Executive Summary

The County of Alameda (County) is preparing this Subsequent Environmental Impact Report (SEIR) to examine the environmental effects of the Sand Hill Wind Repowering Project (Project). The Project area is located within the Altamont Pass Wind Resource Area (APWRA) in eastern Alameda County. As required by Section 15123 of the State California Environmental Quality Act (CEQA) Guidelines, this Executive Summary contains the following sections.

- Project Overview
- Project Objectives
- Project Impacts and Mitigation Measures
- Project Alternatives
- Potential Areas of Controversy and Issues to be Resolved

This SEIR analyzes the environmental effects of the proposed Project, recommends measures to reduce or avoid potential environmental damage resulting from the Project, and identifies alternatives to the proposed Project. This SEIR also describes any significant environmental effects that cannot be avoided, growth-inducing effects, effects found not to be significant, and cumulative impacts.

Environmental review of the Project under CEQA began with the publication in September 2018 of an Environmental Analysis (EA) with supporting technical information intended to identify site-specific Project effects pursuant to Section 15168 of the CEQA Guidelines, providing for use of a Program EIR with later activities. The County had previously approved three wind repowering projects that had been tiered under similar documentation. However, after receiving comments on the EA in advance of a public hearing to consider approving the Project on such basis, the County decided to prepare this SEIR based on its determination that the current Project proposes turbines with characteristics sufficiently distinct from those described in the PEIR and is proposed in the context of new information that together support the decision to prepare a subsequent EIR. The requirements for a subsequent SEIR, under CEQA, are set out in State CEQA Guidelines Section 15162.

ES.1 Project Overview

Sand Hill Wind, LLC (Sand Hill) is proposing the Sand Hill Wind Repowering Project (Project) on 15 privately owned parcels in the Altamont Pass Wind Resource Area (APWRA). The proposed Project would entail installation of up to 40 new wind turbines and is expected to utilize turbines with generating capacities between 2.3 and 4.0 megawatts (MW) each, all generally similar in size and appearance, to develop up to 144.5 MW of generating capacity. The Project is proposed as a Conditional Use Permit (Alameda County Planning case PLN2017-00201) and is reviewed in this SEIR pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15162, as a project tiered under the Altamont Pass Wind Resource Area Repowering Program EIR (PEIR), which the County of Alameda certified in December 2014.

ES.2 Project Objectives

The underlying purpose of the Project is to repower a large segment of the program area with a commercially viable wind energy facility that would be subject to a single, uniform avian monitoring protocol and help meet the state's Renewables Portfolio Standard (RPS), greenhouse gas (GHG) reduction, and carbon neutrality goals.

The fundamental objectives of the Project are as follows:

- To maximize wind energy production for Power Purchase Agreements obtained for the Project by siting up to forty new wind turbines on leased lands within the program area.
- To maintain commercial viability.

The secondary objectives of the Project are as follows:

- To minimize environmental impacts by:
  - Limiting ground disturbance through the re-use of existing infrastructure (e.g., roads, transmission lines) where feasible.
  - Improving understanding of the effects of new generation turbines on birds and bats by applying the same avian mortality monitoring protocol across a large segment of the program area, rather than separate protocols for multiple separate projects.
- To increase local short-term and long-term employment opportunities.
- To provide economic benefits to Alameda County.
- To assist California in meeting its RPS, GHG reduction, and carbon neutrality goals.

ES.3 Project Impacts and Mitigation Measures

This EIR discusses the project's potential environmental effects, and provides mitigation measures to reduce any significant impacts to less-than-significant levels, where feasible. Environmental topic areas and resources considered and dismissed from further evaluation are distinguished from those considered in detail in Chapter 1, *Introduction*. Sections 3.1 through 3.19 provide comprehensive discussions of the regulatory and environmental setting for the environmental resources affected by the project, and identify project impacts and mitigation measures designed to reduce significant impacts. Table ES-1, *Summary of Impacts and Mitigation Measures*, summarizes the impacts and mitigation measures identified for the Project.

ES.3.1 Summary of Project Impacts

The project impacts are summarized in Table ES-1 (presented at the end of this summary). For potentially significant impacts, mitigation measures are identified where feasible to reduce the impact on the environmental resources to a less-than-significant level. Chapter 3, *Impact Analysis*, provides a detailed discussion of impacts and mitigation measures for the proposed Project.

ES.3.2 Significant and Unavoidable Impacts

Section 15126.2(b) of the State CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. The

following environmental impacts, also summarized in Table ES-1, were determined to be significant and unavoidable.

Biological Resources

Impact BIO-11: Avian mortality resulting from interaction with wind energy facilities

Impact BIO-14: Turbine-related fatalities of special-status and other bats

Impact BIO-19: Potential impact on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites

ES.4 Project Alternatives

Chapter 4, *Alternatives Analysis*, provides an evaluation of alternatives that would avoid or lessen significant effects of the project and that would feasibly attain the fundamental objective and most of the secondary project objectives. These alternatives are described below.

No Project – Repowering by Others

Under the No Project – Repowering by Others alternative, sPower would not repower the Project site. However, because of the site's unique wind resources, location within the Program Area, and proximity to existing transmission lines and substations, it is reasonable to expect, based on current plans and consistent with available infrastructure, that the project sites would be repowered in the foreseeable future by one or more wind companies, using turbines described in the PEIR and made subject to the same regulatory regime as other repowering proposals and achieving roughly the same MW production capacity. Any remaining turbine foundations would be removed as required by County regulations and policies, and road improvements and equipment laydown requirements would be assumed to be comparable to the Project.

No Project – No Repowering

Under the No Project – No Repowering alternative, no repowering would occur, and the project area would be restored to pre-permit conditions with restrictions against further installation of wind turbines on the Sand Hill project sites for the foreseeable future.

Smaller Turbine – Pre-Micro-Sited Layout

The Smaller Turbine – Pre-Micro-Sited Layout alternative, would involve the same number of turbines as the Project—up to 40—but would substitute the 35 proposed turbines of more than 3.0 MW in operating capacity (3.6-, 3.8- or potentially 4.0-MW-rated turbines) with moderately smaller, 2.8-MW turbines, and would micro-site all turbines at all feasible locations determined through two sequential micro-siting studies that were conducted with the objective of potentially reducing bat and avian impacts. Although the number of turbines within the leased project parcels would remain the same as the proposed project, the turbine locations would be different. In total, the Smaller Turbine – Pre-Micro-Sited alternative relocates 19 of the proposed Project's 40 turbines, reduces overall Project capacity by 24% from 144.5 MW to 109.5 MW, reduces rotor-swept area by 13%, from

568,775 m^2 to 496,220 m^2, and raises the average clearance of turbine blades by 75%, from 14.1 m to 24.7 m above the ground.

ES.5 Potential Areas of Controversy/Issues to be Resolved

The County previously issued an EA in September 2018 that provided public agencies and the public with a detailed Project description and an analysis of how the Project would fit within the scope of the PEIR and would not require either a subsequent or supplemental EIR. However, after careful consideration of the comments received regarding the EA, the County has elected to prepare this subsequent EIR (SEIR).

Areas of controversy were identified through written agency and public comments received during the project public review of the EA and are provided in Appendix A.

Commenters asserted that there is new information of potentially substantial importance that was not and could not have been known at the time the PEIR was completed. As a result, the commenters assert the Project will have more severe impacts on protected species of birds and bats than were anticipated in the PEIR, and therefore the CEQA analysis for the Project, as tiered from the PEIR, should identify different mitigation measures and alternatives that could reduce such effects.

The following issues were identified as areas of concern during scoping and are addressed in the appropriate sections of Chapter 3, *Impact Analysis*.

- Biological resources, especially Avian and Bat impacts
- Aesthetics (blade flicker and nighttime lighting) Setback requirements and how alternative minimum setbacks are appropriate with supporting studies of blade throw, noise or flicker studies, as needed
- Hazards and Hazardous Materials (blade throw)
- Noise (turbine noise).

ES.6 How to Comment on this Draft EIR

This draft SEIR, incorporating public and agency responses to the Notice of Preparation (NOP), is being circulated for review and comment by appropriate agencies, as well as organizations and individuals who have requested notification. In accordance with Section 15205(d) of the State CEQA Guidelines, the County has scheduled a 45-day public review period for the draft EIR, ending at 5:00 p.m. on Friday, September 23, 2019. Within that 45-day period, the County will hold one public hearing to request comments on the draft EIR.

This draft SEIR is available for review and download at the Alameda County website (www.acgov.org/cda/planning, under Pending Land Use Projects, Current Development Projects and Wind Farm Projects; see Sand Hill Wind Project - Application No. PLN2017-00201). Copies will also be available for viewing during normal business hours (8:30 a.m. to 5:00 p.m.), Monday through Friday, at the Alameda County Community Development Agency, Planning Department, located at 224 West Winton Avenue, Room 111, Hayward, California, 94544. Comments on the draft SEIR may be

submitted to the Planning Department at that address, to the attention of Andrew Young, Senior Planner.

Following the close of the public review period for the draft SEIR, the County will consider the comments it receives. The County will prepare a final SEIR, incorporating all comments received during the public comment period, for consideration by the EBZA, tentatively scheduled for Thursday, October 10, 2019. As required by CEQA (Section 21092.5), the final SEIR, including written responses to the comments submitted by public agencies, will be available at least 10 days prior to certification.

Table ES-1. Summary of Impacts and Mitigation Measures

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Aesthetics			
Impact AES-1: Potential to have a substantial adverse effect on a scenic vista	S	PEIR Mitigation Measure AES-1: Limit construction to daylight hours 2019 Updated PEIR Mitigation Measure AES-2a: Require site development review PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways PEIR Mitigation Measure AES-2c: Screen surplus parts and materials	LTS
Impact AES-2: Potential to substantially damage scenic resources along a scenic highway	S	2019 Updated PEIR Mitigation Measure AES-2a: Require site development review PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways PEIR Mitigation Measure AES-2c: Screen surplus parts and materials	LTS
Impact AES-3: In non-urbanized areas, degradation of the existing visual character or quality of public views of the site and its surroundings; in urbanized areas, conflict with zoning or other regulations governing scenic quality	S	2019 Updated PEIR Mitigation Measure AES-2a: Require site development review PEIR Mitigation Measure AES-2b: Maintain site free of debris and restore abandoned roadways PEIR Mitigation Measure AES-2c: Screen surplus parts and materials	LTS
Impact AES-4: Introduction of a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area	S	2019 Updated PEIR Mitigation Measure AES-2a: Require site development review PEIR Mitigation Measure AES-5: Analyze shadow flicker distance and mitigate effects or incorporate changes into Project design to address shadow flicker	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Agricultural and Forestry Resources			
Impact AG-1: Conversion of Important Farmland to nonagricultural use	NI		
Impact AG-2: Conflict with existing zoning for agricultural use or with a Williamson Act contract	NI		
Impact AG-3: Conflict with existing zoning of forest land, timberland, or timberland zoned Timberland Production	NI		
Impact AG-4: Loss of forest land or conversion of forest land to non-forest use	NI		
Impact AG-5: Potential to cause changes in the existing environment that could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use	NI		
Air Quality			
Impact AQ-1: Conflict with or obstruction of implementation of the applicable air quality plan	LTS		
Impact AQ-2: Cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard	Construction: S Operation: LTS	PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures 2019 NEW Mitigation Measure AQ-2c: Reduce construction-related air pollutant emissions to below BAAQMD NO_x thresholds	Construction: LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact AQ-3: Exposure of sensitive receptors to substantial pollutant concentrations	S	PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation Measures 2019 NEW Mitigation Measure AQ-2c: Reduce construction-related air pollutant emissions to below BAAQMD NO_x thresholds	LTS
Impact AQ-4: Generation of objectionable odors adversely affecting a substantial number of people	LTS		
Biological Resources			
Impact BIO-1: Potential for ground-disturbing activities to result in adverse effects on special-status plants or habitat occupied by special-status plants	S	PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status plant species 2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	LTS
Impact BIO-2: Adverse effects on special-status plants and natural communities resulting from the introduction and spread of invasive plant species	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands PEIR Mitigation Measure WQ-1: Comply with NPDES requirements	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact BIO-3: Potential mortality or loss of habitat for vernal pool branchiopods and curved-foot hygrotus diving beetle	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas PEIR Mitigation Measure BIO-3b: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	LTS
Impact BIO-4: Potential disturbance or mortality of and loss of suitable habitat for valley elderberry longhorn beetle	NI		
Impact BIO-5: Potential disturbance or mortality of and loss of suitable habitat for California tiger salamander, western spadefoot, California red-legged frog, and foothill yellow-legged frog	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas 2019 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact BIO-6: Potential disturbance or mortality of and loss of suitable habitat for western pond turtle	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas PEIR Mitigation Measure BIO-6: Conduct preconstruction surveys for western pond turtle and monitor construction activities if turtles are observed	LTS
Impact BIO-7: Potential disturbance or mortality of and loss of suitable habitat for Blainville's horned lizard, Alameda whipsnake, and San Joaquin coachwhip	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	LTS
Impact BIO-8: Potential construction-related disturbance or mortality of special-status and non–special-status migratory birds	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands 2019 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact BIO-9: Permanent and temporary loss of occupied habitat for western burrowing owl and foraging habitat for tricolored blackbird and other special-status and non–special-status birds	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of occupied habitat for western burrowing owl	LTS
Impact BIO-10: Potential injury or mortality of and loss of habitat for San Joaquin kit fox and American badger	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact BIO-11: Avian mortality resulting from interaction with wind energy facilities	S	PEIR Mitigation Measure BIO-11a: Prepare a Project-specific avian protection plan PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors PEIR Mitigation Measure BIO-11f: Discourage prey for raptors PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects Updated 2019 PEIR Mitigation Measure BIO-11h: Compensate for the loss of raptors and other avian species, including golden eagles, by contributing to conservation efforts PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program	SU
Impact BIO-12: Potential mortality or disturbance of bats from roost removal or disturbance	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts	LTS
Impact BIO-13: Potential for construction activities to temporarily remove or alter bat foraging habitat	LTS		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact BIO-14: Turbine-related fatalities of special-status and other bats	S	PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats 2019 Updated PEIR Mitigation Measure BIO-14b: Implement postconstruction bat fatality monitoring program for all repowering projects PEIR Mitigation Measure BIO-14c: Prepare and publish annual monitoring reports on the findings of bat use of the Project area and fatality monitoring results PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan PEIR Mitigation Measure BIO-14e: Compensate for expenses incurred by rehabilitating injured bats	SU
Impact BIO-15: Potential for road infrastructure upgrades and installation of electrical collection lines to result in adverse effects on alkali wetlands/drainages	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas 2019 Updated PEIR Mitigation Measure BIO-15: Compensate for the loss of alkali wetland/drainage habitat	LTS
Impact BIO-16: Potential for road infrastructure upgrades to result in adverse effects on riparian habitat	NI		
Impact BIO-17: Potential for ground-disturbing activities to result in direct adverse effects on common habitats	LTS		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact BIO-18: Potential for road infrastructure upgrades to result in adverse effects on wetlands and drainages	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas 2019 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and non-wetland waters	LTS
Impact BIO-19: Potential impact on the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors, and the use of native wildlife nursery sites	S	2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas PEIR Mitigation Measure BIO-3a: Conduct preconstruction surveys for habitat for special-status wildlife species 2019 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles 2019 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non–special-status nesting birds PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	SU

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds	
		PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts	
		PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	
		PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program	
		PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys	
		PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts	
		PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats	
		PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan	
Impact BIO-20: Conflict with local plans or policies	S	PEIR Mitigation Measure BIO-1a: Conduct surveys to determine the presence or absence of special-status species	LTS
		2019 Updated PEIR Mitigation Measure BIO-1b: Implement best management practices to avoid and minimize impacts on special-status species	
		PEIR Mitigation Measure BIO-1c: Avoid and minimize impacts on special-status plant species by establishing activity exclusion zones	
		PEIR Mitigation Measure BIO-1d: Compensate for impacts on special-status plant species	
		PEIR Mitigation Measure BIO-1e: Retain a biological monitor during ground-disturbing activities in environmentally sensitive areas	
		PEIR Mitigation Measure BIO-2: Prevent introduction, spread, and establishment of invasive plant species	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		PEIR Mitigation Measure BIO-3a: Implement measures to avoid, minimize, and mitigate impacts on vernal pool branchiopods and curved-footed hygrotus diving beetle	
		2019 Updated PEIR Mitigation Measure BIO-5a: Implement best management practices to avoid and minimize effects on special-status amphibians	
		PEIR Mitigation Measure BIO-5b: Compensate for loss of habitat for special-status amphibians	
		PEIR Mitigation Measure BIO-5c: Restore disturbed annual grasslands	
		PEIR Mitigation Measure BIO-7a: Implement best management practices to avoid and minimize effects on special-status reptiles	
		2019 Updated PEIR Mitigation Measure BIO-8a: Implement measures to avoid and minimize potential impacts on special-status and non-special-status nesting birds	
		PEIR Mitigation Measure BIO-8b: Implement measures to avoid and minimize potential impacts on western burrowing owl	
		PEIR Mitigation Measure BIO-9: Compensate for the permanent loss of foraging habitat for western burrowing owl	
		PEIR Mitigation Measure BIO-10a: Implement measures to avoid and minimize potential impacts on San Joaquin kit fox and American badger	
		PEIR Mitigation Measure BIO-10b: Compensate for loss of suitable habitat for San Joaquin kit fox and American badger	
		PEIR Mitigation Measure BIO-11a: Prepare a Project-specific avian protection plan	
		PEIR Mitigation Measure BIO-11b: Site turbines to minimize potential mortality of birds	
		PEIR Mitigation Measure BIO-11c: Use turbine designs that reduce avian impacts	
		PEIR Mitigation Measure BIO-11d: Incorporate avian-safe practices into design of turbine-related infrastructure	

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
		PEIR Mitigation Measure BIO-11e: Retrofit existing infrastructure to minimize risk to raptors	
		PEIR Mitigation Measure BIO-11f: Discourage prey for raptors	
		PEIR Mitigation Measure BIO-11g: Implement postconstruction avian fatality monitoring for all repowering projects	
		2019 Updated PEIR Mitigation Measure BIO-11h: Compensate for the loss of raptors and other avian species, including golden eagles, by contributing to conservation efforts	
		PEIR Mitigation Measure BIO-11i: Implement an avian adaptive management program	
		PEIR Mitigation Measure BIO-12a: Conduct bat roost surveys	
		PEIR Mitigation Measure BIO-12b: Avoid removing or disturbing bat roosts	
		PEIR Mitigation Measure BIO-14a: Site and select turbines to minimize potential mortality of bats	
		PEIR Mitigation Measure BIO-14d: Develop and implement a bat adaptive management plan	
		2019 Updated PEIR Mitigation Measure BIO-15: Compensate for the loss of alkali wetland/drainage habitat	
		2019 Updated PEIR Mitigation Measure BIO-18: Compensate for the loss of wetlands and non-wetland waters	
Impact BIO-21: Conflict with provisions of an adopted HCP/NCCP or other approved local, regional, or state habitat conservation plan	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Cultural Resources			
Impact CUL-1: Potential to cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5	NI		
Impact CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5	S	PEIR Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction PEIR Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities	LTS
Impact CUL-3: Disturbance of any human remains, including those interred outside of dedicated cemeteries	S	PEIR Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities	LTS
Energy			
Impact EN-1: Wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation	S	PEIR Mitigation Measure AQ-2a: Reduce construction-related air pollutant emissions by implementing applicable BAAQMD Basic Construction Mitigation Measures PEIR Mitigation Measure AQ-2b: Reduce construction-related air pollutant emissions by implementing measures based on BAAQMD's Additional Construction Mitigation 2019 NEW Mitigation Measure AQ-2c: Reduce construction-related air pollutant emissions to below BAAQMD NO_x thresholds	LTS
Impact EN-2: Conflict with or obstruction of a state or local plan for renewable energy or energy efficiency	NI		
Geology, Soils, Mineral Resources, and Paleontological Resources			
Impact GEO-1: Potential substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides	S	PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
Impact GEO-2: Potential to result in substantial soil erosion or the loss of topsoil	LTS		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Impact GEO-3: Placement of Project-related facilities on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse	S	PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
Impact GEO-4: Placement of Project-related facilities on expansive soil, creating substantial direct or indirect risks to life or property	S	PEIR Mitigation Measure GEO-1: Conduct site-specific geotechnical investigation and implement design recommendations in subsequent geotechnical report	LTS
Impact GEO-5: Direct or indirect destruction of a unique paleontological resource or site or unique geologic feature	S	PEIR Mitigation Measure GEO-7a: Retain a qualified professional paleontologist to monitor significant ground-disturbing activities PEIR Mitigation Measure GEO-7b: Educate construction personnel in recognizing fossil material PEIR Mitigation Measure GEO-7c: Stop work if substantial fossil remains are encountered during construction	LTS
Greenhouse Gas Emissions			
Impact GHG-1: Generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	LTS		
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	S	2019 Updated PEIR Mitigation Measure GHG-2a: Implement best available control technology for heavy-duty vehicles PEIR Mitigation Measure GHG-2b: Install low SF6 leak rate circuit breakers and monitoring PEIR Mitigation Measure GHG-2c: Require new construction to use building materials containing recycled content PEIR Mitigation Measure GHG-2d: Comply with construction and demolition debris management ordinance	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Hazards and Hazardous Materials			
Impact HAZ-1: Creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	LTS		
Impact HAZ-2: Creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTS		
Impact HAZ-3: Emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school	NI		
Impact HAZ-4: Placement of Project-related facilities on a site that is included on a list of hazardous materials sites, and resulting creation of a significant hazard to the public or the environment	S	2019 Updated PEIR Mitigation Measure HAZ-4: Perform a Phase I Environmental Site Assessment prior to construction activities and remediate if necessary	LTS
Impact HAZ-5: Placement of Project-related facilities within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, resulting in a safety hazard or excessive noise for people residing or working in the Project area	LTS		
Impact HAZ-6: Impairment of implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan	S	PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan	LTS
Impact HAZ-7: Exposure of people or structures, either directly or indirectly, to a significant risk involving wildland fires	LTS		
Impact HAZ-8: During normal operation, the effects of bending and stress on rotor blades over time could lead to blade failure and become a potential blade throw hazard	S	2019 NEW Mitigation Measure HAZ-8: Site Turbines at least 1.25 times TTH from Public Roads and Prepare a Blade Throw Study if Necessary	LTS

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Hydrology and Water Quality			
Impact WQ-1: Violation of any water quality standards or waste discharge requirements or other degradation of surface water or groundwater quality	S	PEIR Mitigation Measure WQ-1: Comply with NPDES requirements	LTS
Impact WQ-2: Substantial decrease of groundwater supplies or substantial interference with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	LTS		
Impact WQ-3: Substantial alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation onsite or offsite	S	PEIR Mitigation Measure WQ-1: Comply with NPDES requirements	LTS
Impact WQ-4: Substantial increase in the amount of surface runoff in a manner that would result in flooding onsite or offsite	S	PEIR Mitigation Measure WQ-1: Comply with NPDES requirements	LTS
Impact WQ-5: Creation of or contribution to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	S	PEIR Mitigation Measure WQ-1: Comply with NPDES requirements	LTS
Impact WQ-6: Obstruction or redirection of flood flows caused by drainage modifications	NI		
Impact WQ-7: In flood hazard, tsunami, or seiche zones, risk of release of pollutants as a result of Project inundation	S	PEIR Mitigation Measure WQ-1: Comply with NPDES requirements	LTS
Impact WQ-8: Conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan	S	PEIR Mitigation Measure WQ-1: Comply with NPDES requirements	LTS
Land Use and Planning			
Impact LU-1: Physical division of an established community	NI		
Impact LU-2: Conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Noise			
Impact NOI-1: Generation of increased ambient noise levels in the Project vicinity in excess of applicable standards	S	PEIR Mitigation Measure NOI-2: Employ noise-reducing practices during decommissioning and new turbine construction PEIR Mitigation Measure NOI-1: Perform project-specific noise studies and implement measures to comply with County noise standards	LTS
Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels	LTS		
Impact NOI-3: Placement of Project-related activities in the vicinity of a private airstrip or an airport land use plan or within 2 miles of a public airport or public use airport, resulting in exposure of people residing or working in the Project area to excessive noise levels	NI		
Population and Housing			
Impact POP-1: Creation of substantial population growth either directly or indirectly	NI		
Impact POP-2: Displacement of a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere	NI		
Public Services			
Impact PS-1: Creation of a need for new or physically altered governmental facilities to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, of other public facilities	NI		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Recreation			
Impact REC-1: Increased use of existing recreational facilities, resulting in substantial physical deterioration	NI		
Impact REC-2: Construction or expansion of recreational facilities that might have an adverse physical effect on the environment	NI		
Transportation			
Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities	S	PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan	LTS
Impact TRA-2: Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)	NI		
Impact TRA-3: Substantial increase in hazards because of a geometric design feature (e.g., sharp curves, dangerous intersections) or incompatible uses (e.g., farm equipment)	S	PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan	LTS
Impact TRA-4: Potential to cause inadequate emergency access	S	PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan	LTS
Tribal Cultural Resources			
Impact TCR-1: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)	LTS		
Impact TCR-2: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	LTS		

Impact	Level of Significance	Mitigation Measure	Significance after Mitigation
Utilities and Service Systems			
Impact UT-1: Relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects	LTS		
Impact UT-2: Have sufficient water supply to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years	LTS		
Impact UT-3: Project-related exceedance of existing wastewater treatment capacity	NI		
Impact UT-4: Project-related exceedance of state or local solid waste standards or of the capacity of local infrastructure, or other impediments to attaining solid waste reduction goals	LTS		
Impact UT-5: Inconsistency with federal, state, and local management and reduction statutes and regulations related to solid waste	NI		
Wildfire			
Impact WF-1: Substantial impairment of an adopted emergency response plan or emergency evacuation plan	S	PEIR Mitigation Measure TRA-1: Develop and implement a construction traffic control plan	LTS
Impact WF-2: Exacerbation of wildfire risks associated with pollutant concentrations or uncontrolled spread of wildfire	LTS		
Impact WF-3: Project-related installation or maintenance of associated infrastructure that may exacerbate fire risk or result in temporary or ongoing environmental impacts	LTS		
Impact WF-4: Exposure of people or structures to significant risks such as downslope or downstream flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes	LTS		

SU = significant and unavoidable; S = significant; LTS = less than significant; NI = no impact.