

# **TURNING POINT SOLAR PROJECT**

## **SCOPING REPORT** September 2011



U.S. Department of Agriculture  
Rural Utilities Service

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## List of Acronyms

<b>Abbreviation</b>	<b>Definition</b>
AE-SSS	Alternatives Evaluation – Site Selection Study
AEP	American Electric Power Inc.
AEP Ohio	American Electric Power Ohio (Columbus Southern Power Company and Ohio Power Company)
AES	Alternatives Evaluation Study
Agile	Agile Energy, Inc.
CFR	Code of federal regulations
CO <sup>2</sup>	carbon dioxide
DOE	U.S. Department of Energy
EA	Environmental Assessment with scoping
FAA	Federal Aviation Administration
GenCo	a to be formed company, that will build and own the solar facility
Gen-tie	generation-tie-line
HVAC	heating, ventilation and air conditioning
Inc.	Incorporated
kV	kilovolt
kW	kilowatt
LLC	Limited Liability Company
M	million
MOU	Memorandum of Understanding
MW	Megawatts
MWh	megawatt-hours
NCSS	National Cooperative Soil Survey
NEPA	National Environmental Policy Act
NOI	Notice of Intent
OBDB	Ohio Biodiversity Data Base
ODNR	Ohio Department of Natural Resources
OHPO	Ohio Historic Preservation Office
ORC	Ohio Revised Code
OSM	Office of Surface Mining Reclamation and Enforcement
PA	Programmatic Agreement
PJM	PJM Interconnection LLC
PPA	Power Purchase Agreements
Project	Turning Point Solar Project
PUCO	Public Utility Commission of Ohio
PV	photovoltaics
RES	Renewable Energy Standards
ROW	Right-of-Way
RTO	regional transmission organization
RUS	Rural Utilities Service
S.B.	Senate Bill
s-REC	solar Renewable Energy Certificate
SR	State Route
SSS	Site Selection Study
TPS	Turning Point Solar LLC
TWh	terawatt hours
USDA	United States Department of Agriculture
US DOE	U.S. Department of Energy
US EIA	U.S. Energy Information Administration
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey

## 1.0 Introduction

The U.S. Department of Agriculture's (USDA) Rural Utilities Service (RUS) is considering a request for funding for a proposal by Turning Point Solar LLC (TPS). The proposal is for the 49.9 megawatt (MW) TPS energy generation project on 771 acres of land in southeastern Ohio. As specified in RUS' Environmental Policies and Procedures, as codified in 7 Code of Federal Regulations (CFR) 1794, RUS' regulations for implementing the National Environmental Policy Act (NEPA), the proposed Project requires the preparation of an Environmental Assessment (EA) with scoping (7 CFR 1794.24[b][2]).

Accordingly, a scoping meeting with the public, federal, state, and local agencies was held on July 14, 2011. This scoping report identifies and summarizes comments received during the scoping period from July 14 to August 15, 2011 and identifies what will be evaluated in the EA.

This report describes the proposed Project, outlines the public scoping meeting and materials, and provides a summary of the comments received at that meeting, which was held on July 14, 2011. In addition, this document includes eight appendices containing supplementary information.

## 2.0 Project Description

The Turning Point Solar Project (the Project) is a proposed solar generation facility using photovoltaic panel arrays mounted on fixed solar racking equipment. The Project would be built on reclaimed coal strip mine land owned by Columbus Southern Power Company and Ohio Power Company, collectively American Electric Power Ohio ("AEP Ohio") at a site located in Noble County, Ohio, about eight miles northwest of Caldwell, Ohio. The land was mined by the Central Ohio Coal Company between 1969 and 1991, after which time it was reclaimed. The proposed solar generating facility would interconnect to AEP Ohio's South Cumberland 69 kV substation, subject to completion of the PJM Generation Interconnection application process (Godfrey, 2011). PJM Interconnection LLC is a regional transmission organization (RTO) which is part of the Eastern Interconnection grid and which coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia (PJM, 2011).

To achieve the required project output, the Project would install approximately 239,400 high-efficiency monocrystalline photovoltaic panels and would utilize fixed solar racking equipment. The Project would create enough power to service 7,500–8,000 homes and will displace around 65,000 tons of carbon dioxide (CO<sub>2</sub>) from the environment annually [U.S. Energy Information Administration (US EIA), 2011a and 2011b]. When complete, the Turning Point facility would be the largest photovoltaic array east of the Mississippi River.

The Project is to be built in three phases: Phase 1 with 20MW is scheduled to come online in 2012 or 2013; Phase 2 with 15MW is scheduled to come on-line in 2014; and Phase 3, with 14.9MW, is scheduled to come on-line in 2015. Turning Point Solar LLC and AEP Ohio executed a Participation Agreement on June 23, 2011, pursuant to which Turning Point Solar will continue to complete its development of the project. Turning Point Solar will sell the project

development assets pursuant to the Development Assets Purchase Agreement to Turning Point Solar Generation LLC (“TPSG”), a to be formed company that will build and own the solar facility. TPSG will lease the solar facility to AEP Ohio, which will operate the solar facility over the life of the asset. AEP Ohio, an operating unit of American Electric Power Inc. (“AEP”), serves nearly 1.5 million customers in Ohio and the northern panhandle of West Virginia. AEP Ohio will use its purchase of solar energy to comply with Ohio’s solar generation benchmark mandated by Section 4928.64 of the Ohio Revised Code (ORC) as established per Substitute Senate Bill 221 (“S.B. 221”).

Turning Point Solar intentionally located the project in Ohio’s Appalachian region to serve as a centerpiece for integrated rural economic development (Ohio Air Quality Development Authority, 2010). It is anticipated that the project will bring significant construction jobs to Appalachian Ohio.

Under pre-project conditions, the 771-acre project site consists of open grass fields, rolling terrain, and pastures primarily used for livestock and recreation. The rolling terrain ranges in elevation from 990 feet to 1,090 feet above mean sea level, with slopes ranging from approximately 1 to 20 percent. The site was formerly used for strip mining up until the late 1980s. When the mining ceased, reclamation efforts required that gently rolling grasslands be established. The site was graded and seeded for open grass fields and ponds. The ponds were intended to mitigate soil erosion potential, especially during the grass establishment phase. The now-established grass is intended to mitigate soil erosion potential.

Post-project conditions will keep the pre-project topography of the rolling hills to the greatest extent practical, and earthwork grading will be minimized to the extent possible. New gravel roads will essentially follow the existing contours. Some portions of the site planned to be directly under the future solar modules have relatively steep slopes (in excess of five percent), and these areas will be smoothed to more gentle slopes. Areas which will be directly covered by solar modules will have a post-project topography not greater than approximately a five percent slope. New 20-foot wide gravel roads that will provide access to major electrical equipment within each solar block will be constructed on the site. The roads will be spaced every 500 feet throughout the site’s interior as well as around its perimeter.

New pavements, rooftops, and foundations will cover a total of roughly 1 acre or 0.1 percent of the site’s ground surface. These features will be dotted throughout the site. The solar modules will canopy the ground surfaces. Storm runoff will sheet-flow underneath the modules and infiltrate into the ground surface below the modules. Grass growth underneath and around the solar modules will also intercept and absorb much of the storm runoff.

Post-project conditions will maintain the same drainage patterns as those of the pre-project conditions. While some of the existing topography and slopes will be smoothed, the flow directions and sizes of the drainage areas will be maintained. New earthwork grading will keep the pre-project drainage areas and slope directions. The post-project storm water discharge from the site will have the same characteristics and be at the same locations as pre-project conditions. The project will not increase the flow rates discharging from the site, including the flow rates which would result from the 100-year return period storm event. Where runoff exits the site as

sheet flow, this characteristic will be preserved; where runoff exits as stream flow, this will be preserved.

RUS environmental review of the proposed Project was initiated by the submittal of an Alternatives Evaluation and Site Selection Study (AE-SSS) from TPS (<http://www.rurdev.usda.gov/UWP-EA-TurningPointSolar.html>). These studies were approved by RUS in June, 2011 and made available to the public and agencies for review and comment. The AE-SSS was developed to define the proposed Project need and summarize the studies and alternatives that were used to develop the Project.

## **2.1 Summary of the Alternative Evaluation Study (AES)**

The purpose of the proposal is to provide solar energy for AEP Ohio to meet its targets for renewable energy generally and solar energy, specifically, as required under Section 4928.64 of the ORC as established per S.B. 221. The AES assesses different technological alternatives that met the project purpose such as:

- AEP Ohio building solar generation in-state,
- Distributed and building-mounted solar photovoltaic (PV) panels,
- Ground-mounted solar photovoltaics on reclaimed land,
- Contracting for the output of an in-state solar facility built by another entity,
- Purchasing available (Ohio) s-RECs,
- Banked compliance, and
- Renewable energy compliance payment.

In addition, the AES assesses different technological alternatives that did not meet the project purpose such as:

- Purchase of out-of-state s-RECs,
- Wind energy,
- Biomass, and
- Hydropower.

Only contracting for some or all of the output of an in-state solar facility built by another entity, will allow AEP Ohio to achieve their designated near to medium term solar energy benchmarks required under Ohio law. The other alternatives that nominally met the project purpose are not currently reasonable. Other feasible alternatives such as purchase of out-of-state s-RECs, wind energy, biomass fuels, or hydropower would not fulfill the project purpose.

## **2.2 Summary of Site Selection Study**

Site selection criteria that reflect the specific purpose and need of the project and the local setting needed to be developed. These criteria reflected the need to reduce costs, eliminate delays, minimize potential impacts and project opposition, and streamline the regulatory process. Based on criteria developed for the project, the preferred site would have the following characteristics:

- Within AEP Ohio service area

- Transmission line adjacent to site,
- Near a major highway,
- Property available for sale or owned by AEP Ohio or for sale from one landowner,
- Located on relatively level reclaimed strip-mined land,
- With no or few nearby residences or schools, and no nearby parks, recreational areas or important natural or cultural resources,
- Not located in a floodplain,
- Not impacting Waters of the United States,
- Not impacting forested areas,
- Not impacting Prime Farmland or farmland of local importance,
- Lot size of 500 to 1,000+ acres (larger size allows more options for design).

The AE-SSS was released for public review and comment in June 2011. The public was able to access the documents on the RUS website. Additionally, hard copies of the documents were available for review at the Caldwell Public Library, 517 Spruce Street, Caldwell, Ohio 43724 and at the scoping meeting held on July 14, 2011.

### **3.0 Turning Point Solar's Pre-Scoping Process**

Beginning in the fall of 2010, TPS initiated efforts to publicize the proposed Project. A press conference was held by then-Ohio Governor Ted Strickland on October 5, 2010. TPS produced a project handout, provided information about the project on the New Harvest Ventures website (<http://www.newharvestventures.com/portfolio.html>) and gave presentations concerning the project at various industry conferences. Subsequent press releases in April and July of 2011 informed the public of changes or advances in the project.

In addition, on March 10, 2011, the Ohio Department of Natural resources Division of Wildlife Ohio Biodiversity Data Base (OBDB) was contacted concerning known records of endangered and threatened species from the three candidate sites being examined in the Site Selection Study. OBDB responded on March 11, 2011 with information concerning each site. Selected newspaper articles, handouts, and other pre-scoping information are provided in **Appendix A**.

### **4.0 RUS' Agency Scoping Process**

#### **4.1 Federal, State, and Local Agencies**

RUS proposed an agency scoping meeting for interested federal, state, and local agencies in a presentation meeting format. The agency scoping meeting was to be held on July 15, 2011 at the John W. Bricker Federal Building, located at 200 North High Street, Columbus, Ohio 43215.

##### **4.1.1 Purpose**

The purpose of the meeting was to provide information regarding the Project as well as to solicit comments for the preparation of an Environmental Assessment in line with RUS guidelines.

#### **4.1.2 Notification**

RUS notified federal, state, and local agencies of the proposed Project by mailing letters (via Agile) on June 15, 2011. The form letters detailed the role of the RUS in the proposed Project, invited recipients to the agency scoping meeting, outlined the availability of the AE- SSS, specified the dates and locations of the public and agency scoping meetings, provided contact information for the RUS representative assigned to the proposed Project, and detailed the process for submitting comments (**Appendix B**). A hardcopy of the AE-SSS was included in each invitation letter. A total of 13 individuals representing the following 11 agencies were invited to the public and agency scoping meetings:

- Ohio Department of Natural Resources
- Ohio Environmental Protection Agency
- Ohio Department of Transportation, Office of Environmental Services
- Ohio Department of Transportation, Office of Aviation
- Ohio Historic Preservation Office
- Ohio Air Quality Development Authority
- Public Utility Commission of Ohio
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- Noble County Commissioners
- Brookfield Township Trustees

#### **4.1.3 Agency Meeting Cancellation**

Due to the receipt of only one response expressing interest in attending the agency meeting, this meeting was cancelled via email notification dated July 11, 2011 (**Appendix B**). Invitees were alternately invited to attend the public meeting held on July 14 in Caldwell, Ohio and instructed as to the procedures for submitting comments concerning the project and obtaining electronic copies of the AE-SSS.

#### **4.2 Tribal Governments**

Due to the disturbed state of the Project site, government-to-government consultation with tribal governments was not initiated. If cultural sites of tribal origin are discovered during the preparation of the EA, RUS will initiate consultation in accordance with Section 106 of the National Historic Preservation Act.

#### **4.3 Agency Comments**

The following federal, state, and local agencies and tribes provided written scoping comments that were mailed to RUS or Agile:

- Ohio Department of Natural Resources, Division of Wildlife
- Ohio Department of Natural Resources, Division of Wildlife, Ohio Biodiversity Data Base
- Ohio Department of Natural Resources, Division of Geological Survey
- Office of Surface Mining Reclamation and Enforcement
- Ohio Historic Preservation Office

- U.S. Fish & Wildlife Service

The comments discussed environmental topics including but not limited to wildlife resources, potential abandoned underground mines, potential underground oil and gas lines, strip mines, potential land use conflicts, and potential cultural resources. All agency comments submitted during (and after) the scoping period are provided in **Appendix C**.

**Table 4-1. Agency Comments**

<b>Comment Topic</b>	<b>Number of Comments</b>
Endangered & Threatened Species	2
Potential Abandoned Underground Mines	1
Potential Abandoned Oil & Gas Wells	1
Strip Mining	1
Potential Land Use Conflicts	1
Potential Cultural Resources	1

## 5.0 Public Scoping Process

RUS held a public scoping meeting, using an open house format, at the Caldwell Elementary School, 44350 Fairground Road, Caldwell, Ohio 43724. The public scoping meeting was held between 5:00 p.m. and 9:00 p.m. on July 14, 2011.

### 5.1 Purpose

The purpose of the public scoping meeting was to provide the public with information regarding the proposed Project, answer questions relating to the proposed Project and environmental review process, identify concerns regarding the potential environmental impacts that may result from construction and operation of the proposed Project, and gather information from the public to determine the scope of issues to be addressed in the RUS environmental review and documentation of the proposed Project (in accordance with RUS Bulletin 1794A-603). The notification process, public scoping meeting, and process for collecting public comments are described in the following sections.

### 5.2 Scoping Meeting Notices

Several methods were used to notify the public of the scoping process and meeting, including a *Federal Register* notice, legal notices in newspapers, and paid advertisement in newspapers. The Notice of Intent (NOI) to prepare an EA and hold scoping meetings was published in the *Federal Register* on June 27, 2011. The NOI included a summary of the proposed Project, public scoping meeting information, 30-day public comment period start and end dates, and RUS contact information.

In addition to the NOI, a legal notice was published in the legal section and a paid advertisement was published in the news section of three newspapers within the Project area. **Table 5-1** lists the names of the publications and dates of the advertisements and legal notices. The NOI is included in **Appendix D**. The newspaper notices are included in **Appendix E**.

**Table 5-1. List of Newspapers**

<b>Newspaper</b>	<b>City</b>	<b>Publish Date</b>
Daily Jeffersonian	Cambridge, Ohio	27-June-11
Zanesville Times-Recorder	Zanesville, Ohio	28-June-11
Journal-Leader	Caldwell, Ohio	5-July-11

### 5.3 Public Scoping Meeting

An open house format was used to encourage discussion and information sharing as well as to ensure that the public had opportunities to speak directly with RUS and TPS representatives. Stations were set up around the room and staffed with representatives from RUS, TPS, and Project consultants. Information stations included:

- Sign-in and Welcome Table
  - Sign-in Sheets
  - RUS Meeting Handout/ Project Fact Sheet
  - RUS Comment Form
- A series of Project information boards including:
  - Project Area (on high-quality aerial photo)
  - Project Highlights
  - Site Selection Criteria
  - Permitting/Environmental Review Process
  - Visual Simulation (two boards)

Sign-in Sheets and comment forms (**Appendix F**) were made available to all scoping meeting attendees. **Appendix G** contains copies of the materials used at the Public scoping meetings including the information boards and handout.

### 5.4 Public and Non-Government Organization Comments

A total of four public and non-government organization comments were received during the scoping comment period beginning on July 14, 2011 and ending August 15, 2011. RUS requires a 30-day scoping comment period following the public scoping meetings. Comments collected during the public scoping meeting were included in the scoping comment period. The comments received after the deadline were not included in this report, but will continue to be collected and considered by RUS. Public comments were submitted using comment forms and e-mails. All comments received by TPS were submitted to RUS for review. A summary of the public and non-government organization comments received are organized by topic and provided below in **Table 5-2**. Five topics were discussed within the comments. Note that many of the public comments received discuss more than one topic, explaining why the total comment count in **Table 5-2** equals more than the number of comment letters and forms received during the scoping period. Each comment was listed as a separate topic and entered into the comment management database. Each comment letter or form is only entered into the database once, but is listed under all topics discussed within that comment. The comments received during the scoping

period were separated into two main categories; public and non-government organization scoping comments and agency scoping comments. Agency scoping comments are discussed in Section 4.3 and **Appendix C**. All public and non-government organization scoping comments received are located in **Appendix H**.

**Table 5-2. Public and Non-Government Organization Scoping Comments by Topic**

<b>Comment Topic</b>	<b>Number of Comments</b>
Copy of EA Requested	1
EIS versus EA Required	1
Solar Panels Should First be put on Roofs	1
Breadth of Outreach Insufficient	1
Encouragement of Project Approval	1

#### **5.4.1 Copy of EA Requested**

One (1) comment was received requesting any available information, including copies of the environmental analysis from the scoping announcements and summaries through to the RUS environmental decision.

#### **5.4.2 EIS versus EA Required**

One (1) comment was received stating that an EA was not sufficient for this project, and that an EIS should be required.

#### **5.4.3 Solar Panels Should First be Put on Roofs**

One (1) comment was received stating that solar panels should first be put on roofs, etc. and not on open farm land.

#### **5.4.4 Breadth of Outreach Insufficient**

One (1) comment was received stating that having a meeting at the local site is not broad outreach as required by NEPA.

#### **5.4.5 Encouragement of Project Approval**

One (1) comment was received stating that the project represents a great opportunity for southeast Ohio, pointing out that the land was formerly strip-mined and that the impacts will be minimal. The commenter ended by encouraging quick approval of the environmental reviews.

## **6.0 Project Status**

Based on the initial scoping process and additional comments received, RUS has decided to continue in its preparation of an EA and anticipates that distribution of the EA should occur in late autumn 2011. A public review and comment period on the EA would occur in the same timeframe. In addition, RUS would engage in necessary agency consultation and coordination regarding potential affects to resources, pursuant to Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act. RUS would continue to review and

respond to substantive comments. An agency (RUS) environmental decision regarding the outcome of the NEPA process is expected to be reached in 2011.

## 7.0 Tentative Environmental Assessment Schedule

The current schedule for developing the EA and the anticipated completion is provided in **Table 7-1**. This schedule is subject to change as the Project proceeds.

**Table 7-1. Tentative EA Schedule**

<b>Federal EA Milestones</b>	<b>Date</b>
Submit Alternative Evaluation Study and Macro-Corridor Study to RUS	June 2011
Hold Public Scoping Meetings for EA	July 2011
Publication of RUS Scoping Report	September 2011
Publish EA	November 2011
Issue Agency (RUS) Environmental Decision	December 2011

## 8.0 Additional Environmental Review Requirements

TPS would be required to obtain approvals from a variety of federal, state, and local agencies prior to constructing the proposed Project. During development of the AE-SSS, permitting and regulatory requirements were reviewed to identify jurisdictional authorities.

The agency with primary NEPA responsibilities for this project is RUS. **Table 8-1** identifies permits, approvals, and other project coordination that may be needed by federal agencies, tribal governments, the state of Ohio, counties, and townships. This preliminary listing of regulatory requirements is subject to change as the proposed Project proceeds.

**Table 8-1. Required Permits, Approvals, and Coordination**

<b>Agency</b>	<b>Permit, Regulatory Compliance, or Coordination</b>
<b>Federal</b>	
Rural Utilities Service	NEPA Compliance and Approval of Financial Assistance, Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act coordination, and Native American Consultation
U.S. Fish and Wildlife Service	Section 7 of the Endangered Species Act, Migratory Bird Treaty Act of 1918, and Bald and Golden Eagle Protection Act of 1972
U.S. Army Corps of Engineers	Sections 401 and 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899
Department of Agriculture – Natural Resources Conservation Service	Farmland Conversion Form - Form AD-1006
<b>State</b>	
Ohio Department of Natural Resources	Fish and Wildlife Coordination Act, the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code
Ohio Environmental Protection Agency	Section 401 of the Clean Water Act, Ohio Isolated Wetlands Law (Ohio Revised Code 6111.02 to 6111.028)
Ohio Historic Preservation Office	Section 106 of the National Historic Preservation Act coordination

## 9.0 Conclusion

The intent of the information within this Scoping Report is to identify potential Project affects and concerns that would be addressed in the EA document. All comments within this Scoping Report will be considered while developing the EA.

## 10.0 References Cited

- Godfrey, Jay F. 2011. Before the Public Utilities Commission of Ohio Direct Testimony of Jay F. Godfrey on Behalf of Columbus Southern Power Company and Ohio Power Company. January 27, 2011.  
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