



United States Department of the Interior
BUREAU OF LAND MANAGEMENT

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In Reply Refer To:
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Memorandum

To: State Director, California

From: Deputy State Director, Resources (CA930)

Subject: Silurian Valley Solar Project Variance Determination

The Appendix Section B.5 of the Solar PEIS ROD established a variance process through which the BLM would determine if a project proposed in a variance area would be able to avoid, minimize, and/or mitigate impacts to sensitive resources as necessary and be in the public interest. This process required consideration of 24 factors and was used for the Silurian Valley Solar Project right-of-way application to reach the attached determination. Based on the Variance Determination attached, my recommendation is that the proposed project is not in the public interest and that the application be denied.

Katrina Symons
Barstow Field Manager

I have reviewed the recommendation by the Field Manager and the attached Variance Determination, and I agree that the proposed project is not in the public interest and that the application be denied.

Teresa A. Raml
California Desert District Manager

Final Determination: The Field Manager conducted a thorough process and analysis of the 24 required factors. The Field Manager recommendation is accepted and the final determination of the Bureau of Land Management is that the proposed project in the Silurian Valley is not in the public interest and the application will be denied.

James G. Kenna
California State Director

Silurian Valley Solar Project Variance Determination Attachment

This attachment provides supporting documentation for the BLM's decision to reject the Silurian Valley solar application. It describes how the BLM carried out the variance process and reached its determination. The information supporting the BLM's decision is organized based on the environmental "factors to be considered" listed in the Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar PEIS, or Western Solar Plan) description of the variance process in Appendix Section B.5 of the Record of Decision (ROD).

Solar Variance Process

The Solar PEIS ROD designated Solar Energy Zones (SEZs) on public lands in six southwestern states as a means of identifying specific locations well suited for utility scale solar energy production where the BLM proposes to prioritize solar development. The Solar PEIS ROD also allows for responsible utility scale solar development in variance areas outside of SEZs. The Solar PEIS ROD established a specific process for solar applications located in variance areas as a means of screening to determine if those applications are appropriate for continued processing based on environmental considerations, coordination with appropriate federal, state, and local agencies and tribes, and public outreach (Solar PEIS ROD, Appendix Section B.5).

In the variance process, the BLM has two options with regard to proposals located outside of SEZs and not in exclusion areas. One, the BLM may deny an application under appropriate circumstances with regard to the public interest, and based on reasoned analysis and adequate administrative record (pursuant to 43 CFR §2804.26). And two, the BLM may decide to continue to process the application, and the permitting process would begin in compliance with the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA) as well as other applicable laws and regulations. Requirements of the variance process are described more fully in Appendix Section B.5 of the Solar PEIS ROD.

The responsibility for demonstrating to the BLM that a proposal in a variance area will avoid, minimize, and/or mitigate, as necessary, sensitive resources rests with the applicant.

Summary of Outreach

As required in the Solar PEIS ROD and Instructional Memorandum (IM) 2011-061, pre-application meetings were held in late 2013. On September 26, 2013, a pre-application meeting was held with Aurora Solar, LLC and interdisciplinary staff from the Barstow Field Office and staff from the Renewable Energy Coordinating Office, California Desert District and the California State Office at the Barstow Field Office (see attached meeting sign-in sheet). On December 11, 2013 a second pre-application meeting was held at the Mojave National Preserve. The second meeting was attended by representatives of the Bureau of Land Management, San Bernardino County Fire, Inland Empire Film Commission of San Bernardino County, United States Army, San Bernardino County, National Park Service, United States Fish and Wildlife Service, California Department of Transportation, Environmental Protection Agency, Aurora Solar, LLC, Iberdrola, California Office of Historic Preservation, United States Navy, and the California Department of Fish and Wildlife. In addition to the interagency meeting, a site visit was conducted the same day by BLM to assist agencies in their evaluation of the proposal.

As also required by the Solar PEIS ROD, public meetings were held on March 27, 2014 in Barstow, California. The afternoon meeting was attended by approximately 42 people, and the evening meeting had approximately eighteen participants. The BLM received public comments at the public meetings and for an additional 60 days following the public meetings.

The BLM used information collected through these outreach efforts, as well as additional informational provided by government agencies and three Tribes (the Timbisha Shoshone, Chemehuevi, and Colorado River Indian Tribes) in making its variance determination. Government agencies that provided written comments on the Silurian Valley solar application include:

August 16, 2013	Regional Director NPS, Pacific West Region
December 4, 2013	Mojave Desert Air Quality Management District
December 6, 2013	State of California Department of Transportation
February 6, 2014	US Fish and Wildlife Service, Ventura Office
February 28, 2014	State of California Fish and Wildlife, Inland Deserts Region
April 23, 2014	Baker Community Services District, General Manager, Baker, CA
May 28, 2014	National Park Service National Trails – Intermountain Region
June 3, 2014	National Park Service, Death Valley National Park

During the comment period, the BLM received approximately 80 letters from concerned groups and citizens. Concerns raised in these comments included the project's potential impacts to local wildlife, recreation, public land access, historic and prehistoric resources, and aesthetic values associated with development in an in-tact landscape. Specific public comments are referenced in the Factors to be Considered section as appropriate. The project applicant, Aurora Solar, LLC, also submitted a letter dated February 14, 2014 addressing each of the Factors to be Considered. Information from this letter is also incorporated below.

Factors to be Considered in Variance Determination

The Solar PEIS ROD provides a list of factors for the BLM to consider when evaluating ROW applications in variance areas. The factors are listed below, along with a summary of information that the BLM collected through the variance process related to each factor. This information provides the rationale for the BLM's variance determination.

1. The availability of lands in an SEZ that could meet the applicant's needs, including access to transmission.

There are three SEZs in California. The Solar PEIS ROD designated the Riverside East (Riverside County) and Imperial East (Imperial County) SEZs in October 2012, and the West Chocolate Mountains SEZ (Imperial County) was subsequently designated in August 2013. The Riverside East SEZ contains several pending applications and approved solar energy projects, but suitable lands are still available for projects within the 153,000 acre SEZ. The Imperial East SEZ is largely encumbered by a pending solar application, and no solar applications have been filed in the West Chocolate Mountains SEZ.

Conclusion: While California's three SEZs are some distance from the project area and the applicant has made financial commitments to the proposed site, lands are still available for application in two of California's three SEZs.

- 2. Documentation that the proposed project will be in conformance with decisions in current land use plan(s) (e.g., visual resource management class designations and seasonal restrictions) or, if necessary, represents an acceptable proposal for a land use plan amendment.**

The application area is within the boundaries of the California Desert Conservation Area (CDCA) Plan of 1980, as amended. The CDCA Plan has designated the application area as Multiple Use Class M (Moderate). The CDCA Plan states that solar energy generation facilities may be allowed within this class of lands after NEPA requirements are met, but requires that sites associated with power generation or transmission, unless they have already been identified as such, be considered through the plan amendment process.

Conclusion: The current land use plan allows for solar energy rights-of-way in the project area. The project must be considered in the land use plan amendment process and comply with NEPA. The CDCA Plan could be amended to allow a solar energy right-of-way at the proposed location.

- 3. Documentation that the proposed project will be consistent with priority conservation, restoration, and/or adaptation objectives in the best available landscape-scale information (e.g., landscape conservation cooperatives, rapid ecological assessments, and state and regional-level crucial habitat assessment tools [CHATs]).**

Landscape-scale assessments such as landscape conservation cooperatives, rapid ecoregional assessments (REAs), and crucial habitat assessment tools generally do not create conservation, restoration, and/or adaptation objectives. Rather, they provide best-available broad scale information that can be used for management decision-making. The proposed project area is included within the Mojave Basin and Range REA, which synthesizes existing information regarding ecological values, conditions, and trends in parts of Arizona, California, Nevada, and Utah. REA data indicates that the proposed project area is relatively undisturbed and has relatively high landscape condition. Some data in the REA suggest that the valley provides moderately high desert tortoise connectivity, while other data suggest the area may have lower value as a wildlife corridor (Mojave Basin and Range REA, August 2013).

The Western Governors' Wildlife Council Crucial Habitat Assessment Tool (CHAT) was created to provide a regional picture of crucial wildlife habitat across the West. While the tool is not intended for project level approval, it does provide broad scale data for project developers to use in project assessment, siting, and planning. The CHAT uses a scale from 1-6 where 1 indicates the most crucial habitat and 6 indicates the least crucial habitat. The CHAT shows the proposed project area as a level 4 on this scale (Western Governors' CHAT, available at <http://westgovchat.org/map>).

Conclusion: The available broad level, landscape-scale datasets do not establish priority conservation, restoration, or adaptation objectives, but they do indicate that the Silurian Valley area has moderate ecological resource value. The proposed project has the potential to impact those ecological resource values.

4. Documentation that the proposed project can meet applicable programmatic design features adopted in the Solar PEIS ROD (see Appendix A, Section A.4.1).

The applicant has indicated that the project will meet all programmatic design features adopted by the Solar PEIS ROD.

Conclusion: The project would be required to implement all applicable programmatic design features adopted in the Solar PEIS ROD.

5. Documentation that the applicant has coordinated with state and local (county and/or municipal) governments, including consideration of consistency with officially adopted plans and policies (e.g., comprehensive land use plans, open space plans, and conservation plans) and permit requirements (e.g., special use permits).

The applicant has indicated that they have met with San Bernardino County officials in 2011. The BLM has not received correspondence from San Bernardino County regarding the proposed project's consistency with local plans or policies. The BLM did receive correspondence from the California Department of Fish and Wildlife (CDFW). CDFW's February 28, 2014 letter recommended not allowing the variance application based on a host of potential impacts, including desert tortoise habitat loss and fragmentation, migratory birds, golden eagles, and invasive species.

Conclusion: While the applicant has stated that it has begun outreach to state and local government agencies, there is no record of coordination with San Bernardino County since 2011 and in 2014 CDFW identified myriad resource conflicts and recommended that the BLM not process the application. The BLM is unable to conclude that there has been sufficient coordination between the applicant and state and local governments, and has considered the findings and recommendations of the CDFW with respect to potential biological resource conflicts.

- 6. Documentation of the financial and technical capability of the applicant, including, but not limited to, the following:**
- **International or domestic experience with solar energy projects on either Federal or nonfederal lands; and**
 - **Sufficient capitalization to carry out development, monitoring, and decommissioning, including the preliminary study phase of the project and the environmental review and clearance process.**

The applicant provided the following information documenting its financial and technical capability: Aurora Solar LLC is a wholly-owned subsidiary of Iberdrola Renewables (IR) LLC. IR is headquartered in Portland, Oregon, with more than 850 employees. It is part of the

Iberdrola global group, the world's leading provider of wind power with more than 12,700 MW of renewable energy in operation around the world. The company has the financial backing of Iberdrola, S.A., the fourth largest utility in the world by Market Cap, with a 110 year history with roots in hydroelectric generation. The Applicant states that it has sufficient capitalization to carry out development, including the preliminary study phase, environmental review, and clearance process.

Conclusion: The applicant currently holds several developed and operational BLM public land rights-of-way in several states. The BLM concludes that the applicant is financially and technically capable of holding the right-of-way.

7. Documentation that the proposed project is in an area with low or comparatively low resource conflicts and where conflicts can be resolved (as demonstrated through many of the factors that follow).

Information provided by federal and state agencies, tribes, the public, and BLM technical experts indicate that the proposed project is located in a valley with substantial potential resource conflicts. These potential conflicts are summarized below, and many of them are discussed in more detail later in this document.

Biological: The US Fish and Wildlife Service and California Department of Fish and Wildlife submitted letters to the BLM (dated February 6, 2014 and February 28, 2014, respectively) indicating that a project in the Silurian Valley could have substantial biological conflicts. Both agencies expressed particular concern over potential impacts to the desert tortoise, and indicated that the project site not only contains suitable habitat for desert tortoise, but also overlaps an important linkage area. The agencies also highlighted the potential for conflict with migratory birds drawn to the dry lakebeds in the valley in wet years, and with golden eagles that use the mountainous topography surrounding the valley.

Cultural: Comment letters received from agencies, tribal governments, and the public indicate likelihood that the proposed project would conflict with the valley's historical and cultural values. The Colorado River Indian Tribes commented that the valley is within traditional Chemehuevi, Timbisha Shoshone, and Mohave territory and likely included a prehistoric trail (letter dated May 27, 2014). The Timbisha Shoshone Tribe stated during formal consultation that this area is important for traditional gathering and prehistoric trails.

The congressionally designated route of the Old Spanish National Historic Trail (NHT) also runs through the Silurian Valley. The Old Spanish NHT, designated in 2002, is co-managed by the BLM and the National Park Service. The Silurian Valley contains a proposed "high potential segment" of the Old Spanish NHT. A high potential segment is a trail segment with high interpretive potential that superbly captures the experience of the original travelers of the trail, and which has integrity of place and viewshed. Intact segments such as the segment of the Old Spanish NHT running through the Silurian Valley are rare. The National Park Service expressed concern in multiple letters (dated May 28, 2011 and August 16, 2013), as did the Old Spanish Trail Association (May 23, 2014), that the proposed project would disrupt the viewshed and interpretive potential of this segment of the Old Spanish NHT. Finally, the valley also contains

remnants of other historic travel routes, including the Mormon Road and the historic Tonopah and Tidewater Railroad, the historic mining camp of Riggs, and Paleolithic human sites as old as 10,000 years.

The potential impacts of the project on historic and prehistoric resources are not fully understood, as the applicant has deferred carrying out cultural and ethnographic studies requested by the BLM. The National Park Service, Timbisha Shoshone Tribe, California Office of Historic Preservation, and Advisory Council for Historic Preservation all strongly recommended that these studies be conducted during the multi-agency pre-application meeting on December 11, 2013 and through public comments.

Recreational and Scenic: Among the multiple public comment letters received during the comment period, The American Motorcycle Association (AMA), the American Lands Access Association (dated May 8 and May 28, 2014) and several individual recreationists and business owners expressed their concerns that the proposed project would disrupt the recreational experience of those who recreate in or travel through the Silurian Valley. Commenters specifically called attention to potential impacts to the recreational experience of those using the Tonopah and Tidewater Railroad Off-Highway Vehicle Trail and recreationists driving between the Mojave National Preserve and Death Valley National Park. Commenters highlighted the significance of the scenic value in Silurian Valley, given its proximity to National Parks, the Amargosa Wild and Scenic River, and several designated Wilderness Areas and Wilderness Study Areas (Hollow Hills Wilderness, Soda Mountains Wilderness Study Area, Avawatz Mountains Wilderness Study Area, and Kingston Range Wilderness Study Area). Commenters also drew attention to the economic value of the Silurian Valley's recreational and scenic resources, indicating that renewable energy development in the valley could have negative impacts on the tourism and film industries that the community heavily relies upon. Residents and local business owners conveyed concerns of potential economic loss to local businesses that rely upon tourism.

The project area has not been assigned a Visual Resource Management Class at this time. However, the area has received a Visual Resource Inventory of Class II, indicating that the area has high scenic quality.

Conclusion: The Silurian Valley is considered an area with high resource conflicts. The valley's location amongst designated Wilderness Areas, Wilderness Study Areas, and between National Park Service units, combined with relatively little development, gives it high value for biological resources, visual resources, and recreational opportunities. The area includes a segment of a National Historic Trail that has maintained much of its original character. A relatively large development introduced into the valley would disrupt these characteristics, and the information collected to date suggests that these impacts would be significant and immitigable.

8. Documentation that the proposed project will optimize the use of existing roads.

The Plan of Development estimates that 44 miles of newly constructed access roads will be required. Other access will utilize existing developed routes. Per the Northern and Eastern Mojave Desert Management Plan (NEMO Plan), eight open routes of travel (approximately 16

miles) would be impacted from construction of the proposed project. These routes provide off-road connections between Dumont Dunes Off-Highway Vehicle Area and the Silurian Valley network. Route D1612 parallels (within 50 feet) the historic Tonopah and Tidewater Railroad. Routes D0718, 699135, and D080 provide interconnection for east-west travel within the historic Boulder Transmission Corridor.

Conclusion: The project will utilize existing routes and roads to a limited extent but will require the construction of 44 miles of new access roads and rerouting of up to eight NEMO designated open OHV trails.

9. Documentation that the proposed project will optimize the capacity of existing and new transmission infrastructure, and avoid duplication in the use of or need for existing and new transmission and transmission interconnection facilities.

The applicant has indicated, in correspondence with the BLM dated February 14, 2014, that it has submitted an interconnect request to the Los Angeles Department of Water and Power (LADWP) to connect with the existing 287 kilovolt (kV) transmission line, which runs approximately one mile south of the project. The Plan of Development estimates that transmission infrastructure connecting the proposed project with the LADWP line would result in 24 acres of disturbance. The BLM has not received confirmation to date that the applicant has executed an interconnect agreement with LADWP.

Conclusion: While the applicant plans to use existing transmission infrastructure near the proposed project site, the applicant does not have an interconnect agreement with LADWP and therefore cannot document how this project will optimize the capacity of existing and new transmission infrastructure, or how this project will avoid duplicating the use of or need for existing facilities.

10. Documentation that the proposed project will make efficient use of the land considering the solar resource, the technology to be used, and the proposed project layout.

According to the Plan of Development, the proposed project would generate 200 megawatts. The solar array itself would occupy 1,518 acres. Ancillary facilities would occupy an additional 54 acres, meaning the project would disturb less than eight acres per megawatt of capacity.

Conclusion: The expected land use efficiency of the proposed project is well within the range of solar projects the BLM has permitted, which in California has generally ranged from 5 to 9.5 acres of disturbance per megawatt of capacity. BLM finds this proposed use of the land to be efficiently utilized, considering the solar resource, the technology used and the project's layout.

11. If applicable, documentation that the proposed project will be located in an area identified as suitable for solar energy development in an applicable BLM land use plan and/or by another related process such as the California DRECP (e.g., Development Focus Areas) or Arizona Restoration Design Energy Project (e.g., Renewable Energy Development Areas).

The current land use plans covering the project area are the CDCA Plan, as amended by the Northern and Eastern Mojave Desert Management Plan, and the Solar PEIS ROD. As previously indicated, the project area is within a variance area designated by the Solar PEIS ROD. The project area has been designated as Multiple Use Class M (Moderate) in the CDCA Plan. The CDCA Plan states that solar energy generation facilities may be allowed within Multiple Use Class M (Moderate) area after NEPA requirements are met, but requires that sites associated with power generation or transmission, unless they have already been identified as such, be identified through a plan amendment process.

The BLM, with federal and state partner agencies, together have developed the Draft Desert Renewable Energy Conservation Plan (DRECP). The DRECP is not an approved BLM land use plan, though the draft plan was released for public review on September 26, 2014. The Draft DRECP contemplates different potential land use allocations for the Silurian Valley in different alternatives. This range includes making the area a Development Focus Area (DFA) that would be open for renewable energy applications under one alternative to including the area within a conservation designation that would completely close it from renewable energy applications. In the Draft DRECP's Preferred Alternative, the project area would be a Special Analysis Area, a designation that recognizes the Silurian Valley's high value for both natural and cultural resources and renewable energy. The Draft DRECP contemplates that the Special Analysis Area will eventually be designated as either a Development Focus Area or conservation designation.

In the Draft DRECP's other four action alternatives, the project area would be maintained as a variance area in one alternative, designated as a Development Focus Area in one alternative, and designated as conservation lands in two alternatives.

Conclusion: The current land use plan does not preclude solar energy development in the project area. The DRECP, if approved, would make a definitive decision on renewable energy development in the Silurian Valley. However, the Draft DRECP does not control the BLM's decision on the Silurian Valley application. Once a DRECP decision is finalized, BLM's decision-making with respect to Silurian Valley will need to conform to the DRECP ROD.

12. If applicable, special circumstances associated with an application such as an expansion or repowering of an existing project or unique interagency partnership.

Not Applicable.

13. If applicable, opportunities to combine Federal and nonfederal lands for optimum siting (e.g., combining BLM-administered land with adjacent previously disturbed private lands).

The proposed project is entirely on BLM-administered land.

14. If applicable, documentation that the proposed project will be located in, or adjacent to, previously contaminated or disturbed lands such as brownfields identified by the EPA's RE-Powering America's Land Initiative or state, local

and/or tribal authorities; mechanically altered lands such as mine-scarred lands and fallowed agricultural lands; idle or underutilized industrial areas; lands adjacent to urbanized areas and/or load centers; or areas repeatedly burned and invaded by fire-promoting non-native grasses where the probability of restoration is determined to be limited.

While the Silurian Valley has seen historic use and currently supports recreational and filming activities, the proposed project area is relatively undisturbed. A designated utility corridor is located directly south of the proposed project area and contains a LADWP transmission line.

Conclusion: The proposed project is not located in previously contaminated or disturbed lands.

15. Documentation that the proposed project will minimize adverse impacts on access and recreational opportunities on public lands (including hunting, fishing, and other fish- and wildlife-related activities).

Public comments submitted by recreationists, local residents, and business owners (e.g. American Motorcycle Association (May 8, 2014), American Lands Access Association (May 28, 2014), Desert District Advisory Council (May 19, 2014), Inland Empire Film Commission (April 30, 2014), and The Nature Conservancy (May30,2014)) expressed concerns that the proposed project would have adverse impacts on recreational opportunities in the Silurian Valley, as well as economic impacts related to the potential loss of recreation. In particular, commenters highlighted the potential of the proposed project to disrupt rock hounding in a unique mineral-rich area and dispersed recreation in the valley, and to negatively impact recreational off-highway vehicle trails in the area. About 16 miles of eight designated open off-highway vehicle routes (D1612, D0718, D080, D0723, 699135, D0318, D072 and D0713) would be affected by the project, including the likely closure of more than 2 miles of Route D80, which traverses the proposed project site. Commenters were particularly concerned about the project's potential to negatively impact the recreational experience associated with the Tonopah and Tidewater Railroad OHV trail, given its status as one of the few expedition quality scenic landscape routes in the California Mojave Desert. Multiple commenters emphasized the importance of maintaining undeveloped recreational experiences in the Silurian Valley to the local tourism-based economy.

Conclusion: The Silurian Valley provides domestic and international recreational opportunities and historical tourism experiences to a wide variety of user groups that would be disrupted by renewable energy development within the valley. These impacts likely could not be fully mitigated.

16. Documentation that the proposed project will minimize adverse impacts on important fish and wildlife habitats and migration/movement corridors (e.g., utilizing the Western Wildlife CHAT, administered by the Western Governor's Wildlife Council and coordinating with state fish and wildlife agencies).

As mentioned above, the Western Governors' Wildlife Council Crucial Habitat Assessment Tool (CHAT) was created to provide a regional picture of crucial wildlife habitat across the West.

While the tool is not intended for project level approval, it does provide broad scale data for project developers to use in project assessment, siting, and planning. The CHAT uses a scale from 1-6 where 1 indicates the most crucial habitat and 6 indicates the least crucial habitat. The CHAT shows the proposed project area as a level 4 on this scale.

Other assessments have indicated that the Silurian Valley may have substantial value for wildlife. The United States Fish and Wildlife Service highlighted in its February 6, 2014 letter to the BLM that the proposed project site contains desert tortoise habitat that serves as an important linkage between the Superior-Cronese Desert Tortoise Conservation Area to the west and the Ivanpah Desert Tortoise Conservation Area to the east. The United States Fish and Wildlife Service identified this linkage as “Priority 1” in a least cost path analysis conducted to inform the Solar PEIS ROD. The United States Fish and Wildlife Service went on to explain that:

“Least cost paths represent linkages most likely to sustain connectivity between desert tortoise populations. Preserving connectivity between tortoise conservation areas will make the desert tortoise conservation network more robust than the existing network which has limitations due to conservation area size, shape, and population abundance. A more connected conservation network could also allow for a potential range shift in response to climate change. In addition, preserving connectivity between tortoise conservation areas will help maintain genetic variability through long-term gene flow between populations. Development within key habitat linkages such as this will lead to further fragmentation of desert tortoise habitat and could compromise the viability of demographic and genetic connections in the area.”

The California Department of Fish and Wildlife made similar comments in its February 28, 2014 letter. Both agencies also raised concerns about the project location in relation to golden eagle habitat and migratory bird pathways.

Public comments also raised concerns about the project’s potential impacts to Desert Tortoise (Desert Tortoise Council, May 25, 2014), bats, (Dr. Patricia Brown, May 28, 2014), and birds (Defenders of Wildlife, National Parks Conservation Association, Natural Resources Defense Council, Sierra Club, and Wilderness Society joint letter dated May 28, 2014).

The applicant indicated that it would reduce impacts to wildlife and migration/movement corridors by minimizing the project footprint and through mitigation.

Conclusion: Based on input from federal and state wildlife agencies, the proposed project could have substantial impacts to wildlife habitat and habitat connectivity. While the disruption of an important habitat linkage may be mitigated, the proposed project may disturb potential connectivity linkages for Desert Tortoise.

17. Documentation that the proposed project will minimize impacts on lands with wilderness characteristics and the values associated with these lands (e.g., scenic values, recreation, and wildlife habitat).

The proposed project area was managed as part of a Wilderness Study Area until 1994, when it was released by Congress back into multiple use management. However, a wilderness characteristics inventory conducted by the BLM in 2013 found that the proposed project area – and most of the Silurian Valley – still contains wilderness characteristics. The proposed project would eliminate the wilderness characteristics on these lands.

Conclusion: The BLM has not made a decision in the Silurian Valley to preserve the wilderness characteristics inventoried in 2013. The proposed project would not minimize impacts to lands with wilderness characteristics and would have a direct impact on the area.

18. Documentation that the proposed project will be designed, constructed, and operated to optimize their specific generation technology's efficiencies with respect to water impacts.

The applicant's Plan of Development states that the proposed photovoltaic technology would require far less water use than a thermal solar project, and that estimated water use during operations is not expected to exceed 100,000 gallons per year for panel washing.

Conclusion: Estimated water use is on par with reasonable water use at other solar energy projects on BLM lands.

19. Documentation that any groundwater withdrawal associated with a proposed project will not cause or contribute to withdrawals over the perennial yield of the basin, or cause an adverse effect on ESA-listed or other special status species or their habitats over the long term. However, where groundwater extraction may affect groundwater-dependent ecosystems, and especially within groundwater basins that have been over appropriated by state water resource agencies, an application may be acceptable if commitments are made to provide mitigation measures that will provide a net benefit to that specific groundwater resource over the duration of the project. Determination of impacts on groundwater will likely require applicants to undertake hydrological studies using available data and accepted models.

As described under the previous factor, the proposed project's water use is expected to be within the range of water use at other energy projects on BLM lands. However, an evaluation on the potential effects of withdrawing 100,000 gallons of ground water per year for maintenance of the project has not been evaluated for this specific water basin. More than 50 public comment letters, including the Baker Community General Manager, Tecopa Chapter of the Old Spanish Trail Association, National Park Conservation Association, Western Watersheds, and local residents, included concerns that groundwater withdrawals associated with the project would impact the town of Baker, Soda Springs, Salt Creek Hills, Tecopa and the Amargosa River watershed, and that groundwater recharge in the area is very low. The applicant has indicated that it would evaluate the option of trucking water in from an outside source.

Conclusion: The public has raised concerns regarding groundwater withdrawals in the proposed project area, but site-specific hydrological studies have not been conducted to date. If the

applicant uses outside water sources, it is likely that any potential impacts could be avoided or may be mitigated. However, if this measure is determined infeasible, there may be impacts to on-site hydrological resources.

20. Documentation that the proposed project will not adversely affect lands donated or acquired for conservation purposes, or mitigation lands identified in previously approved projects such as translocation areas for desert tortoise.

The proposed project area does not include lands donated or acquired for conservation or mitigation purposes.

21. Documentation that significant cumulative impacts on resources of concern should not occur as a result of the proposed project (i.e., exceedance of an established threshold such as air quality standards).

Several comments from agencies and the public expressed concern that, if built, the proposed project would combine with the proposed wind energy project proposed directly to the north by another subsidiary of Iberdrola Renewables, LLC to produce cumulative effects in the Silurian Valley. Pacific Wind, LLC has submitted a Plan of Development for a proposed 200 megawatt wind energy project on a 15,849 acre right-of-way. Commenters who highlighted the likelihood that if both projects were built, cumulative impacts to visual, wildlife, recreational, and other resources would occur included The Nature Conservancy (May 30, 2014), Inland Empire Film Commission (April 30, 2014), Desert Tortoise Council (May 25, 2014), and a collective letter from Defenders of Wildlife, National Park Conservation Association, Natural Resources Defense Council, Sierra Club and Wilderness Society (November 6, 2013). The applicant has indicated that any potential cumulative impacts would be mitigated but no specific measures have been offered.

Conclusion: If multiple energy projects are constructed in the Silurian Valley, there would likely be cumulative impacts to the variety of resources described in this document. It is unlikely that those cumulative impacts could be fully mitigated.

22. Desert Tortoise

In evaluating information provided by an applicant, the BLM and USFWS will consider cumulative effects and landscape-level information consistent with desert tortoise recovery goals and objectives and best available science to determine if a project will result in acceptable impacts on desert tortoise. [Full text of factor may be viewed in Section B.5 of the Solar PEIS ROD]

The applicant conducted a desert tortoise habitat assessment and surveys in April and May of 2013. Those surveys showed that there are 6,553.7 acres of suitable habitat within the proposed project area. During the surveys, neither live desert tortoises nor their sign were observed within the planned impact areas. Contrary to these findings are surveys where sign was documented within the adjacent wind project footprint. Diagnostic sign and one live tortoise were observed nearby, including a burrow 318 feet from the planned project. One tortoise carcass, six tortoise burrows, and one tortoise scat were observed within the adjacent proposed wind project area.

Rainfall during winter 2011–2012 and winter 2012–2013 was relatively low, and overall desert tortoise activity on the proposed project site may have been reduced from previous years. Also, “zones of influence” surveys which are a typical requirement of the United States Fish and Wildlife Service protocol surveys were not conducted for the proposed solar site. The applicant concluded that the scarcity of observations of burrows and other sign indicates that desert tortoises have a relatively low abundance in the proposed project area and may be more abundant in adjacent surrounding areas. However, the survey results have not been accepted by BLM at this juncture.

The United States Fish and Wildlife Service and the California Department of Fish and Wildlife have expressed significant concerns over the proposed project’s potential impacts to desert tortoise habitat that serves as an important linkage between the Superior-Cronese Desert Tortoise Conservation Area to the west and the Ivanpah Desert Tortoise Conservation Area to the east (letters dated February 6, 2014 and February 28, 2014). The Service identified this linkage as “Priority 1” in a least-cost path analysis conducted as part of the Solar PEIS.

Public comments, such as from the Desert Tortoise Council (May 25, 2014) also expressed concerns that placement of renewable development within Silurian Valley would have significant impacts on the habitat linkages/connectivity for Desert Tortoise.

Conclusion: Data provided by the applicant indicates that the proposed site contains low tortoise densities, which would result in a minimal need for translocation. Comments received from the United States Fish and Wildlife Service state that based on currently available information, the proposed project could affect desert tortoise connectivity. The applicant has not provided documentation that project mitigation would improve conditions within the connectivity area or nearby desert tortoise conservation areas.

23. Greater Sage-Grouse

Developers that propose utility-scale solar energy projects in variance areas that overlap the range of the greater sage-grouse will be required to provide documentation of the following, unless a project is otherwise determined by the BLM and USFWS and appropriate state wildlife agencies to have acceptable impacts on greater sage-grouse.

There is no greater sage grouse habitat in the Silurian Valley.

24. Protecting Resources and Values of Units of the National Park System and Other Special Status Areas under National Park Service Administration [Full text of factor may be viewed in Section B.5 of the Solar PEIS ROD]

As mentioned above, a segment of the Old Spanish NHT passes through the Silurian Valley within sight of the proposed project area. The BLM and National Park Service co-manage the Old Spanish NHT. The National Park Service provided maps documenting the variance lands within the Silurian Valley as high-potential conflict during the Solar PEIS process. These maps are available at <http://solareis.anl.gov/maps/alternatives/index.cfm>

In an August 16, 2013 Memorandum from the National Park Service, the Pacific West Regional Director expressed significant concerns that proposed renewable energy development in the Silurian Valley has high potential for resource conflict and high potential for adverse impacts to units of the National Park System, and recommended denying the application. According to the memo,

“The visual impacts to these historic and prehistoric cultural landscapes would be significant, irreversible, and likely unmitigatable. Glint and glare from the PV panels, as proposed for Silurian Valley Solar project, will likely diminish the potential for visitors to experience an authentic cultural perspective that is currently attributed to experiencing the Old Spanish NHT within the undeveloped valley.”

The National Park Service also highlighted potential impacts to resources related to the nearby Mojave National Preserve and Death Valley National Park, including sensitive terrestrial and avian species, the view from and into the park, and the night sky.

Conclusion: Based on the proposed project’s proximity to the Old Spanish NHT and the likelihood of visual impacts to the Old Spanish NHT, as well its proximity to Mojave National Preserve and Death Valley National Park, the proposed project has a high potential for conflict with natural resources and values associated with the National Park System.

Variance Determination

Based on the information collected through the variance process and summarized above, the BLM has determined that continued processing of the proposed Silurian Valley Solar Project would not be in the public interest. The project is proposed outside of a Solar Energy Zone (SEZ) on lands designated as variance areas in the Solar PEIS, although lands are available in two SEZs within the state of California, and in a valley with little existing disturbance that supports a variety of important biological, cultural, recreational, and scenic resources. The project as proposed would likely have significant, adverse, and immitigable impacts to this substantially intact landscape that includes a high potential segment of the Old Spanish National Historic Trail, important habitat connections, and multiple dispersed recreation opportunities. Additionally, the applicant has not shown sufficient coordination with state and local governments or that the project will optimize the use of transmission infrastructure. Given the undeveloped nature of the area, the project will also require substantial road development and improvements.