

Solar Power and Wildlife/Natural Resources SYMPOSIUM

DECEMBER 1 – 3

VIRTUAL

PRESENTED BY AWWI

Agenda*

All times listed in Eastern Time

Wednesday, December 1: Solar 101

11:00 AM – 5:30 PM

Welcome

11:00 AM – 11:07 AM

Abby Arnold, American Wind Wildlife Institute

Solar Power in the U.S.

11:07 AM – 12:30 PM

Following COP26, this session will feature a review of the impacts of climate change on wildlife. Then, a panel of speakers will discuss projections for the buildout of solar power required to achieve net-zero emissions in the U.S. by 2035 and 2050: What do models predict for current and future markets, anticipated development in the next 3-5 years, current and emerging technologies, and patterns of future buildout across the U.S.?

Speakers

Aimee Delach, Defenders of Wildlife

Dr. Robert Margolis, National Renewable Energy Laboratory

Dr. Xiaojing Sun, Wood Mackenzie

Moderator

Nathanael Greene, Natural Resources Defense Council

Break: 12:30 PM – 1:00 PM

*Speakers are listed in alphabetical order by last name. Speakers and program are subject to change.

www.awwi.org/solar-symposium | solar@awwi.org

Keynote Speaker

1:00 PM – 1:20 PM

Keynote Speaker, Kelly Speakes-Backman, Principal Deputy Assistant Secretary for the Office of Energy Efficiency and Renewable Energy at the U.S. Department of Energy, will be discussing the exciting work the Department of Energy is undertaking to enable a bright future for solar energy in the U.S.

Keynote

Kelly Speakes-Backman, Office of Energy Efficiency and Renewable Energy at the U.S. DOE

Introduction

Michele Boyd, DOE Office of Energy Efficiency and Renewable Energy

Break: 1:20 PM – 2:00 PM

Solar Site Selection & Development Process

2:00 PM – 3:45 PM

Selecting the location for a large utility-scale solar facility is a complicated process. Experts will give an overview of what factors developers address when deciding where and what kind of development to pursue. They will also discuss essential requirements to consider when developing a new utility-scale solar project, including wildlife and non-wildlife-related federal, state, and local level permitting and regulatory requirements.

Speakers

Stephen Czapka, U.S. Fish & Wildlife Service
Alyssa Edwards, Lightsource bp
Jodie Eldridge, Florida Power & Light Co.
Dr. Karen Voltura, Colorado Parks and Wildlife, Southeast Region

Moderator

Jason Hight, Florida Fish and Wildlife, Conservation Commission

Public Acceptance

3:45 PM – 4:55 PM

Community views about solar power play an important role in future expansion of solar across the U.S. Hear from experts and practitioners in the field about concerns and interests of residents and landowners, and studies, strategies, and opportunities to understand and address local interests.

Speakers

Steve Kalland, NC Clean Energy Technology Center
Dr. Sarah Mills, University of Michigan, Center for Local, State, and Urban Policy
Dr. Sharlissa Moore, Michigan State University
Sarah Moser, Savion Energy
Amy Berg Pickett, Sunstone Energy

Moderator

Jaci Friedley, Apex Clean Energy

Capstone: Current and Future Opportunities to Collaborate for Sustainable Development

4:55 PM – 5:30 PM

Tom Starrs, Vice President Government Affairs at EDP Renewables, & Renee Stone, Senior Vice President for Conservation Programs and General Counsel at Defenders of Wildlife, will discuss paths forward to collaborate on sustainable development of solar and renewables.

Speakers

Tom Starrs, EDP Renewables

Renee Stone, Defenders of Wildlife

Moderator

Abby Arnold, American Wind Wildlife Institute

Thursday, December 2: Evaluating and Mitigating Impacts on Wildlife and Their Habitats & Water Resource Management

11:00 AM – 5: 30 PM Eastern Time

Welcome

11:00 AM – 11:05 AM

Abby Arnold, American Wind Wildlife Institute

Evaluating and Mitigating Impacts on Wildlife and Their Habitats:

A. Risks of Solar Development to Avian Species (direct, habitat, and modeling cumulative impacts)

11:05 AM – 12:35 PM

B. Risks of Solar Development to Other Wildlife Species (direct, habitat, and modeling cumulative impacts)

12:35 PM – 2:00 PM

A first step in developing research priorities is to understand the state of the science. This two-part panel features experts summarizing the state of the science on direct and habitat-related risks of solar power to birds and other wildlife species, followed by a discussion on approaches to model population and cumulative impacts to various species of concern.

A. Speakers

Dr. Ryan Harrigan, Institute of the Environment and Sustainability at University of California, Los Angeles

Dr. Todd Katzner, U.S. Geological Survey

Dr. Karl Kosciuch, Western EcoSystems Technology, Inc.

Leroy Walston, Argonne National Laboratory

B. Speakers

David Bender, Stantec

Matthew Ihnken, Environmental Consulting & Technology, Inc.

Dr. Todd Katzner, U.S. Geological Survey

Dr. Karl Kosciuch, Western EcoSystems Technology, Inc.

Moderator (A & B)

Dr. Taber Allison, American Wind Wildlife Institute

Break: 2:00 PM – 2:30 PM

Siting: Science, Tools, and Solutions

2:30 PM – 4:05 PM

Siting energy facilities, including solar power, can be controversial. Following an expert review of siting tools and strategies available to avoid and minimize impacts to wildlife and habitat, a representative group of stakeholders will discuss challenges and opportunities for existing tools and identify how planning and other strategies and tools could continue to improve.

Speakers

Dr. Shilo Felton, National Audubon Society
Dr. Yuki Hamada, Argonne National Laboratory
Andrew Pinger, EDP Renewables North America
Sarah Reif, Oregon Department of Fish and Wildlife

Moderator

Nicole Hughes, Renewable Northwest

Stormwater Management

4:05 PM – 5:30 PM

Stormwater management is an important element when designing large-scale solar facilities. Experts will discuss how different state interpretations of the federal Clean Water Act NPDES regulations are impacting solar project-related stormwater management around the country. They will explore how these interpretations affect emerging BMPs, future areas of study, and approaches to reconcile stormwater regulations with other ecosystem related objectives, such as establishing native vegetation, pollinator habitat, and related onsite management objectives.

Speakers

Jay Johnstone, Stantec
Deron Lawrence, Longroad Energy
Todd Smith, Minnesota Pollution Control Agency
Chris Stone, Connecticut Department of Energy and Environmental Protection
Jacob Thompson, Barr Engineering

Moderator

James McCall, National Renewable Energy Laboratory

Friday, December 3: Land Management and Wildlife Compatibility & Solar Life-Cycle and Natural Resource Considerations

11:00 AM – 5:45 PM Eastern Time

Welcome

11:00 AM – 11:05 AM

Abby Arnold, American Wind Wildlife Institute

Land Management Considerations for Native Vegetation, Pollinators, Wildlife, and Habitat

11:05 AM – 1:20 PM

‘Ecosystem benefits’ is being discussed by the industry and conservation/science community as it relates to solar projects. This panel will feature an engaging discussion of diverse perspectives on ecological management opportunities and challenges at solar facilities in three different regions of the country, and discuss regional differences and tradeoffs related to management for native vegetation, pollinator species habitat, research needs, and other considerations such as project costs and worker safety.

Speakers

Brian Croft, U.S. Fish & Wildlife Service

Tim Hayes, Duke Energy

Marylou Horan, Georgia Department of Natural Resources

Magdalena Rodriguez, California Department of Fish & Wildlife

Dan Salas, Cardno

Tom Swinford, Indiana Department of Natural Resources

Bryan Tompkins, U.S. Fish & Wildlife Service

Jennifer Wong, U.S. Fish & Wildlife Service

Moderator

Iris Caldwell, Energy Resources Center, University of Illinois Chicago

Opportunities Around Dual-Use of Land for Solar and Agriculture (Grazing Livestock, Crop Production)

1:20 PM – 2:30 PM

In response to concern about land use transitioning from agriculture production to energy development, opportunities for dual-use of lands at solar facilities have been studied and applied in Europe and are now being applied in the U.S. Practitioners fresh from the field will discuss innovations in dual-use including livestock grazing, vegetable production, and apiary management under and around solar arrays. They will also explore legal and economic considerations and the feasibility of scaling up “agri-solar” models to larger solar projects.

Speakers

Kevin Campbell, EDF Renewables

Lexie Hain, American Solar Grazing Association

Cody Smith, Environmental Resilience Institute

Brittany Staie, Sprout City Farms

Moderator

Dr. Stacie Peterson, National Center for Appropriate Technology

Break: 2:30 PM – 3:00 PM

Re-Development of Degraded Sites

3:00 PM – 4:20 PM

Solar development on already disturbed lands is one option to avoid impacting intact habitats. However, development on these sites is complicated by current laws, regulations, and other technical issues related to "re-development" of a site previously used for other purposes. Experts will define "disturbed sites" and address safety, legal, and regulatory considerations at these sites, and highlight strategies to promote social and environmental benefits and future directions for solar development on degraded lands.

Speakers

Benjamin Cowan, Locke Lord LLP

Eric Hansen, Westwood PS

Erich Miarka, Savion

Lora Strine, U.S. Environmental Protection Agency

Moderator

Roger Clarke, Xcel Energy

Product End-of-Life Management

4:20 PM – 5:45 PM

Product end-of-life management is a critical component of solar power as part of the strategy to make renewable energy sustainable. Experts will present on the latest developments in solar panel recycling, re-use, and environmentally responsible disposal, product design for end-of-life management, and how state and federal regulators are approaching solar panel recycling and disposal.

Speakers

Evelyn Butler, Solar Energy Industries Association

Dr. Garvin Heath, National Renewable Energy Laboratory

Chris Newman, U.S. Environmental Protection Agency

Dr. David Waggoner, Institute of Scrap Recycling Industries

Moderator

Dr. Stephanie Shaw, Electric Power Research Institute