

A MULTIAGENCY COLLABORATIVE WORKING GROUP SEEKS TO ADVANCE UNDERSTANDING OF AVIAN-SOLAR INTERACTIONS

INTRODUCTION

Utility-scale solar energy development is increasing in the United States in response to national energy policy and federal and state renewable energy goals aimed at reducing dependence on fossil fuels and mitigating climate change. Avian interactions with utility-scale solar development, in particular avian fatalities, are not well understood and, if not properly addressed, could affect avian populations and present an impediment to meeting federal and state goals. Utility-scale solar project development costs are driven in part by the costs of project siting, design, permitting, and timely access to suitable tracts of land.

BACKGROUND

The formation of a multiagency collaborative working group to advance the understanding of avian-solar interactions builds upon outcomes from several meetings among state and federal agencies over the past 2 years.

In 2015, the U.S. Department of Energy (DOE) Solar Program funded the publication of a report summarizing existing avian mortality and monitoring information from utility-scale solar plants (Walston et al. 2015). This report concluded that although avian fatalities have been documented at solar energy facilities employing both photovoltaic and concentrating solar technologies, insufficient data are available to determine the scope and causes of impacts, thus making it difficult to develop solutions to avoid, minimize, and mitigate such impacts.

PURPOSE AND OBJECTIVES

The multiagency Avian-Solar Collaborative Working Group (CWG) has been established to promote better understanding of impacts on avian species related to solar energy projects and associated infrastructure. The scope of the CWG includes all solar energy technologies (e.g., photovoltaic [PV] and concentrated solar power [CSP] technologies) with initial emphasis on the southwestern U.S. where most utility-scale solar has been developed. The purpose of the CWG is to:

- Share and summarize existing information on avian-solar issues with other agencies, industry, and public stakeholders;
- Identify information gaps related to avian-solar interactions and the data needed to better understand the nature and magnitude of those interactions;
- Develop and prioritize science-based monitoring and research protocols to address information gaps; and
- Coordinate future research activities related to avian-solar interactions.



Loggerhead shrike (*Lanius ludovicianus*).
Photo credit: Joshua Tree National Park.

The overall goal of the CWG is to develop better information that can be used to inform future actions to reduce the impacts of solar energy development on birds. To realize this goal, the CWG will develop an Avian-Solar Science Plan that will:

- 1) define research questions and future research needs related to avian-solar interactions;
- 2) support development of monitoring protocols, evaluation of avian risk, and development of effective mitigation measures;
- 3) qualitatively discuss potential associated costs; and
- 4) define agency roles and process for implementing the Science Plan.

It is anticipated that this improved understanding will result in soft cost reductions and reduced avian impacts through more informed project siting and design decisions and the application of appropriate and cost-effective monitoring and mitigation measures.



Silver State North Solar Project (Photo credit: R. Sullivan, Argonne National Laboratory)

CWG MEMBERSHIP

The CWG is composed of staff of federal and state land management, natural resource, and energy agencies. Membership is initially focused on federal and state agencies in Arizona, California, and Arizona. Member agencies include, but are not limited to:

- Arizona Corporation Commission
- Arizona Game and Fish Department
- Bureau of Land Management
- California Energy Commission
- California Department of Fish and Wildlife
- California Public Utilities Commission
- Nevada Department of Wildlife
- Public Utilities Commission of Nevada
- U.S. Department of Defense
- U.S. Department of Energy
- U.S. Department of the Interior, Solicitor's Office
- U.S. Fish and Wildlife Service
- U.S. Geological Survey

The CWG is led by a chair and co-chair selected from CWG members. Technical and logistical support for the CWG is provided by Argonne National Laboratory and the National Renewable Energy Laboratory.

PUBLICATIONS

The CWG will prepare outreach materials to inform the public of CWG activities, meetings, and publications. Some publications such as the CWG Science Plan will be made available for downloading via websites of the CWG member agencies.



Horned lark (*Eremophila alpestris*)
Photo credit: National Park Service.



Ivanpah Solar Electric Generating System (Photo credit: R. Sullivan, Argonne National Laboratory)



Alamosa Solar Generating Project (Photo credit: Dennis Schroeder, National Renewable Energy Laboratory)

STAKEHOLDER ENGAGEMENT

Stakeholder engagement will be conducted to provide transparency, allow sharing of information with interested stakeholders, and support interaction with other working groups. The CWG will engage with stakeholders by hosting in-person meetings and webinars to share information about CWG activities and to obtain information from stakeholders.

For more information about this effort and opportunities to be involved, see the Multiagency Avian-Solar Collaborative Working Group webpage:

<http://blmsolar.anl.gov/program/avian-solar/>

REFERENCE

Walston, L., K. Rollins, K. Smith, K. LaGory, K. Sinclair, C. Turchi, T. Wendelin, and H. Souder. 2015. A Review of Avian Monitoring and Mitigation Information at Existing Utility-Scale Solar Facilities. Prepared for U.S. Department of Energy, SunShot Initiative and Office of Energy Efficiency & Renewable Energy.