AMERICAN BIRD CONSERVANCY

*Bringing back the birds*

Chokecherry-Sierra Madre EIS
U.S. Fish and Wildlife Service, Mountain Prairie Region
P.O. Box 25486 DFC
Denver, CO 80225

May 15, 2016

**Draft EIS for Phase I Chokecherry-Sierra Madre Wind Energy Project Comments**

To Whom It May Concern:

American Bird Conservancy (ABC) appreciates the opportunity to comment on the U.S. Fish and Wildlife Service's (FWS') *Draft Environmental Impact Statement (EIS) Evaluating Impacts from the Proposed Chokecherry and Sierra Madre (CCSM) Wind Energy Project, Phase I.* ABC has commented throughout this process, expressing its concerns about the impact of this project on birds and other wildlife (http://abcbirds.org/wp-content/uploads/2015/05/Chokecherry-Sierra-Madre-Eagle-Take-Permit_February2014.pdf ). We continue to have serious concerns about both short- and long-term impacts that this massive, commercial wind energy project will have on our nation's federally protected migratory birds, eagles and Greater Sage-Grouse.

ABC is a 501(c) (3) science-based, not-for-profit membership organization whose mission is to conserve native birds and their habitats throughout the Americas (www.abcbirds.org). ABC acts by safeguarding the rarest species, conserving and restoring habitats, and reducing threats, while building capacity in the bird conservation movement.

ABC believes that it is possible to be concerned about climate change *and* still expect that wind and solar energy development be done right (Hutchins et al. 2016). ABC supports the development of clean, renewable sources of energy such as wind and solar power to address anthropogenic climate change, but also believes that it must be done responsibly and with minimal impact on our public trust resources, including native species of birds and bats, and particularly threatened, endangered and other protected species. When it comes to wind energy, proper siting is the most important consideration. ABC is a proponent of Bird Smart Wind Energy, described in some detail on our web site (https://abcbirds.org/program/wind-energy/bird-smart-strategies/).

ABC recently identified 10 of the worst sited wind energy projects for birds in the United States and we included Chokecherry and Sierra Madre on that list, primarily because of its potential impacts on Greater Sage-Grouse and Golden Eagles. As a bird conservation organization, we support the "no build" option that would either split up this massive 1,000-turbine project (500 in Phase I) or have it moved to a more suitable location.

This is not a good place to put large scale, commercial wind energy and associated infrastructure from the perspective of wildlife conservation. Decisions about siting renewable energy are becoming increasingly important, not only because of the increasing cumulative impact, but because our nation's birds (and bats) are under massive pressure from a wide variety of anthropogenic factors (Loss et al. 2015b), leading to precipitous population declines, even in

4301 Connecticut Avenue, N.W., Suite 451 ● Washington, D.C. 20008
Tel: 202-234-7181 ● Fax: 202-234-7182 ● info@abcbirds.org ● abcbirds.org

many of our most common species (North American Bird Conservation Initiative, U.S. Committee 2014). This, combined with an increasing recognition of the important ecological services that birds provide (Sekercioglu 2006, Sekercioglu er al. 2016) is ample cause for concern, suggesting that all significant sources of mortality need to be addressed, including wind energy and its associated infrastructure.

In the 1950s, hydroelectric dams were state-of-the-art technology for clean, renewable energy. Now, we are tearing them down due to the many unanticipated environmental problems they have caused, ranging from the loss of salmon to the loss of river deltas, important areas for wildlife (Davenport 2012). We wonder whether traditional bladed wind turbines, a 2,000 year-old technology built to oversized dimensions, will eventually suffer the same fate.

We recognize that the CCSM project is not included in the Core Areas for Greater Sage-Grouse Conservation as designated by the Western Association of Fish and Wildlife Agencies' (WAFWA's) and FWS' plan, but believe that the plan should have had some CCSM areas included. ABC is generally supportive of the core-area concept, but wants careful monitoring of the population and adaptive management if assumptions on which the plan is based do not pan out.

The number of Greater Sage-Grouse in the CCSM area is significant. There are eight active leks in the area, as well as thousands of acres of brood-rearing and nesting habitat. It is our impression that the potentially affected areas were purposely kept out of the Sage-Grouse Core Area *a priori* so that CCSM could be built. It is possible that the CCSM project will eliminate Greater Sage-Grouse from the entire area.

Recent studies have shown that Sage-Grouse do not like tall structures, such as wind turbines and power lines and towers; their presence can lead to both displacement and reduced breeding success. These structures can also provide a barrier to movement, thus potentially affecting genetic interchange between populations (Schroeder 2010, Lebeau et al. 2014, Kirol et al. 2015, Shirk et al. 2015). We sincerely hope that the impacts of the CCSM project on Greater Sage-Grouse will be minimal, but in order to confirm this, we request that, should the project be built, the results of on-going monitoring, both at the CCSM site and throughout the Sage-Grouse Core Area, will be transparent to the public and interested conservation organizations.

One of the most serious problems with our current voluntary federal permitting system for wind energy has been the lack of transparency when it comes to bird and bat kill data (Hutchins et al. 2016). The degree of displacement and/or brood loss from this development will be difficult to determine, but should also be monitored. The absence of such information makes it impossible for the public and concerned conservation organizations to assess the accuracy of the pre-construction risk assessments, effectiveness of mitigation, or to evaluate the appropriateness of compensation.

Another problem has been the use of industry-paid consultants to conduct post-construction mortality studies (Johnson et al. 2016). ABC considers this a direct conflict of interest. Since a

portion of this patchwork project is on public lands, we hope that transparency will be the rule, rather than the exception at this wind energy facility (see Clarke 2014a). Hawaii is currently the only state where independent, third-party experts using standardized methods collect mortality data, and data are made available to the public on request.

Improved transparency would be consistent with the President's recent memorandum, "Mitigating Impacts on Natural Resources from Development", which specifically calls for improved transparency. (https://www.whitehouse.gov/the-press-office/2015/11/03/mitigating-impacts-natural-resources-development-and-encouraging-related). Right now, we really have no idea as to how many birds are actually being killed by wind turbines and their associated infrastructure—only rough estimates based on data collected by paid consultants to the wind industry and using a wide variety of different, often incompatible methods (Smallwood 2013, Johnson et al. 2016).

Impacts on migratory birds could also be more significant than the EIS implies. Seventy species were observed in the area during surveys. According to the EIS, 16 species of conservation concern have been seen in the CCSM project area, including Horned Grebe, Marbled Godwit, Mountain Plover, Ferruginous Hawk, Bald Eagle, Golden Eagle, Prairie Falcon, Short-eared Owl, Burrowing Owl, Loggerhead Shrike, Bewick's Wren, Sage Thrasher, Sage Sparrow, Grasshopper Sparrow and McCown's Longspur.

BLM estimated the loss of 5,400 birds annually at 3000 MW of power generated, which it deemed "significant." FWS estimates that between 1,868 and 4,148 birds would be lost annually. We note that such figures are theoretical and could represent significant underestimates of actual kill. Nonetheless, these are hardly trivial numbers, especially when applied to species of conservation concern. The EIS also recognizes recent studies showing that certain grassland songbirds are stressed and displaced by wind turbines (Schaffer and Buhl 2015, Mahoney and Chalfoun 2016), which could add significantly to the impacts from direct collisions with the turbine blades.

The accuracy of the EIS' predictions and estimated risks is also in question. We are concerned that survey methods used were both inconsistent and, according to the EIS, "did not follow FWS recommendations for pre-construction bird surveys." It may be "the best available science" but that does not mean it is adequate. In addition, Ferrer et al. (2012) found a weak correlation between pre-construction risk assessments like the kind conducted at CCSM and post-construction mortality, and this further complicates decision-making.

The plan also includes measures to further avoid and minimize impacts to migratory birds. However, we are concerned about the reliance on unproven mitigation in this plan. As the EIS points out, few mitigation techniques to reduce bird kill have been, tested, and verified for their efficacy. Indeed, the only mitigation that FWS is accepting for eagles is the retrofitting of power lines to reduce collisions and electrocutions, although the EIS points out that, the science behind even these recommendations has been opportunistic at best. We agree with the recent statement by the Department of Energy EERE, who said that "…technologies to minimize impacts at

operational facilities for most species are either in early stages of development or do not exist" (DOE EERE 2014), which was recently verified in a review by Arnett and May (2016). This is particularly troubling given a recent statement made by FWS in correspondence with ABC regarding a recent FOIA request. A FWS representative stated, "Developers are not required to report to FWS what changes to a project were made, if any, in response to FWS recommendations" (Allen, 2015). This suggests that FWS is not tracking either the implementation of or efficacy of any mitigation measures that wind energy developers put into place.

We were pleased to see the FWS EIS separate impacts related to construction versus those related to operation. Although we are more concerned about the long-term operational impacts of this massive project, its construction will have both temporary and permanent impacts that will differ from those associated with post-construction operation and maintenance. The EIS appropriately made that distinction.

ABC remains seriously concerned about the fate of the Golden Eagle population at this project (http://abcbirds.org/wp-content/uploads/2015/05/Chokecherry-Sierra-Madre-Eagle-Take-Permit_February2014.pdf). We agree with FWS' conclusion that "Golden Eagle populations in the United States may not be able to sustain any additional, unmitigated mortality and the threshold for this species is zero."

BLM's original assessment estimated that wind turbines annually at CCSM would take as many as 64 eagles. However, that number was disputed by the developer. The FWS EIS subsequently reduced this projection to 10-14 eagles. This large discrepancy may reflect real reduced risk, or it may illustrate problems with the untested models being used to make such predictions.

With a weak correlation between pre-construction risk assessments and post-construction mortality (Ferrer et al. 2012), the public and concerned conservation organizations will only know what the actual losses have been if and when: (1) mortality data are collected by independent, third party experts using standardized methods and (2) these data are made publically available.

A failure to do so will make it impossible for the public to be involved in decisions affecting their natural resources. How will the public, for instance, begin to understand the accuracy of pre-construction risk assessments, efficacy of various mitigation methods, or to evaluate the appropriateness of compensation?

We note that the President's recent Memorandum on Mitigating the Impacts of Development on Natural Resources specifically calls for improved transparency (https://www.whitehouse.gov/the-press-office/2015/11/03/mitigating-impacts-natural-resources-development-and-encouraging-related ). To be consistent with this policy, data on post-construction bird and bat mortality should be transparent and open to the public.

The threat that wind energy development poses to Golden Eagles is increasing rapidly, as evidenced from the recent controversy surrounding the proposed Rocky Forge Wind Energy project in Botetourt Country, Virginia, which could threaten the small, remaining Eastern population (https://abcbirds.org/wp-content/uploads/2015/05/Proposed-Rocky-Forge-Wind-Energy-Project%E2%80%99s-Impacts-on-Golden-Eagles-Botetourt-County-VA.pdf). Many other raptor species reside or migrate through this area and they should be cause for concern as well, as raptors are among the most vulnerable to wind turbines and by their associated power lines and towers (Smallwood 2012, Loss et al. 2013, Loss et al. 2015).

The developer's paid consultant to the project saw few eagles during its general bird surveys during a two-year period West, Inc. 2016), which caused them to argue in their application that, "There is a low eagle use of the area compared to other Appalachian ridgelines and the project poses a low risk of impact."

However, to reiterate, there is a poor correlation between pre-construction risk assessments and the numbers and types of birds killed post-construction (Ferrer et al. 2011) which make such a statement highly questionable. A weakness of the revised Eagle Rule recently released by the FWS (and which ABC is currently conducting a detailed review of) is that it is unclear how the guidelines can or will be used to influence siting. Judging from the number of poorly sited projects already in existence and the number that have been proposed (Casey 2015), FWS policy would appear to have very little influence on siting—the only verified method to date of mitigating for bird kill (Arnett and May 2016).

We note that substantial fines were levied against Duke and PacifiCorp for killing large numbers of federally protected birds in Wyoming, including Golden Eagles (Cappiello, 2013, Anon. 2015, Dept. of Justice 2015). ABC continues to believe that CCSM is poorly sited, as the numbers of federally protected birds taken by CCSM could greatly exceed the take from the Duke and PacifiCorp cases combined. As demonstrated in Altamont, where thousands of eagles have been lost over the past few decades of wind energy operation (Smallwood and Thelander 2008), once these turbines go up, they are not coming down, regardless of their impacts on federally protected birds and other wildlife.

The American public is not going to tolerate large numbers of iconic eagles killed by poorly sited wind energy projects. As the EIS itself points out, not only are these our national birds and symbols of our democracy, but they are also sacred to First Nations. Indeed, the public response to the FWS' revised eagle rule that would allow up to 4,200 Bald Eagles to be harvested "sustainably" by wind energy projects annually has been decidedly negative (e.g., Daily 2016, Opar 2016).

The new rule treats our national symbol the same way it treats white-tailed deer, not for meat for consumption like deer, but rather to be harvested for "clean" energy. The FWS is treating wind energy as if it were our only hope to address climate change, when, in fact, there are many other alternative approaches, such as forest and habitat conservation, energy efficiency, and distributed

solar that would be just as effective, but not have the same destructive impacts on wildlife as large, commercial wind projects.

The FWS EIS predicts minimal impact on eagle populations in the region. However, the final word on whether or not the predictions are accurate and mitigation effective will only come after the project is built and operational (Ferrer et al. 2012). As mentioned above, ABC hopes that post-construction data on eagle mortality will be collected by independent, third-party experts using standardized methods and be transparent to the public and interested conservation organizations.

We also would like to know what consequences there will be if the numbers of eagles killed regularly exceed the limits established by the Eagle Incidental Take Permit. Currently, the Bald and Golden Eagle Protection Act (BGEPA) is being enforced inconsistently (Clarke 2014b), as many eagles have been taken with little or no consequences for wind energy developers, particularly in the Altamont Region of California (Smallwood and Thelander 2008).

Furthermore, we emphasize the importance of FWS keeping accurate, real time data on eagle mortality at large commercial wind projects and their associated infrastructure, locally, regionally and nationally. We recently used the FOIA process to ask FWS for data on eagle mortality at wind projects following the Pagel et al (2013) study. Unfortunately, it took them over a year to respond and, in the end; the Service only had records of 25 deaths (4 Bald Eagles and 21 Golden Eagles) during the past 3 years (Allen, 2016). However, this cannot be accurate because there are vastly more eagles killed at Altamont alone annually (67 on average) (Smallwood and Thelander 2008) and the PacifiCorp case involved 38 Golden Eagles (Anon 2015, U.S. Dept. of Justice, 2015).

We do not see how the FWS can reach its goal of a stable or increasing eagle population without access to such data on local, regional and national levels. The discrepancies in FWS' answers to our FOIA request and recently released FWS data (Millsap et al. 2016) are huge. This quote from the recently released report is not good news for Golden Eagles:

> "We used banding data obtained from the United States Geological Survey Bird Banding Lab from 1968–2014 to estimate contemporary age-specific survival rates. We also used a data set of unbiased cause-of-mortality information for a sample of 386 satellite-tagged golden eagles from 1997–2013 to estimate the effect of current levels of anthropogenic mortality on those survival rates. Anthropogenic factors were responsible for about 56% of satellite-tagged golden eagle mortality, but rates of anthropogenic mortality varied among age-classes, ranging from 34% for first-year eagles to 63% for adults. We estimated the maximum rate of population growth for the golden eagle in the U.S. in the absence of existing anthropogenic mortality was 10.9% (20th quantile = 9.7%). Sustainable take under these conditions is close to 2,000 individuals (20th quantile = 1,600). However, available information suggests ongoing levels of human-caused mortality likely exceed this value, perhaps considerably. Thus, the data from satellite tags

lends further support to the suggestion from the demographic models that current survival rates may be leading to a decline in population."

**All of this suggests that the FWS does not actually know how many Golden Eagles are at present killed by wind turbines annually, and that estimated levels of "sustainable take" are purely theoretical.**

We were happy to see that BLM attempted an analysis of the cumulative impacts of this and other projects in the region, but we see no such analysis in the FWS EIS. Cumulative impact analyses are important, as projects, such as CCSM, cannot be considered in isolation. Given existing and proposed wind energy projects in the state of Wyoming, for example, how many Golden Eagles will be lost cumulatively and how might it affect the population's short- and long-term changes of survival? Such analyses are still highly theoretical and in their early stages of development. The actual cumulative impacts of this and other projects taken together may be much greater in reality than those projected by BLM, and should be taken into consideration when evaluating the impacts of CCSM.

In summary, ABC continues to believe that CCSM is poorly sited from the perspective of bird conservation, and we would recommend that it not be approved and moved somewhere else. However, if the CCSM project is given final approval for construction, we would like to be assured that the following will occur:

(1) That all post-construction bird and bat mortality data will be collected by independent, third-party experts and not by consultants working for the developer, which would be a direct conflict of interest.

(2) That all post-construction mortality data will be open to the public and concerned conservation organizations, which is consistent with the President's recent Memorandum on "Mitigating Impacts on Natural Resources from Development."

(3) That FWS monitors the degree of displacement and reduced brood success in Greater Sage-Grouse so that it can inform risk assessment and mitigation at other projects going forward.

(4) That the efficacy of all mitigation "best practices" utilized in this project are actually verified to reduce bird deaths, displacement, etc. through empirical studies.

(5) That, based on the mortality and other data collected on this project's actual impacts that adaptive management be practiced such that actual bird mortality counts are further reduced through additional mitigation and compensation.

(6) That the Eagle Incidental Take Permit specifically lays out the consequences should the developer exceed established limits. When an incidental take permit becomes available under the Migratory Bird Treaty Act, the developer should be required to obtain one of those as well.

(7) That the effectiveness of the core areas strategy for Greater Sage Grouse conservation be monitored carefully and that appropriate changes are made if and when it is determined that the assumptions on which it was based were incorrect and the population is continuing to decline.

(8) That cumulative impacts from this and other developments in the region are closely monitored to ensure that it is not having population level effects on Golden Eagles and other sensitive and federally protected bird species.

(9) That this and other large, commercial wind energy projects in the United States ultimately adhere to ABC's definition of Bird-Smart Wind energy, including independent pre-construction risk assessments leading to proper siting, tested, effective mitigation, collection of mortality data post-construction by independent, third party experts reporting directly to regulatory agencies, and compensation for unavoidable take of public trust resources.

Thank you for the opportunity to comment.

Sincerely,

Michael Hutchins, Ph.D.

Director, Bird Smart Wind Energy Campaign

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