

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426  
December 12, 2018

OFFICE OF ENERGY PROJECTS

Project No. 2570-032  
Racine Hydroelectric Project  
AEP Generation Resources Inc.

**Subject: Scoping Document 2 for the Racine Hydroelectric Project**

To the Parties Addressed:

The Federal Energy Regulatory Commission (Commission) is currently reviewing the Pre-Application Document filed July 2, 2018, by AEP Generation Resources, Inc. (AEP Generation Resources) for relicensing the Racine Hydroelectric Project (Racine Project) (FERC No. 2570). The project is located at the U.S. Army Corps of Engineers' (Corps) Racine Locks and Dam on the Ohio River near the Town of Racine in Meigs County, Ohio. The project occupies 23 acres of federal land administered by the Corps.

Pursuant to the National Environmental Policy Act of 1969, as amended, Commission staff intends to prepare an environmental assessment (EA), which will be used by the Commission to determine whether, and under what conditions, to issue a new license for the project. To support and assist our environmental review, we are beginning the public scoping process to ensure that all pertinent issues are identified and analyzed, and that the EA is thorough and balanced.

Our preliminary review of the environmental issues to be addressed in the EA was contained in Scoping Document 1 (SD1), which was issued on August 21, 2018. We requested comments on SD1, conducted an environmental site review, and held scoping meetings on September 26 and 27, 2018, to hear the views of all interested agencies and entities on the scope of issues that should be addressed in the EA. Based on verbal comments received at the meetings and the submission of written comments, we have updated SD1 to reflect our current view of issues and alternatives to be considered in the EA. ***Key changes from SD1 to SD2 are identified in bold, italicized type.***

The enclosed SD2 supersedes SD1. SD2 is issued for informational use by all interested parties; no response is required. If you have any questions about SD2, the scoping process, or how Commission staff will develop the EA for this project, please contact Jay Summers at (202) 502-8764, or [jay.summers@ferc.gov](mailto:jay.summers@ferc.gov). Additional information about the Commission's licensing process and the Racine Project may be obtained from our website (<http://www.ferc.gov>) or AEP Generation Resources' relicensing website (<http://www.aephydro.com/Hydroplant/racine>).

Enclosure: Scoping Document 2

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**SCOPING DOCUMENT 2**  
**RACINE HYDROELECTRIC PROJECT**  
**OHIO**  
**FERC PROJECT NO. 2570-032**



Federal Energy Regulatory Commission  
Office of Energy Projects  
Division of Hydropower Licensing  
Washington, D.C.

December 2018

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## SCOPING DOCUMENT 2

### Racine Hydroelectric Project No. 2570-032

#### 1.0 INTRODUCTION

The Federal Energy Regulatory Commission (Commission or FERC), under the authority of the Federal Power Act (FPA),<sup>1</sup> may issue licenses for terms ranging from 30 to 50 years for the construction, operation, and maintenance of non-federal hydroelectric projects. On July 2, 2018, AEP Generation Resources, Inc. (AEP Generation Resources) filed a Pre-Application Document (PAD) and Notice of Intent to seek a new license for the Racine Hydroelectric Project (Racine Project or project) (FERC Project No. 2570).<sup>2</sup>

The Racine Project is located at the U.S. Army Corps of Engineers' (Corps) Racine Locks and Dam on the Ohio River at river mile (RM) 237.5 near the Town of Racine in Meigs County, Ohio (**figure 1**). The project consists of an intake canal, a concrete powerhouse with two horizontal bulb turbines (each connected to a generator), a cellular cofferdam connecting the powerhouse to the right abutment, a tailrace, and a 475-foot-long, 69-kilovolt (kV) transmission line. The project has a total installed capacity of 47.5 megawatts (MW). The total annual generation of the project from 2012 through 2016 was 198,948 megawatt-hours. A detailed description of the project is provided in section 3.0, *Proposed Action and Alternatives*. The project occupies 23 acres of federal land administered by the Corps.

The National Environmental Policy Act of 1969 (NEPA),<sup>3</sup> the Commission's regulations, and other applicable laws require that we independently evaluate the environmental effects of relicensing the Racine Project as proposed, and also consider reasonable alternatives to the licensee's proposed action. At this time, we intend to prepare an environmental assessment (EA) that describes and evaluates the probable effects, including an assessment of the site-specific and cumulative effects, if any, of the proposed action and alternatives. The EA preparation will be supported by a scoping process to ensure that all pertinent issues are identified and analyzed.

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<sup>1</sup> 16 U.S.C. §§ 791(a)-825(r).

<sup>2</sup> The current license for the Racine Project was issued on December 27, 1973, with an effective date of December 1, 1973, for a term of 50 years, and expires on November 30, 2023. *Ohio Power Company*, 50 F.P.C. 2020 (1973).

<sup>3</sup> National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, §4(b), September 13, 1982).

Although our current intent is to prepare an EA, there is a possibility that an environmental impact statement (EIS) may be required. The scoping process will satisfy the NEPA scoping requirements, irrespective of whether the Commission issues an EA or an EIS.

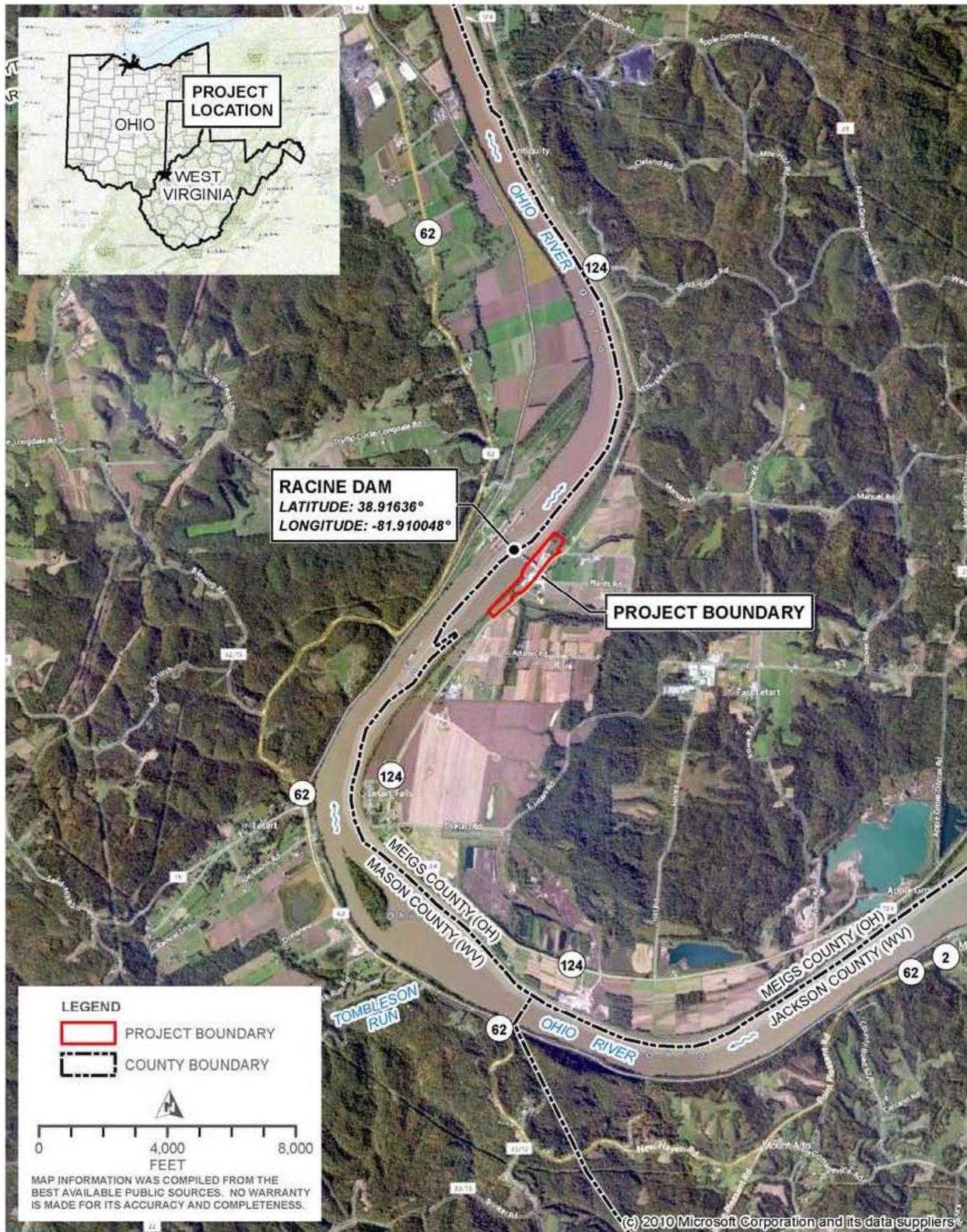


Figure 1. Project location map (Source: AEP Generation Resources, 2018).

## **2.0 SCOPING**

This Scoping Document 2 (SD2) is intended to advise all participants as to the proposed scope of the EA and to seek additional information pertinent to this analysis. This document contains: (1) a description of the scoping process and schedule for the development of the EA; (2) a description of the applicant's proposed action and alternatives; (3) a preliminary identification of environmental issues and proposed studies; (4) a proposed EA outline; and (5) a preliminary list of comprehensive plans that are applicable to the project.

### **2.1 PURPOSES OF SCOPING**

Scoping is the process used to identify issues, concerns, and opportunities for enhancement or mitigation associated with a proposed action. According to NEPA, the scoping process should be conducted during the early planning stages of a project. The purposes of the scoping process are as follows:

- invite participation of federal, state, and local resource agencies; Indian tribes; non-governmental organizations (NGOs); and the public to identify significant environmental and socioeconomic issues related to the proposed project;
- determine the resource issues, depth of analysis, and significance of issues to be addressed in the EA;
- identify how the project would or would not contribute to cumulative effects in the project area;
- identify reasonable alternatives to the proposed action that should be evaluated in the EA;
- solicit from participants available information on the resources at issue, including existing information and study needs; and
- determine the resource areas and potential issues that do not require detailed analysis during review of the project.

### **2.2 COMMENTS, SCOPING MEETINGS, AND ENVIRONMENTAL SITE REVIEW**

Commission staff issued Scoping Document 1 (SD1) on August 21, 2018, to enable resource agencies, Indian tribes, and other interested parties to more effectively participate in and contribute to the scoping process. In SD1, we requested clarification of preliminary issues concerning the project and identification of any new issues that needed to be addressed in the EA.

We conducted two scoping meetings and held an environmental site review to identify potential issues associated with the Racine Project. Scoping meetings were held in Pomeroy, Ohio, on September 26 and 27, 2018, and an environmental site review was held on September 26, 2018. The scoping meetings and environmental site review were

noticed in local newspapers and the Federal Register. A court reporter recorded and transcribed oral comments made during both scoping meetings.

In addition to oral comments received at the scoping meetings, written comments were filed by the following entities:

<u>COMMENTING ENTITY</u>	<u>FILING DATE</u>
U.S. Environmental Protection Agency (EPA)	October 29, 2018
Ohio Department of Natural Resources (Ohio DNR)	October 29, 2018
West Virginia Department of Natural Resources (West Virginia DNR)	October 30, 2018
U.S. Fish and Wildlife Service (FWS)	October 30, 2018

We revised SD1 following the scoping meetings and after reviewing comments filed during the scoping comment period, which ended on October 30, 2018. This SD2 presents our current view of issues and alternatives to be considered in the EA. ***To facilitate review, key changes from SD1 to SD2 are identified in bold, italicized type.***

All comments received are part of the Commission’s official record for the project. Information in the official file is available for inspection and reproduction at the Commission’s Public Reference Room, located at 888 First Street, NE, Room 2A, Washington, DC 20426, or by calling (202) 502-8371. Information also may be accessed through the Commission’s eLibrary system using the “Documents & Filings” link on the Commission’s webpage at <http://www.ferc.gov>. Call (202) 502-6652 for assistance.

### 2.3 ISSUES RAISED DURING SCOPING

***The issues raised by participants in the scoping process are summarized and addressed below. Note that the primary purpose of SD2 is to identify the issues to be analyzed in the EA. The summary does not include every oral and written comment made during the scoping process. We revised SD1 to address only those comments relating directly to the scope of environmental issues for the Racine Project. Comments on the PAD and study requests are not discussed here, as they will be considered during the study plan development process. Nor do we address comments that are recommendations for license conditions, such as protection, mitigation, and enhancement (PM&E) measures, as these comments will be addressed in the NEPA document and/or any license order that is issued for this project. We will request final terms, conditions, recommendations, and comments when we issue our Ready for Environmental Analysis (REA) notice, following the filing of the license application.***

#### General

***Comment: EPA recommends that the EA provide information and details on how FERC will incorporate the staff-recommended actions and mitigation measures contained in FERC’s 1988 Final Environmental Impact Statement (1988 EIS) for***

*Hydroelectric Development in the Upper Ohio River Basin.*<sup>4</sup> EPA also recommends that Commission staff review the recommendations and commitments made regarding the 1988 EIS and in EPA's previous comment letters on the 1988 EIS.<sup>5</sup>

*Response: In the EA, Commission staff will consider current conditions as informed by AEP Generation Resources' license application for the project, including recent studies in the Ohio River, and other relevant existing information as support for its recommendations. As for recommendations of the 1988 EIS, the Commission uses the best available information on existing conditions to determine potential project effects and inform its licensing decision. The 1988 EIS does not describe existing conditions nor does it provide recent analyses that would be useful to develop conditions for any new license issued for the Racine Project.*

*Comment: West Virginia DNR states that the Racine Project is unique because although it is located in Ohio, AEP Generation Resources must obtain water quality certification under section 401 of the Clean Water Act from both Ohio and West Virginia.*

*Response: Under section 401(a)(1) of the Clean Water Act, only the state where the discharge from a project will originate has the authority to act on a water quality certification request. The boundary line between Ohio and West Virginia is the low water mark on the Ohio side of the Ohio River, which is located approximately halfway between the two states.<sup>6</sup> Because the powerhouse would be located and discharge on the Ohio side of the river, Ohio is the only state from which certification would be required under section 401(a)(1).*

*Comment: FWS requested additional details related to the turbine-generator units, including runner diameter, rated speed, and number of blades.*

*Response: AEP Generation Resources has not filed their final license application, which would provide specific project details. We will evaluate the information contained within the final license application to determine its adequacy. At that time, if additional information or clarification in regard to specific project details is needed for Commission staff to conduct our analysis, we would issue an additional information request to AEP Generation Resources to obtain this information.*

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<sup>4</sup> FERC. 1988. *Final Environmental Impact Statement, Hydroelectric Development in the Upper Ohio River Basin*. Filed October 1, 1988.

<sup>5</sup> EPA's comment letter on the 1988 FEIS (dated December 21, 2016) is appended to its October 29, 2018 comment letter.

<sup>6</sup> See West Virginia Base Map Viewer (accessed on December 6, 2019): [http://mapwv.gov/base\\_viewer/?wkid=102100&x=-9118130&y=4709732&l=10](http://mapwv.gov/base_viewer/?wkid=102100&x=-9118130&y=4709732&l=10).

## Aquatic Resources

***Comment: Ohio DNR, West Virginia DNR, EPA, and FWS state that continued operation of the project may affect populations of native freshwater mussels within the project area.***

***Response: In section 4.2.2, Aquatic Resources, we added “Effects of continued project operation on native freshwater mussels in the Ohio River” to our list of resource issues to analyze in the EA.***

***Comment: EPA recommends that the Commission review recent Corps mussel surveys and determine how to ensure that project effects to mussel beds would be avoided. EPA also recommends that the EA discuss mussel resources and potential project effects on mussels.***

***Response: In the EA, we will analyze the information contained in the Corps mussel surveys from 2010 and 2015, along with other relevant information in the record as part of our assessment of potential project effects on freshwater mussels in the project area. In section 4.2.2, Aquatic Resources, we added “Effects of continued project operation on native freshwater mussels in the Ohio River” to our list of resource issues to analyze in the EA. In addition, section 4.1.1, Resources that Could Be Cumulatively Affected, has also been modified to include freshwater mussels, mussel beds, and glochidial host fish as resources that could also be cumulatively affected by the continued operation and maintenance of the project in combination with other activities in the Ohio River Basin.***

***Comment: Ohio DNR states that the project is within the range of several state-listed fish species (i.e., the western banded killifish, goldeye, speckled chub, paddlefish, river darter, and channel darter) and suggests these species could be affected by the continued operation of the project.***

***Response: In section 4.2.2, Aquatic Resources, we added “Effects of continued project operation on state-listed fish species in the Ohio River” to our list of resource issues to analyze in the EA.***

***Comment: Ohio DNR and FWS state that SD1 did not contain any detail in regard to the bar spacing of the existing trash racks at the project.***

***Response: Additional information on the trash racks at the project is needed. In a letter to AEP Generation Resources filed on October 26, 2018, Commission staff noted that the PAD did not contain any information on the project’s trash racks. Therefore, staff requested that AEP Generation Resources provide a detailed description of the existing trash racks at the project, including the bar spacing of the trash racks. AEP Generation Resources’ response to this additional information request is due by December 14, 2018, and should provide clarity on the bar spacing of the trash racks.***

***Comment: FWS expresses concern over several specific fish species (e.g., American eel and skipjack herring) that it states are present within the project area and may be***

*potentially affected by continued operation of the project. Specifically, FWS states that these species, including many that serve as hosts for special status freshwater mussel species, could potentially become entrained or impinged on the project's trash racks during project operation.*

*Response: Whether from existing information that is identified and entered into the record, or from the project-specific studies and surveys that may be conducted by AEP Generation Resources, the EA will characterize the entire known aquatic community. In addition, any effects on the aquatic community from continued project operation will be identified and evaluated in the EA, as indicated in section 4.2.2 (Aquatic Resources). Therefore, no change to SD2 is needed.*

*Comment: FWS and West Virginia DNR expresses concern over the effects of continued project operation on the upstream and downstream passage of migratory fish species and fish species which serve as glochidial hosts for freshwater mussel species present in the project area.*

*Response: In section 4.2.2, Aquatic Resources, we added "Effects of continued project operation on upstream and downstream fish passage at the Racine Locks and Dam" to our list of resource issues to analyze in the EA.*

*Comment: FWS expresses concern over the effects of continued project operation on rare fish species (e.g., bluebreast and Tippecanoe darters) in the project's tailrace.*

*Response: In section 4.2.2, Aquatic Resources, we added "Effects of continued project operation on downstream aquatic biota and their habitats" to our list of resource issues to analyze in the EA.*

*Comment: EPA recommends that Ohio River Valley Water Sanitation Commission (ORSANCO) fish survey data be considered in the EA's assessment of impacts to fish communities. EPA also states that the Ohio River fisheries biologist for the States of West Virginia and Ohio and the Ohio River Fisheries Management Team should be contacted and their recommendations incorporated into the EA.<sup>7</sup> Lastly, EPA states that this fish data and these consultations would help determine the need for more expansive fishery studies.*

*Response: We will analyze the information contained in fish surveys previously conducted by ORSANCO in the project vicinity, along with other information in the record as part of our assessment of potential project effects on fishery resources. We also note that both Ohio DNR and West Virginia DNR are actively involved in the pre-filing process for the project. In letters filed with the Commission on October 29 and October 30, 2018, Ohio DNR and West Virginia DNR, respectively, filed comments on the PAD and SD1, and study requests. We will request final terms, conditions,*

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<sup>7</sup>*Fishery resources in the Ohio River are cooperatively managed by state natural resource agencies bordering the river, including Pennsylvania, West Virginia, Ohio, Kentucky, Indiana, and Illinois through the Ohio River Fisheries Management Team.*

*recommendations, and comments from all stakeholders when we issue our Ready for Environmental Analysis notice.*

### **Resources That Could Be Cumulatively Affected**

*Comment: EPA recommends that the cumulative effects analysis in the EA also consider freshwater mussels, mussel beds, and fish species which serve as glochidial hosts to mussel species.*

*Response: We have modified section 4.1.1, Resources that Could Be Cumulatively Affected, to include mussels, mussel beds, and glochidial host fish as resources that could also be cumulatively affected by the continued operation and maintenance of the project in combination with other activities in the Ohio River Basin.*

*Comment: West Virginia DNR is concerned about the cumulative effects of hydroelectric projects in the Ohio River Basin on aquatic resources, particularly migratory fish species and mussel species that depend on specific fish species to serve as glochidial hosts. West Virginia DNR requests that the EA consider these potential cumulative effects.*

*Response: In SD1 we identified water quality and fishery resources as resources that could be cumulatively affected by the continued operation and maintenance of the project in combination with other activities in the Ohio River Basin, including navigation, hydropower, and other land and water development activities. We have revised section 4.1.1, Resources That Could Be Cumulatively Affected, to also include freshwater mussels (including mussel beds and glochidial host fish) as a cumulatively affected resource for analysis in the EA.*

### **Dam Safety**

*Comment: EPA states that the U.S. Global Change Research Program's 2014 National Climate Assessment found that in the Midwest region, extreme heat, heavy downpours, and flooding will affect infrastructure.<sup>8</sup> Based on this assessment, EPA recommends that the EA include a discussion of reasonably foreseeable effects that changes in the climate may have on the project, including its long-term infrastructure, and the project area. EPA states that this analysis could inform the development of measures to improve the resilience of the proposed project. Lastly, EPA states that if projected changes could notably exacerbate the environmental effects of the project, it recommends these effects also be considered in the EA.*

*Response: We are not aware of any available climate change model or assessment, including the National Climate Assessment, which is able to predict, with any degree of accuracy and reliability, water availability at the individual project level. However, 50*

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<sup>8</sup> Melillo, J.M., T.C. Richmond, and G.W. Yohe, Eds., *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program (2014), located at <http://nca2014.globalchange.gov/report>.

*years (i.e., 1968 through present) of historical streamflow data are available for the Ohio River using the United States Geological Survey gage no. 03216600 at Greenup Dam, which is approximately 103 miles upstream of the Racine Project. This streamflow data can be used to evaluate changes to hydraulic inputs over time at the individual project level, and would therefore serve as a baseline for the environmental analysis of aquatic resources.*

*The Racine Project is subject to Part 12 of the Commission's regulations (Safety of Water Power Projects and Project Works) under the current license. Part 12 requires, among other things, periodic operational inspections by Commission staff focusing on the continued safety of the structures. Projects that are subject to Part 12 must also be inspected and evaluated every 5 years by an independent consultant and a consultant's safety report must be submitted for Commission review.*

*As part of the relicensing process, Commission staff would evaluate the continued adequacy of the proposed project facilities under a new license. Special articles would be included in any license issued, as appropriate. Commission staff would continue to inspect the project during any new license term to assure continued adherence to Commission-approved plans and specifications, special license articles relating to construction (if any), operation and maintenance, and accepted engineering practices and procedures.*

### **3.0 PROPOSED ACTION AND ALTERNATIVES**

In accordance with NEPA, the environmental analysis will consider the following alternatives, at a minimum: (1) the no-action alternative, (2) the applicant's proposed action, and (3) alternatives to the proposed action.

#### **3.1 NO-ACTION ALTERNATIVE**

Under the no-action alternative, the Racine Project would continue to operate as required by the current project license (*i.e.*, there would be no change to the existing environment). No new environmental protection, mitigation, or enhancement (PM&E) measures would be implemented. We use this alternative to establish baseline environmental conditions for comparison with other alternatives.

##### **3.1.1 Existing Project Facilities**

The Racine Project is located at the Corps' Racine Locks and Dam, which is at RM 237.5 on the Ohio River within Mason County, West Virginia and Meigs County, Ohio. The Racine Locks and Dam is one of 20 Corps' locks and dams located along the Ohio River, which are operated for commercial and recreational navigation. Its reservoir extends 33.6 miles upstream to the Belleville Locks and Dam at RM 203.9 and the RC Byrd Locks and Dam, located at RM 279.2, forms the downstream reservoir. The Racine Locks and Dam consists of a gated spillway, lock structures, powerhouse and sheet pile cells. The locks, reservoir, and spillway are owned and operated by the Corps' and are not part of the project.

The Racine Project facilities are shown in figure 2 and include an intake canal, a powerhouse with two horizontal bulb turbines (each connected to a generator), a cellular cofferdam connecting the powerhouse to the right abutment, and a tailrace. The intake canal, which leads to the powerhouse's intake structure, is about 350 feet long and 110 feet wide. The intake structure, which is integral with the powerhouse, contains two 21.75-foot-wide by 60-foot-high intake openings for each of the two generating units, providing four openings total. Each intake opening has a set of steel trashracks. Two sets of stoplogs are provided so both units can be dewatered at the same time. The reinforced concrete powerhouse is a water-retaining structure approximately 132 feet long and 210 feet wide. The powerhouse contains two horizontal bulb turbines, each connected to a direct-coupled generator; each turbine/generator unit has an installed capacity of 24 MW at a flow of 16,000 cubic feet per second (cfs) under a gross head of 22 feet. The turbine/generator units discharge to a tailrace that returns the flow to the river 450 feet downstream of the dam. The 9-kV generator leads are connected to a 9/69-kV step-up transformer by a 475-foot-long transmission line. The step-up transformer is connected to the Racine bus where it connects to the grid.

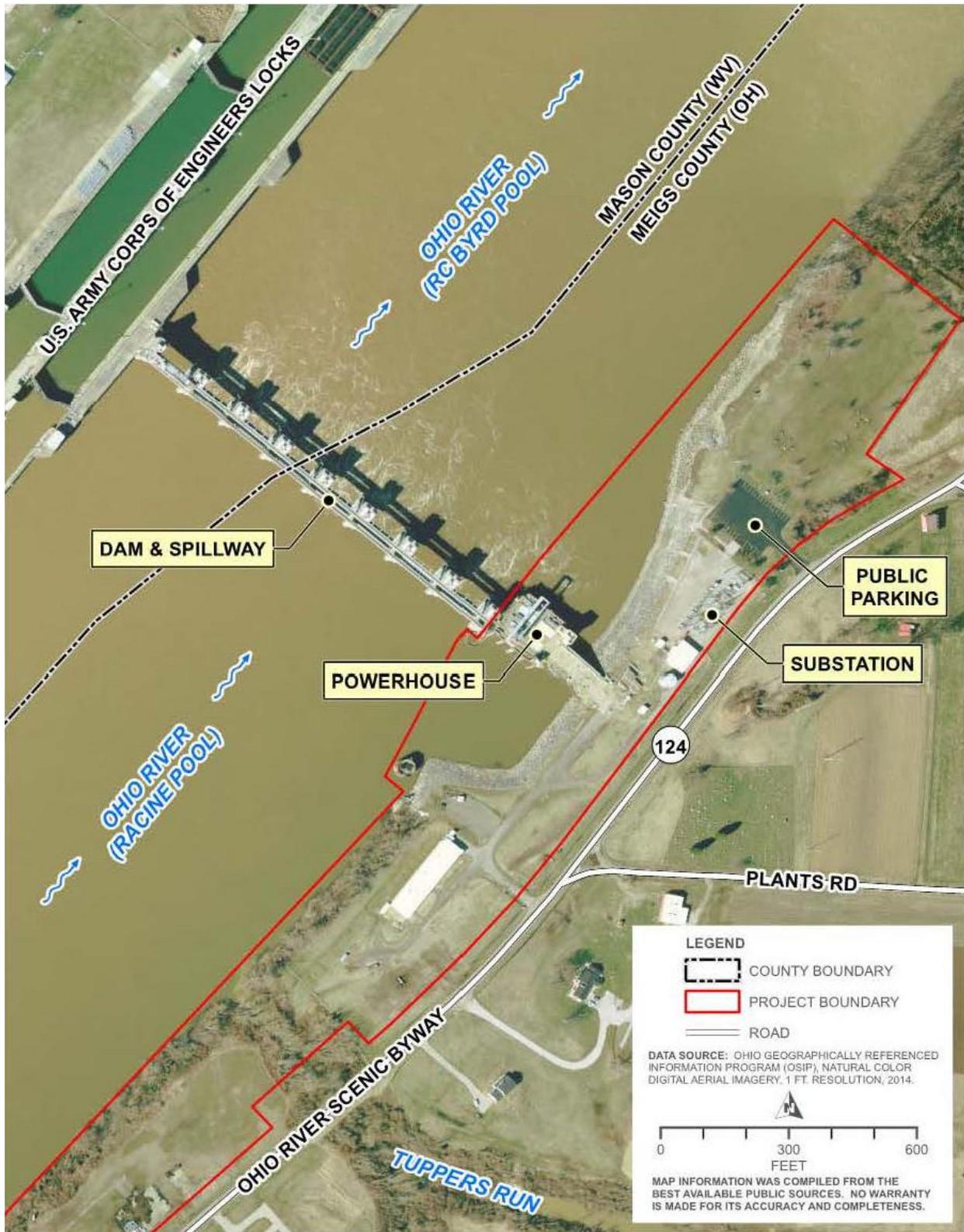


Figure 2. Project facilities for the Racine Project (Source: AEP Generation Resources, 2018).

### **3.1.2 Existing Project Operation**

The Racine Project is operated as a run-of-release<sup>9</sup> project in accordance with a February 25, 1983, operating agreement with the Corps. Under normal project operation, the upper pool level is maintained at 560.0 feet mean sea level (msl) and the lower pool is maintained so as not to fall below 538.0 feet msl. During normal operation, the project will generate with one or two of the units, 24 hours a day, when favorable river flows exist. River flows from about 4,000 cfs (minimum turbine discharge capacity) to 31,300 cfs (maximum turbine discharge capacity) normally will be passed through the project's turbines. For river flows between 31,300 cfs and 150,000 cfs, discharges are made through both the dam and the project turbines in a coordinated effort between AEP Generation Resources and the Corps. When river flows reach about 150,000 cfs, the Racine Project turbines are shut down due to a loss of operating head. Flows exceeding 150,000 cfs are released through the dam only. River flows greater than 225,000 cfs are considered open-river conditions when all Tainter gates at the dam are raised clear of the water. If the river flow is less than the minimum discharge, the hydroelectric plant is shut down and the flow is passed through the dam. AEP Generation Resources coordinates the starting and stopping of all units with the Corps.

## **3.2 APPLICANT'S PROPOSAL**

### **3.2.1 Proposed Project Facilities and Operations**

AEP Generation Resources proposes to continue to operate the Racine Project in a run-of-release mode. No new or upgraded facilities, structural changes, or operational changes are proposed for the project during the term of the new license.

### **3.2.2 Proposed Environmental Measures**

AEP Generation Resources proposes to continue operating the Racine Project with the PM&E measures described below. The potential need for additional PM&E measures will be evaluated during the relicensing process.

#### **Geologic and Soil Resources**

- There are no proposed PM&E measures related to geology and soil resources for the project.

#### **Aquatic Resources**

- Continue to operate the project in a run-of-release mode.

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<sup>9</sup> Although AEP Generation Resources describes its current operating mode as run-of-river, it is better defined as run-of-release because the project would generate from flows "released" (i.e., made available) to the project by the Corps.

### **Terrestrial Resources**

- There are no proposed PM&E measures related to terrestrial resources for the project.

### **Threatened and Endangered Species**

- There are no proposed PM&E measures related to threatened and endangered species for the project.

### **Recreation Resources**

- There are no proposed PM&E measures related to recreation, land use, and aesthetic resources for the project.

### **Cultural Resources**

- If properties eligible for or listed on the National Register of Historic Places are identified within the area of potential effect (APE), and may be potentially affected by project operation, AEP Generation Resources proposes to develop an Historic Properties Management Plan (HPMP).

### **Socioeconomic Resources**

- There are no proposed PM&E measures related to socioeconomic resources for the project.

## **3.3 DAM SAFETY**

It is important to note that dam safety constraints may exist and should be taken into consideration in the development of proposals and alternatives considered in the pending proceeding. For example, proposed modifications to the dam structure, such as the addition of flashboards or fish passage facilities, could impact the integrity of the dam structure. As the proposal and alternatives are developed, the applicant must evaluate the effects and ensure that the project would meet the Commission's dam safety criteria found in Part 12 of the Commission's regulations and the Engineering Guidelines (<http://www.ferc.gov/industries/hydropower/safety/guidelines/eng-guide.asp>).

## **3.4 ALTERNATIVES TO THE PROPOSED ACTION**

Commission staff will consider and assess all alternative recommendations for operational or facility modifications, as well as environmental measures identified by staff, federal and state agencies, Indian tribes, NGOs, and the public.

### **3.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY**

At present, we propose to eliminate the following alternatives from detailed study in the EA.

#### **3.5.1 Federal Government Takeover**

In accordance with 18 C.F.R. § 16.14 of the Commission's regulations, a federal department or agency may file a recommendation that the United States exercise its right to take over a hydroelectric power project with a license that is subject to sections 14 and 15 of the FPA.<sup>10</sup> We do not consider federal takeover to be a reasonable alternative. Federal takeover of the project would require congressional approval. While that fact alone would not preclude further consideration of this alternative, there is currently no evidence showing that federal takeover should be recommended to Congress. No party has suggested that federal takeover would be appropriate, and no federal agency has expressed interest in operating the project.

#### **3.5.2 Non-Power License**

A non-power license is a temporary license the Commission would terminate whenever it determines that another governmental agency is authorized and willing to assume regulatory authority and supervision over the lands and facilities covered by the non-power license. At this time, no governmental agency has suggested a willingness or ability to take over the project. No party has sought a non-power license, and we have no basis for concluding that the Racine Project should no longer be used to produce power. Thus, we do not consider a non-power license a reasonable alternative to relicensing the project.

#### **3.5.3 Project Decommissioning**

Decommissioning of the project could be accomplished with or without removal of some, or all, project facilities. Either alternative would require denying the relicense application and surrender or termination of the existing license with appropriate conditions. There would be significant costs involved with decommissioning the project and/or removing any project facilities. The project provides a viable, safe, and clean renewable source of power to the region. With decommissioning, the project would no longer be authorized to generate power.

No party has suggested project decommissioning would be appropriate in this case, and we have no basis for recommending it. Thus, we do not consider project decommissioning a reasonable alternative to relicensing the project with appropriate environmental measures.

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<sup>10</sup> 16 U.S.C. §§ 791(a)-825(r).

## **4.0 SCOPE OF CUMULATIVE EFFECTS ANALYSIS AND RESOURCE ISSUES**

### **4.1 CUMULATIVE EFFECTS**

According to the Council on Environmental Quality's regulations for implementing NEPA (40 C.F.R. § 1508.7), a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time, including hydropower and other land and water development activities.

#### **4.1.1 Resources That Could Be Cumulatively Affected**

Based on information in the PAD for the Racine Project, and preliminary staff analysis, we have identified water quality, fisheries, *and freshwater mussels (including mussel beds and glochidial host fish)* as resources that could be cumulatively affected by the continued operation and maintenance of the project in combination with other activities in the Ohio River Basin, including navigation, hydropower, and other land and water development activities.

#### **4.1.2 Geographic Scope**

Our geographic scope of analysis for cumulatively affected resources is defined by the physical limits or boundaries of: (1) the proposed action's effect on the resources, and (2) contributing effects from other hydropower and non-hydropower activities within the Ohio River Basin. The proposed action would affect resources differently, and for this reason, the geographic scope for each resource may vary. We have identified the geographic scope for water quality to include the Ohio River, from the Racine Locks and Dam at RM 237.5 to the downstream Robert C. Byrd Locks and Dam located at RM 279.2. We have identified the geographic scope for fisheries resources to include the Ohio River, from the upstream Belleville Locks and Dam at RM 203.9 to the downstream Robert C. Byrd Locks and Dam located at RM 279.2. We chose these geographic scopes because we expect the effects of project operation on these respective resources and any mitigation measures to be limited to these areas.

#### **4.1.3 Temporal Scope**

The temporal scope of our cumulative effects analysis in the EA will include a discussion of the past, present, and reasonably foreseeable future actions and their effects on each resource that could be cumulatively affected. Based on the potential term of a new license, the temporal scope will look 30 to 50 years into the future, concentrating on the effect on the resources from reasonably foreseeable future actions. The historical discussion will, by necessity, be limited to the amount of available information for each

resource. The quality and quantity of information, however, diminishes as we analyze resources further away in time from the present.

## **4.2 RESOURCE ISSUES**

In this section, we present a preliminary list of environmental issues to be addressed in the EA. We identified these issues, which are listed by resource area, by reviewing the PAD and the Commission's record for the Racine Project. This list is not intended to be exhaustive or final, but contains those issues raised to date that could have substantial effects. After the scoping process is complete, we will review the list and determine the appropriate level of analysis needed to address each issue in the EA. Those issues identified by an asterisk (\*) will be analyzed for both cumulative and site-specific effects.

### **4.2.1 Geologic and Soils Resources**

- None

### **4.2.2 Aquatic Resources\***

- Effects of continued project operation on water quality (e.g., dissolved oxygen and water temperature) in the Ohio River downstream of the project.
- Effects of entrainment and impingement mortality on resident fish populations.
- *Effects of continued project operation on upstream and downstream fish passage at Racine Locks and Dam.*
- *Effects of continued project operation on native mussels in the Ohio River.*
- *Effects of continued project operation on state-listed fish species in the Ohio River.*
- *Effects of continued project operation on downstream aquatic biota and their habitats.*

### **4.2.3 Terrestrial Resources**

- Effects of continued project operation on the state-listed endangered eastern spadefoot.

### **4.2.4 Threatened and Endangered Species**

- Effects of continued project operation on the following federally listed threatened and endangered species: running buffalo clover; Indiana bat; northern long-eared bat; and the fanshell, pink mucket, sheepnose, and snuffbox mussels.

#### **4.2.5 Recreation**

- Adequacy of existing recreation facilities and public access at the project to meet current and future recreational demand.

#### **4.2.6 Cultural Resources**

- Effects of continued project operation on properties that are included in or eligible for inclusion in the National Register of Historic Places.

#### **4.2.7 Developmental Resources**

- The effects of any recommended environmental measures on the project's economics.

## 5.0 PROPOSED STUDIES

AEP Generation Resources’ initial study proposal is identified by resource area in Table 1. Detailed information on AEP Generation Resources’ initial study proposals can be found in the PAD. Additional studies may be added to this list based on comments provided by Commission staff, federal and state resource agencies, Indian tribes, and other interested participants during this scoping process.

AEP Generation Resources has not identified any issues relating to the following resources: geology and soils, or socioeconomic resources. Therefore, no studies are proposed for these resource areas.

Table 1. AEP Generation Resources’ initial study proposals for the Racine Paper Project (Source: AEP Generation Resources, 2018).

<b>Resource Area and Study Name</b>	<b>Proposed Study/Information Need</b>
<b>Aquatic Resources</b>	
Water Quality Study (dissolved oxygen and water temperature)	AEP Generation Resources proposes to conduct a dissolved oxygen and water temperature study downstream of the project to confirm compliance with Ohio Environmental Protection Agency water quality standards and designated uses.
Fish Entrainment/ Impingement Study	AEP Generation Resources proposes to conduct a desktop entrainment/impingement study to assess potential project effects on fish mortality and injury.
<b>Terrestrial Resources</b>	
Eastern Spadefoot Habitat Suitability Study	AEP Generation Resources proposes to consult with Ohio Department of Wildlife to determine the need for an eastern spadefoot habitat survey within the project area.
<b>Recreation Resources</b>	
Recreation Resources	AEP Generation Resources proposes to: (1) evaluate the need for improvements to existing recreation facilities in the tailrace area of the project; and (2) conduct a recreation assessment of the project to evaluate recreational opportunities and potential improvements in the project boundary.

<b>Resource Area and Study Name</b>	<b>Proposed Study/Information Need</b>
<b>Cultural Resources</b>	
Cultural Resources	AEP Generation Resources proposes to assess potential project effects on historic and archeological resources, and the need for any additional archaeological site file search and/or Phase I investigation in the project's APE, through consultation with the Ohio State Historic Preservation Office.

## 6.0 EA PREPARATION SCHEDULE

At this time, we anticipate preparing a single EA. The EA will be sent to all persons and entities on the Commission's service and mailing lists for the Racine Project. The EA will include our recommendations for operating procedures, as well as PM&E measures that should be part of any license issued by the Commission. All recipients will then have 30 days to review the EA and file written comments with the Commission.

The major milestones, with pre-filing target dates are as follows:

<b><u>Major Milestone</u></b>	<b><u>Target Date</u></b>
Scoping Meetings	September 2018
License Application Filed	November 2021
Ready for Environmental Analysis Notice Issued	
Deadline for Filing Comments, Recommendations, and Agency Terms and Conditions/Prescriptions	
Single EA Issued	
Comments on EA Due	

Post-filing milestones will be established following AEP Generation Resources' filing of the final license application. A copy of the process plan and schedule, which has a complete list of pre-filing milestones for the Racine Project, including those for developing the license application, is attached as Appendix A to this SD2.

## **7.0 PROPOSED EA OUTLINE**

The preliminary outline for the Racine Project EA is as follows:

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## APPENDICES

A—Draft License Conditions Recommended by Staff

## 8.0 COMPREHENSIVE PLANS

Section 10(a)(2)(A) of the FPA<sup>11</sup> requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Commission staff has preliminarily identified and reviewed the plans listed below that may be applicable to the Racine Project. Agencies are requested to review this list and inform staff of any changes. If there are other comprehensive plans that should be considered for this list that are not on file with the Commission, or if there are more recent versions of the plans already listed, they can be filed for consideration with the Commission according to 18 C.F.R. 2.19 of the Commission's regulations. Please follow the instructions for filing a plan at <http://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf>.

The following is a list of comprehensive plans currently on file with the Commission that may be relevant to the Racine Project:

- National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington D.C. 1993.
- Ohio Department of Natural Resources. 1991. Statewide river inventory. Columbus, Ohio. August 1991.
- Ohio Department of Natural Resources. Ohio Statewide Comprehensive Outdoor Recreation Plan (SCORP): A plan for the future. Columbus, Ohio. July 2003.
- Ohio Department of Natural Resources. 2004. Boating on Ohio Waterways Plan. Columbus, Ohio. May 2004.
- Ohio River Basin Commission. 1978. Upper Ohio main stem comprehensive coordinated joint plan. Cincinnati, Ohio. January 1978.
- U.S. Fish and Wildlife Service. n.d. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

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<sup>11</sup> 16 U.S.C. § 803(a)(2)(A) (2012).

## 9.0 MAILING LIST

The list below is the Commission’s official mailing list for the Racine Project (FERC No. 2570). If you want to receive future mailings for this proceeding and are not included in the list below, please send your request by email to [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov), or by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, D.C. 20426. All written and emailed requests to be added to the mailing list must clearly identify the following on the first page: **Racine Hydroelectric Project (FERC No. 2570-032)**. You may use the same method if requesting removal from the mailing list below.

Register online at <http://www.ferc.gov/docs-filing/esubscription.asp> to be notified via email of new filings and issuances related to this project or other pending projects. For assistance, please contact FERC Online Support at [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov), or toll free at 1-866-208-3676, or for TTY, (202) 502-8659.

### Official Mailing List for the Racine Project FERC Project No. 2570-032

Elizabeth Parcell AEP Generation Resources Process Supervisor 40 Franklin Road Roanoke, VA 24022	John A. Whittaker Winston & Strawn LLP 1700 K Street, NW Washington, D.C. 20006-3817
Douglas Rosenberger AEP Generation Resources Plant Manager Hydro 40 Franklin Road SW Roanoke, VA 24011	Janet J. Henry AEP Generation Resources 40 Franklin Road SW Roanoke, VA 24011
David Mark Shirley AEP Generation Resources Energy Production Supervisor 1 Riverside Plaza 24rd Floor Columbus, OH 43215	Teresa P. Rogers Appalachian Power Company PO Box 2021 Roanoke, VA 24022-2121
Thomas St. Pierre Associate General Counsel American Electric Power Service Corporation 1 Riverside Plaza, 29th Floor Columbus, OH 43215	Geological and Economic Survey Director State of West Virginia 1 Mont Chateau Road Morgantown, WV 26508-8079

<p>Fred Cutlip Intergovernmental Review Community and Industrial Development Building 6, Room 553 S. Capitol Complex Charleston, WV 25305</p>	<p>County of Mahoning Board of County Commissioners 21 W. Boardman Street, Suite 200 Youngstown, OH 44503-1416</p>
<p>Sean D. Logan Director Ohio Department of Natural Resources 2045 Morse Road Columbus, OH 43229</p>	<p>Ohio Department of Natural Resources Director Division of Soil and Water Resources 2045 Morse Road, Building B-3 Columbus, OH 43229</p>
<p>Ohio Department of Natural Resources Director Department of Reclamation 2045 Morse Road Columbus, OH 43229</p>	<p>Ohio Department of Natural Resources Wildlife Division SCEA Unit 2045 Morse Road, Bldg G Columbus, OH 43229-6693</p>
<p>Ohio Department of Natural Resources Director Division of Soil and Water Conservation 2045 Morse Road Columbus, OH 43229</p>	<p>Ohio Department of Natural Resources Director Division of Parks and Recreation 2045 Morse Road Columbus, OH 43229</p>
<p>Ohio Department of Natural Resources Director Division of Water 2045 Morse Road Columbus, OH 43229</p>	<p>Ohio Historical Society Interstate 71 at 17<sup>th</sup> Avenue Columbus, OH 43211</p>
<p>Ohio Office of the Attorney General 30 East Broad Street State Office Tower Columbus, OH 43266-0001</p>	<p>Bill Vineyard Vice President American Electric Power Service Corporation PO Box 16631 Columbus, OH 43216-6631</p>
<p>James Kennedy Director Ohio Public Utilities Commission Forecasting and Power Siting Division 180 E Broad St., Floor 3 Columbus, OH 43215-3707</p>	<p>Gary E. Vigorito Secretary Ohio Public Utilities Commission 180 E Broad St Columbus, OH 43215-3707</p>

Bernard E. Imhoff Ohio Water Service Company Service Center 6650 South Ave Boardman, OH 44512-3624	Hoss HL Liaghat Pennsylvania Department of Environmental Protection 400 Market Street Harrisburg, PA 17105
Pennsylvania Fish & Boat Commission 595 E. Rolling Ridge Drive Bellefonte, PA 16823-8133	Susquehanna River Basin Commission 4423 North Front Street Harrisburg, PA 17110-1788
U.S. Army Corps of Engineers WM. S. Morehead Federal Building- Pittsburgh 1000 Liberty Avenue Pittsburgh, PA 15222-4004	U.S. Army Corps of Engineers 550 Main Street Cincinnati, OH 45202
U.S. Army Corps of Engineers Project Manager-Hydro WM. S. Morehead Federal Building- Pittsburgh District 1000 Liberty Avenue Pittsburgh, PA 15222-4186	Office of the Solicitor U.S. Bureau of Indian Affairs 1849 C Street, NW, MS 6557 Washington, D.C. 20240
Commanding Officer United States Coast Guard 95 Peyton St Barboursville, WV 25504	Commanding Officer United States Coast Guard MSO Toledo 420 Madison Ave Ste 700 Toledo, OH 43604-1265
United States Coast Guard MSO Cleveland 1055 East Ninth Street Cleveland, OH 44114-1092	FERC Contact United States Coast Guard MSO Chicago 555 Plainfield Rd, Ste A Willowbrook, IL 60527
United States Coast Guard MSO Louisville 600 Martin Luther King, Jr. Place, No. 360 Louisville, KY 40202-2230	United States Coast Guard Director, MSU Pittsburgh 1041 Washington Pike Suite 300 Bridgeville, PA 15017
United States Environmental Protection Agency Section Chief Region 3 1650 Arch Street Philadelphia, PA 19103-2029	United States Environmental Protection Agency Region 5 77 West Jackson Blvd Chicago, IL 60604-3511

<p>United States Fish and Wildlife Service Regional Director 300 Westgate Center Dr. Northeast Regional Office Hadley, MA 01035-9587</p>	<p>United States Fish and Wildlife Service 110 Radnor Rd Suite 101 State College, PA 16801-7987</p>
<p>United States Fish and Wildlife Service FERC Contact U.S. Fish &amp; Wildlife Service 4625 Morse Rd, Suite 104 Columbus, OH 43230-8355</p>	<p>United States Fish and Wildlife Service Regional Director 5600 American Blvd W Suite 990 Bloomington, MN 55437-1458</p>
<p>Alan B. Mollahan U.S. House of Representatives Washington, D.C. 20515</p>	<p>United States National Park Service 15 State St Boston, MA 02109-3502</p>
<p>Angela Marian Tornes United States National Park Service Midwest Hydropower Coordinator U.S. National Park Service 626 E. Wisconsin Ave Suite 100 Milwaukee, WI 53202</p>	<p>Kevin Mendik, ESQ NPS Hydro Program Coordinator U.S. National Park Service 15 State Street 10th floor Boston, MA 02109</p>
<p>Sherrod Brown Senator U.S. Senate 713 Hart Senate Office Building Washington, D.C. 20510</p>	<p>Joe Manchin Senator U.S. Senate 306 Hart Senate Office Building Washington, D.C. 20510</p>
<p>Shelley Moore Senator U.S. Senate 172 Russell Senate Office Building Washington, D.C. 20510</p>	<p>Rob Portman Senator U.S. Senate 448 Russell Senate Office Building Washington, D.C. 20510</p>
<p>West Virginia Department of Agriculture Director State Capitol Building Charleston, WV 25305</p>	<p>West Virginia Hydro, Inc. Agent P.O. Box 5550 Aiken, SC 29804-5550</p>
<p>West Virginia Press Services, Inc. 3422 Pennsylvania Ave. Charleston, WV 25302-4633</p>	<p>David M. Coon Wisconsin Valley Improvement Company 2301 3<sup>rd</sup> Street Wausau, WI 54403-3202</p>

## APPENDIX A: RACINE PROCESS PLAN AND SCHEDULE

This process plan establishes the deadlines for the pre-filing process. If the due date falls on a weekend or holiday, the due date is the following business day. Early filings or issuances will not result in changes to these deadlines. Shaded milestones are unnecessary if there are no study disputes.

<b>Responsible Party</b>	<b>Pre-Filing Milestone</b>	<b>Date</b>	<b>FERC Regulation</b>
AEP Generation Resources	Issue Public Notice for NOI/PAD	7/2/18	5.3(d)(2)
AEP Generation Resources	File NOI/PAD with FERC	7/2/18	5.5, 5.6
FERC	Tribal Meetings	8/1/18	5.7
FERC	Issue Notice of Commencement of Proceeding; Issue Scoping Document 1	8/31/18	5.8
FERC	Racine Project Environmental Site Review and Scoping Meetings	9/26 and 9/27/2018	5.8(b)(viii)
All stakeholders	PAD/SD1 Comments and Study Requests Due	10/30/18	5.9
FERC	Issue Scoping Document 2	12/14/18	5.10
AEP Generation Resources	File Proposed Study Plan (PSP)	12/14/18	5.11(a)
All stakeholders	Proposed Study Plan Meeting	1/13/19	5.11(e)
All stakeholders	Proposed Study Plan Comments Due	3/14/19	5.12
AEP Generation Resources	File Revised Study Plan	4/13/19	5.13(a)
All stakeholders	Revised Study Plan Comments Due	4/28/19	5.13(b)
FERC	Director's Study Plan Determination	5/13/19	5.13(c)
Mandatory Conditioning Agencies	Any Study Disputes Due	6/2/19	5.14(a)
Dispute Panel	Third Dispute Panel Member Selected	6/17/19	5.14(d)
Dispute Panel	Dispute Resolution Panel Convenes	6/22/19	5.14(d)(3)
AEP Generation Resources	Applicant Comments on Study Disputes Due	6/27/19	5.14(j)
Dispute Panel	Dispute Resolution Panel Technical Conference	7/2/19	5.14(j)
Dispute Panel	Dispute Resolution Panel Findings Issued	7/22/19	5.14(k)

<b>Responsible Party</b>	<b>Pre-Filing Milestone</b>	<b>Date</b>	<b>FERC Regulation</b>
FERC	Director's Study Dispute Determination	8/11/19	5.14(l)
AEP Generation Resources	First Study Season	2019	5.15(a)
AEP Generation Resources	Initial Study Report	5/12/20	5.15(c)(1)
All stakeholders	Initial Study Report Meeting	5/27/20	5.15(c)(2)
AEP Generation Resources	Initial Study Report Meeting Summary	6/11/20	5.15(c)(3)
All stakeholders	Any Disputes/Requests to Amend Study Plan Due	7/11/20	5.15(c)(4)
All stakeholders	Responses to Disputes/Amendment Requests Due	8/10/20	5.15(c)(5)
FERC	Director's Determination on Disputes/Amendments	9/9/20	5.15(c)(6)
AEP Generation Resources	Second Study Season	2020	5.15(a)
AEP Generation Resources	Updated Study Report due	5/12/21	5.15(f)
All stakeholders	Updated Study Report Meeting	5/27/21	5.15(f)
AEP Generation Resources	Updated Study Report Meeting Summary	6/11/21	5.15(f)
All stakeholders	Any Disputes/Requests to Amend Study Plan Due	7/11/21	5.15(f)
All stakeholders	Responses to Disputes/Amendment Requests Due	8/10/21	5.15(f)
FERC	Director's Determination on Disputes/Amendments	9/9/21	5.15(f)
AEP Generation Resources	File Preliminary Licensing Proposal	7/3/21	5.16(a)
All stakeholders	Preliminary Licensing Proposal Comments Due	10/1/21	5.16(e)
AEP Generation Resources	File Final License Application	11/30/21	5.17
AEP Generation Resources	Issue Public Notice of License Application Filing	12/14/21	5.17(d)(2)