant fatality rates for the whole year even though the rates change during winter when turbines are non-operational, the proposed project's impact could be underestimated for species whose rates are lower in the winter.
- Additionally, the Monitoring Team fatality rates based on the installed capacity of the turbines presume a seasonal shutdown. For comparing alternatives to the proposed project, the annual fatality rates using data collected during the seasonal shutdown period should not be applied to the proposed project. Since the proposed project would not have the seasonal winter shutdown, then the projected fatalities would be underestimated. Additionally, because the no-project and alternative projects follow the same winter shutdown schedule that the annual fatality rates were derived from, then the winter months for those projects should be included as operational months; otherwise those fatality estimates are also underestimated. If this cannot be done, there should be a disclaimer explaining the proposed project, no-project, and alternative project estimates are biased low.
- Hazardous turbine removal would be a way of reducing fatalities; however, it would be more difficult to quantify its effectiveness.

- Many of the high-priority hazardous turbines have been removed, but there are still some remaining. Removing hazardous turbines may not significantly reduce fatality rates as a standalone measure.
- Some AWI turbines are interspersed with other companies' turbines along turbine strings. The Monitoring Team noted there could be additional risk if the rest of the turbines were in winter shutdown while AWI was not.
- One SRC member suggested using BLOB-specific fatality rates rather than Altamont-wide fatality rates. It would make the EIR more accurate, but would not likely affect the outcome of the EIR.

Public Comment

Danielle Roach of CDFW asked for clarification for Figure 2.2 in the DEIR. She was curious if the turbines marked as "AWI WT's Received from ESI Northside.shp" were included in the approximate 900 turbines owned by AWI.

- Joan Stewart of NextEra said she was not certain, but those were not likely included, as they were going through ownership transition.

Mary Lim of AWI said AWI believes that ICF's analyses exaggerates the impacts of removing the winter shutdown requirement, because it assumes AWI is running at full capacity during the full 3.5-month winter season. AWI calculates that 6% of its total production occurs during the winter shutdown season. AWI requests that the DEIR include a caveat that a very small proportion of production would occur during the winter months.

Elliot Chasin of CDFW asked whether turbines at low productivity in the winter spin more slowly or do not spin at all.

- Joan Stewart of NextEra explained that there were multiple types of turbines with differing starting criteria for different wind speeds and wind direction. Some turbines would spin [of those turbines not capable of being locked down], but most would not be spinning at all.

Nanette Leuschel of RPII asked, in terms of greenhouse gases, did the DEIR compare the benefits of the proposed project versus other negative environmental impacts, such as avian fatalities?

- Susan Swift of ICF responded that the California Environmental Quality Act does not call for analyzing project benefits, only impacts.

Danielle Roach of CDFW suggested that AWI communicate with EDF Renewable Energy, which is working on turbine decommissioning documents for its turbines near the Altamont landfill. CDFW is developing a biological opinion for that project and it could potentially address AWI decommissioning in that area as well.

SRC Consensus Input on the Draft Environmental Impact Report on AWI's proposed Conditional Use Permit Modifications

The SRC agreed on the following consensus input items:

- Given that fatality trends are approximately 45%, removing the seasonal shutdown management action would not be a justified action at this point.
- The SRC agrees with the report's conclusion that the proposed project would result in a significant impact as per CEQA guidelines.

- The projected fatalities under the proposed project are underestimated because it was calculated by applying annual fatality rates, derived by the monitoring study in which turbines were shut down during winter, to a proposed operating period in which turbines are activated year-round. The projected fatalities under the no-project and alternative proposals are also underestimated because they were calculated by applying the same annual fatality rates, which includes winter shutdown and normal non-winter activity, prorated to partial years (i.e. excluding winter months). The SRC recommended the report include a disclaimer to acknowledge the underestimation and consider including winter months as operating months for the no-project proposal and the alternative proposals.
- Given that the avian impact would be significant and unavoidable, the report should further explore other mitigations, such as hazardous turbine removals and other US Fish and Wildlife Service mitigations for golden eagles, which could further reduce the magnitude of the impact.

Next Steps

- SRC members can submit detailed individual comments to CCP to submit to Alameda County as a compiled document
- Comments on the DEIR are due by April 19th at 5 p.m.

Meeting Summary Review and Approval

Related Documents:

[P258 SRC Meeting Summary December 2012](#)

[P259 SRC Call Notes 1-16-13](#)

Facilitator Ariel Ambruster asked if the SRC had any additional changes they would like in the following meeting notes:

- December 2012 Meeting Summary (P258). The following edits were requested:
 - Correct meeting date in heading
 - Pg. 4 – 2nd bullet, current shutdown is supposed to be a 3.5 month shutdown
 - Pg. 5 – Detection Probability Estimate, Bullet 1: "...233 carcasses, 109 were raptor species..." Remove "species".
 - No additional edit requests; meeting notes were approved.
- January 16, 2013 Call Notes (P259).
 - No edits were requested; approved as is.

Public Comment on General Issues

There were no general comments from the public.

Future SRC Meetings

Next In-person meeting:

August 19-20, 2013

Topics:

- Final 2005-2012 Monitoring Report, incorporating database audit and SRC Analysis Subcommittee's framework review
- Develop recommendations on monitoring for the coming 2013-14 bird year
- Results from the Seasonal Shutdown Model runs
- Possible: review and SRC input on Avian Bat Protection Plan for repowering

Documents Circulated at Meeting

[M97 March 2013 Presentation Slides](#)

[M96 APWRA 2005-2011 Draft Bird Fatality Report](#)

[P265 Seasonal Shutdown Model Description](#)

[P262 AWI CUP Mods Notice of Availability](#)

[P263 AWI CUP Modification DEIR](#)

[P264 Alameda County Memo on Questions for AWI DEIR Review](#)

[P266 SRC Comments on AWI DEIR](#)

[P267 ICF AWI DEIR Presentation Slides](#)

[P258 SRC Meeting Summary December 2012](#)

[P259 SRC Call Notes 1-16-13](#)

SRC Meeting Participants

SRC Members

Joanna Burger
Jim Estep
Mike Morrison
Sue Orloff
Julie Yee

Staff

Sandra Rivera, Alameda County
Ariel Ambruster, Facilitator
Stephanie Horii, Assistant Facilitator

Monitoring Team

Doug Leslie
Brian Karas

Others

(Meeting sign-in is optional)

Brad Schafer, ICF International (ICF)
Susan Swift, ICF
Danielle Roach, California Department of Fish and Wildlife (CDFW)
Elliot Chasin, CDFW
Andrew Young, Alameda County Planning Department
Renee Culver, NextEra Energy Resources (NextEra)
Joan Stewart, NextEra
Meg Lawler Fratanduono
Mary Lim, Altamont Winds, Inc. (AWI)
Nanette Leuschel, Ralph Properties II
William Fleishhacker, Alameda County Council

List of SRC Agreements Developed March 25, 2013

(Compiled from this document)

SRC Recommendations for the Draft APWRA Bird Fatality Study

SRC members agreed to the following recommendations on fatality analysis:

- Mike Morrison will join Julie Yee on the SRC Analysis Subcommittee;
- The Analysis Subcommittee will review the Monitoring Team's analytical framework and report to the SRC; and
- The final report will incorporate the outcomes from the audit and Analysis Subcommittee review.

SRC Recommendations on Julie Yee's Seasonal Shutdown Model

The SRC agreed that the model has high value as an approach to potentially identify a seasonal shutdown signal, and encouraged SRC member Julie Yee to pursue her analyses.

The SRC recommended that the model runs include bird use as a variable. As time and resources permit, include the following other variables:

- Whether fatalities spike when shutdown turbines are turned on
- Underlying seasonal effects
- Geographic variation at the BLOB level
- Whether or not blades are locked down when the turbine is not operating and
- Differences in megawatts.

SRC Consensus Input on the Draft Environmental Impact Report on AWI's proposed Conditional Use Permit Modifications

The SRC agreed on the following consensus input items:

- Given that fatality trends are approximately 45%, removing the seasonal shutdown management action would not be a justified action at this point.
- The SRC agrees with the report's conclusion that the proposed project would result in a significant impact as per CEQA guidelines.
- The projected fatalities under the proposed project are underestimated because it was calculated by applying annual fatality rates, derived by the monitoring study in which turbines were shut down during winter, to a proposed operating period in which turbines are activated year-round. The projected fatalities under the no-project and alternative proposals are also underestimated because they were calculated by applying the same annual fatality rates, which includes winter shutdown and normal non-winter activity, prorated to partial years (i.e. excluding winter months). The SRC recommended the report include a disclaimer to acknowledge the underestimation and consider including winter months as operating months for the no-project proposal and the alternative proposals.
- Given that the avian impact would be significant and unavoidable, the report should further explore other mitigations, such as hazardous turbine removals and other US Fish and Wildlife Service mitigations for golden eagles, which could further reduce the magnitude of the impact.