

**REPORT ON THE PILOT TWO-YEAR HYDROELECTRIC LICENSING
PROCESS FOR NON-POWERED DAMS AND CLOSED-LOOP PUMPED
STORAGE PROJECTS AND RECOMMENDATIONS
PURSUANT TO SECTION 6 OF THE HYDROPOWER REGULATORY
EFFICIENCY ACT OF 2013**



REPORT

Submitted to the
United States Congress

Prepared by the Staff of
The Federal Energy Regulatory Commission
May 2017

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Report on the Pilot Two-Year Hydroelectric Licensing Process for
Non-Powered Dams and Closed-Loop Pumped Storage Projects
and Recommendations Pursuant to Section 6 of the Hydropower
Regulatory Efficiency Act of 2013

May 26, 2017

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TECHNICAL ACRONYMS AND ABBREVIATIONS

AIR	Additional Information Request
ALP	Alternate Licensing Process
BO	Biological Opinion
Commission, or FERC	Federal Energy Regulation Commission
Conservation Fund	Imperiled Bat Conservation Fund
Conservation Strategy	Conservation Strategy for Forest Dwelling Bats
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
EA	Environmental Assessment
EDP	Existing Dam Process
EIS	Environmental Impact Statement
ESA	Endangered Species Act
Forest Service	U.S. Forest Service
FPA	Federal Power Act
FWPA	Federal Water Power Act
FWS	U.S. Fish and Wildlife Service
HPMP	Historic Properties Management Plan
HREA	Hydropower Regulatory Efficiency Act of 2013
ILP	Integrated Licensing Process
Interior	U.S. Department of the Interior
Kentucky DEP	Kentucky Department of Environmental Protection
Kentucky DWFR	Kentucky Department of Fish and Wildlife Resources
Kentucky SHPO	Kentucky State Historic Preservation Office
KRA	Kentucky River Authority
kV	kilovolt
L&D 11 Project	Kentucky River Lock and Dam No. 11 Hydroelectric Project No. 14276
Lock 12	Lock 12 Hydro Partners, LLC
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MW	megawatt
MWh	megawatt-hour
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
New York State DEC	New York State Department of Environmental Conservation
NHA	National Hydropower Association
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
Oncor	Oncor Electric Delivery Company

PA	Programmatic Agreement
PAD	Pre-Application Document
PM&E	protection, mitigation, and enhancement
REA	Ready for Environmental Analysis
Recreation Plan	Recreation Resources Management Plan
RTE	Rare, Threatened, and Endangered
Rye	Rye Development, LLC
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer
TLP	Traditional Licensing Process
Wild Flower Project	Wild Flower Water Pumped Storage Hydro Project
Wild Flower Water	Wild Flower Water, LLC

EXECUTIVE SUMMARY

Background

This report was prepared by the staff of the Federal Energy Regulatory Commission (Commission) pursuant to section 6 of the Hydropower Regulatory Efficiency Act (HREA) of 2013.¹ Section 6 requires the Commission to investigate the feasibility of the issuance of a license for hydropower development at non-powered dams and closed-loop pumped storage projects in a two-year period (pilot two-year licensing process), and prepare a report describing the outcome of the Commission's efforts in implementing a pilot two-year licensing process. The report is to include a description of public comments on the effectiveness of each tested two-year pilot process. In addition, the report is to outline how the Commission will adopt policies or issue new regulations that result in a two-year licensing process for appropriate projects, or identify hindrances that justify a determination by the Commission that a two-year licensing process is not practicable. The recommendations herein reflect the views only of Commission staff.

After gathering initial public comments and recommendations in the fall of 2013, staff, via public notice, solicited interest in testing a two-year licensing process in January, 2014. The Commission's notice identified criteria specifying that a proposed pilot project: be located at a non-powered dam or be a closed-loop pumped storage project; have a well-developed project proposal including descriptions of project facilities and operation; would cause little to no change to environmental resources; and be located in areas where there is substantial existing information on environmental resources and effects.

Two project proponents, Wild Flower Water, LLC (Wild Flower Water) and Rye Development (Rye)² filed timely Notices of Intent (NOI) to file applications for original licenses, pre-application documents (PADs), and requests to test a two-year licensing process. Wild Flower Water's proposed pumped storage project did not meet the Commission's specified criteria for testing a two-year process. Staff determined that Rye's proposed project (L&D 11 Project) met the criteria for a project at an existing non-powered dam, and granted Rye's request to test the two-year licensing process in August, 2014.

¹ Hydropower Regulatory Efficiency Act of 2013, Pub. L. 113-23, § 6, 127 Stat. 493 (2013) (HREA).

² Free Flow Power Project 92, LLC filed the initial Notice of Intent (NOI) and application for the L&D 11 Project. On August 22, 2014, Rye filed with the Commission a letter indicating that it was the successor entity to Free Flow Power Corporation, and would replace Free Flow Power Project 92, LLC as manager of the L&D 11 Project.

Rye's May 5, 2014 filing of its NOI, PAD, and request to use test a two-year licensing process set May 5, 2016 as the Commission's two-year deadline to issue Rye's license. As will be discussed in more detail below, staff worked with Rye to address information gaps in Rye's PAD in advance of Rye's filing of its license application on April 16, 2015. Upon receiving Rye's application, staff continued to work with Rye to correct deficiencies in Rye's application, and obtain from Rye additional information necessary to enable staff to issue a ready for environmental analysis notice.

On February 12, 2016, staff issued an Environmental Assessment analyzing the potential environmental effects of constructing and operating the project and concluding that licensing the L&D 11 Project, as proposed by Rye and with some additional staff-recommended environmental measures, would not constitute a major federal action significantly affecting the quality of the human environment. On May 5, 2016, the Commission issued an original license to Rye for the L&D 11 Project, meeting the two-year process target date for completing the licensing process.³

In accordance with the HREA, staff held a public workshop to solicit comments on the effectiveness of the tested two-year pilot licensing process, as well as the feasibility and practicability of implementing such a process programmatically.

The comments are discussed in section IV of this report. The majority of the stakeholders⁴ and commenters felt that the pilot two-year licensing process was a success, and that it is both feasible and practicable for the Commission to implement a formal two-year licensing process. Rye felt that the specificity of the pilot licensing process, including the detailed schedule set by Commission staff, was particularly helpful. Commenters further encouraged staff to identify and incorporate a set of specific criteria that projects would need to satisfy in order to use the two-year licensing process. Such criteria, the commenters felt, would limit the applicability of the two-year licensing process to projects without significant environmental or design challenges and would be able to proceed through licensing smoothly. Concerns were raised, however, about the ability of state and federal resource agencies to process multiple projects utilizing a two-year licensing process simultaneously.

Because of the small sample size of projects testing the pilot two-year process, to assess the necessity of a two-year licensing process, this report also examines processing times for the 83 projects that completed pre-filing activities and were issued original licenses or small hydropower exemptions between 2003 and 2016. During this period, 23 projects, or approximately 28 percent of all of the projects that were authorized, were

³ *FFP Project 92, LLC.*, 155 FERC ¶ 62,089 (2016) (Rye License Order).

⁴ "Stakeholders" typically refers federal and state agencies, conservation groups, and the public.

completed in two years or less. The median processing time for these projects was 1.36 years, including pre-filing consultation. The projects in the sample set that were not licensed in two years tended to be larger capacity projects that presented increased complexity and/or controversy, a larger scope of issues, and a higher likelihood of the need for additional information. These factors often increase licensing time.

Based on this analysis, staff believes it is feasible under the Commission's current regulations for developers to complete the licensing process in two years. Staff remains convinced that site selection, a well-defined project proposal, thorough pre-filing consultation, and a complete application are the most important elements to ensuring a project is authorized in an expeditious manner.

However, staff is also aware of actions it can take to further aid applicants in the site selection, pre-filing, and post-filing processes. In large part, this will involve updating and improving the small/low-impact hydropower portion of the Commission's website which was developed in 2010 as a tool to assist applicants in expediting projects. Staff also commits to providing more frequent processing updates, when appropriate, to provide additional clarity and certainty during the licensing process.

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Report on the Pilot Two-Year Hydroelectric Licensing Process for Non-Powered Dams and Closed-Loop Pumped Storage Projects and Recommendations Pursuant to Section 6 of the Hydropower Regulatory Efficiency Act of 2013

Federal Energy Regulatory Commission
Office of Energy Projects
Washington, DC
FERC Docket AD13-9-000

I. BACKGROUND

a. Hydropower Regulatory Efficiency Act of 2013

The Hydropower Regulatory Efficiency Act (HREA) was signed into law on August 9, 2013.⁵ The HREA was designed to promote the development of hydropower across the United States by encouraging the addition of hydropower facilities at existing dams and conduits, and streamlining the regulatory process for license-seekers.

Section 6 of the HREA directed the Federal Energy Regulatory Commission (FERC or Commission) to investigate the feasibility of issuing a license for hydropower development at non-powered dams and closed-loop pumped storage⁶ projects in a two-year period, including any of the Commission's pre-filing consultation requirements.

To assess the feasibility of a two-year licensing process, the HREA directed the Commission to hold an initial workshop, no later than 60 days after the HREA was enacted, and solicit public comment and recommendations on how to implement a two-year licensing process. After the workshop, the Commission was required to develop criteria for identifying projects that may be appropriate for a two-year process, and, if practicable, use these criteria to develop and implement pilot projects to test a two-year process no later than 180 days after the HREA was enacted. To the extent possible, the Commission was to enter into memoranda of understanding (MOUs) with any applicable federal or state agencies to facilitate the implementation of a pilot project.

The HREA further stipulated that, after implementing the two-year process(es), the Commission was to hold a final workshop to solicit public comment on the effectiveness of each tested two-year process, and ultimately submit a report to the

⁵ See HREA.

⁶ "Closed-loop" pumped storage refers to pumped storage projects not connected to a continually flowing natural water feature. For more information, see <https://www.ferc.gov/industries/hydropower/gen-info/licensing/pump-storage.asp>.

Committee on Energy and Commerce of the House of Representatives and the Committee on Energy and Natural Resources of the Senate. The final workshop was to be held no later than 3 years after the date of implementation of the two-year process pilot project, with the report submitted no later than 60 days after the final workshop, and to include:

- A. a description of the outcomes of the pilot projects;
- B. a description of the public comments from the final workshop on the effectiveness of each tested two-year process; and
- C.
 - i. an outline of how the Commission will adopt policies under existing law (including regulations) that result in a two-year process for appropriate projects;
 - ii. an outline of how the Commission will issue new regulations to adopt a two-year process for appropriate projects; or
 - iii. identification of the process, legal, environmental, economic, and other issues that justify a determination of the Commission that no two-year process is practicable, with recommendations on how Congress may address or remedy the identified issues.

b. Hydropower Program Descriptions and Functions

The Commission currently regulates approximately 1,665 hydropower projects at over 2,518 dams pursuant to Part I of the Federal Power Act (FPA).⁷ Those projects have a combined installed capacity of about 56 gigawatts, representing more than half of the Nation's approximately 101 gigawatts of hydroelectric generating capacity and about five

⁷ Federal Power Act, 16 U.S.C. §§ 791(a) – 825(r) (2012) (FPA). The FPA defines a project as “a complete unit of development.” 16 U.S.C. § 796 (2012). This generally refers to all lands, water, and facilities needed to carry out project purposes, which, besides electric generation, can include any other public interest purposes the Commission designates. A typical project will consist of a dam, the reservoir it impounds, a penstock diverting water from the impoundment to the turbines, the powerhouse containing the turbines and generators, a channel or pipe returning diverted water downstream, a transmission line connecting the project power to a grid, the lands or interests in lands encompassing the above facilities, and the necessary water rights to operate the project as authorized. There is, however, great diversity in project size and operating regimes, and in the resources affected.

percent of the Nation's approximately 1,191 gigawatts of all electric generating capacity combined.

The Commission's hydropower work generally falls into three categories of activities: (1) licensing, which includes processing applications for preliminary permits and applications for original and new licenses; (2) administration and compliance, which includes providing regulatory oversight of licensed projects to ensure compliance with license requirements and processing applications to amend licenses; and (3) dam safety and inspections, which includes protecting life, health, property and the environment of licensed projects. This report focuses on licensing.

c. Statutory and Regulatory Framework of Hydropower Licensing

The Commission's licensing processes have evolved over the years in response to changes in the law, heightened interest by resource agencies and other stakeholders, and increased competition for resources affected by projects. A brief summary follows herein.

With the Federal Water Power Act of 1920 (FWPA),⁸ Congress ended several decades of piecemeal development of hydroelectric power on federal land and on waters subject to federal jurisdiction by vesting in the Commission the authority to license non-federal projects determined by the Commission to be "best adapted to a comprehensive scheme for improvement and utilization" of a river basin for navigation, water power development, and other beneficial public uses. Typical (and sometimes competing) uses for a waterway include power generation, irrigation, flood control, navigation, fish and wildlife, municipal water supply, and recreation.⁹

The FWPA was re-enacted in 1935 as Part I of the FPA.¹⁰ Since that time, many pieces of legislation have been enacted that bear on the Commission's process of reviewing and authorizing hydropower projects. In addition to the requirements of the FPA, other statutes including the National Environmental Policy Act (NEPA),¹¹ section

⁸ Federal Water Power Act of 1920, P.L. 66-280, 41 Stat. 1063 (1920).

⁹ Section 15(a)(2) of the FPA provides that, with respect to new license applications, the Commission must consider, in addition to the requirements of FPA section 10, various other factors, including the applicant's ability to comply with the license terms; plans to manage, operate, and maintain the project safely; ability to operate the project to provide efficient and reliable electric service; and existing and planned transmission services. An existing licensee's compliance record must also be considered. 16 U.S.C. § 808(a)(2) (2012).

¹⁰ See FPA, 16 U.S.C. §§ 791(a) – 825(r) (2012).

¹¹ 42 U.S.C. §§ 4321, *et. seq.* (2012).

401 of the Clean Water Act (CWA),¹² the Endangered Species Act (ESA),¹³ the National Historic Preservation Act (NHPA),¹⁴ the Wild and Scenic Rivers Act,¹⁵ and others, can affect the timing and outcome of hydropower licensing decisions. The requirements of the FPA and other relevant statutes and regulations relevant to hydropower licensing are summarized in Appendix A.

d. Available Licensing Processes

The Commission is authorized to issue original licenses for terms of up to 50 years.¹⁶ New licenses, issued following the expiration of an original license, may be issued for terms from 30 to 50 years. The Commission's jurisdiction applies regardless of project size. In addition, the Commission issues exemptions, in perpetuity, for projects under 40 megawatts (MW) utilizing man-made conduits,¹⁷ and projects under 10 MW located at existing non-federal dams or natural water features.¹⁸

An applicant for an original or new license may use one of three existing licensing processes: integrated, traditional, or alternative. Commission approval is required to use either the Traditional Licensing Process (TLP) or Alternative Licensing Process (ALP); the Integrated Licensing Process (ILP) is the default process for all license requests.¹⁹ Projects that qualify for a small hydropower (10 MW or less) exemption from licensing must use the TLP.

¹² 33 U.S.C. § 1341(a)(1) (2012).

¹³ 16 U.S.C. § 1531 *et. seq.* (2012).

¹⁴ 54 U.S.C. § 300101 *et. seq.* (2014). The National Historic Preservation Act was recodified in Title 54 in December 2014.

¹⁵ 16 U.S.C. § 1271 *et. seq.* (2012).

¹⁶ 16 U.S.C. § 799 (2012). Not all original licenses are for undeveloped projects. Historically, many projects were constructed without Commission authorization that were later determined to be subject to the Commission's jurisdiction by reason of judicial decisions clarifying the ambit of the Commission's authority, or because facts establishing jurisdiction were subsequently developed.

¹⁷ A "conduit" is defined as "any tunnel, canal, pipeline, aqueduct, flume, ditch, or similar manmade water conveyance that is operated for the distribution of water for agricultural, municipal, or industrial consumption and not primarily for the generation of electricity." 18 C.F.R. § 4.32 (b)(2) (2016).

¹⁸ For more information, please visit: <https://www.ferc.gov/industries/hydropower/gen-info/licensing/small-low-impact/get-started/exemp-licens.asp>.

¹⁹ 18 C.F.R. § 5.6 (2016).

Each of the licensing processes requires consultation designed to develop a record on which the Commission can base its licensing decision and fulfill its responsibilities under the FPA, and aforementioned statutes.

While each licensing process features its own information collection and application review process, all processes share certain features. The licensing process begins with the filing of a Notice of Intent (NOI) and pre-application document (PAD), the content of which is the result of pre-application activity.²⁰ Once filed, the applicant, with the assistance of Commission staff, stakeholders, and federal and state resource agencies, identify and gather information in order to assess the effects of the proposed project. Once sufficient information has been collected, the applicant files a license application with the Commission. Commission staff conducts an environmental review of the project proposed in the application, pursuant to NEPA, and ultimately makes a licensing decision based upon the application and staff's NEPA review.

The pilot two-year process, developed in response to the requirements of the HREA, is described in further detail, in section II and compared with the existing licensing processes in Appendix B.

²⁰ Prior to filing an NOI and PAD, a potential applicant can seek a preliminary permit from the Commission for the site being developed. A preliminary permit is issued for up to three years, with a maximum two-year extension. A preliminary permit does not authorize construction; rather, it maintains priority of application for license while the permittee studies the site and prepares to apply for a license. However, it is not necessary to obtain a permit in order to apply for or receive a license.

II. IMPLEMENTATION OF THE HREA

a. Initial Workshop

As directed by the HREA, the Commission held an initial workshop on October 22, 2013, to solicit public comment and recommendations on how to implement a two-year process. By notice issued October 8, 2013,²¹ the Commission requested that comments be filed by November 21, 2013. Federal and state agencies, hydropower developers, and non-governmental organizations provided input at the workshop. Sixteen comment letters were filed.²²

b. Notice Soliciting Proposed Pilot Projects

On January 6, 2014, the Commission issued a notice²³ soliciting proposals from potential applicants wishing to test a two-year licensing process. The notice included criteria for identifying projects that may be appropriate for a pilot two-year licensing process. Prior to requesting the use of a two-year process, prospective applicants were expected to meet with federal and state resource agencies, Indian tribes, non-governmental organizations, and the public about the project and potential pilot process proposal, potential project-related environmental effects, the availability of existing information, and the need for studies to supplement existing information. Prospective applicants were to request written comments on the adequacy of available information and the need for studies, including the anticipated scope and duration of the studies.

Based on the Commission's experience with expediting projects, the comments received at the initial workshop, and comments filed in response to the October 8, 2013 notice, the Commission identified the following criteria and process plan for projects that may be appropriate for licensing within a two-year process:

- The project must cause little to no change to existing surface and groundwater flows and uses;
- The project must be unlikely to adversely affect federally listed threatened and endangered species;

²¹ See October 8, 2013 notice filed in Docket No. AD13-9. 78 *Fed. Reg.* 62,322 (October 10, 2013).

²² All comments filed in response to both the initial workshop and the final workshop are on the Commission's eLibrary site (<https://elibrary.ferc.gov>), under Docket No. AD13-9-000.

²³ See January 6, 2014 notice filed in Docket No. AD13-9. 79 *Fed. Reg.* 2164 (January 13, 2014).

- If the project is proposed to be located at or use a federal dam, the request to use the two-year process must include a letter from the dam owner that the applicant's plan of development is conceptually feasible;²⁴
- If the project would use any public park, recreation area, or wildlife refuge established under state or local law, the request to use the two-year process must include a letter from the managing entity indicating its approval of the site's use for hydropower development;²⁵ and
- For a closed-loop pumped storage project, the project must not be continuously connected to a naturally-flowing water feature.

Prospective applicants that wanted to test a two-year process were to file a request to do so no earlier than February 5, 2014, and no later than May 5, 2014. The request was to include:

(1) A demonstration that the proposed project met the above criteria;

(2) Documentation that the prospective applicant had met with, described, and consulted with the affected federal and state resource agencies, Indian tribes, non-governmental organizations, and the public regarding its project and pilot process proposal along with a summary of verbal comments and copies of any written comments received in response to the meeting;

(3) Copies of written comments from the affected federal and state agencies and Indian tribes regarding the availability of existing information and the need for studies to supplement the existing information, including the anticipated scope and duration of the studies;

(4) A PAD and Proposed Study Plan that met the content requirements of 18 C.F.R. § 5.6 and 5.11, respectively. **The PAD was to include a defined and well-developed project proposal** [*emphasis included in January 6, 2014 notice*]. If a prospective applicant determined that a Proposed Study Plan was not needed, the

²⁴ The intent of this requirement was to ensure that applicants had discussed the project proposal with the federal dam owner and there were no issues with the dam that would preclude the Commission from authorizing the project.

²⁵ Section 21 of the FPA, as amended by the Energy Act of 1992, states that no licensee may use the right of eminent domain to acquire any lands or other property that, prior to October 24, 1992 (the date of enactment of the FPA), were owned by a state or political subdivision thereof and were part of, or included within, any public park, recreation area, or wildlife refuge established under state or local law.

prospective applicant was to demonstrate that the PAD contained sufficient information to address its list of potential environmental effects for environmental analysis;

(5) A list of potential environmental effects, including effects on geologic, aquatic, terrestrial, recreational, and cultural resources, as applicable; and

(6) A process plan and schedule.

Based on the comments received at the initial workshop and comments filed in response to the October 8, 2013 notice, staff developed a process plan and schedule for use by prospective applicants. Prospective applicants had the option of filing an alternative two-year process plan and schedule to test under the HREA; however, the Commission reserved the right to modify any filed process plan and schedule as necessary to ensure that the Commission could fulfill its responsibilities under the FPA and other applicable laws. The Commission's process plan and schedule for two-year pilots was modeled after the ILP and is described in more detail in section III.

c. Proposed Pilot Projects

In response to the January 6, 2014 notice, two entities filed NOIs to file applications for original licenses and requests to test a two-year process.

On May 1, 2014, Wild Flower Water, LLC (Wild Flower Water) filed an NOI and PAD to construct, operate, and maintain the proposed Wild Flower Water Pumped Storage Hydro Project No. 13842 (Wild Flower Project).²⁶ Wild Flower Water proposed to construct a new closed-loop pumped storage project that would be located on the Kiamichi River near the town of Clayton in Pushmataha County, Oklahoma.

On May 5, 2014, Rye Development, LLC (Rye)²⁷ filed an NOI and PAD to construct, operate, and maintain the proposed Kentucky River Lock and Dam No. 11 Hydroelectric Project No. 14276 (L&D 11 Project).²⁸ Rye proposed to develop a

²⁶ See Wild Flower Water's May 1, 2014 Two-Year Licensing Process Application in Docket No. P-13842-001 (Wild Flower License Process Application).

²⁷ Free Flow Power Corporation, on behalf of its subsidiary Free Flow Power Project 92, LLC, filed the initial NOI and application for the L&D 11 Project. On August 22, 2014, Rye filed with the Commission a letter indicating that it was the successor entity to Free Flow Power Corporation, acting as manager of FFP New Hydro, LLC's portfolio of hydropower development projects, including the L&D 11 Project.

²⁸ See Rye's (then operating as Free Flow Power Corporation and filing on behalf of FFP Project 92, LLC) May 5, 2014 Two-Year Licensing Process Application in Docket No. P-14276-001 (Rye License Process Application).

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conventional hydropower project at the existing Kentucky River Lock and Dam No. 11, which is owned by the Commonwealth of Kentucky and operated by the Kentucky River Authority (KRA). The proposed project would be located on the Kentucky River in Estill and Madison Counties, Kentucky.

III. OUTCOMES OF THE PILOT TWO-YEAR LICENSING PROCESS

a. Pilot Project Not Implemented: Wild Flower Project

On May 27, 2014, staff issued a letter responding to Wild Flower Water's request that its proposed Wild Flower Project be selected as a pilot project to test a two-year licensing process.²⁹ Based on staff's review of the NOI and PAD, the proposed Wild Flower project did not meet the criteria set forth in the Commission's January 6, 2014 notice soliciting pilot projects.

Commission staff determined that Wild Flower Water's proposed project was not sufficiently developed because it only generally described the project facilities and operations, and was not a complete unit of development as defined by the FPA.³⁰ In particular, section 3(11) of the FPA states that a project must include a primary transmission line in order to be considered a complete unit of development. Wild Flower Water's proposed project did not include a primary transmission line, nor did it adequately describe how the project would connect to the regional electric distribution system. Instead, Wild Flower Water proposed that the project connect to the distribution system via a new 120-mile-long, 340-kilovolt (kV) transmission line to be constructed, owned, and operated by a separate entity, Oncor Electric Delivery Company (Oncor).

In its May 27, 2014 letter, Commission staff also determined that the information in the PAD was insufficient to enable staff to evaluate the potential environmental effects of the project. In addition, the PAD contained no documentation of consultation to gather existing information or discuss the project with interested parties, nor did the PAD propose studies to fill information gaps. Finally, to the limited extent that the PAD showed Oncor's proposed transmission line, there was no information describing environmental resources within the transmission line corridor, the effects of constructing and operating the transmission line, or whether interested agencies and the public were aware of this project feature.³¹ Therefore the Wild Flower Project was not accepted as a pilot for testing the two-year process.

²⁹ See May 27, 2014 Letter to Wild Flower Power, filed in Docket No. P-13842-001, and attached in Appendix C.

³⁰ See *supra* note 7.

³¹ Commission staff determined that Wild Flower Water's project proposal was incomplete because Wild Flower Water had no control as to the timing of project development, potential environmental impact studies, and the constructability and operation of Oncor's proposed transmission line project.

b. Pilot Project Implemented: L&D 11 Project

The L&D 11 Project includes: (1) an existing dam and 579-acre reservoir; (2) a new 275-foot-long, 75-foot-wide reinforced concrete intake channel equipped with trash racks; (3) a new 140-foot-long, 64.5-foot-wide powerhouse built within the existing lock structure, with two turbine generator units each rated at 2.5 MW for a total installed capacity of 5 MW; (4) a new 190-foot-long, 78-foot-wide tailrace; (5) a new 69-kV substation; (6) a new, 212-foot-long, 4.16-kV underground transmission cable from the generators to the substation; and (7) a new, approximately 4.5-mile-long, 69-kV transmission line extending from the powerhouse to an existing substation located near Waco, Kentucky. The project will be operated as a run-of-river facility while maintaining current water surface elevations in the upstream pool. The project will generate about 18,500 MWh annually, which will be sold to a local utility. The project does not occupy federal land.

1. Pre-filing Milestones

A. Notice of Request to Use the Two-Year Process and Technical Meeting

On June 3, 2014, in response to Rye's NOI and PAD, the Commission issued notice of Rye's intent to file a license application and request to be selected as a pilot project to test a two-year licensing process.³² The notice solicited comments on the use of the two-year licensing process, the PAD, the list of environmental issues and proposed studies, as well as any stakeholder study requests. Any stakeholder request for additional studies or modifications to the proposed studies were to conform to the requirements of the Commission's regulations.³³ The notice also informed stakeholders that Commission staff would hold a technical meeting via teleconference to discuss the identified issues and study needs, as well as discuss the process plan and schedule. Comments were due by July 3, 2014.

The technical meeting was held on June 19, 2014, and focused on information gaps that needed to be filled to ensure that sufficient information existed for the Commission to make a determination on whether the proposed project met the criteria for a pilot project and for processing a license application once filed with the Commission. All interested individuals, organizations, and agencies were invited to participate in the technical meeting. Participants in the technical meeting included the National Park Service, the Kentucky Department of Fish and Wildlife Resources (Kentucky DFWR), the Kentucky Heritage Council, the Kentucky State Historic Preservation Office

³² See June 3, 2014 notice filed in Docket Nos. AD13-9-000 and P-14276-001. 79 *Fed. Reg.* 32,929 (June 9, 2014).

³³ 18 C.F.R. § 5.9 (b) (2016).

(Kentucky SHPO), the Kentucky Riverkeeper, Commission staff, and representatives of Rye. A summary of the meeting was issued on July 1, 2014.³⁴ The following entities filed comments: Kentucky DFWR,³⁵ U.S. Fish and Wildlife Service (FWS),³⁶ KRA,³⁷ Kentucky Heritage Council,³⁸ National Park Service,³⁹ Rye,⁴⁰ and Lock 12 Hydro Partners, LLC (Lock 12).⁴¹ None of the participants objected to testing a two-year licensing process for the project.⁴²

B. Use of Two-Year Process Granted and Approval of Studies

On August 4, 2014, the Commission issued a letter⁴³ and notice⁴⁴ granting Rye's request to use the two-year process. In the letter, Commission staff stated that, based on a review of the information in the PAD, Rye's proposed project appeared to meet the criteria outlined in the Commission's January 6, 2014 notice. The letter also provided a

³⁴ See July 1, 2014 Technical Meeting Summary in Docket Nos. AD13-9-000 and P-14276-001.

³⁵ See Kentucky DFWR's June 6, 2014 filing in Docket No. P-14276-001.

³⁶ See U.S. Fish and Wildlife Service's June 26, 2014 filing in Docket No. P-14276-001.

³⁷ See KRA's July 1, 2014 filing in Docket No. P-14276-001.

³⁸ See Kentucky Heritage Council's July 2, 2014 filing in Docket No. P-14276-001.

³⁹ See National Park Service's July 3, 2014 filing in Docket No. P-14276-001.

⁴⁰ See Rye's July 25, 2014 filing in Docket No. P-14276-001.

⁴¹ See Lock 12's July 29, 2014 comments filed in Docket No. P-13214-003. Lock 12 is the licensee for the proposed Ravenna Hydroelectric Project (Ravenna Project) (FERC No. 13214) at the Kentucky River Lock and Dam No. 12, located upstream from the proposed L&D 11 Project. At the time of this filing, Lock 12 was the applicant for the Ravenna Hydroelectric Project.

⁴² The Kentucky DFWR stated that it did not anticipate any substantive controversy or disputes over the proposed project. However, the request for timely license issuance should not take precedence over the proposed studies on project related effects to the resource and its users.

⁴³ See August 4, 2014 letter filed in Docket Nos. AD13-9-000 and P-14276-001.

⁴⁴ See August 4, 2014 notice filed in Docket Nos. AD13-9-000 and P-14276-001. 79 *Fed. Reg.* 46,796 (August 11, 2014). This notice also designated Rye as the Commission's non-federal representative for carrying out informal consultation pursuant to section 7 of the ESA and section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act; and consultation pursuant to section 106 of the NHPA.

list of approved study plans, a process plan and schedule,⁴⁵ and requests for additional information.

Of the six studies proposed by Rye, three were approved with staff-recommended modifications: a Project Hydraulics Study, Aquatic Habitat Assessment, and Fish Entrainment and Survival Study. In addition, three were approved as filed by Rye: a Water Quality Study, Terrestrial Habitat and Rare, Threatened, and Endangered (RTE) Species Survey,⁴⁶ and Cultural Resource Assessments. Commission staff also requested additional information regarding the project design,⁴⁷ including information about the originally-proposed, 3.5-foot-high adjustable crest gate and existing water quality data for the Kentucky River. Staff recommended that Rye consider both land- and water-based recreation and conduct consultation with the National Park Service, Kentucky DFWR, the Kentucky Heritage Council, KRA, and the Kentucky Riverkeeper in the development of its proposed Recreation Resources Management Plan (recreation plan).⁴⁸ Staff also

⁴⁵ See Rye's approved schedule with target deadlines and actual completion dates for each milestone in the pilot two-year process attached in Appendix D.

⁴⁶ Rye originally proposed to conduct its proposed Terrestrial Habitat and RTE Species Survey after license issuance, but prior to the start of construction to ensure that potential effects on habitat and species, including federally listed species, present at that time within the project area would be addressed. During the technical meeting, Rye also stated that it intended to finalize the precise route of the proposed transmission line closer to the deadline for filing its license application, but Rye indicated that it would conduct the study during pre-filing if there was stakeholder interest in doing so. To ensure there was sufficient information on which to base a determination on effects to federally listed species, Commission staff issued a letter on June 26, 2014, requiring Rye to conduct the study during pre-filing and include the results with its license application. In addition, to ensure the adequacy of the data collected, the Commission advised Rye to consult with the FWS and Kentucky DFWR in developing survey protocols for the RTE species potentially occurring in the project area.

⁴⁷ Specifically, the Commission requested: (1) the dimensions of the existing dam, trashrack, and intake structure; (2) the length of the proposed buried voltage cable from the powerhouse to the new substation; (3) the composition of the proposed crest gates; (4) confirmation that information regarding (a) maximum depth, (b) mean depth, (c) flushing rate, (d) shoreline length, and (e) substrate composition of the upper reservoir is not currently available; (5) confirmation that the gradient of the affected downstream reach is not currently available; and (6) an explanation of why the proposed 3.5-foot-high crest gate was needed.

⁴⁸ In particular, Rye was to explain how the Kentucky River Water Trail and associated recreation facilities were considered in the development of the recreation plan. In 2012, the Kentucky River Water Trail, a National Water Trail stretching the entire

requested that Rye respond to Lock 12's comments, including its concern regarding the potential effects of the L&D 11 project on the Ravenna Project.

C. Implementation of Studies and Information Gathering

The two-year process plan and schedule allowed 180 days, or 6 months, during pre-filing for the completion of studies and other information gathering, as well as to apply for water quality and coastal zone certifications.⁴⁹ On August 25, 2014, Rye filed a response to the Commission's August 4, 2014 additional information requests (AIR) regarding project design⁵⁰ and a preliminary response to Lock 12's comments. Rye clarified that an adjustable crest gate was proposed for the entire length of the spillway as a means of ensuring that the project is able to minimize changes to the existing water surface elevations in the upper impoundment.⁵¹

Regarding study results, Rye filed a partial response regarding existing water quality data on November 17, 2014.⁵² On January 15, 2015, Rye requested an extension of time to complete the approved studies and to apply for water quality certification. Because the extension of time to file study reports was not expected to delay the development and filing of a license application within the approved two-year timeframe, it was granted on January 20, 2015.⁵³ However, staff advised that the delay in filing an

length of the mainstem Kentucky River, was designated a model project for the Secretary of Interior's America's Great Outdoor initiative. The National Park Service, in conjunction with the Commonwealth of Kentucky, local government agencies, and the Kentucky Riverkeeper (collectively the Kentucky Water Trail Partners), developed plans for improving river access for recreational boating and interpreting the ecology and cultural history along the river.

⁴⁹ The Commonwealth of Kentucky does not have a Coastal Zone Management Act program; therefore, no coastal zone certification was necessary.

⁵⁰ See Rye's August 25, 2014 response filed in Docket No. P-14276-001.

⁵¹ The maximum hydraulic capacity of the proposed turbines is 4,000 cfs. Rye stated that diverting river flows through the proposed turbines, in the existing condition and without the installation of a crest gate, would have the effect of reducing the elevation of upper pool for a large percentage of time. Instead, Rye proposed to install and operate the crest gate to mitigate the impact of diverting flows through turbines.

⁵² See Rye's November 17, 2014 response filed in Docket No. P-14276-001.

⁵³ Rye proposed to file: (1) existing water quality data by January 30, 2015; (2) the results of the Fish Entrainment and Survival Study by February 27, 2015; (3) the results of the Project Hydraulics Study, Aquatic Habitat Assessment, Terrestrial Habitat and Rare, Threatened, and Endangered Species Survey, and Cultural Resource Assessment by March 31, 2015; and (4) an application for water quality certification by May 5, 2015, to ensure consistency with the information and the proposal in the license

application for water quality certification could prevent the processing of Rye's license application within the one-year timeframe contemplated in the two-year process schedule if the state of Kentucky took a full year to process the water quality certification, as provided by law.⁵⁴ Subsequently, Rye filed existing water quality data⁵⁵ and draft reports for the Fish Entrainment and Survival Study,⁵⁶ Aquatic Habitat Study,⁵⁷ Terrestrial Habitat and RTE Species Survey,⁵⁸ and Hydraulics Study.⁵⁹ Rye filed its draft Cultural Resource Assessments concurrently with its license application on April 16, 2015,⁶⁰ prior to the established May 5, 2015 deadline.

2. Post-filing Milestones

A. Tendering Notice and Review of the License Application

The two-year process plan and schedule provided one year to complete the post-filing milestones, including 30 days for staff to review the license application. On May 1, 2015, the Commission issued notice of the application's filing and established a procedural schedule for licensing and deadline for submission of final amendments.⁶¹ The procedural schedule matched the post-filing milestones in the approved two-year process plan and schedule.⁶² Final amendments to the application were to be filed with the Commission no later than 30 days from the issuance date of the ready for environmental analysis (REA) notice. Commission staff reviewed the license application for consistency with its content requirements.⁶³ All of Rye's proposed measures and plans to protect, mitigate, or enhance environmental resources were to be provided with the license application.⁶⁴

application.

⁵⁴ 33 U.S.C. § 1341 (2012).

⁵⁵ See Rye's January 30, 2015 filing in Docket No. P-14276-001.

⁵⁶ See Rye's February 25, 2015 filing in Docket No. P-14276-001.

⁵⁷ See Rye's March 31, 2015 filing in Docket No. P-14276-001.

⁵⁸ *Id.*

⁵⁹ See Rye's April 1, 2015 filing in Docket No. P-14276-001.

⁶⁰ See Rye's April 16, 2015 application and cultural resources assessment in Docket No. 14276-001.

⁶¹ See May 1, 2015 notice filed in Docket No. P-14276-002. 80 *Fed. Reg.* 26,428 (May 7, 2015).

⁶² The May 1, 2015 notice stated that revisions to the schedule may be made as appropriate.

⁶³ 18 C.F.R. §§ 5.17 – 5.18 (2016).

⁶⁴ See Appendix A of August 4, 2014 letter filed in Docket Nos. AD13-9-000 and P-14276-001; and 18 C.F.R. § 5.18(b)(5)(ii)(C) (2016).

B. Supplemental Filings

As staff commenced its review of the license application, Rye filed a number of documents to supplement and support its application. On May 5, 2015, Rye filed revised Exhibit F drawings and final reports on its Water Quality Study, Aquatic Habitat Assessment, Fish Entrainment and Survival Study, Project Hydraulics Study, and Terrestrial Habitat and RTE Species Survey.⁶⁵ On May 29, 2015, Rye filed documentation of its application for water quality certification, which was stamped as received by the Kentucky Department for Environmental Protection on May 6, 2015.⁶⁶ On June 3, 2015, Rye filed a final recreation plan for the project.⁶⁷ On June 8, 2015, Rye filed revised Cultural Resource Assessments with documentation of consultation with the Kentucky SHPO.⁶⁸ On June 10, 2015, Rye filed its Preliminary Supporting Design Report.⁶⁹ On June 11, 2015, Rye filed a response to Lock 12's comments.⁷⁰

C. Adequacy of the License Application and Additional Information Requests

In reviewing Rye's license application and supplemental filings, staff identified deficiencies and the need for additional information before action could be taken on the license application, which extended the review period beyond the original 30 days contemplated in the two-year process plan and schedule. On June 12, 2015, staff issued a letter with preliminary deficiencies and AIRs based on Rye's April 16, 2015 license application.⁷¹ The deficiencies included proof of notification of the filing of the application to land owners and government agencies, and documentation of consultation with stakeholders. The AIRs were related to Rye's estimated project costs, aquatic resources, terrestrial resources, threatened and endangered species, recreation, cultural resources, and proposed measures to protect, mitigate, and enhance environmental resources.

After reviewing Rye's Preliminary Supporting Design Report and other supplemental filings, staff identified additional deficiencies and information needed

⁶⁵ See Rye's May 6, 2015 filings in Docket No. P-14276-001.

⁶⁶ See Rye's May 29, 2015 filing in Docket No. P-14276-001.

⁶⁷ See Rye's June 3, 2015 filing in Docket No. P-14276-001.

⁶⁸ See Rye's June 8, 2015 filing in Docket No. P-14276-001.

⁶⁹ Section 4.61(e) of the Commission's regulations requires, in part, that a license application includes an Exhibit F that contains information demonstrating that existing and proposed structures are safe and adequate to fulfill their stated functions. 18 C.F.R. § 4.61(e) (2016).

⁷⁰ See Rye's June 11, 2015 filing in Docket No. P-14276-001.

⁷¹ See June 12, 2015 letter filed in Docket No. P-14276-001.

before action could be taken on the license application. On July 29, 2015, staff issued a second letter listing the additional deficiencies and AIRs.⁷² Deficiencies included the following: details about the existing and proposed project structures; information to be included in the Preliminary Supporting Design Report, including a site suitability assessment, geological information, stability and stress analysis on major structures, and seismic and spillway design flood information; and Exhibit G drawings that identify all the principal project features. The AIRs were related to engineering and dam safety, aquatic resources, and recreation.

Rye filed responses to staff's June 12 and July 29, 2015 letters on July 1, July 21, August 14, August 27, and September 23, 2015. As part of its first response on July 1, 2015, Rye modified its original proposal to exclude the adjustable crest gate on top of the existing dam.⁷³ On July 21, 2015, Rye filed documentation of consultation with the United Keetoowah Band of Cherokee Indians in Oklahoma. The tribe's acting Tribal Historic Preservation Officer (THPO) stated that tribe had reviewed the project under section 106 of the NHPA, and had no comments or objections.⁷⁴ On August 14, 2015, Rye filed its final resource protection plans which incorporated comments and recommendations from resource agencies. These plans included the Erosion and Sediment Control Plan, Avian Protection Plan, Invasive Species and Noxious Weed Control Plan, and Transmission Line Corridor Management Plan.⁷⁵ On August 27, 2015, Rye filed a revised Preliminary Supporting Design Report.⁷⁶ On September 23, 2015, Rye filed additional Cultural Resource Assessments.⁷⁷ Subsequently, Rye provided several other filings with supplemental information to support their license application.⁷⁸

⁷² See July 29, 2015 letter filed in Docket No. P-14276-001.

⁷³ See Rye's July 1, 2015 filing in Docket No. P-14276-001.

⁷⁴ See Rye's July 21, 2015 filing in Docket No. P-14276-001.

⁷⁵ See Rye's August 14, 2015 filing in Docket No. P-14276-001.

⁷⁶ See Rye's August 27, 2015 filing in Docket No. P-14276-001. On September 28, 2015, the Commission's Division of Dam Safety staff held a teleconference with the applicant representatives to clarify information presented in Rye's revised Preliminary Supporting Design Report and explain the Commission's requirements for this report. A summary of the teleconference and a list of action items for Rye was issued on October 14, 2015 in Docket No. P-14276-001.

⁷⁷ See Rye's September 23, 2015 filing in Docket No. P-14276-001.

⁷⁸ See Rye's additional filings on September 28, 2015 (cost clarifications), October 28, 2015 (Architectural Report clarifications), November 2, 2015 (Inflow Design Flood and Stability Analysis), December 9, 2015 (documentation of consultation with Kentucky Heritage Council), and January 20, 2016 (draft Historic Properties Management Plan (HPMP)).

D. Notice of Ready for Environmental Analysis and Environmental Assessment

On September 25, 2015, the Commission issued a notice that the application had been accepted for filing and was ready for environmental analysis.⁷⁹ The notice also solicited motions to intervene and protests, and solicited comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions. Consistent with the timeframes in the two-year process plan and schedule, the deadline for filing motions to intervene and protests, comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions was 60 days from the issuance of the REA notice, or November 24, 2015. In response, Lock 12 filed a motion to intervene⁸⁰ and comments. The U.S. Department of the Interior (Interior)⁸¹ and the Kentucky Heritage Council⁸² filed comments and recommendations.

On February 12, 2016, Commission staff issued an Environmental Assessment (EA) analyzing the potential environmental effects of constructing and operating the project. In the EA, staff concluded that licensing the L&D 11 Project, as proposed by Rye and with some additional staff-recommended environmental measures, would not constitute a major federal action significantly affecting the quality of the human environment.

E. Other Statutory Requirements

As part of the NEPA review of project proposals, staff also examined the project's consistency with the statutory requirements under the FPA, CWA, ESA, and the NHPA. Neither the Secretary of Commerce nor the Secretary of Interior filed section 18 fishway prescriptions or requested that a reservation of authority to prescribe fishways under section 18 of the FPA be included in any license issued for the L&D 11 Project. In addition, no recommendations were filed under section 10(j) of the FPA for the L&D 11 Project.

⁷⁹ See September 25, 2015 notice filed in Docket Nos. AD13-9-000 and P-14276-002. ⁸⁰ *Fed. Reg.* 59,763-59,764 (October 2, 2015).

⁸⁰ See Lock 12's November 16, 2015 filing in Docket No. P-14276-001. Timely, unopposed motions to intervene are granted by operation of Rule 214(c) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c) (2015).

⁸¹ See Interior's November 20, 2015 filing in Docket No. P-14276-002.

⁸² See the Kentucky Heritage Council's December 9, 2015 filing in Docket No. P-14276-002. In the comments the Kentucky SHPO requested additional information about historic properties in the project's transmission line corridor, which Rye provided on January 20, 2016.

i. Section 401 of the CWA

On January 29, 2016, the Kentucky Department of Environmental Protection (Kentucky DEP) issued a water quality certification with 21 conditions to comply with section 401 of the CWA. Fourteen of the conditions are project or process descriptions, administrative requirements, and general conditions.⁸³ The remaining seven conditions require Rye to: (1) meet state water quality standards for dissolved oxygen and water temperature;⁸⁴ (2) monitor water quality in accordance with the conditions of the final water quality certification; (3) notify downstream water users prior to any activities that may affect water quality; (4) prevent the direct or indirect discharges of pollutants to the waters of Kentucky; (5) develop and implement a BMPs inspection and maintenance plan; (6) locate staging areas and access points in open upland areas and minimize disturbance of existing wetlands; and (7) develop and implement a Stormwater Pollution Prevention Plan that includes sediment and erosion control measures. Condition T-2 of the water quality certification establishes the requirements for dissolved oxygen and temperature during project operations. The Commission determined that the water quality certification is sufficient for the Commission to issue a license for the project; however, the water quality certification does not authorize project construction and operation.⁸⁵

⁸³ The administrative and general terms and conditions provide: (1) the historical context for the license application (T-1); (2) a project description (T-2); (3) the basis for issuing the certification (T-4); (4) for amendments to, or revocation of, the certification (T-7); (5) that Kentucky DEP may modify or revoke the certification (T-8); (6) that Rye 92 notify Kentucky DEP of any changes in ownership, scope, or construction methods of the project (T-9); (7) that any new owner request that Kentucky DEP transfer of the certification to the new owner (T-10); (8) that FFP 92 provide Kentucky DEP personnel access to the site (T-11); (9) that Rye is responsible for work done by contractors (T-12); (10) that project areas be clearly marked in the field (T-13); (11) for the suspension or revocation of the certification if conditions are not adhered to or if significant degradation to water occurs as a result of permitted activities (T-16); (12) that the certification does not constitute authorization of other entities' permitted activities (T- 17); (13) that Rye provide Kentucky DEP a certification from any other jurisdiction where a discharge originates, or will originate (T-19); and (14) for the Energy and Environment Cabinet's certification of compliance with applicable provisions of the CWA (T-20).

⁸⁴ Rye is required to maintain: (1) DO at a minimum concentration of 5.0 mg/L as a 24-hour average, with an instantaneous minimum of not less than 4.0 mg/L; and (2) water temperatures that do not exceed 31.7 degrees Celsius (89 degrees Fahrenheit).

⁸⁵ Kentucky DEP refers to the certification issued as "interim," and requires Rye to apply to Kentucky DEP for a "final" certification after license issuance. Condition T-4 explains that the interim certification was issued in this instance to allow a license to be

The Kentucky DEP reviewed the EA and provided comments and recommendations regarding potential impacts to water quality and aquatic resources.⁸⁶ Given that fish habitat would be reduced downstream from the project during periods of low flow, Kentucky DEP recommended that baffles be used to increase aeration of water coming out of the turbines to reduce the potential for low dissolved oxygen concentration in this area. Kentucky DEP also stated that it had no major concerns from the review of the proposed project as presented other than those provided as conditions or comments. However, Kentucky DEP clarified that this finding did not imply the acceptance or issuance of any permits, certifications or approvals that the Kentucky DEP may require.

ii. ESA

In compliance with ESA, staff examined the potential project's effects on federally listed species, including the endangered Indiana bat, gray bat, running buffalo clover, Short's bladderpod, and threatened northern long-eared bat. In the EA, staff determined that licensing the project, as proposed with the staff-recommended measures, was not likely to adversely affect the above-referenced federally listed endangered or threatened species, because the applicant's proposed surveys would identify occurrences of both the species and any suitable habitat within the project boundary, any adverse impacts to which would be mitigated by the specific measures included in staff's recommended endangered species protection plan. Staff also concluded that licensing the L&D 11 Project, as proposed with staff-recommended measures, was not likely to jeopardize the continued existence of the Kentucky arrow darter, a fish species proposed for federal listing as threatened, because the effects of proposed project's construction and operation would be limited to the mainstem of the Kentucky River where the species is not found. On February 17, 2016, Commission staff issued a letter requesting that FWS concur with these determinations.

The FWS⁸⁷ and Rye⁸⁸ filed comments on the EA related to ESA. FWS concurred with staff's determinations of effect on the Kentucky darter, northern long-eared bat,⁸⁹

issued within the tested two-year process timeframe. Condition T-3 explains that Kentucky DEP expects to issue a "final" certification authorizing project construction and operation after Rye submits certain information.

⁸⁶ See Kentucky DEP's March 10, 2016 filing in Docket No. P-14276-002.

⁸⁷ See FWS's March 9, 2016 filing in Docket No. P-14276-002.

⁸⁸ See Rye's March 10, 2016 filing in Docket No. P-14276-002.

⁸⁹ FWS also agreed that the proposed project was consistent with the final 4(d) rule for northern long-eared bat and FWS's January 5, 2016 intra-Service Programmatic BO on the final 4(d) rule for the northern long-eared bat. The 4(d) rule identifies prohibitions that focus on protecting the bat's sensitive life stages in areas affected by the disease white-nose syndrome. See 81 *Fed. Reg.* 1900 (2016).

gray bat, and Virginia big-eared bat. However, FWS required additional information in order to evaluate staff's determination on running buffalo clover, Short's bladderpod, and Indiana bat. For running buffalo clover and Short's bladderpod, FWS stated it could not concur with staff's determination without the results of a presence/absence survey, an analysis of potential impacts based on the survey results, and a final plan to minimize potential effects to these species. For Indiana bat, FWS stated that it could not concur with staff's determination until Rye decided between one of two options to address potential effects to the species. FWS indicated Rye could either (1) conduct surveys to determine whether Indiana bats are present in the project area,⁹⁰ or (2) assume the presence of Indiana bat in the project area and contribute to the Imperiled Bat Conservation Fund (Conservation Fund), created under a programmatic biological opinion (BO) covering the potential impacts to the Indiana bat summer habitat in Kentucky.⁹¹

In its comments on the EA, Rye stated it was in consultation with FWS regarding federally listed species. Rye confirmed it was considering the cost and time implications of conducting surveys for Indiana bat versus assuming presence of this species and contributing to the Conservation Fund. In addition, to address potential project effects on running buffalo clover and Short's bladderpod, Rye requested that staff consider including language in the license requiring post-license, pre-construction botanical surveys which would avoid impacts to land containing the two botanical species and/or, allow certain non-invasive construction activities during an approved season, such as winter.

FWS filed two subsequent comments regarding ESA consultation.⁹² In its March 22, 2016 letter, FWS stated that it concurred with staff's determination that the project was not likely to adversely affect running buffalo clover and Short's bladderpod, based on a clarification of the results of Rye's pre-filing surveys, as well as Rye's commitment to perform an additional survey of the project area prior to construction, avoid

⁹⁰ See FWS's June 26, 2014 filing in Docket No. P-14276-001, which describes the recommended Indiana bat surveys and alternatives to surveys based on FWS's guidance in effect at that time.

⁹¹ See FWS's April 21, 2015 BO, entitled Kentucky Field Office's Participation in Conservation Memoranda of Agreement for the Indiana Bat and/or Northern Long-eared Bat at 3, 34. The Conservation Fund is administered by the Kentucky Natural Lands Trust, an independent non-profit land trust, and use of these funds is a collaborative effort among the Kentucky Natural Lands Trust, FWS's Kentucky Field Office, and several federal, state, and private conservation organizations that are involved with bat and/or forest conservation in Kentucky.

⁹² See FWS's March 22, 2016 and April 1, 2016 filings in Docket No. P-14276-002.

occurrences of these plant species, if identified, and consult with FWS if avoidance is not feasible. Subsequently, on March 30, 2016, Rye contributed to the Conservation Fund to address potential project effects on Indiana bats. In its April 1, 2016 letter, FWS stated that Rye's contribution followed the Kentucky Field Office's 2015 BO as well as its *Conservation Strategy for Forest Dwelling Bats* (Conservation Strategy).⁹³ FWS concluded that the L&D 11 Project was not likely to jeopardize the continued existence of the Indiana bat or result in the destruction or adverse modification of designated critical habitat.⁹⁴ With FWS's April 1, 2016 concurrence on staff's determination for the Indiana bat, the Commission fulfilled the requirements of section 7 of the ESA for the L&D 11 Project.

iii. Section 106 of the NHPA

In compliance with section 106 of the NHPA, staff took into account how the project undertaking could affect historic properties, such as districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register). In the EA, staff stated its intent to execute a Programmatic Agreement (PA) for the protection of historic properties from the effects of construction, operation, and maintenance of the L&D 11 Project. A draft PA was issued on February 10, 2016, in advance of the EA to ensure that parties to the PA would have sufficient time to review and finalize it prior to the target two-year process completion date. The terms of the PA were designed to ensure that Rye addresses and treats all historic properties identified within the project's area of potential effects through development of a Historic Properties Management Plan. To satisfy its responsibilities under section 106 of the NHPA, the Commission executed a final PA

⁹³ The Conservation Strategy supersedes the Revised Indiana Bat Mitigation Guidance for the Commonwealth of Kentucky and can be found at <http://www.fws.gov/frankfort/pdf/2015%20KY%20Forest-Dwelling%20Bat%20Conservation%20Strategy.pdf>. Currently, the FWS Kentucky Field Office's 2015 BO and Conservation Strategy cover impacts to, and mitigation for, Indiana bats as well as northern long-eared bats because these forest dwelling bats have similar habitat requirements. The Conservation Strategy contemplates future expansion of the species list.

⁹⁴ FWS noted that any incidental take of Indiana (and/or northern long-eared) bats that results from the removal of forest habitat associated with the project is authorized under the BO, except for tree clearing during the bats' non-volancy period (when bat pups are incapable of flight, from June 1 through July 31). FWS also clarified that if additional forested areas not previously considered are to be removed, Rye should coordinate with FWS to determine if additional compensation is necessary to be in ESA compliance.

with the Kentucky SHPO on April 22, 2016.⁹⁵ Rye signed the PA as a concurring party. The PA requires Rye to prepare and implement a final Historic Properties Management Plan for the project. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA.

F. Licensing Decision

Having met all statutory requirements with the execution of the PA on April 22, 2016, the Commission made its licensing decision and issued an original license to Rye for the L&D 11 Project on May 5, 2016, meeting the two-year process target date for completing the licensing process.⁹⁶ The license requires, among other things, that Rye implement the environmental and protective measures as proposed by Rye and modified by staff in the EA. To coordinate the license term of the L&D 11 Project with the upstream Heidelberg Project and Ravenna Project⁹⁷ license terms, expiring on December 31, 2055, the license for the L&D 11 Project was issued for a 39-year, 8-month license term.

The license is subject to a number of standard and environmental requirements. In addition, the license for the L&D 11 Project is subject to the conditions submitted by the Kentucky DEP under section 401(a)(1) of the CWA.⁹⁸ The Commission must ensure that any future conditions for the project are accounted for in the license. Therefore, Ordering Paragraph (D) of the license reserves the Commission's authority to modify the license, as necessary, to incorporate the water quality certification conditions as may be required by the Kentucky DEP upon issuance of a water quality certification for construction and operation of the project, and to modify existing conditions of the license, as necessary, to achieve consistency with any such additional certification conditions.⁹⁹ Rye's progress in meeting the license requirements before construction and operation can be approved is summarized in Appendix E.

⁹⁵ See May 5, 2016 transmittal of the executed PA in Docket No. P-14276-002.

⁹⁶ See Rye License Order, 155 FERC ¶ 62,089 (2016).

⁹⁷ Lock 14 Hydro Partners, LLC and FFP Project 106, LLC, 153 FERC ¶ 62,219 (2015).

⁹⁸ 33 U.S.C. § 1341(a)(1) (2012). The Kentucky DEP's conditions are provided in Appendix A of the order.

⁹⁹ See Kentucky DEP's January 29, 2016 filing in Docket No. 14276-002 and Appendix A of the Rye License Order.

IV. STAKEHOLDER COMMENTS AND RECOMMENDATIONS

As required by section 6(b)(4) of the HREA, the Commission held a final workshop on March 30, 2017, to solicit public comment of the effectiveness of the two-year licensing process. The workshop included two-panels. The first panel focused specifically on the effectiveness of the Kentucky River L&D 11 licensing process, and consisted of representatives from Rye, the Kentucky SHPO, FWS, the KRA, and the Kentucky DEP. The second panel focused on the feasibility and implications of a two-year process if implemented at a national level, and consisted of representatives from private industry, the U.S. Army Corps of Engineers (Corps), the U.S. Forest Service (Forest Service), the New York State Department of Environmental Conservation (New York State DEC), and American Whitewater/ Hydropower Reform Coalition. The workshop was open to the public, and attendees were encouraged to submit verbal comments on the two-year process. With the notice of the workshop, Commission staff provided an agenda including a list of issues for commenter and panelist consideration. The Commission also invited written comments, to be filed within 15 days of the final workshop, or by April 14, 2017. Written comments were filed by 12 organizations and individuals. This section summarizes the stakeholder comments.¹⁰⁰

a. Benefits of Expedited Licensing

One purpose of the HREA was to foster development of original hydropower projects by addressing the regulatory timeframe for licensing two specific classes of new projects: those at non-powered dams and closed-loop pumped storage projects. In general, commenters support the assumption that expedited processing of license applications would encourage greater investment in hydropower development. Developers including Rye, Aquanovis, Klickitat Public Utility District #1, and the National Hydropower Association (NHA), assert that the length of time it takes to license new projects under the Commission's existing licensing processes is a barrier to investment.

Resource agency staff also commented on the benefits of expedited processing for specific projects. Those benefits include maintaining the relevancy of data collected for a project, reduced potential for agency staff turnover during the licensing process, and better retention of process- and project- specific information for members of the public involved in the licensing process.

¹⁰⁰ Full text of all comments provided on the final workshop, including transcripts of verbal comments provided during the workshop, are available on the Commission's eLibrary website (<https://elibrary.ferc.gov>), under docket no. AD13-9-000.

b. Feasibility and Practicability

In general, all commenters affirm that licensing new projects in two years or less is both feasible and practicable, with some caveats. Rye and the participants in the L&D 11 Project found the tested pilot process to be successful from the standpoint that the goal of a license within two years of filing the NOI and PAD was achieved. However, some Kentucky agency staff commented that for their agency's purposes, work on the project is not yet complete and that Rye will need to complete additional consultation post-licensing. In particular, the KRA commented that consultation will occur as a lease agreement is negotiated for the site, and the Kentucky DEP and Kentucky SHPO commented that additional consultation will occur regarding resource protection measures for water quality and historic resources, respectively.¹⁰¹ In each case, a more final project design is required before agency staff can complete all necessary reviews to ensure that the project is developed with minimal effects to existing resources. Rye indicated that the additional consultation and requirements post-licensing is an acceptable trade-off for a shorter, better-defined licensing process.

At a programmatic scale, commenters acknowledge that a two-year process is feasible for a certain subset of projects, although there is no consensus on what criteria, if any, are appropriate for determining whether a project, or class of projects, can be expedited. Some commenters, including New York State DEC and Hydropower Reform Coalition, noted that the experiences of the participants of the L&D 11 Project were informative for how the process could work in a favorable situation, but that it was difficult to draw conclusions from a single test case.

These same commenters outlined hypothetical situations where factors such as AIRs, consultation requirements, or other issues surfaced during the licensing process, requiring more time than an expedited process would allow. Rye, Noesis, and NHA suggest that for such situations, the Commission create "off-ramps" to the process if a project encounters technical or environmental factors that render the project infeasible for licensing within two years. In general, commenters recognized that for any project, unknown factors could contribute to a process taking longer than two years, and agree that "off-ramps" should be available if a project cannot continue along an expedited licensing timeline. This particularly relates to information needs identified during the process. NHA states that off-ramps could be built into the two-year process and triggered when there is a change in circumstances from those anticipated by the NOI/PAD filing such as: significant changes to project design or operation; new information or issues that arise after filing of the PAD and early NEPA scoping that require information

¹⁰¹ In addition to advancing the final engineering design and construction contracting, Rye also indicated it needs to finalize take off arrangements and line up project financing.

gathering beyond one study season; or the applicant and stakeholders agree, for some other reason, on the need to extend the two-year process. NHA also recommends that projects be allowed to resume a two-year licensing process or be eligible for other process streamlining if the issue(s) that caused an off-ramp are later resolved.

Commenters also noted that there is limited data for expedited processing of closed-loop pumped storage projects and there were no qualifying applications to use the pilot two-year process for closed-loop pumped storage projects. Given this lack of data, several commenters recommended additional study before the feasibility or practicability of an expedited process for closed-loop pumped storage is determined.

c. Criteria for Expedited Licensing

Despite the lack of consensus, many commenters provided recommendations for the types of projects that could be licensed in two years or fewer, whether under an existing licensing process or under a new licensing process. These generally fell into four major categories: (1) design criteria, (2) environmental criteria and information needs, (4) implementation, and (5) best practices.

1. Design Criteria

Many commenters recommend that developers meet specific design criteria if they wish to pursue expedited licensing. These criteria, which are supported by several developers as well as the Nature Conservancy include:

- The project is at an existing dam.
- The project adds generating capacity.
- The project causes no material change to the existing reservoir's storage capacity or flow release regime.
- The project occupies no federal lands other than that associated with an existing federal dam.

The Nature Conservancy further recommends that projects be sited only at federal dams that are currently serving their congressionally authorized purpose or non-federal dams that are meeting public needs for purposes such as flood control, water supply (all sectors), hydropower and/or navigation. Hydropower Reform Coalition supports hydropower on existing dams used for navigation and flood control/storage and states that the Commission's criteria for the pilot process made sense and are important in establishing the privilege to use an accelerated licensing process.

NHA and Hydro Green Energy recommended that there be no specific restrictions on capacity for projects that wish to pursue expedited licensing. Aquanovis states that small hydropower projects (under 1 MW) would particularly benefit from streamlined

regulation to reduce the costs of licensing. NHA recommends that there be no specific criteria and that the Commission decide if a project qualifies for a two-year process on a case-by-case basis.

Several developers, including Rye, Noesis Engineering Services, and Mavel Americas, filed comments in response to the criterion that required that any project proposed for the pilot two-year process that would be located at or use a federal dam obtain a letter from the dam owner that the applicant's plan of development was conceptually feasible. In general, the commenters asserted that this criterion was a barrier to using the pilot process at Corps or Reclamation dams, because the dam-owning agencies would not review conceptual plans for feasibility. Rather, the developers asserted that to obtain such a finding would require final design drawings, which typically are developed after receiving a license from the Commission. The Hydropower Reform Coalition recommended that the Commission define "conceptually feasible"¹⁰² and conduct additional outreach to ascertain whether the Corps or Reclamation actually received requests for conceptual feasibility that were denied.

2. Environmental Effects Criteria and Information Needs

In the notice soliciting pilot projects, the Commission identified specific resource impacts that should be considered when requesting use of the pilot process: (1) that the project was unlikely to adversely affect federally listed threatened or endangered species; and (2) that if the project would use a public park, recreation area, or wildlife refuge established under state or local law, the request to use the pilot process was to include a letter from the managing entity indicating it was not opposed to the site's use for hydropower development.

In comments provided during the workshop, FWS stated that effects on federally-listed aquatic species are more difficult to address than effects on terrestrial species, and the presence of federally-listed terrestrial species might not be an impediment to expedited licensing of hydropower projects. FWS explained that it gave a conditional "not likely to adversely affect" determination for federally listed threatened and endangered species to expedite the issuance of the L&D 11 Project license, and required Rye to survey for listed plant species after license issuance, but prior to construction, because Rye didn't have access to the full project area to complete the surveys before license issuance. FWS stated that it typically expects an entire site be surveyed for the presence-absence of threatened and endangered species before making a determination on the project's effects.

¹⁰² The intent of this requirement was to ensure that applicants had discussed the project proposal with the federal dam owner and there were no issues with the dam that would preclude the Commission from authorizing the project.

Similarly, Kentucky DEP commented that Rye was not able to provide all of the environmental data for a complete application for a water quality certificate. Without a complete application, Kentucky DEP stated that it cannot publicly notice the application, which is the beginning of the agency's process for issuing a final water quality certification. In order to meet the Commission and Rye's target timeframes of the two-year pilot process and still comply with state regulations, Kentucky DEP issued an interim water quality certification¹⁰³ for the L&D 11 Project.

At a programmatic scale, commenters generally do not agree on environmental criteria to use for expedited processing. For example, regarding effects on recreation and environmental resources, as noted above, Hydropower Reform Coalition concurs with the Commission's environmental criteria used in the pilot but requests that the criteria be expanded to exclude projects that would affect trails and recreation areas established under federal law or that exist in a protected stream reach. Conversely, NHA states that the only criterion that should be used to determine if a project is eligible for expedited processing is the adequacy of the information presented in the PAD and, that if data gaps exist, they can be addressed within one study season.

Regarding consultation, commenters universally recommend consulting with agencies early and often during the licensing process as a key to successfully expediting the process. Agency staff involved in the L&D 11 project commented that early consultation with both Rye and Commission staff was critical to understanding the process and meeting the compressed schedule. New England Power furthered this assertion, stating that one factor determining the success of a project is the level of initial consultation and other pre-filing work done to prepare the PAD or initial consultation document under the TLP.

Rye, the Forest Service, New York State DEC, and the Nature Conservancy agree that projects requiring more than one study season would not be good candidates for a two-year process. To reduce the burden for information gathering, several commenters provided recommendations about streamlining the study development process or reducing requirements for pre-filing studies. Hydro Green Energy recommended that the Commission streamline study requirements if existing studies (for another project) can be applied to address the potential effects of a project at another site. Hydropower Reform Coalition recommends that the Commission identify a list of required studies for projects seeking expedited licensing and develop a best practices guide for licensing studies to assist applicants in meeting information needs. In addition, Hydropower Reform Coalition recommends that the Commission require studies that other agencies deem to be necessary to exercise their statutory authorities within the licensing process, even if

¹⁰³ The requirements of the Kentucky DEP's interim water quality certification are described in more detail in section III.

the Commission does not need the information to complete its own review. Hydropower Reform Coalition believes that implementing these recommendations would shorten the overall regulatory timeframe.

3. Implementation of a Two-Year Process on a National Scale

Commenters have diverse opinions about whether, or how, the Commission should implement a two-year licensing process. Absaroka Energy and the Hydropower Reform Coalition state that a two-year process is possible under the Commission's existing regulations and there is no need to modify to the FPA. Absaroka Energy added that it declined to request the pilot two-year process for its recently licensed Gordon Butte Project, but used the TLP because it felt the TLP gave it more control over the overall licensing process. New England Power states that it also considered using the pilot process, but didn't have any difficulty completing the processes for its projects in two to two and a half years under the TLP. The Forest Service states that, rather than developing a fourth licensing process, it prefers that the Commission consider modifying the ILP to support a two year process.

Several commenters state that the Commission should formalize a new two-year licensing process to provide clarity and certainty in the licensing timeline and requirements. Rye proposes a new process, called the "Existing Dam Process" (EDP). Several other commenters supported the adoption of the proposed EDP. The EDP is a variation of the pilot two-year process that would last approximately two years and two months and consist essentially of: fewer eligibility criteria;¹⁰⁴ much shorter timeframes for the Commission and other stakeholders to act during pre-filing review; more time during pre-filing for developers to conduct studies; and off-ramps to allow time to address unexpected environmental issues.

Some commenters express concern that it would be difficult to process multiple projects on a two-year schedule simultaneously. The Kentucky SHPO states that it would be burdensome to provide input within the condensed schedule for L&D 11 for a larger group of projects given the small size of the agency and its current workload. The Hydropower Reform Coalition is also concerned that it would be difficult to handle multiple projects in the same basin at the same time under a two-year schedule. The FWS states that multiple project processing could work for projects like L&D 11 where there was early and frequent consultation, which would allow FWS to work with the

¹⁰⁴ Rye's proposed eligibility criteria for the EDP include: (1) new generating capacity added to non-powered dams; (2) no new dams or impoundments; (3) no material change in any existing storage and release regime; (4) no federal lands other than those associated with an existing federal dam; (5) all environmental studies supporting the application must be able to be completed within a single study season.

applicant on avoidance and minimization measures to reach a “not likely to adversely affect” determination on listed species. However, FWS states that processing multiple projects simultaneously that require formal consultation might not be feasible given the standard ESA timeframes and other workload. The KRA added that it is currently working on multiple hydropower projects at the same time and does not foresee this to be an issue. The Corps states there are no anticipated barriers for the Corps Regulatory Program to process multiple projects concurrently. The Forest Service wondered whether applicants using the existing licensing processes would be satisfied if two-year projects become the priority over processing other project applications.

Many commenters offered suggestions as to ways the Commission could use its existing authorities and processes to shorten the licensing timeframe. These suggestions include:

- Reducing the length of mandated comment periods, shortening noticing timeframes, and/or combining notices;
- Allowing early/shortened NEPA scoping;
- Issuing a single scoping document instead of two;
- Implementing early/accelerated study plan approval;
- Granting a waiver of the requirement for a draft license application;
- Issuing a single NEPA document concurrently with a license order;
- Expediting NEPA document drafting by Commission staff especially if all agencies’ study requests are required, allowing for adequacy of information;
- Applying the Commission’s ILP study criteria in a critical manner;
- Coordinating ESA consultation with the FWS and National Marine Fisheries Service (NMFS) in a more efficient manner;
- Developing and revising new MOUs with stakeholder agencies;
- Coordinating NEPA review among federal agencies to reduce redundancies;
- Moving the front end risks associated with acquiring 401 certifications, historic preservation concurrences, etc. to post-licensing, pre-construction conditions, as demonstrated at the pilot project;
- Developing standard license articles for non-powered dam and closed-loop storage projects and making the articles easily available for applicants to use in describing the project, its operations and impacts, along with standard mitigation measures in the NOI/PAD; and

- Applying more stringent standards in issuing and processing preliminary permits to facilitate agencies' ability to manage expedited processes concurrently, so that agency time and resources are not spent on processing projects that aren't appropriate for expedited processing.

Hydropower Reform Coalition, however, commented that expediting licensing processes should not occur at the expense of opportunities to improve environmental resources, such as temperature, dissolved oxygen concentration, and fish passage issues. Hydro Reform Coalition and the Nature Conservancy also noted that the Commission still has a responsibility under the FPA to balance the interests to find the best adapted for the comprehensive development of the waterway.

The Corps states that it is feasible to complete both the Commission and Corps' processes together using the procedures in the revised MOU which outlines how the processes can be aligned to arrive at a decision concurrently. However, the Corps noted that aligning the two agency processes requires a larger initial investment in project design from developers. The Corps also commented that small projects with less complexity and controversy are more feasible for the Commission and the Corps to process simultaneously.

4. Best Practices and Recommendations

Commenters pointed to a number of best practices that have contributed to successful completion of shortened licensing proceedings. The most commonly cited best practice is early and frequent consultation by applicants with agencies and other stakeholders. Having a hands-on, problem-solving approach and not being afraid to call regulators to ask questions were identified as keys for successful expedited licensing regardless of which process was selected. Absaroka Energy emphasized that flexibility in the process is a key factor in successful expedited licensing because every project has unique characteristics and challenges. New England Power and other commenters generally agree that if applicants, stakeholders, and the Commission can be flexible in terms of the timing of process milestones, two-year processing becomes much more feasible and likely because it allows stakeholders to address unforeseen issues that can arise in the middle of a process.

Multiple commenters stressed the importance of having adequate baseline data at the start of pre-filing to facilitate agency and stakeholder review and avoid the need for additional information gathering and associated delays.

New England Power commented that early initial consultation with agencies, particularly the 401 certifying agency, can help applicants identify issues that could delay processing. Similarly, Absaroka Energy identified two key elements of expediting that do not require new legislation. First, early consultation with all interested stakeholders

allowed the company to get agreement on study needs, ensure that only one study season was necessary, and allow the Commission to do NEPA scoping early. Studies and scoping for the Gordon Butte Project were completed in one year. Second, Absaroka Energy used study reports to negotiate mitigation measures with agencies and included the measures in a draft EA filed with the final license application as Exhibit E. By doing this, Absaroka Energy avoided the draft license application step, which minimized the risk that stakeholders would identify new issues and saved time. Absaroka Energy stated that accomplishing their goal efficiently was a matter of intelligent pre-planning, pre-negotiating, and pre-directing the process by the applicant.

Agencies and Nongovernmental Organizations offered a number of best practices and recommendations for expediting licensing processes. The Forest Service noted that it streamlines its review process by tiering off of the Commission's NEPA documents whenever possible. The Forest Service and Corps also both suggest that developers reach out to them directly, via telephone or email. Hydropower Reform Coalition/American Whitewater's recommended best practices included: (1) Commission continuing to engage stakeholders early in the licensing process; (2) maintaining licensing guidance on the Commission's website, (3) the Commission showing more deference to agencies by requiring all agency-requested studies or including a disclaimer in study determinations that additional studies may be required by other agencies; (4) processing multiple projects in a river basin in a comprehensive, integrated way; (5) continuing to refine existing MOUs and exploring opportunities for new MOUs to facilitate parallel agency processing; (6) consulting with Congress about reducing the Commission and Corps' duplicative authorities by allowing the Corps to have exclusive authority to regulate non-federal hydropower at its dams; and (7) developing more stringent criteria for preliminary permits. New York State DEC suggests the use of generic and/or formatted and automated document preparation to streamline licensing, as with the agency's electronic form for initial EAs that can be completed if there is sufficient information.

V. TIMELINESS OF EXISTING LICENSING PROCESSES

Given that only one case was able to be tested under the pilot process, Commission staff reviewed its records to ascertain whether there is sufficient flexibility within the current regulations to facilitate a two-year process. These results are presented below.

Because the primary goal of section 6 of the HREA is to promote the development of new projects, staff limited its analysis to proceedings for new projects, and did not take into account relicensing proceedings. This analysis includes projects authorized from 2003 to 2016, and focuses on the characteristics of the cases that were completed in two years or less.

a. Processing Times for New Projects

Between 2003 and 2016, 83 new hydropower projects completed pre- and post-filing activities and were issued original licenses or small hydropower project exemptions from licensing¹⁰⁵ by the Commission.¹⁰⁶ These 83 projects comprise the sample set used for the analysis discussed below. Applicants used the TLP for 52 of the projects, the ILP for 7, and the ALP for 4. Additionally, 19 projects were granted exemptions from licensing under the small hydropower project exemption process which uses the TLP.¹⁰⁷ The remaining project, the L&D 11 Project, was licensed with the pilot two-year licensing process.

For all projects in the sample set, the median time from the filing of the NOI and PAD until license issuance was 3.34 years. The median time spent in the pre-filing phase developing the license application was 1.55 years. Once an application was received by the Commission, the median time until license issuance was 1.79 years. The median time for the small hydropower exemption projects was 1.86 years. Staff notes that it did not include in the processing time the period between when an initial preliminary permit was issued and the NOI/PAD was filed, because (1) a preliminary permit is not a prerequisite to filing an NOI/PAD, and (2) staff does not believe it is reasonable to count this time because it is the filing of the NOI/PAD that initiates the licensing process.

¹⁰⁵ The sample set only included 10 MW or less exemptions. Conduit exemptions were not included because such projects are categorically exempt from NEPA.

¹⁰⁶ The Commission issued more than 63 original licenses from 2003 through 2016, however these 63 licenses represent those projects for which the Commission received an NOI and PAD after the first day of 2003, and issued a licensed through the end of 2016.

¹⁰⁷ 18 C.F.R. §§ 4.101 – 4.106 (2016).

During the 13-year period examined, the Commission authorized 22 projects (27 percent) in two years or less using existing processes. All used the TLP or ALP. No projects that were processed in less than 2 years used the ILP, which, per the process plan identified in the Commission's regulations, is designed to take longer than two years.¹⁰⁸

Table 1 shows the licensing processes used in the proceedings that were completed in two years or less. The median licensing time for these projects, from the filing of the NOI and PAD to license issuance, was 1.36 years. The L&D 11 Project was also licensed within two years, using the pilot two-year process.¹⁰⁹

Table 1. Projects Licensed or Exempted from Licensing in Two Years or Less (2003-2016).

Licensing process	Total number of projects	Number licensed in 2 years or less	Percent licensed in 2 years or less
TLP	52	11	22
ALP	4	1	25
ILP	7	0	0
10 MW or less exemption	19	10	53
Pilot two-year process	1	1	100
Total	83	23	28

b. Characteristics of Projects Processed in Two Years

As discussed previously, Commission staff and commenters have asserted that certain projects have characteristics that make them better candidates for processing in two years or less. In this section, we compare the characteristics of the 23 projects licensed (or exempted from licensing) in two years with the 60 projects licensed (or exempted) in more than two years to determine what, if any, factors contribute to or hinder expedited processing. Table 2 summarizes the characteristics that can affect these timeframes. The characteristics are discussed in greater detail in the sections that follow.

¹⁰⁸ 18 C.F.R. §§ 5.3 – 5.25 (2016).

¹⁰⁹ As discussed in Appendix B, the pilot two-year process's process plan and schedule was based on the ILP, with a compressed schedule for both pre-filing and post-filing activities. A copy of the pilot two-year process plan and schedule is provided in Appendix D.

Table 2. Characteristics of Projects Licensed or Exempted from Licensing in Greater Than Two Years and Two Years or Less (2003-2016).

Characteristic	Greater than 2 years	2 years or less
Number of projects	60	23
Process	83% TLP license or exemptions (50 projects)	91% TLP license or exemptions (21 projects)
	5% ALP (3 projects)	4% ALP (1 project)
	12% ILP (7 projects)	4% Pilot Two-Year Process (1 project)
Median Processing Time	3.91 years	1.36 years
Project Capacity	30% 1 MW or less (18 projects)	74% 1 MW or less (17 projects)
	30% > 1 and ≤ 5 MW (18 projects)	13% > 1 and ≤ 5 MW (3 projects)
	15% > 5 and ≤ 10 MW (9 projects)	13% > 5 and ≤ 10 MW (3 projects)
	25% > 10 MW (15 projects)	0% > 10 MW (0 projects)
Post-Filing AIRs or Deficiencies	87% Required AIR (52 projects)	65% Required AIR (15 projects)
	67% had one or more deficiencies (40 projects)	43% had one or more deficiencies (10 projects)
	8% no AIRs or deficiencies (5 projects)	30% no AIRs or deficiencies (7 projects)
Median Time from Application Filed to REA Notice	8.5 months (0.71 years)	2.3 months (0.19 years)

Characteristic	Greater than 2 years	2 years or less
Median Time from REA Notice to final EA issuance	0.81 years (10 of 60 projects had both a draft and final EA and the remaining 50 projects had only a single EA)	0.36 years (all projects required only a single EA)
FPA 4(e) Conditions, Section 18 Prescriptions, and 30(c) Conditions	33% 4(e) Conditions received before deadline set in Commission notice (3 projects of 51 received 4(e) conditions)	100% 4(e) Conditions received before deadline set in Commission notice (4 projects of 13 received 4(e) conditions)
	78% Section 18 Prescriptions received before deadline set in Commission notice (18 projects of 51 received Section 18 Prescriptions)	100% Section 18 Prescriptions received before deadline set in Commission notice (4 projects of 13 received Section 18 Prescriptions)
	71% 30(c) Conditions received before deadline set in Commission notice (7 projects of 9 received 30(c) Conditions)	100% 30(c) Conditions received before deadline set in Commission notice (8 projects of 10 received 30(c) Conditions)
CWA 401 Certification	80% 401 Certification received or waived in one year (48 projects)	100% 401 Certification received or waived in one year (23 projects)
ESA Consultation	43% required informal consultation (26 projects)	26% required informal consultation (6 projects)
	10% required formal consultation (6 projects)	4% required formal consultation (1 project)
	47% required no consultation (28 projects)	70% required no consultation (16 projects)
NHPA Section 106	28% no historic properties (17 projects)	35% no historic properties (8 projects)
	35% no adverse effects (21 projects)	43% no adverse effects (10 projects)

Characteristic	Greater than 2 years	2 years or less
	37% adverse effect – PA or MOA needed (22 projects)	22% adverse effect– PA or MOA needed (5 projects)

c. Site Selection and Project Design Characteristics

Overwhelmingly, projects that the Commission has licensed or exempted from licensing in two years or less are small, low-capacity projects at existing infrastructure. For all new projects studied, 42 percent were designed with capacities of 1 MW or less. A larger percentage (74 percent) of all projects licensed or exempted in two years or less had capacities of 1 MW or less. No projects licensed in two years or less had a capacity greater than 10 MW.

This result is due, in part, to the applicability of the small hydropower exemption to low-capacity projects. However, it is also related to the increased complexity, scope of issues, and likelihood of the need for additional information that can arise as project size increases.

Site selection is an important factor in determining if a project is a candidate for expedited processing. Many potential obstacles to expedited processing can be avoided or substantially reduced if the site selected requires little to no change to environmental resources and is located in an area where there is substantial existing information on environmental resources and effects.

In particular, projects that affect existing flow regimes in a river basin will likely take longer to license. Project complexity can be directly related to the other issues that affect license timing because more complex projects can require more information for the Commission and other agencies to fulfill their statutory requirements. Therefore, we conclude that the projects that are best suited for expedited processing are low-capacity projects with relatively few complex issues that must be addressed during the licensing process.

Regarding dam safety, all license applicants and licensees of hydropower projects are subject to inspection and evaluation by Commission staff pursuant to Commission safety regulations.¹¹⁰ An applicant must use sound and prudent engineering practices in any action relating to the design, construction, operation, maintenance, use, repair, or modification of a water power project or project works. Projects sited at existing dams

¹¹⁰ 18 C.F.R. Part 12 (2016).

are expected to satisfy the Commission's Dam Safety Guidelines¹¹¹ prior to licensing or post-licensing through planned remediation. A proposed project and project works that meet the guidelines may reduce the applicant's design time and expense.

d. PAD Development, Pre-filing Consultation, and Study Needs

Development of a PAD is the first step an applicant takes to initiate licensing proceedings. The PAD provides the Commission and stakeholders with the applicant's proposal as well as the existing, reasonably available information relevant to the project proposal that the applicant can obtain with the exercise of due diligence. This existing, relevant, and reasonably available information is distributed to the stakeholders to assist with identifying issues and information needs, developing study requests and study plans, and preparing documents analyzing any license application that may be filed.¹¹²

As a starting point for consultation between an applicant and stakeholders, a complete and accurate PAD upon filing with the Commission increases the likelihood that any additional information needs will be identified and addressed early and efficiently. In response to the Commission's initial workshop, multiple agencies commented that they are unable to request appropriate studies that may be needed if the applicant's PAD does not fully explain the project proposal and the environmental resources that it may affect. Filing PADs with insufficient information can lead to prolonged stakeholder deliberations during pre-filing or unnecessary study requests from stakeholders. Disagreements between the applicant and stakeholders about the need for studies or data collection can add significant amounts of time to the pre-filing phase. Projects that are likely to have such disagreements are not good candidates for expedited processing. On the other hand, a robust PAD that documents a clear proposal and presents available environmental information tends to lead to diligent and effective consultation from the beginning of the process and results in quicker processing by Commission staff. During the final public workshop, New England Power and Absaroka Energy attested that providing a PAD with all the required elements allowed their projects to be licensed in a much quicker manner.

e. Application Quality

Upon receipt of a final license application, Commission staff reviews the application to ensure it contains the information required by the Commission's regulations. Any missing information is termed a deficiency and, if present, staff issues a letter to the applicant requesting the required information. During the review process,

¹¹¹ Available at <https://www.ferc.gov/industries/hydropower/safety/guidelines/eng-guide.asp>.

¹¹² 18 C.F.R. § 5.6(b)(1) (2016).

Commission may need additional environmental, engineering, or economic information to analyze effects specific to the proposed project. Any information that is missing that staff needs is requested in a formal AIR letter to the applicant. Once the deficiencies have been corrected and Commission staff has all of the information needed to conduct its environmental analysis, Commission staff can then develop and issue an environmental document.

Of the 83 new projects in the sample set, the Commission needed to issue a letter requesting information to remedy a deficiency or obtain additional information in 71 of the proceedings (86 percent). Applications that were able to be processed in two years or less had a lower rate of deficiencies and/or AIRs. Of the projects that took longer than two years to authorize, 67 percent had at least one deficiency in the application, while only 43 percent of projects authorized in less than two years had deficiencies in the application. Of the projects that took longer than two years to authorize, 87 percent required additional information, while only 65 percent of projects authorized in less than two years required additional information. The median time from the filing of the application until all AIRs or deficiencies were corrected (REA notice) was 0.60 years. It is very unlikely that a project can be authorized in two-years or less when it takes over seven months to obtain the information needed to conduct a basic NEPA analysis.

In the case of the L&D 11 Project, Rye filed its license application prior to the two-year target, but then supplemented its application with 18 filings over a period of 9 months to correct deficiencies, respond to AIRs, and revise its proposed project design and environmental protection measures.¹¹³ These additional and unanticipated filings caused significant delays in Commission staff's review of the application and in writing the EA (see Appendix D). On various occasions staff debated internally about whether the two-year process remained feasible, or if an "off ramp" to a standard TLP was more appropriate. However, in the interest of testing at least one complete pilot process, Commission staff worked diligently and coordinated with other stakeholders as needed to complete the target milestones within two years. While preserving the stakeholder comment periods, Commission staff absorbed the delays associated with information gathering by investing an atypical amount of staff time to complete the EA and license order under the two year schedule. Staff question whether this level of post-filing coordination with other agencies and information gathering would be feasible with a large number of projects.

Even with all the supplemental filings, several stakeholders in L&D 11 Project process identified outstanding information gaps that hindered completion of their statutory and regulatory responsibilities and resulted in conditional concurrences and

¹¹³ See section III.b.2. for detailed descriptions of the deficiencies, information gaps, and supplemental filings.

requirements for subsequent (post-licensing) reviews. As summarized in section IV, despite limited staff and heavy workloads, agency stakeholders prioritized the processing of Rye's proposal in order to meet the two-year process targets. Prioritizing the processing of proposals with significant information gaps can come at the expense of processing other projects.

Obtaining complete and thorough license applications at the time of filing without deficiencies or significant additional data gathering will be critical in maximizing the expedited and/or efficient processing of the entire pool of hydropower license applications and promoting the development and maintenance of U.S. hydropower projects in general.

f. Commission Processing Timelines

The Commission's regulations set certain timelines for processing license applications (see Appendix B for descriptions of the timing associated with each licensing process). In general, the timelines reflect required review periods to provide opportunities for stakeholders' comments and recommendations on: information gaps in the PAD, use of a particular licensing process, study plans and study results, the scope of the project and issues to be addressed in the environmental document, the applicant's licensing proposal, and staff's environmental analysis. However, the regulations also recognize that not all steps are needed in every case. For example, pursuant to section 4.38(e) of the Commission's regulations, an applicant for a license may request waiver of certain pre-filing consultation requirements.

Many of the projects the Commission has licensed in two years or less have been processed by waiving portions of these regulations that were not needed based on the circumstances of the particular proceeding or where waiver requests were supported by the stakeholders, and therefore, would have unnecessarily prolonged the proceeding. The portions of the regulations that are most typically waived to expedite the process have included solicitation of additional study requests, and the preparation and distribution of a draft license application. In addition, where appropriate, Commission staff may expedite licensing by allowing an early, shortened NEPA scoping process.

In addition, the timeline for completing NEPA during the processing of license and exemption applications is affected by the nature and complexity of the project. For projects licensed in two years or less, the actual time between REA and license/exemption issuance was significantly shorter than for projects that were licensed in more than two years (0.19 years compared with 0.71 years).

g. Other Statutory and Regulatory Factors

As discussed in section I.c of this report, there are a number of federal statutes that the Commission must abide by before it can license a project. Often times, the Commission cannot act until it receives input from other federal and state agencies or other stakeholders. The influence of these factors on the licensing timeline are discussed below.

1. Timing of Receipt of Mandatory Section 4(e), 18, and 30(c) Conditions

Following issuance of the REA notice, the Commission provides parties 60 days to submit recommendations, terms and conditions, and fishway prescriptions. However, it is not uncommon for agencies with authority under sections 4(e), 18, and 30(c) of the FPA to provide conditions and prescriptions later than the requested date. Pursuant to 18 CFR § 4.34 (b)(1) (2016), agencies that are not able to file their conditions and prescriptions in a timely manner must explain why, file preliminary conditions, and provide a schedule for providing the final conditions. In order to determine the actual timeframe for receiving these terms and conditions, Commission staff evaluated the timeframes from the sample set for projects that received preliminary and/or final conditions. In the sample set of 64 licenses, land management agencies filed 4(e) conditions for 7 projects, while the Departments of Interior or Commerce filed section 18 prescriptions for 22 projects. In the sample set of 19 small hydropower exemptions, fish and wildlife agencies filed 30(c) conditions for 15 of the projects.

The 23 projects that were authorized in two years or less were not subject to delays caused by untimely filings from mandatory conditioning agencies. Conditions filed under various sections of the FPA (4(e), 18, and 30(c)) were filed within the timeframe set by Commission notice for all projects authorized in two years or less in our sample. Projects that were licensed in more than two years were more likely to be delayed because of late filing of these conditions. For the 60 projects licensed in more than two years, 67 percent of projects with 4(e) conditions had late filings, 22 percent of the projects with section 18 prescriptions had late filings, and 29 percent of projects with section 30(c) conditions had late filings.

2. Time to Receive Water Quality Certification

Section 401 of the CWA water quality certification process can be time-consuming. An applicant can request a water quality certification from a state agency or tribe at any time throughout the Commission's licensing process, but the latest an applicant can request a water quality certification for a licensing proposal is 60 days after the Commission issues its REA notice.

To determine if the receipt of a water quality certification is a factor in delayed licensing, staff reviewed the sample set and looked at the time between when the applicant formally made its first or only¹¹⁴ request for a water quality certification and when the state agency or tribe either issued or waived water quality certification, or the water quality certification was deemed waived due to agency inaction by the one-year statutory deadline. The average time was 411 days,¹¹⁵ and the median time was 356 days. All 23 projects licensed in two years or less either received a water quality certification or a waiver within one year of the applicant's request.¹¹⁶

During the final public workshop, participants of the two-year process were unanimous in recommending early and frequent consultation among stakeholders, including a special focus on communication between applicants and 401 certifying agencies. New England Power suggested that early initial consultation with agencies, particularly the 401 certifying agency, serve essentially as a litmus test by helping applicants identify issues that could delay processing. In some cases, 401 certifying agencies or tribes are new to processing hydropower projects. For example, Kentucky DEP staff was relatively new to Commission licensing processes and were among the first and only agency staff testing the pilot process. Therefore, the Kentucky DEP relied heavily upon consultation with Rye and guidance from Commission staff to navigate the process. The earlier and more collaboratively the applicant works with 401 certifying agencies or tribes, the more quickly licensing may proceed.

3. Time to Complete ESA Consultation

Under the ESA, the Commission must ensure that its actions do not jeopardize protected species or their habitat and must consult with the FWS or NMFS when determining what protection measures to take. The consultation process can vary in length according to the level of effect on listed species. If the Commission determines its action will have no effect on a listed species or its habitat, no further consultation is

¹¹⁴ An applicant may withdraw and refile a request for certification, thereby, resetting the statutory deadline for agency action. However, for purposes of assessing how the certification process affects the overall licensing process time, our calculation of certification process time in this report begins with the first or only formal request for certification, and does not reset where an applicant subsequently withdrew and refiled its request.

¹¹⁵ The average (mean) contains both requests where a certification was granted and requests where the Commission deemed the certification was waived because no response from the water quality agencies was provided within one year of an initial or subsequent request, as applicable.

¹¹⁶ In all 23 cases, the applicant made one formal request for certification, and did not subsequently withdraw and refile that request.

required. If the Commission believes its action is not likely to adversely affect a listed species or its habitat, staff will send a letter to the appropriate service seeking its concurrence. If FWS or NMFS agrees with the Commission's finding, consultation is finalized with a letter from the appropriate service indicating its concurrence. The Commission usually seeks concurrence upon issuance of an EA or environmental impact statement (EIS) for a project and the Services typically respond in 30 days or less.

If the FWS or NMFS do not agree with the Commission conclusion that its action is not likely to adversely affect a species or its habitat, formal consultation would be required under section 7 of the ESA. Additionally, the Commission may determine that its action is likely to adversely affect a species or its habitat, in which case the Commission will initiate formal consultation with the appropriate service. The Commission usually does this by sending the FWS and/or NMFS its EA or EIS for a project, which includes a section of analysis on federally listed species. The Commission will request that FWS or NMFS provide it with a list of protection and mitigation measures to protect the listed species or its habitat within 135 days in a BO. The Commission will make the protection and mitigation measures from the Services' BO a part of any license that may be issued for a project.

The formal consultation process can be lengthy and can hinder the Commission's ability to issue a license in a timely manner. Often, FWS or NMFS will determine that the agency does not have all the information it needs to complete a BO upon request to do so. Requests for additional information associated with BO preparation can take the form of simple clarifications and data requests, which can be resolved fairly quickly, to additional field studies or surveys which can lead to significant delays during a licensing proceeding.

Seventy percent of all projects licensed in two years or less required no consultation under the ESA. Six projects required informal consultation. Only one project required formal consultation; the L&D 11 Project.¹¹⁷ Of the seven projects licensed in two years or less that required consultation under ESA, all of the consultations were completed in less than 48 days. This compares with a median time of 76 days for informal consultation and 187 days for formal consultation across the 83 projects in the sample set.

During the final public workshop, FWS commented that if "not likely to adversely affect" determinations could not be reached, it may not have the resources to handle multiple formal consultations in an expedited manner. However, FWS also stated that

¹¹⁷ During the pilot two-year process for the L&D 11 Project, formal consultation was required for one species, the Indiana bat. Staff conducted informal consultation for the other six federally listed species potentially occurring in the project area.

applicants that consult with FWS early and frequently have more options and flexibility in addressing ESA issues in an efficient manner. This is because FWS can assist them in identifying listed species that may occur in the project area, plan surveys to ensure they will be conducted during the appropriate season and be valid for inclusion in the Commission's NEPA analysis, and thereby not delay the overall licensing process. Early ESA consultation also allows applicants to build in time to avoid or minimize effects to listed species by negotiating protection, mitigation, and enhancement measures.

4. Time to Complete Section 106 Consultation

Section 106 of the NHPA¹¹⁸ requires the Commission to take into account the effect of its undertakings on properties included in or eligible for inclusion in the National Register and to afford the Advisory Council a reasonable opportunity to comment with regard to the undertaking. Compliance with section 106 is a four-stage process, as defined by the Advisory Council's implementing regulations:¹¹⁹ (1) an applicant defines the project's area of potential effects, in consultation with the relevant SHPO, or THPO for projects on tribal lands; (2) an applicant collects data to identify if historic properties are present; (3) Commission staff determines whether the project would adversely affect historic properties, if any are present, and seek concurrence from the SHPO/THPO(s) about the determination of effect; and (4) Commission staff reaches agreement with the SHPO/THPO(s) to resolve any adverse effects on historic properties.

Typically, in situations where an undertaking would adversely affect a historic property, Commission staff makes a determination of effects in the environmental document. The environmental document may also describe treatment measures proposed by an applicant, SHPO/THPO, or Commission staff to resolve the adverse effect. Final agreement on treatment measures to resolve adverse effects to historic properties are described in a PA or memorandum of agreement (MOA)¹²⁰ between the Commission and the applicable SHPO or THPO. Licensees, tribes, and other stakeholders may be asked to sign the agreement document (PA or MOA) as concurring parties, although the agreement document is considered executed with the signatures of both the Director of the Commission's Division of Hydropower Licensing and the applicable SHPO/THPO(s). Should the Commission and applicable SHPO/THPO(s) fail to agree, the alternative is to terminate further consultation and ask the Advisory Council to provide formal comments on the dispute. Although a licensing proceeding may continue

¹¹⁸ 54 U.S.C. § 306108 (2012).

¹¹⁹ 36 C.F.R. Part 800 (2016).

¹²⁰ Typically, PAs are used for licensed projects where potential effects on historic resources would be ongoing over the term of a license; MOAs are used for one-time actions, like exemptions.

if agreement is not achieved, the goal of the section 106 process is reaching mutually agreeable outcomes that protect historic resources at a project.

Of the 83 licensed or exempted projects, 25 were proposed at sites with no historic properties present; 31 were proposed at sites with historic properties present, but where it was determined that construction, operation, and maintenance of the project would have no adverse effect on historic properties; and 27 projects were proposed at sites with historic properties that had the potential to be adversely affected by the proposed project. These 27 projects required PAs or MOAs to resolve adverse effects on historic properties. Projects licensed in two years or less were more likely either have no historic properties present or not cause adverse effects to known historic properties (78 percent compared with 63 percent for projects that took longer than two years).

If a proposed project would be located at a dam that meets the criteria for listing on the National Register, or if the construction site has not been previously disturbed, an applicant should be prepared to provide a detailed and well-developed proposal explaining the area affected by project construction and should expect to conduct surveys within the project's area of potential effects, including the transmission line corridor. If resources are found, more in-depth surveys may be required. The more collaboratively the applicant works with a SHPO and affected tribes, the more quickly licensing may proceed. The most lengthy section 106 consultation processes occur when an applicant, Commission staff, SHPOs and/or tribes disagree on: (1) the area affected by the project; (2) the need for surveys; (3) whether actions included in the project proposal will affect historic properties; and/or (4) how to resolve any adverse effects.

VI. CONCLUSIONS

Based on the outcomes of the tested two-year pilot process, public comments from the final workshop on the effectiveness of the tested two-year pilot process, and the Commission staff's experience with licensing (or exempting from licensing) new projects as described in section V of this report, we provide the following conclusions.

How the Commission will adopt policies under existing law (including regulations) that result in a two-year process for appropriate projects

Commission staff has found that two-year license processing for new projects is feasible, and can occur within the existing legal and regulatory framework. As discussed, expedited license processing is feasible under the existing TLP or small hydro exemption processes without modifications to the Commission's standard practices with some regulation waivers depending on the specifics of each case. Two-year processing could also be feasible under the ILP, with waivers, or with agreement among all stakeholders as part of the ALP.

From 2003 through 2016, the Commission successfully licensed, or exempted from licensing, 23 projects in two years or less, comprising 28 percent of all licensed or exempted new projects during the same timeframe. Expedited processing is possible when applicants and stakeholders work closely during pre-filing to gather information, conduct studies, and address information gaps. Expedited licensing is further aided by well-developed PADs and license applications that provide a detailed project proposal, a comprehensive summary of the existing facilities and natural resources, and a thorough examination of the resource issues at hand and study needs.

As discussed in section V and reinforced by comments provided by the public (as summarized in section IV), there are certain characteristics of projects that enhance the likelihood that a two-year process will be feasible for any given project. These include both design and environmental characteristics, as well as characteristics related to information-gathering and consultation.

Developers wishing to receive a license in an expedited manner should be aware of these characteristics and approach the licensing of their projects accordingly. Expedited licensing occurs most readily when projects have the following characteristics:

Design Characteristics

- The project would not alter existing flow regimes or cause significant impoundment fluctuations (i.e., operate in run-of-river or run-of-release mode);
- Minimal land clearing would be required; and

- For projects at non-federal dams, the existing structures satisfy the Commission's Dam Safety Guidelines.

Environmental Characteristics

- There are few, or only minor environmental concerns, for example:
 - There would be no significant change to water quality parameters such as dissolved oxygen concentration and temperature;
 - The project would not significantly alter the flow regime at the project site;
 - There would be little or no potential for project effects on migratory fish; and
 - There would be no adverse effects on federally listed species and/or habitat.

Information Gathering and Consultation

- Sufficient existing information about environmental and cultural resources exists and little new data collection is needed;
- Stakeholders, especially agencies, are consulted early, and frequently during the term of the preliminary permit and pre-filing to identify, and reach a consensus on, appropriate environmental protection, mitigation, and enhancement (PM&E) measures that address project-related impacts; and
- The applicant includes pre-negotiated environmental PM&E measures in its license application.

The Commission has worked within its own authorities to expedite licensing for certain projects and we expect to continue to do so, whenever possible. Some of the strategies that can be employed include:

- Waiving some pre-filing consultation requirements;
- Allowing pre-filing consultation to serve as the Commission's NEPA scoping process;
- Combining public noticing requirements;
- Shortening comment periods;
- Issuing a single environmental document (as opposed to using draft and final documents); and
- Issuing the licensing decision concurrently with an EA.

Commission staff believes that the goal of reducing the time and effort it takes applicants to receive a license can be advanced with improved guidance. As noted above, the time it takes for applicants to correct application deficiencies and provide additional information can be significant. The better the Commission's regulatory requirements can be clearly communicated to applicants, the fewer the instances of incomplete PADs and applications.

It is also important that applicants are fully aware of the types of projects that are good candidates for expedited licensing, what they can do to facilitate the process, and, when appropriate, what the Commission can do to shorten the process, under specific circumstances. As a start, the small/low impact portion of the Commission's public hydropower website (www.ferc.gov) will be made more prominent, and will be updated more frequently with recent examples of projects that were expedited. Staff will also explore whether a stand-alone best practices guidance document would be of value to developers.

Commission staff does not believe that Congress needs to make statutory changes to the FPA or otherwise amend the Commission's authority to ensure expedited processing of license applications for the types of projects where the Commission is able to move quickly to a licensing decision. However, as identified in comments provided on the tested two-year process and in Commission staff's analysis of its own workflow history, factors outside of the Commission's jurisdiction can delay license processing. These include the statutory authorities granted to other federal or state agencies under the CWA, ESA, and NHPA. The degree to which these other agency timelines extend the Commission's licensing schedule will continue to affect the feasibility of a two-year process in certain cases.

Finally, while the focus of this report is on the time it takes for developers to receive the Commission's authorization for a new project, Commission authorization is just the first of several steps a project must take before it goes into operation. If the goal of Congress is to expedite and increase new hydropower project generation delivery to the nation's power grid, we believe additional attention could be given to those factors that can delay the start of project construction and operation that are outside of the Commission's jurisdiction.

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APPENDICES

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APPENDIX A

Summary of Statutory and Regulatory Requirements of the Commission's
Hydropower Licensing Process

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APPENDIX A
**Summary of Statutory and Regulatory Requirements of the Commission’s
 Hydropower Licensing Process**

Statute/ Regulation	Agency	Summary of Requirements
Section 4(e) of the FPA ¹	FERC	Section 4(e) of the FPA gives the Commission the authority to issue licenses for hydropower projects that: (1) are located on navigable waters; (2) are located on non-navigable waters over which Congress has Commerce Clause jurisdiction, were constructed after 1935, and affect the interests of interstate or foreign commerce (e.g., are connected to the interstate grid); (3) are located on public lands or reservations of the U.S. (excluding national parks); <u>or</u> (4) use surplus water or water power from a federal dam (usually a U.S. Army Corps of Engineers (Corps) or Bureau of Reclamation (Reclamation) dam). ² As amended, ³ section 4(e) requires the Commission to give equal consideration to, but not necessarily equal treatment of, developmental and non-developmental values. ⁴

¹ 16 U.S.C. § 797(e) (2012).

² Licensed projects at federal facilities do not include the facilities themselves. The Commission has Memoranda of Understanding (MOU) with the Corps of Engineers (Corps) and Bureau of Reclamation (Reclamation) to coordinate the exercise of their respective authorities.

³ Electric Consumers Protection Act of 1986, P.L. 99-495, 100 Stat. 1243 (1986), codified at 16 U.S.C. § 791a, *et. seq.* (2012)

⁴ “Developmental” benefits of a project include power generation, water supply, flood control, irrigation, and river navigation. “Non-developmental” values of a waterway include fish and wildlife resources, recreational opportunities, and other aspects of environmental quality.

Statute/ Regulation	Agency	Summary of Requirements
NEPA ⁵	FERC ⁶	Requires that the Commission, as the federal agency permitting and licensing non-federal hydropower projects, evaluate the environmental impact and significance of these impacts, as part of its permitting/licensing processes. The Commission is bound by the statutory requirements of NEPA and maintains a policy of adhering to the objectives of NEPA.
Section 10 of the FPA ⁷	FERC	Establishes the comprehensive development standard which each project must meet to be licensed. Pursuant to this standard, the Commission must explore all issues relevant to the public interest, including, but not limited to: (1) the need for project power; (2) the cost of project power relative to other energy sources; (3) compliance with antitrust laws; ⁸ (4) the project's consistency with state or federal comprehensive plans which address beneficial uses of a waterway; (5) federal and state fish and wildlife agencies' and tribes' conditions to protect fish and wildlife; and (6) the Commission's assessment of the proposed project's environmental impacts.

⁵ 42 U.S.C. §§ 4321, *et. seq.* (2012).

⁶ Federal agencies with 4(e) authority may perform an environmental analysis pursuant to NEPA, independent of the Commission's NEPA analysis.

⁷ 16 U.S.C. § 803 (2012).

⁸ 16 U.S.C. § 803(h)(2) (2012).

Statute/ Regulation	Agency	Summary of Requirements
Section 4(e) of the FPA	Federal Land – Administering Agencies	Authorizes federal land-administering agencies, such as the Department of Agriculture and the Department of the Interior, ⁹ to impose mandatory conditions on projects located on Federal reservations ¹⁰ they supervise. ¹¹ The Commission must either include these conditions in the license without modification or, if it believes the license as conditioned would not satisfy the section 10(a) comprehensive development standard, it may decline to issue a license. ¹² Alternatively, the Commission may issue a license and explain why it believes the conditions should be deleted or modified.

⁹ As examples, the Secretary of the Interior prescribes mandatory conditions for projects on Indian reservations, and the Secretary of Agriculture does so for projects in national forests.

¹⁰ Federal "reservations" are a subset of federal lands. Reservations are defined in section 3(2) of the FPA as "national forest, tribal lands embraced within Indian reservations, military reservations, and other lands and interests in lands owned by the United States, and withdrawn, reserved, or withheld from private appropriation and disposal under the public land laws; also lands and interests in lands acquired and held for any public purposes; but shall not include national monuments or national parks." 16 U.S.C. § 796 (2012).

¹¹ Section 4(e) conditioning applies to new as well as original licensing. *See S. Cal. Edison Co. v. FERC*, 116 F.3d 507 (D.C. Cir. 1997).

¹² *See Escondido Mut. Water Co. v. LaJolla Band of Mission Indians*, 466 U.S. 765 (1984).

Statute/ Regulation	Agency	Summary of Requirements
Section 10(j) of the FPA ¹³	Federal and State Fish and Wildlife Agencies	Requires that the Commission base fish and wildlife conditions in licenses on recommendations received from federal and state fish and wildlife agencies. The Commission must attempt to resolve any inconsistencies of the recommendations with the FPA or other applicable law. If the Commission does not adopt an agency's recommendation, it must explain why it disagrees with the agency, why the agency's recommendation is inconsistent with the law, and how the measures included in the license provide adequate protection for fish and wildlife resources.
Section 18 of the FPA ¹⁴	Interior or U.S. Department of Commerce (Commerce)	Requires that the Commission require licensees to construct, maintain, and operate fishways, ¹⁵ prescribed by the Secretaries of Commerce and Interior. Commerce and Interior have the authority to prescribe fishways for new licenses as well as original licenses. ¹⁶
Section 401 of the CWA ¹⁷	State, Tribe or Interstate Pollution Control (Water Quality Certifying)	License applicants must obtain certification from the state, tribe or interstate pollution control agency verifying compliance with the CWA. ¹⁸ The Commission's licensing process requires hydropower applicants to consult with the certifying agency and file evidence of a request for water quality certification no later than

¹³ 16 U.S.C. § 803 (j) (2012).

¹⁴ 16 U.S.C. § 811 (2012).

¹⁵ Section 18 of the FPA also requires that the Commission require licensees to construct, maintain, and operate such lights and signals as may be directed by the Secretary of the Department in which the Coast Guard is operating.

¹⁶ See *Hydroelectric Relicensing Regulations Under the Federal Power Act*, Order No. 513, 54 *Fed. Reg.* 23,756 (June 2, 1989), FERC Stats. & Regs. ¶ 30,854; Order 513-A (1989), 55 *Fed. Reg.* 4-02 (January 2, 1990), FERC Stats & Regs. ¶ 30,869.

¹⁷ 33 U.S.C. § 1341(a)(1) (2012).

¹⁸ States acting under the CWA could regulate not only water quality (such as the physical and chemical composition of the water), but water quantity (the amount of water released by a project), as well as State-designated water uses (fishing, boating, etc.). *PUD No. 1 of Jefferson Cty v. Wash. Dep't of Ecology*, 511 U.S. 700 (1994).

Statute/ Regulation	Agency	Summary of Requirements
	Agencies	60 days after the Commission issues its REA notice. The Commission cannot determine whether conditions submitted by state agencies pursuant to section 401 of the CWA are beyond the scope of that section. ¹⁹ In addition, the Commission cannot license a hydroelectric project unless the project has first obtained water quality certification or the water quality certifying agency has waived certification. ²⁰
ESA ²¹	FWS or National Marine Fisheries Service (NMFS)	Requires that the Commission ensure that its actions do not jeopardize protected species or their habitat and must consult with FWS or NMFS when determining what protection measures to take. A project that would pose such jeopardy could not be authorized.
Marine Mammal Protection Act (MMPA) ²²	NMFS	Prohibits, with certain exceptions, the “take” (defined under statute to include harassment) of marine mammals in U.S. waters and the high seas. In 1986, Congress amended both the MMPA, under the incidental take program, and the ESA, to authorize incidental takings of depleted, endangered, or threatened marine mammals, provided the “taking” (defined under the statute as actions that are or may be lethal, injurious, or harassing) was small in number and had a negligible impact on marine mammals. With this relationship between the MMPA and the ESA, NMFS cannot complete section 7 consultation under the ESA and issue an Incidental Take Permit for listed marine mammals until an Incidental Harassment Authorization ²³ has been issued. This requires that

¹⁹ Disputes concerning whether conditions submitted under section 401 are lawful are to be resolved by the courts. *American Rivers v. FERC*, 129 F.3d 99 (2nd Cir. 1997)

²⁰ The intent of the CWA is that a State should act on a certification request in a year or less.

²¹ 16 U.S.C. § 1531 *et. seq.* (2012).

²² 16 U.S.C. § 1361 *et. seq.* (2012).

²³ In 1994, MMPA section 101(a)(5) was amended to establish an expedited process by which citizens of the United States can apply for an authorization, referred to

Statute/ Regulation	Agency	Summary of Requirements
		Commission staff analyzes effects of a project on marine mammals, if there is a likelihood of their occurrence in the project area. This analysis occurs during the preparation of the environmental document for a proposed licensing, amendment, or exemption action.
Fish and Wildlife Coordination Act ²⁴	Interior, FWS, and NMFS	Requires the Commission, prior to granting a license or permit for the control, impoundment, or modification of streams and water bodies, to consult with Interior, FWS, and the appropriate state fish and wildlife agencies regarding conservation of these resources. Pursuant to the Fish and Wildlife Coordination Act, the Commission is also directed to include in each license conditions for the protection, mitigation, and enhancement of fish and wildlife that are to be based on recommendations received from the NMFS, FWS, and state fish and wildlife agencies.
Migratory Bird Treaty Act (MBTA); ²⁵ Executive Order 13186	Interior; FWS	<p>Protecting over 800 species of birds that occur in the U.S., MBTA provides that it is unlawful to pursue, hunt, take,²⁶ capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. Some regulatory exceptions apply.</p> <p>Under Executive Order 13186, federal agencies, whose direct activities will likely result in the take of migratory birds, were directed to further implement the MBTA, by developing and implementing a Memorandum of</p>

as an Incidental Harassment Authorization, to incidentally take small numbers of marine mammals by harassment.

²⁴ 16 U.S.C. §§ 661 – 667e (2012).

²⁵ 16 U.S.C. §§ 703-712 (2012).

²⁶ Take is defined as: “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.” 16 U.S.C. § 1532 (2016).

Statute/ Regulation	Agency	Summary of Requirements
		Understanding (MOU) with the FWS to promote the conservation of bird populations. Although regulatory agencies, like the Commission, are not covered by the order, the Commission agreed to develop a MOU and it was issued on March 30, 2011.
Bald and Golden Eagle Protection Act ²⁷	FWS	Prohibits the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import" of the bald eagle "at any time or in any manner." Covers golden eagles too, but the golden eagle, however, is accorded somewhat lighter protection under the Act than the bald eagle. The Commission has indicated that compliance with this act is the responsibility of the licensee and it will not impose any license requirement regarding future compliance with the Eagle Act permitting process.
Magnuson-Stevens Fisheries Conservation and Management Act ²⁸	NMFS	Requires the Commission to consult with NMFS on all actions that may adversely affect essential fish habitat (EFH). If EFH for species managed by NMFS occurs in the project area, Commission staff must analyze the effects of the project on EFH, and if adverse effects are predicted, must consult with NMFS to determine appropriate measures to reduce those effects. Commission staff completes the EFH analysis and consultations during the preparation of the environmental document for a proposed licensing, amendment, or exemption action.

²⁷ 16 U.S.C. §§ 668-668c (2012).

²⁸ 16 U.S.C. § 1851 *et seq.* (2012).

Statute/ Regulation	Agency	Summary of Requirements
Coastal Zone Management Act (CZMA) ²⁹	State Coastal Zone Management Program	The Commission cannot authorize development of a hydropower project within or affecting a state's coastal zone, unless the state concurs with the applicant's certification of consistency with the state's CZMA program. The state's concurrence is conclusively presumed if it fails to act within 180 days of its receipt of the applicant's completed certification.
NHPA ³⁰	Advisory Council on Historic Preservation (Advisory Council)	Requires the Commission, before authorizing a project, to consider the project's effects on any site, structure, or object included in, or eligible to be included in, the National Register, and to afford the Advisory Council an opportunity to comment. In practice, this is generally handled through the State Historic Preservation Officer (SHPO).
Pacific Northwest Electric Power Planning and Conservation Act ³¹	Northwest Power and Conservation Planning Council	Requires the Commission to: (1) provide "equitable treatment" to fish and wildlife; (2) take into account "to the fullest extent practicable" the Council's fish and wildlife program; and (3) in carrying out its responsibilities, consult with a variety of entities and, to the "greatest extent practicable," coordinate actions with other federal agencies.
Federal Land Policy and Management Act ³²	U.S. Forest Service or Bureau of Land Management (BLM)	Most Commission licensees and exemptees (some are grandfathered) ³³ must obtain from the Forest Service or BLM, as appropriate, the necessary rights-of-way to build and operate projects on public land. Any Forest Service or BLM conditions on such rights-of-way are mandatory.

²⁹ 16 U.S.C. § 1451 *et. seq.* (2012).

³⁰ 54 U.S.C. § 300101 *et. seq.* (2014). The National Historic Preservation Act was recodified in Title 54 in December 2014.

³¹ 16 U.S.C. § 839 *et. seq.* (2012).

³² 43 U.S.C. § 1701 *et. seq.* (2012).

³³ The Federal Land Policy and Management Act (FLPMA) was amended in 1992, reversing a court decision which had excluded Commission licensed projects from

Statute/ Regulation	Agency	Summary of Requirements
Wild and Scenic Rivers Act ³⁴	Federal river administrating agencies	Bars the Commission from licensing hydropower projects on river segments congressionally designated as Wild or Scenic, or on river segments congressionally selected to be studied for possible designation.
Wilderness Act ³⁵	Forest Service, National Park Service, and FWS	Section 4 prohibits the establishment of power projects, transmission lines, and other facilities in a federally designated wilderness area. Section 4 doesn't prohibit issuance of a preliminary permit for a proposed project. The Commission is prohibited from issuing licenses authorizing the construction or operation of projects within wilderness areas.
Energy Policy Act (EPAct) of 2005 ³⁶	Interior, Commerce, and Agriculture	<p>The Commission worked with Interior, Commerce, and Agriculture, pursuant to section 241, which required the departments to establish procedures allowing parties to hydropower licensing proceedings, including license applicants, to request trial-type hearings concerning disputed issues of material fact regarding fishway prescriptions and other mandatory conditions proffered by the departments, and to provide parties the opportunity to propose alternative conditions and fishway prescriptions. The departments published an interim final rule implementing section 241, which applies to any license proceeding for which the license was not issued as of November 17, 2005.³⁷</p> <p>The Commission also issued a guidance document to help hydropower licensees seeking renewable tax credit certification for incremental energy gains from efficiency improvements.</p>

FLPMA's terms. *See* Energy Policy Act of 1992, P.L. 102-46, 106 Stat. 2776.

³⁴ 16 U.S.C. § 1271 *et. seq.* (2012).

³⁵ 16 U.S.C. § 1131 *et seq.* (2012).

³⁶ Energy Policy Act of 2005, P.L. 109-58, 119 Stat. 594 (2005).

³⁷ Resource Agency Procedures for Conditions and Prescriptions in Hydropower

Statute/ Regulation	Agency	Summary of Requirements
Energy Act of 2000 ³⁸	FERC	<p>Added section 32 to the FPA, which removed from Commission jurisdiction projects 5 MW or less in Alaska, effective on the date on which the Commission certifies that the State of Alaska has in place a regulatory program for water-power development that meets three tests.³⁹</p> <p>Section 603 required that the Commission, in consultation with other appropriate agencies, immediately undertake a comprehensive review of policies, procedures, and regulations for the licensing of hydroelectric projects to determine how to reduce the cost and time of obtaining a license. The Commission submitted "Section 603" report to Congress on May 8, 2001.</p>
EPA Act of 1992 ⁴⁰	FERC	<p>Section 1701(a) requires the Commission to include in annual charges "subject to annual appropriations acts," "reasonable and necessary costs" incurred by fish and wildlife agencies and other natural resources and cultural resource agencies "in connection with studies or other reviews carried out by such agencies for purposes of administering their responsibilities under" Part I of the FPA.</p> <p>Section 1701(d) bars licensees from using eminent domain to condemn state-owned land managed for parks, recreation, or wildlife that was owned on October 10, 1992. For such lands designated by the state for these purposes after October 10, 1992, the licensee may not use eminent domain unless a public hearing was held in the community and the Commission finds the license won't be inconsistent with the purposes for which the lands are owned.</p>

Licenses, 70 Fed. Reg. 69804 (Nov. 17, 2005).

³⁸ Energy Act of 2000, P.L. 106-469 (2000).

³⁹ For further detail, *see* section 501 of the Energy Act of 2000.

⁴⁰ Energy Policy Act of 1992, P.L. 102-486, 106 Stat. 3096 (1992).

Statute/ Regulation	Agency	Summary of Requirements
		<p>Section 2401 amended the Federal Land Policy and Management Act to require, prospectively, that licensees and exemptees for projects on federal lands must also obtain a right-of-way from the federal land managing agency, but also permanently grandfathered all projects that had not received a right-of-way prior to the date of enactment, and the project, as relicensed, would not involve the use of additional public lands.</p> <p>Section 2402 bars the Commission from issuing an original license for a new project located within the boundaries of a national park “that would have a direct adverse effect on federal lands within” the park.</p> <p>Section 2403 allows the Commission to permit, at the applicant's elective, a contractor funded by the applicant and chosen by the Commission from a list of qualified contractors to prepare an EIS for the Commission, with the Commission establishing the scope of work and procedures. The Commission may permit an applicant or its contractor to prepare an EA, but the Commission must institute procedures, including pre-application consultations, to advise potential applicants of studies or data reasonably foreseen to be required.</p> <p>Section 2407 authorizes the Commission to grant exemptions to certain projects in Alaska.</p> <p>Section 2408 required the Commission to study whether jurisdiction over hydropower in the State of Hawaii should be transferred to the State. The report was approved by the Commission and forwarded to the Committee on April 13, 1994.</p>

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APPENDIX B

Summary Table and Descriptions of the Commission's Existing Hydropower
Licensing Processes and the Pilot Two-Year Process

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APPENDIX B

Summary Table of Existing Licensing Processes

	Integrated Licensing Process	Traditional Licensing Process	Alternative Licensing Process	10-MW Exemption
Availability	Default Process	Available by request of applicant, with Commission approval; stakeholders may comment on appropriateness	Available by request of applicant, with Commission approval; requires agreement of stakeholders	Available for projects that meet the requirements in 18 C.F.R § 4.30(29) (2016)
Recommended Project Type	Projects with complex issues and study needs	Projects with less complex issues and study needs	Projects that effectively promote a self-driven collaborative pre-filing process	Projects for which, given their size and location, have minimal environmental impacts
Schedule	Predictable schedule in both pre-filing and post-filing stages	Paper-driven process; three-stage pre-filing consultation with no set timeframes	Collaboratively-determined schedule in pre-filing stage	Paper-driven process; no set timeframes
FERC Involvement	Pre-filing involvement; sustained	No pre-filing involvement; involved post-filing	Pre-filing involvement for scoping and as requested by applicant and stakeholders; involved post-filing	No pre-filing involvement; involved post-filing
Deadlines	For all participants	Some pre-filing deadlines; post-	Pre-filing deadlines are	Post-filing deadlines

	Integrated Licensing Process	Traditional Licensing Process	Alternative Licensing Process	10-MW Exemption
	during process, including the Commission	filing deadlines defined by the Commission	collaboratively defined; post-filing deadlines determined by the Commission	defined by the Commission
Study Plan Development	Study plan meetings; Commission approval for study plan	Applicant develops; no Commission involvement	Collaboratively developed; Commission assistance, as requested	Applicant develops; no Commission involvement
Opportunities for Study Dispute Resolution	Formal: Mandatory agency Informal: Yes	Formal: Advisory Informal: If requested	Formal: Advisory Informal: Yes	Formal: Advisory Informal: No
Section of Application that Includes Environmental Information	Preliminary Licensing Proposal, or Exhibit E that follows EA format	Exhibit E	Applicant-prepared EA, or 3rd Party Environmental Impact Statement (EIS)	Exhibit E
Additional Information Requests and Studies	Pre-filing; Post-filing study requests are unlikely	Post-filing, including studies as necessary	Pre-filing; Post-filing requests are limited	Post-filing, including studies as necessary
Timing of Resource Agency Terms & Conditions	60 days after REA; Modified 60 days after due date for comments on draft NEPA document	60 days after REA; Schedule for final	60 days after REA; Schedule for final	30 or 60 days after REA

Descriptions of the Commission’s Existing Hydropower Licensing Processes and the Pilot Two-Year Process

a. Integrated Licensing Process

1. Pre-filing

For a new project, licensing commences when a prospective applicant files a Notice of Intent (NOI) and Pre-Application Document (PAD). The NOI and PAD must be distributed to federal and state resource agencies, tribes, and members of the public likely to be interested in the proceeding (stakeholders).¹ At the same time, an applicant may also request Commission approval for use of either the TLP or ALP, which are described in greater detail below.

In the ILP, pre-filing consultation, which includes all steps in the licensing process prior to the filing of a final license application, is conducted concurrently with the Commission’s NEPA scoping process. The filing of the NOI and PAD begins pre-filing consultation and sets in motion the Commission’s scoping and tribal consultation efforts.² Pre-filing consultation includes the development of a preliminary list of issues to be addressed in the NEPA document (EA or EIS), as well as identification of studies that may be necessary to address gaps in existing information about the project and its effects on environmental, recreation, and cultural resources.³

The ILP involves a consultation process where applicants and stakeholders meet to discuss the need for studies and develop a study plan for the project. Following the conclusion of the study planning process, the Director of the Commission’s Office of Energy Projects issues a study plan determination that approves the applicant’s study plan, with any needed modifications determined to be necessary in light of the record.⁴ Once approved, typically, an applicant has two years to complete the approved studies.⁵ Upon completion of the studies, an applicant prepares a preliminary licensing proposal, or draft license application, for review and comment.⁶ The preliminary licensing proposal, or draft license application, will contain an applicant’s detailed project description, including facilities and operation information, as well as protection, mitigation, and enhancement (PM&E) measures designed to address resource issues

¹ 18 C.F.R. § 5.5 (e) (2016).

² 18 C.F.R. §§ 5.5, 5.6 (2016).

³ 18 C.F.R. §§ 5.9 (b), 5.11, 5.12 (2016).

⁴ 18 C.F.R. § 5.13 (2016).

⁵ 18 C.F.R. § 5.15 (2016).

⁶ 18 C.F.R. §§ 5.16, 5.18 (2016).

identified during the pre-filing consultation process. The period of pre-filing ends with the filing of a final license application for a proposed project; the ILP regulations allow between 2.5 and 3 years for the pre-filing phase of licensing.

2. Post-filing

Filing a final license application initiates the post-filing stage of the ILP. Upon receipt of a final license application, Commission staff reviews it for deficiencies, based on the applicable sections of the Commission's regulations.⁷ An application with major deficiencies which cannot be quickly cured may be considered patently deficient and rejected.⁸ If an application lacks some required information, but does not have major deficiencies, the Commission keeps the application on file, sends the applicant a list of the deficiencies, and establishes a schedule for the missing information to be supplied.⁹ When an applicant has cured any deficiencies, the Commission issues notice accepting the application for filing and setting deadlines for comments, interventions, and protests.¹⁰

Although an application may meet the standards set forth in the Commission's regulations, at any time, Commission staff may also request additional information, or documents it considers relevant for an informed decision on the application.¹¹ For example, additional information requests (AIRs) may include: clarification of an applicant's proposal if the project proposal is unclear or inconsistently described; additional studies or data to address information gaps raised in comments or during review of the application; additional consultation with stakeholders if comments from consulted entities are not adequately addressed in the application, or if the application does not adequately document consultation with relevant entities.

⁷ 18 C.F.R. § 5.6 and, as applicable, 18 C.F.R. §§ 4.41, 4.51, or 4.61 (2016). 18 C.F.R. § 5.41 relates to licenses for major unconstructed projects and major modified projects; 18 C.F.R. § 5.51 relates to licenses for major projects at existing dams; and 18 C.F.R. § 5.61 relates to licenses for minor water power projects and major water power projects of 5-MW or less.

⁸ 18 C.F.R. § 5.22(a) (2016).

⁹ 18 C.F.R. § 5.20(a) (2016).

¹⁰ Commission regulations state that the notice accepting the filing shall be published in the Federal Register, local newspapers, and be mailed to federal and state agencies. 18 C.F.R. § 16.9(d)(1) (2016).

¹¹ 18 C.F.R. § 5.21 (2016).

If or when no additional information is required, the Commission issues the REA notice.¹² Once the REA notice is issued, the stakeholders are given an opportunity to file additional comments or recommendations based on the applicant's complete proposal. Agencies with designated statutory authority, including state agencies under section 401 of the CWA¹³ and federal land management agencies under sections 4(e) and 18¹⁴ of the FPA, may file preliminary terms and conditions, or fishway prescriptions. The applicant is also given the opportunity to reply to all such filings.

When these filings are complete, Commission staff will prepare a NEPA document for the project that analyzes the effects of the project on environmental, recreation, and cultural resources. The NEPA document compares a minimum of three alternatives: a no-action alternative (license denial), the applicant's proposal, and a staff alternative. For a typical new project, the Commission will issue a NEPA document in both draft and final format. At this time, the Commission will also initiate ESA consultation, if necessary, and begin to prepare any agreement documents that may be necessary to resolve adverse effects on historic properties within a project's area of potential effects pursuant to section 106 of the National Historic Preservation Act.

Following the issuance of a draft NEPA document, the Commission will solicit comments. At that time, stakeholders will also have an opportunity to modify their recommendations and prescriptions in light of the Commission staff's analysis and draft recommendations.¹⁵ Also, if the Commission staff proposes not to adopt any of the recommendations of the federal or state fish and wildlife agencies, a meeting is held pursuant to section 10(j) of the FPA for the purpose of attempting to resolve those differences. If warranted, the Commission will issue a final NEPA document that includes a summary of comments received on the draft document, and how those comments have been addressed in the final.

The licensing process concludes with the issuance of a license order by either Commission or its delegate. License orders are issued as expeditiously as possible; however, license orders cannot be issued until the Commission has fulfilled all of its responsibilities under the FPA and other applicable statutes, including section 401 of the CWA, section 7 of the ESA, and section 106 of the NHPA.

¹² 18 C.F.R. § 5.22 (2016).

¹³ 33 U.S.C. § 1341 (2012).

¹⁴ 16 U.S.C. §§ 797, 811 (2012)

¹⁵ 18 C.F.R. § 4.34(b)(4) (2016).

b. Traditional Licensing Process

1. Pre-filing

Concurrently with filing an NOI and PAD, an applicant may request use of the TLP instead of pursuing the ILP. The request must address the following considerations: likelihood of timely license issuance; complexity of resource issues; level of anticipated controversy; relative cost of the TLP as compared to the ILP; the amount of available information and potential for significant disputes over studies; and other pertinent factors.¹⁶ If the level of complexity and/or anticipated controversy for a project is relatively low, and no significant objections to use of the TLP are raised by stakeholders, the Commission may approve use of the TLP.

The fundamental difference between the ILP and TLP is the level of involvement of the Commission in the pre-filing phase of project development. In the TLP, the applicant is responsible for initiating and maintaining communication with the stakeholders without involvement from the Commission. NEPA scoping is not initiated until the post-filing phase of licensing in the TLP. An applicant is expected to conduct, and document, three-stage consultation before filing a final license application.¹⁷

First-stage consultation commences when an applicant provides initial notification to stakeholders about a proposed project. The applicant will also host a joint meeting to discuss the proposal with stakeholders and discuss any study needs. First stage consultation ends when a set of resource-by-resource study plans and detailed documentation of consultation have been assembled.¹⁸

During second stage consultation, an applicant proceeds with all reasonable studies identified during the first stage of consultation, if any. For an original license, these studies must be completed, and the information obtained, before filing the application if the results would influence the financial or technical feasibility of the project, or are needed to determine the design or location of project features, reasonable alternatives to the project, the impact of the project on important natural or cultural resources, or suitable mitigation and enhancement measures. Based on existing information and any information developed through pre-filing studies, an applicant

¹⁶ 18 C.F.R. § 4.38(b)(3)(iii) (2016).

¹⁷ 18 C.F.R. § 4.38(f) (2016).

¹⁸ 18 C.F.R. § 4.38(a) and (b) (2016).

prepares and distributes a draft license application to the consulted entities and the Commission for review and comment.¹⁹

2. Post-filing

An applicant initiates the third stage of consultation with the filing of the final license application,²⁰ which also marks the start of the post-filing stage of the TLP. As in the ILP, the applicant must provide copies of its final license application to all resource agencies, tribes, and members of the public previously consulted.²¹ Once received, the Commission reviews the final license application and, if needed, issues a list of deficiencies and/or requests for additional information.

Once all deficiencies are cured and the application is accepted, the Commission will provide public notice in the Federal Register, local newspapers, and directly to resource agencies and tribes that identifies dates for comment, intervention, and protests.²² Commission staff also issues a scoping document for the project that contains a preliminary list of issues to be addressed in the NEPA document. In the TLP, the Commission may conduct public scoping meetings, or may only solicit written comments on the scoping document, based on comments received after issuing the acceptance notice.

When the applicant has satisfied any Commission requests for additional information, the Commission issues the REA notice. From the issuance of the REA notice until final action is taken on the licensing proceeding, the TLP does not differ significantly from the ILP.

c. Alternative Licensing Process

1. Pre-filing

As with the TLP, an applicant must request and receive Commission approval to use alternative procedures (the ALP) for filing an application for license. The goals of the ALP are to: (1) combine into a single process the pre-filing consultation process, the environmental review process under NEPA, and the administrative processes associated with the CWA and other statutes; (2) facilitate greater participation by, and improve communication among, the applicant, resource agencies, tribes, the public, and

¹⁹ 18 C.F.R. § 4.38(c)(2) (2016).

²⁰ 18 C.F.R. § 4.38(d) (2016). Basic application content requirements are specific to the kind of project in question (i.e., 18 C.F.R. 4.41, 18 C.F.R. 4.51, or 18 C.F.R. 4.61).

²¹ 18 C.F.R. § 4.38(d)(2) (2016).

²² 18 C.F.R. § 4.34(b) (2016).

Commission staff; (3) allow for an applicant-prepared EA, or third-party preparation of a preliminary draft environmental document as a substitute for exhibit E of a license application; (4) promote cooperative efforts by the applicant and stakeholders to narrow areas of disagreement, and to reach agreement or settlement on issues raised in the proposal; and (5) facilitate orderly and expeditious review of an agreement, or offer of settlement of an application for a license.²³

A request to use the ALP should be filed concurrently with the NOI and PAD, demonstrate that an applicant has made a reasonable effort to contact all stakeholders that may be affected by the proposal, and document that stakeholders agree that the use of the ALP is appropriate under the circumstances. Before filing a request to use the ALP, an applicant should develop a written communications protocol, supported by the stakeholders, describing how the applicant and other participants in pre-filing consultation (including Commission staff) will communicate with each other regarding the merits of the applicant's proposal, as well as the recommendations of interested entities.²⁴

As described above, the ILP sets firm deadlines for study planning, comments, and execution. Under the ALP, by comparison, the pre-filing consultation and environmental review processes can be integrated and proceed concurrently. This streamlining of the process is possible if the participants can agree on what information must be developed for the record, and on deadlines for steps such as the completion of studies and the filing of comments and proposed conditions.

2. Post-filing

As under the other licensing processes, post-filing proceedings begin when the applicant files a complete application with the Commission. Because of the collaborative efforts during pre-filing, additional information should not be necessary to develop PM&E measures under the ALP process. One of the goals of the ALP is to facilitate agreement on resource studies to expedite Commission review of the license application. If the applicant or third-party environmental document meets Commission requirements, the timeline for environmental review can be significantly shortened, compared with the other processes. Following issuance of the final NEPA document, the Commission will issue a license order as expeditiously as possible.

²³ 18 C.F.R. 4.34(i)(2) (2016).

²⁴ 18 C.F.R. 5.3 (2016).

d. 10 MW or Less Exemption Process

The Commission also issues exemptions from licensing. An exemption is not deregulation; rather, it is a less comprehensive form of regulation, intended for projects which should, by their size and location, have minimal environmental impacts. A 10 MW exemption can be granted to a project proposing additional capacity (for a total of 10 MW or less) and using an existing dam or natural water feature. Exemptions have no statutory maximum term, and the Commission issues exemptions in perpetuity. Exemptions are subject to mandatory fish and wildlife conditions by federal and state fish and wildlife agencies. Water quality certifications are not required for 10 MW exemptions. Unlike a license, an exemption does not confer federal power of eminent domain, so exemptees must already own the necessary land, or for a project on federal lands, must get a use permit from the land managing agency.

The extent of information required in an exemption application is generally much less than that required in a license application; however, most of the same procedural steps apply to both types of development applications.

1. Pre-filing

The applicant is responsible for initiating and maintaining communication with the stakeholders without involvement from the Commission. As with a license application, an applicant is expected to conduct, and document, three-stage consultation before filing a final exemption application.²⁵

2. Post-filing

An applicant initiates the third stage of consultation with the filing of the exemption application;²⁶ which also marks the start of the post-filing stage of an exemption proceeding. As in the TLP and ILP, the applicant must provide copies of its exemption application to all resource agencies, tribes, and members of the public previously consulted.²⁷ Once received, the Commission reviews the exemption application and, if needed, issues a list of deficiencies and/or requests for additional information.

²⁵ 18 C.F.R. § 4.38(f) (2016).

²⁶ 18 C.F.R. § 4.38(d) (2016). Basic application content requirements are specific to the kind of project in question.

²⁷ 18 C.F.R. § 4.38(d)(2) (2016).

Once all deficiencies are cured and the application is accepted, the Commission will provide public notice in the Federal Register, local newspapers, and directly to resource agencies and tribes that identifies dates for comment, intervention, and protests.²⁸ When the applicant has satisfied any Commission requests for additional information, the Commission issues the REA notice. From the issuance of the REA notice until final action is taken on the exemption proceeding, the process does not differ significantly from the TLP or ILP.

e. Pilot Two-Year Process

3. Pre-filing

The process plan approved to test the pilot two-year process was divided into a one-year pre-filing period and a one-year post-filing period. To accommodate all pre-filing activities in one year, the scoping and study-planning phases that are typically part of the ILP were compressed, with greater responsibility placed on a potential applicant for consultation with stakeholders before filing a PAD. When preparing the PAD, an applicant was expected to consult with stakeholders about the project proposal, potential project-related environmental effects, the availability of existing information, and the need for studies to supplement existing information. As described in section II of this document and the notice soliciting pilot projects, an applicant's PAD was expected to contain a defined and well-developed project proposal that adequately addressed issues raised during consultation and included a proposed study plan. This early consultation process was intended to help an applicant and stakeholders identify issues and resolve conflicts that could potentially delay the development and processing of a license application.

Upon receipt of the NOI, PAD, and request to use the two-year process, the Commission issued notice of a technical conference to discuss the project with the applicant and stakeholders. The notice also solicited written comments on the PAD, proposed studies, and use of the pilot two-year process. Stakeholders were allowed 30 days to provide comments. This comment period compressed both the scoping and study plan meeting process into a single technical teleconference and reduced the written comment periods from three²⁹ to one that addressed both project scope and study needs.

Concurrent with Commission approval to use the pilot two-year process, the Director, Office of Energy Projects also made a determination about required studies. To

²⁸ 18 C.F.R. § 4.34(b) (2016).

²⁹ Typically, written comments are accepted on the first scoping document, the proposed study plan, and the revised study plan.

maintain a two-year timeframe, all required studies needed to be short enough in duration to be completed within one year of the NOI and PAD filing. Reducing the timeline from two full study seasons to less than one significantly reduced the pilot two-year process's pre-filing timeframe; however, it also required that sufficient existing information exist about project effects on resources to allow for rapid completion of any necessary studies.

Once approved to use the pilot two-year process, the applicant was expected to: (1) complete the required studies; (2) conduct informal consultation regarding threatened or endangered species, if necessary; (3) conduct any necessary consultation required by section 106 of the NHPA; (4) file for certification as required section 401 of the CWA; and (5) prepare a license application.

4. Post-filing

One year from the filing of the NOI, PAD, and request to use the pilot two-year process, an applicant was expected to file its final license application. To maintain the one-year post-licensing schedule, the approved process plan assumed no deficiencies and no need to issue AIRs. Commission staff was provided 30 days to review the license application and issue a combined acceptance and REA notice, which is compressed from 30 days for acceptance and 60 days for REA in the ILP. The process plan also set a 180-day timeframe for issuance of a single environmental document following the REA notice. The goal of the pilot two-year process was issuance of a license within two years of the NOI and PAD filing date. The Commission was required to fulfill all of its responsibilities under the FPA and other applicable statutes within the two-year timeframe. To the extent possible, the processes for meeting the Commission's statutory responsibilities (e.g., section 401 of the CWA, ESA, and section 106 of the NHPA) were expedited, with assistance from the implementing agencies.

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APPENDIX C

Copy of the May 27, 2014 Letter to Wild Flower Water, LLC regarding the request to test the two-year pilot process for the Wild Flower Water Pumped Storage Hydro Project (FERC No. 13842)

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APPENDIX C

FEDERAL ENERGY REGULATORY COMMISSION

Washington, D.C. 20426

May 27, 2014

OFFICE OF ENERGY PROJECTS

Project No. 13842-001– Oklahoma
Wild Flower Water Pumped Storage Project
Wild Flower Water, LLC

Mr. Fred Brown
Tomlin Infrastructure Group, LLC
4265 Kellway Circle
Addison, TX 75001

Reference: Application for Pilot Project to test Two-Year Licensing Process

Dear Mr. Brown:

On May 1, 2014 you filed a Notice of Intent (NOI) to file a license application for the Wild Flower Water Pumped Storage Project and a request that the closed-loop pumped storage project be selected as a pilot project to test a two-year licensing process. You also filed a Pre-Application Document (PAD) to support your request. Based on staff's review of the NOI and PAD, the proposed project does not meet the criteria set forth in our January 6, 2014 notice soliciting pilot projects. A detailed description of the deficiencies is provided in the enclosed Attachment A and summarized below.

As explained in the January 6, 2014 notice and during our January 30, 2014 teleconference, a pilot project must be a well-developed proposal as to project facilities and operation. However, your project proposal is not sufficiently developed because it only generally describes the project facilities and operations, and would not be a complete unit of development as defined by section 3(11) of the Federal Power Act. To be a complete unit of development, the project must include the project's primary transmission line. Your proposed project does not include a primary transmission line, nor does it adequately describe how the project would connect to the distribution system. Instead, you propose that the project connect to the distribution system via a new 120-mile-long, 340-kilovolt transmission line that would be constructed and operated by another entity, Oncor.

In addition, to qualify as a two-year pilot, the proposal must show that the project would cause little to no change to environmental resources, would not be likely to adversely affect federally listed species, and would be located in areas where there is substantial existing information on environmental resources and effects. To support its request, the project proponent must also show that it has met with federal and state resource agencies, Indian tribes, non-governmental agencies, and the public regarding the project and the availability of existing information and the need for studies to supplement existing information. The information in the PAD is insufficient for staff to evaluate potential project effects on the environment or federally listed species. There is no documentation of consultation to gather existing information or discuss the project with interested parties, nor does the PAD propose studies to fill information gaps. Finally, to the very limited extent that the PAD shows Oncor's proposed transmission line, there is no information describing environmental resources within the transmission line corridor, the effects of constructing and operating the transmission line, or whether interested agencies and the public are aware of this project feature.

Your filing indicates that if your project is rejected as a pilot project for the two-year process, you intend to develop a license application using the integrated licensing process (ILP). If you choose to do so, you should be aware that the PAD is patently deficient and must be more fully developed to initiate the ILP. The PAD should enable entities to identify issues, develop study requests, and prepare documents analyzing any license application that may be filed. A specific list of deficiencies is enclosed as Attachment B. If you intend to file a license application for the project, you should refile your NOI and PAD only after resolving the deficiencies in the PAD described in the enclosed Attachment B.

Additional information that could assist you in preparing an acceptable PAD and conducting pre-filing consultation is available on the Commission's website at <http://www.ferc.gov/industries/hydropower/gen-info/licensing.asp>. If you have any questions, please contact Monte TerHaar at (202) 502-6035 or monte.terhaar@ferc.gov.

Sincerely,

Jeff C. Wright
Director
Office of Energy Projects

Enclosures: Attachment A, Attachment B
cc: Public Files,
Mailing List

ATTACHMENT A

TWO-YEAR LICENSING PROCESS CRITERIA CHECK LIST

Wild Flower Pumped Storage Project

Criterion	Adequate	Comments
(1) Demonstration that it meets the following criteria:		
<ul style="list-style-type: none"> The project must cause little to no change to existing surface and groundwater flows and uses. 	Deficient	By purchasing existing water withdrawal rights, and staging fill during high flow periods, the project is not likely to change existing surface water flows in the Kiamichi River. However, the proposed upper reservoir would be located on Long Creek, an intermittent stream. Because the Pre-Application Document (PAD) contains no information on the hydrology of Long Creek, we are unable to determine whether or not project operations would affect Long Creek flows. Ground water is not proposed to be used for initial fill or make-up water; however, indirect effects on groundwater may occur and are unknown at this time.
<ul style="list-style-type: none"> The project must be unlikely to adversely affect federally listed threatened and endangered species. 	Deficient	The assertion that the project is unlikely to adversely affect federally listed species is unsubstantiated. Nine federally listed species occur in Pushmataha County where the project reservoir and powerhouse would be located and 10 occur in the Oklahoma and Texas counties crossed by the transmission line. Studies would be needed to determine the potential effect of the project on these species. Because the transmission line is 120 miles long, it is unlikely the necessary studies along the transmission line could be completed in time to file a license application within 1 year.
<ul style="list-style-type: none"> If the project is to be located at or use 	N/A	

a federal dam, the request must include a letter from the dam owner that the applicant's plan of development is conceptually feasible.		
<ul style="list-style-type: none"> If the project would use any public park, recreation area, or wildlife refuge established under state or local law, the request must include a letter from the managing entity indicating its approval of the site's use for hydropower development 	Deficient	Because the project would be located on private land, no public parks, recreation areas, or wildlife refuges would be affected. Inadequate information was provided to determine if public parks or recreation areas occur within the 120-mile-long transmission line corridor.
<ul style="list-style-type: none"> For a closed loop pumped storage project, the project must not be continuously connected to a naturally-flowing water feature 	Adequate	The project would not be continuously connected to the Kiamichi River. A pipeline between the Kiamichi River and the lower reservoir would supply the initial fill and periodic make-up water (needed due to evaporation and losses).
(2) Documentation of Consultation, including summary of verbal comments and copy of written comments	Deficient	The distribution list is incomplete and inconsistent; no documentation of consultation provided.
(3) Copies of written comments from the affected federal and state agencies and Indian tribes regarding the availability of existing information and the need for studies to supplement the existing information, including the anticipated scope and duration of the studies	Deficient	No copies of written comments from the agencies (or a statement that none were received) were provided. No specific studies were identified or proposed.
(4) A PAD and Proposed Study Plan that meet the content requirements of 18 CFR § 5.6 and 5.11, respectively. The PAD must include a defined and well-developed	Deficient	The PAD does not meet the requirements of 18 CFR § 5.6 because: (1) it is unclear whether the PAD was distributed to appropriate agencies, tribes, and members of the public likely to be interested in the proceeding, particularly as it relates to

<p>project proposal. If a prospective applicant determines that a Proposed Study Plan is not needed, then the prospective applicant must demonstrate that the PAD contains sufficient information to address its list of potential environmental effects for environmental analysis.</p>		<p>the transmission line; (2) the description of existing information is sparse and does not demonstrate due diligence in obtaining available information; and (3) elements of the project and project operation are not adequately described.</p> <p>The PAD does not meet the requirements of 18 CFR § 5.11 because there are no proposed studies. The applicant instead proposes to consult with the agencies to define information needs or mitigation measures to address effects.</p> <p>The PAD does not include a well-developed proposal because (1) the project as proposed would not be a complete unit of development, as it would rely on another party (Oncor) to construct and operate the 120-mile-long transmission line that would connect the project to the grid; (2) there is no description of the transmission line; and (3) there is no description of the intake weir or conduit that would be used divert water from the Kiamichi River to the lower reservoir for initial fill and make-up water.</p>
<p>(5) List of potential environmental effects, including effects on geologic, aquatic, terrestrial, recreational, and cultural resources, as applicable</p>	<p>Deficient</p>	<p>The PAD does not discuss potential environmental effects. Rather, it provides an incomplete list of questions which warrant further consideration.</p>
<p>(6) A process plan and schedule.</p>	<p>Deficient</p>	<p>The applicant states it will follow the process plan and schedule described in the January 6, 2014 Notice. However, the specific timeframe and dates are not described. We are unable to determine if the interested parties are fully aware of the timeframe under the proposal.</p>

Attachment B
Pre Application Document (PAD) Adequacy Review Checklist
PURSUANT TO 18 CFR § 5.6

Wild Flower Pumped Storage Project (P-13842)

SUBJECT	ADEQUATE	COMMENTS
<p>§ 5.6 (d)(1) - Process plan and schedule Timeframes for pre-application consultation, information gathering, and studies</p> <p>Proposed location and date for scoping meeting and for the site visit § 5.8 (b)(3)(viii)</p>	<p>Deficient</p> <p>N/A</p>	<p>The applicant states it will follow the process plan and schedule described in the January 6, 2014 Notice. However, the specific timeframe and dates are not described. We are unable to determine if the interested parties are fully aware of the timeframe under the proposal. If an ILP is pursued, the timeline would need to be revised to reflect the requirements of § 5.6 (d)(1).</p> <p>Not required in an application for the two-year licensing process. If an ILP is pursued, a proposed location(s) and date for a scoping meeting and site visit would need to be identified.</p>
<p>§ 5.6 (d)(2) - Project location, facilities, and operations</p> <p>(i) Contact information for applicant’s agents (name, address and phone numbers)</p> <p>(ii) Maps of land use within project boundaries (township, range and section, state, county, river, river mile, and closest town) and, if applicable, Federal and Tribal lands, and</p>	<p>Adequate</p> <p>Deficient</p>	<p>The PAD does not provide a detailed map(s) showing: (a) the location of Long Creek with respect to proposed project facilities; and (b) the location of the pipeline that is being proposed to provide make-up water to the</p>

SUBJECT	ADEQUATE	COMMENTS
location of proposed facilities		reservoirs, and the location of other associated structures for filling and refilling the reservoirs (e.g., any in-channel weir, or off-channel wet well that might be proposed). The project boundary drawing and description does not include the proposed 120-mile-long transmission line. All primary transmission lines should be included in the project boundary.
(iii) Detailed description of proposed facilities (A) Composition, dimensions, and configuration of dams, spillways, penstocks, powerhouses, tailraces, etc.	Deficient	The upper and lower reservoirs are generally described. There is no description of the proposed conduit which would transport fill water and make-up water from the river to the lower reservoir.
(B) Reservoir area, gross and usable capacity, and elevation.	Adequate	
(C) Number, type and capacities of turbines and generators, and installed (rated) capacity of proposed turbines or generators	Adequate	
(D) Transmission line numbers, lengths, voltage, and interconnections (including diagrams)	Deficient	There is no description of the transmission line. It's not clear what portion of the transmission line would be part of the FERC project. It is not clear where it would interconnect with the grid.
(E) Energy production (estimate of dependable capacity, average annual, and average monthly energy production)	Deficient	Only average annual generation is provided.
(iv) Current and proposed project operation	Deficient	The PAD does not provide a detailed description of

SUBJECT	ADEQUATE	COMMENTS
		proposed project operation. This description should include the estimated extent, frequency, and duration of fluctuations in reservoir elevations so that staff can analyze potential environmental effects.
Information provided by applicants when there is an existing license		
(v) Existing license and project operations (if applicable) (1) Description of current license requirements (2) Generation and outflow records (5 years) (3) Current net investment (4) Project compliance history	N/A	
Information provided by all applicants		
(vi) Description of proposed physical and operational changes to project	N/A	
<p>§ 5.6 (d)(3) - Existing environment and resource impacts (based on existing, relevant and reasonably available information)</p> <p>(A) Description of existing environment (See ii-xiii)</p> <p>(B) Summaries of existing data or studies</p> <p>(C) Potential adverse impacts and issues related to project construction, operation, or maintenance</p>	<p>Deficient</p> <p>Deficient</p> <p>Deficient</p>	<p>The PAD does not provide much detail on the existing environment, or evidence of due diligence to acquire existing information, such as a detailed consultation record.</p> <p>The PAD does not reflect some reasonably available sources of this information (e.g., national wetland inventory maps, Oklahoma and Texas SHPO web-based data, and FWS endangered species recovery plans).</p> <p>The PAD does not discuss in adequate detail potential adverse environmental impacts and issues related to project construction, operation, or maintenance.</p>

SUBJECT	ADEQUATE	COMMENTS
(D) Existing or proposed resource protection and mitigation measures (facilities, operations, and management activities)	Adequate	Rather, the PAD provides a list of issues for further consideration. The applicant proposes to conduct studies as necessary to quantify potential effects (e.g. to water resources, fish and aquatic resources, wildlife and botanical resources, wetlands, and riparian and littoral habitat), but does not define those studies.
<p>§ 5.6 (d)(3)(ii) - Geology, topography, and soils (descriptions and maps)</p> <p>(A) Description of geological features, including bedrock lithology, stratigraphy, structural features, glacial features, unconsolidated deposits, and mineral resources</p> <p>(B) Description of soil types, occurrence, physical and chemical characteristics, erodability and potential for mass soil movement, and soil characteristics</p> <p>(C) Description of reservoir shorelines and stream banks, including</p> <p>(1) Steepness, composition, and vegetative cover</p> <p>(2) Existing soil instability</p>	<p>Adequate</p> <p>Adequate</p> <p>Deficient</p>	<p>The PAD does not provide a description of the proposed reservoirs' shorelines and stream banks, including the steepness, composition, vegetative cover, and existing soil instability.</p>
§ 5.6 (d)(3)(iii) - Water resources (quality and quantity)	Deficient	The PAD does not fully describe the water resources of the proposed project and surrounding area. Components of the description not included in the PAD,

SUBJECT	ADEQUATE	COMMENTS
<p>(A) Drainage area (B) Adjusted minimum, mean, and maximum recorded flows at powerplant intake or diversion (C) Monthly flow duration curves and critical stream flow used to determine the project's dependable capacity (D) Existing and proposed water uses and upstream or downstream requirements</p>		<p>include: (a) the quantity and quality of water in Long Creek; (b) the drainage area of the project at the location where water will be withdrawn and/or diverted from the Kiamichi River to fill and refill the reservoirs; (c) the monthly minimum, mean, and maximum recorded flows (in cubic feet per second) of the Kiamichi River at the location where water will be withdrawn and/or diverted from the Kiamichi River to fill and refill the reservoirs; (d) monthly flow duration curves for the Kiamichi River, indicating the period of record and the location and identification number(s) of gauging station(s), used in deriving the curves; and (e) any federally-approved water quality standards applicable to project waters. The PAD did not provide evidence of due diligence in acquiring this information, or a statement indicating that were not able to find such information after soliciting it from the agencies and other sources.</p>

SUBJECT	ADEQUATE	COMMENTS
<p>(E) Existing instream flow uses and water rights (F) Relevant federally-approved water quality standards (G) Project effects on seasonal variation of water quality data, including</p> <p>(1) Water temperature and dissolved oxygen (2) Other physical and chemical parameters (H) Existing or proposed lake and reservoir information (surface area, volume, maximum</p>		<p>The PAD indicates that there are no readily available surface water quality data for streams “running off” the proposed Wild Flower Project. Although the Kiamichi River does not “run off” of the proposed project area, the proposal to withdraw and/or divert water from the Kiamichi River could affect this body of water. Therefore, the PAD is deficient because it does not describe the seasonal variation of existing water quality data for the Kiamichi River, including, as appropriate, information on water temperature and dissolved oxygen, and other physical and chemical parameters such as total dissolved oxygen, pH, total hardness, specific conductance, chlorophyll a, suspended sediment concentrations, total nitrogen, total phosphorus, and fecal coliform (<i>E. coli</i>) concentrations. The PAD did not provide evidence of due diligence in acquiring this information, or a statement indicating that were not able to find such information after soliciting it from the agencies and other sources.</p>

SUBJECT	ADEQUATE	COMMENTS
(5) Extent and location of spawning, rearing, feeding, and wintering habitat		
<p>§ 5.6 (d)(3)(v) - Wildlife and botanical resources including invasive species</p> <p>(A) Description of upland habitat(s) and plant and animal species that use the habitat(s). (B) Temporal or special distribution of commercially, recreationally, or culturally important species</p>	Deficient	<p>The PAD provides broad descriptions of ecological systems/habitat types in the project vicinity, but it is unclear what wildlife and botanical resources, including invasive species occur within the proposed project boundary. The PAD did not provide evidence of due diligence in acquiring this information, or a statement indicating that were not able to find such information after soliciting it from the agencies and other sources.</p> <p>Other than mentioning a few common fish species in the project vicinity, the PAD does not provide the temporal or special distribution of commercially, recreationally, or culturally important species. The PAD did not provide evidence of due diligence in acquiring this information, or a statement indicating that were not able to find such information after soliciting it from the agencies and other sources.</p>
<p>§ 5.6(d)(3)(vi) Description of floodplains, wetlands, riparian, and littoral habitat</p> <p>(1) List of plant and animal species using the</p>	Deficient	<p>The PAD states that there is no riparian, wetland, or littoral habitat identified within the proposed project boundary. However it is not clear how this conclusion was reached. On the U.S. Fish and Wildlife Service's (FWS') National Wetland Inventory (NWI), it appears that forested and scrub-shrub wetlands do occur within the proposed project boundary.</p> <p>The PAD does not provide a list of plant and animal</p>

SUBJECT	ADEQUATE	COMMENTS
<p>habitat</p> <p>(2) Map of wetlands, riparian and littoral habitat</p> <p>(3) Acreage estimate for each type of wetland riparian and littoral habitat, including variability in availability as a function of storage at a project not operated in run-of-river mode</p>		<p>species using the habitat (presumably because no wetland habitat within the project boundary exists). The PAD includes a table of wetlands instead of a map; therefore we cannot determine where the wetlands are located in relation to the project or potential project effects on these habitats. The maps of the proposed 120-mile-long transmission line do not show wetlands. Wetland data and maps are readily available on FWS' NWI website.</p> <p>The PAD does not provide acreage estimates for each type of wetland.</p>
<p>§ 5.6 (d)(3)(vii) - Rare, threatened, and endangered species</p> <p>(A) Description of listed rare, threatened and endangered, candidate, or special status species in the project vicinity.</p> <p>(B) Identification of habitat requirements</p> <p>(C) References to known biological opinion, status reports, or recovery plans pertaining to a listed species</p>	<p>Adequate</p> <p>Adequate</p> <p>Deficient</p>	<p>The PAD does not provide references to known biological opinions, status reports, or recovery plans pertaining to any of the listed species potentially occurring in the project area. For example, there are recovery plans for all three mussels that may occur in the vicinity of the project weir, the whooping crane, interior least tern, red-cockaded woodpecker, and the American burying beetle.</p>

SUBJECT	ADEQUATE	COMMENTS
<p>(D) Extent and location of federally-designated critical habitat or other habitat for listed species (E) Temporal and spatial distribution of the listed species</p>	<p>Adequate Deficient</p>	<p>The PAD describes the large-scale spatial distribution of the Ouachita rock pocketbook mussel, scaleshell mussel, and winged mapleleaf mussel in the United States and Oklahoma; however, the PAD is deficient because it does not describe the temporal and spatial distribution of these species within the project vicinity, specifically the Kiamichi River. A google search found a survey report published in 2008 documenting two listed mussels 22 to 30 miles downstream of the project</p>
<p>§ 5.6 (d)(3)(viii) - Recreation and land use (A) Description and illustration of existing recreational facilities, uses, location, ownership, capacity and management (B) Recreational use of lands and waters compared to facility or resource capacity (C) Existing shoreline buffer zones (D) Current and future recreation needs from existing state or regional plans (E) Existing shoreline management policies (F) Project’s location within or adjacent to a river segment that is:</p>	<p>Deficient N/A N/A Deficient N/A</p>	<p>The PAD states there are no existing recreation facilities in the project area, but it is not clear if the applies to the 120-mile-long transmission corridor. The PAD references the Oklahoma State Outdoor Recreation Plan but does not discuss future recreation needs based on the information in the plan. The PAD did not provide evidence of due diligence in acquiring this information, or a statement indicating that were not able to find such information after soliciting it from the agencies and other sources.</p>

SUBJECT	ADEQUATE	COMMENTS
<p>(B) Description of existing discovery measures for locating, identifying, and assessing the significance of resources</p> <p>(C) Identification of Indian tribes that may attach religious and cultural significance to historic properties, and available information on Indian traditional cultural and religious properties.</p>	<p>Deficient</p> <p>Deficient</p>	<p>The PAD provides no information about efforts to locate, identify, or assess cultural resources at the site. Preliminary information can easily be located by searching the public databases managed by the Oklahoma SHPO (http://www.seic.okstate.edu/shpo/) or the Texas SHPO (http://www.thc.state.tx.us/preserve/texas-historic-sites-atlas).</p> <p>The PAD identifies the Choctaw Nation of Oklahoma and the Chickasaw Nation as having interest in Pushmataha County. However, the Quapaw Tribe of Oklahoma is also listed in the National Park Service's <i>Indian Land Cessions 1784-1894</i> as having historic interest in Pushmataha, Choctaw, and Bryan counties in Oklahoma and should be consulted.</p>
<p>§ 5.6 (d)(3)(xi) - Socio-economic resources</p> <p>Description of socio-economic conditions in the project vicinity including patterns of land use and population and sources of employment</p>	<p>Deficient</p>	<p>The PAD does not describe existing socioeconomic conditions in the project vicinity. There is minimal information on the effect of the project on local socioeconomic resources.</p>
<p>§ 5.6 (d)(3)(xii) - Tribal Resources</p>		<p>The PAD identifies the Choctaw Nation of Oklahoma and the Chickasaw Nation as having interest in Pushmataha County. The Quapaw Tribe of Oklahoma is also listed in the National Park Service's <i>Indian Land</i></p>

SUBJECT	ADEQUATE	COMMENTS
<p>(A) Identification of how existing project construction and operations, and their affects (on water resources, fish and aquatic resources, wildlife and botanical resources, wetland, rare species, recreation and land use, aesthetic resources, cultural resources and socio-economic resources) may impact tribal cultural or economic interests</p> <p>(B) Identify other impacts of existing projects on Indian tribes</p>	<p>Adequate</p>	<p><i>Cessions 1784-1894</i> as having historic interest in Pushmataha, Choctaw, and Bryan counties in Oklahoma.</p>
<p>§ 5.6 (d)(3)(xiii) - Description of river basin and sub-basin including information on:</p> <p>(A) Area of river basin and sub-basin and length of stream reaches</p> <p>(B) Major land and water use in project area</p> <p>(C) All dams and diversion structures</p> <p>(D) Potentially affected tributary rivers and streams</p>	<p>Adequate</p> <p>Adequate</p> <p>Adequate</p> <p>Deficient</p>	<p>The transmission line would cross over 62 rivers/streams which were not identified in the PAD.</p>
<p>§ 5.6 (d)(4) - Preliminary issues and studies list for each resource area</p> <p>(i) Issues pertaining to the identified resources</p>	<p>Deficient</p>	<p>The PAD includes a general list of preliminary issues, but no studies or list of studies that would be conducted. Page 10 of the PAD states that the proposed project is unlikely to adversely affect federally or state listed species. This conclusion is premature because the PAD does not provide any support for this statement. On</p>

SUBJECT	ADEQUATE	COMMENTS
<p>(ii) Potential studies and information gathering requirements (iii) Relevant Federal, state or tribal waterway plans (iv) Relevant resource management plans</p>		<p>page 67 of the PAD the applicant quotes a local FWS representative who states that “evidence of federally listed species (especially the Ouachita rock pocketbook) may be encountered in the project area, and ‘a determination of the effects of the proposed project on state and federally listed threatened and endangered species’ would be required.”</p> <p>The PAD did not provide information about relevant resource management plans. The PAD did not provide evidence of due diligence in acquiring this information, or a statement indicating that were not able to find such information after soliciting it from the agencies and other sources.</p>
<p>§ 5.6 (d)(5) - Summary of contacts used to prepare the PAD including:</p> <p>Federal, state and interstate resource agencies Indian tribes Non-governmental organizations and members of the public</p>	<p>Deficient</p>	<p>The PAD mentions agency consultation in various places but did not provide copies of letters documenting this consultation.</p>
<p>§ 5.6 (e) PURPA Benefit – List if the PURPA benefits are sought</p>	<p>Adequate</p>	<p>No benefits sought.</p>

ADDITIONAL COMMENTS:

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APPENDIX D

Copy of the Process Plan and Schedule for the Pilot Two-Year Process: Kentucky River
Lock & Dam No. 11 Hydroelectric Project (FERC No. 14276)

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APPENDIX D

**KENTUCKY RIVER LOCK & DAM NO. 11 HYDROELECTRIC
PROJECT (FERC No. 14276)
PROCESS PLAN AND SCHEDULE**

(if a due date falls on a weekend or holiday, the due date is the following business day)

Responsible Party	Action or Milestone Description	Time	Target Deadline	Actual Date
<i>Pre-filing Milestones</i>				
Rye	<p>Prior to filing a request to use a two-year pilot process, prospective applicants must meet with Commission staff to discuss the nature of the project, the status of the applicant's consultation efforts, and the status of the applicant's efforts in obtaining the information described below.</p> <p>Prospective applicant files a request to use a pilot two-year process; and a pre-application document, including a detailed project description, a list of potential environmental effects for environmental analysis, a proposed study plan with schedule, and certification that the prospective applicant has met with the affected federal and state resource and land management agencies to discuss its project proposal.</p>	0	May 5, 2014	May 5, 2014
Commission staff	Issue notice of request to use the pilot two-year process, and notice of public technical meeting to discuss the two-year pilot process proposal (if needed); or issue a letter rejecting the pilot process	30 days	June 4, 2014	June 3, 2014

Responsible Party	Action or Milestone Description	Time	Target Deadline	Actual Date
	request if the request does not meet the criteria or filing requirements, or if the request is otherwise deficient pursuant to the instructions in this notice.			
Commission staff, Rye, and interested parties	Hold public technical meeting to discuss the proposed pilot process (if needed, as determined by Commission staff).	45 days	June 19, 2014	June 19, 2014
Commission staff	Issue determinations on the request to use the pilot process, study plan, and environmental effects list; and if the pilot process is approved, designate the applicant to conduct informal section 106 of the NHPA and section 7 of the ESA consultations, as needed.	90 days	August 3, 2014	August 4, 2014
Rye	Complete studies, and apply for water quality and coastal zone certifications. ¹	270 days	January 30, 2015	January 30, February 25, March 31, April 1, April 16, and May 6, 2015 ²

¹ The Commonwealth of Kentucky does not have a Coastal Zone Management Act program; therefore, the Kentucky River Lock & Dam No. 11 Hydroelectric Project is not located within a state-designated coastal management zone.

² As described in section II of this report, Rye requested, and was granted extensions of time to file its various study reports and proof of application for water quality certification.

Responsible Party	Action or Milestone Description	Time	Target Deadline	Actual Date
<i>Post-filing Milestones</i>				
Rye	File license application. ³	1 year	May 5, 2015	April 16, 2015 ⁴
Commission staff	Review license application and issue deficiency or additional information letter, if necessary.	395 days	June 4, 2015	June 12 and July 29, 2015
Commission staff	Issue combined acceptance and ready for environmental analysis (REA) notice.	425 days	July 4, 2015	September 25, 2015
Interested parties	File comments, recommendations, preliminary terms and conditions.	485 days	September 2, 2015	November 16, November 20, and December 9, 2015
Kentucky DEP	File draft water quality certification conditions.	485 days	September 2, 2015	January 29, 2016
Rye	File reply comments.	500 days	September 17, 2015	
Commission staff	Issue EA and draft PA, section 10(j) letter, and section 7 ESA informal consultation letter, as necessary.	605 days	December 31, 2016	February 12, 2016

³ The filing of the license application and license application content requirements should be consistent with the Commission's existing regulations, including 18 C.F.R. §§ 5.17 and 5.18, except as otherwise stipulated in the approved process plan and schedule, or other Commission issuance for the proposed pilot process. As a reminder, all of an applicant's proposed measures and plans to protect, mitigate, or enhance environmental resources must be provided by the time the license application is filed (18 C.F.R. § 5.18(b)(5)(ii)(C)). Measures that contain sensitive information (e.g., the location of an archaeological site) should be submitted separately and marked "Not for Public Disclosure" (18 C.F.R. § 388.107 (c)).

⁴ Supplemental filings to address application deficiencies and additional information requests are described in section III.

Responsible Party	Action or Milestone Description	Time	Target Deadline	Actual Date
Interested parties	File comments on EA and draft PA, final terms and conditions, water quality certification, and response to section 10(j) and informal ESA consultation letters.	635 days	January 30, 2016	March 9, March 10, and March 11, 2016
Commission staff	Issue final PA and hold section 10(j) meeting, if necessary.	655 days	February 19, 2016	April 22, 2016
Commission staff	Issue decision on the license application.		May 5, 2016	May 5, 2016

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APPENDIX E

Summary of Progress on Pre-Construction and Operation License Requirements for the
Kentucky River Lock & Dam No. 11 Hydroelectric Project (FERC No. 14276)

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APPENDIX E

**Summary of Progress on Pre-Construction and Operation License Requirements
for the Kentucky River Lock & Dam No. 11 Hydroelectric Project
(FERC No. 14276)**

Since license issuance on May 5, 2016, Rye has begun to fulfill the requirements of its license for the Kentucky L&D 11 Project. Some of the license requirements must be completed before Rye can be approved to begin construction and/or operation of the project. These pre-construction and operation requirements, the due dates, extension of time (EOT) requests, and Rye's progress towards completing each requirement are summarized below.

Timing and Status of Pre-Construction and Operation License Requirements for the Kentucky L&D 11 Project.¹

Article No. and Name	Original Due Date	Current Status
Administrative Articles (200 Series)		
<i>Approved Exhibit Drawings</i> (article 202)	Within 45 days of license issuance (June 9, 2016)	June 9, 2016 – Response filed June 13, 2016 – Drawings filed
<i>Documentation of Project Financing</i> (article 204)	At least 90 days before starting construction	Response not yet filed
<i>Project Land Rights Progress Report</i> (article 206)	No later than 4 years after license issuance (May 5, 2020)	Response not yet filed
Dam Safety Articles (300 Series)		
<i>Start of Construction</i> (article 301)	Within 2 years from license issuance (May 5, 2018); and completion of construction within 5 years from license issuance (May 5, 2021)	Pending approval of construction

¹ This table includes status updates based on filings and issuances through May 24, 2017, but it does not include all articles included in the license for the project. The articles discussed in this table are those that would affect timing of project construction or commencement of operations. See Rye license order for a complete listing of license requirements.

Article No. and Name	Original Due Date	Current Status
<i>Contract Plans and Specifications</i> ² (article 302)	At least 60 days prior to the start of any construction	Response not yet filed
<i>Cofferdam Construction Drawings and Deep Excavation</i> (article 303)	At least 30 days before starting construction of any cofferdams or deep excavations	Response not yet filed
<i>Inspection by Independent Consultant</i> (article 304)	Within two years of the issuance date of the license (May 5, 2018)	Response not yet filed
<i>Project Owner's Dam Safety Program</i> (article 305)	Within 90 days of the issuance date of the license (August 3, 2016; then December 14, 2016)	- August 18, 2016 – Filed draft program - September 28, 2016 – Staff commented on draft program - December 6, 2016 – Filed revised program - May 24, 2017 – Program accepted
<i>Public Safety Plan</i> (article 306)	At least 60 days prior to the start of construction	Response not yet filed
<i>Proof of Adequate Property Rights</i> (article 307)	Within 90 days of the date of this license (August 3, 2016; extended to November 1, 2016)	- August 18, 2016 – Filed request for 180-day EOT - September 19, 2016 – Staff granted (reduced) 90-day EOT to facilitate timely dam safety inspections - October 17, 2016 – Filed subpart A - <u>Pending Requirements</u> : File subpart B.
Environmental Articles (400 Series)		
<i>Operation Compliance Monitoring Plan</i> (article 402)	Within one year of the issuance date of the license (May 5, 2017; extended to August 3, 2017)	- April 5, 2017 – Filed request for 90-day EOT - April 28, 2017 – Staff granted EOT

² The contract plans and specifications article includes requirements for a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan.

Article No. and Name	Original Due Date	Current Status
<i>Sediment Contaminant Testing and Solid Waste Disposal Plan (article 403)</i>	Within 6 months of license issuance (November 5, 2016; for the final Solid Waste Disposal Plan, due date extended to December 8, 2017)	- November 7, 2016 – Filed plan - December 08, 2016 – Staff approved plan - <u>Pending Requirements</u> : (1) finalize its contaminant testing methodology in consultation with resource agencies; (2) prepare and file, for Commission approval, a more detailed Solid Waste Disposal Plan; and (3) implement the plan after approvals for construction.
<i>Post-Construction Erosion Monitoring Plan (article 404)</i>	Within one year of the issuance date of the license (May 5, 2017)	Response not yet filed
<i>Spill Prevention, Containment, and Countermeasures Plan (article 405)</i>	Within 6 months of license issuance (November 5, 2016)	- November 7, 2016 – Filed draft plan, with request for 60-day EOT - March 2, 2017 – Staff approved plan - <u>Pending Requirements</u> : Implement plan after approvals for construction.
<i>Water Quality Monitoring Plan (article 406)</i>	Within 6 months of license issuance (November 5, 2016; extended to January 7, 2017)	- November 7, 2016 – Filed draft plan, with request for 60-day EOT - November 23, 2016 – Filed final plan - November 30, 2016 – Staff granted EOT - February 15, 2017 – Staff modified and approved plan - <u>Pending Requirements</u> : Implement plan after approvals for construction and operation.
<i>Trashrack Design and Maintenance Plan (article 407)</i>	Within 6 months of license issuance (November 5, 2016; extended to January 7, 2017)	- November 7, 2016 – Filed draft plan, with request for 60-day EOT - November 30, 2016 – Staff granted EOT - December 9, 2016 – Filed final plan - March 15, 2017 – Staff approved plan - <u>Pending Requirements</u> : Implement plan after approvals for construction.

Article No. and Name	Original Due Date	Current Status
<i>Revegetation and Non-Native Invasive Species Management Plan (article 409)</i>	Within 6 months of license issuance (November 5, 2016)	<ul style="list-style-type: none"> - November 7, 2016 – Filed plan - February 15, 2017 – Staff modified and approved plan - <u>Pending Requirements</u>: Implement plan after approvals for construction.
<i>Avian Protection Plan (article 410)</i>	Within 6 months of license issuance (November 5, 2016; final plan due within 90 days of after determining the specific voltage of the proposed overhead transmission line)	<ul style="list-style-type: none"> - November 3, 2016 – Filed plan - January 27, 2017 – Staff modified and approved plan - <u>Pending Requirements</u>: (1) finalize project design, including the transmission line voltage; (2) prepare and submit a final plan with voltage-specific measures to FWS and Kentucky DFWR for review and comment; (3) file final plan with the Commission for approval; and (4) implement plan.
<i>Endangered Species Protection Plan³ (article 411)</i>	Within 6 months of license issuance (November 5, 2016; pre-construction surveys to be conducted at least 90 days prior to the start of any ground-disturbing or land-clearing activities; final survey report to be filed with the Commission by the end of August 2017)	<ul style="list-style-type: none"> - November 3, 2016 – Filed plan - February 22, 2017 – Staff approved plan - <u>Pending Requirements</u>: (1) conduct pre-construction surveys for endangered species; (2) prepare and submit a survey report to FWS and Kentucky DFWR; (3) file final survey report with the Commission; and (4) implement plan to avoid effects to endangered species during project construction and operation.

³ This plan consolidates measures related to federally listed species into a separate plan, rather than being combined with Rye’s proposed transmission line corridor management plan.

Article No. and Name	Original Due Date	Current Status
<i>Revised Recreation Resources Management Plan</i> (article 412)	Within 6 months of license issuance (November 5, 2016; extended to January 7, 2017)	<ul style="list-style-type: none"> - November 7, 2016 – Filed draft plan, with request for 60-day EOT - November 21, 2016 – Staff approved 60-day EOT - January 3, 2017 – Filed revised plan - May 10, 2017 – Staff approved plan, with modifications. - <u>Pending Requirement</u>: Implement plan.
<i>Programmatic Agreement and Historic Properties Management Plan</i> (article 414)	File the HPMP, for Commission approval within one year of license issuance (May 5, 2017).	<ul style="list-style-type: none"> - March 6, 2017 – Filed final HPMP - <u>Pending Requirements</u>: Additional Information Request issued by Commission on April 4, 2017; acceptance of HPMP pending documentation of Kentucky SHPO concurrence.