UNITED STATES OF AMERICA
BEFORE THE
FEDERAL REGULATORY COMMISSION
AND
NATIONAL MARINE FISHERIES SERVICE

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Yadkin-Pee Dee Project )
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REQUEST BY CITY OF ROCKINGHAM, NORTH CAROLINA AND AMERICAN RIVERS FOR REHEARING OF ORDER ISSUING NEW LICENSE

Dated: May 1, 2015
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This Rehearing Request is divided into three parts. Part One seeks rehearing before the Commission of the License Order. Part Two seeks rehearing before NMFS of the Revised BO. Part Three states Petitioners’ requests for relief from each agency.

PART ONE.
REHEARING BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

The new license is about the future of the Yadkin-Pee Dee River Basin for the next forty years. Is this Project best adapted to a comprehensive plan of development for this river basin?³ Petitioners agree that the new license will improve baseline conditions for fish, wildlife, and recreation in many respects.⁴ This rehearing request addresses the flow regulation for the Tillery Reach, including License Article 403.

In the License Order, the Office Director concluded that the new license is overdue, in part because of the delay over the Revised BO.⁵ Petitioners share the impatience regarding schedule. However, the Commission now will decide whether to correct three fundamental gaps in the record that have resulted from Staff’s own course of conduct over many years in this proceeding. These gaps relate to the Licensee’s operations of the Tillery Development for power generation and for protection, mitigation, and enhancement of the non-developmental uses of the Tillery Reach.

¹ 151 FERC ¶ 62,004.
² NMFS, “Revised Final Biological Opinion for the Yadkin-Pee Dee Hydroelectric Project,” eLibrary no. 20150422-4001.
⁴ We support the program for upstream fish passage in Appendices B - C of the License Order, flow reporting under Article 407, enhancements in recreational facilities in the Tillery Reach and other Project lands under Article 408, among others.
⁵ License Order, ¶ 115. Staff initiated consultation with NMFS in this proceeding on January 24, 2008. NMFS issued the original Biological Opinion (“BO”) on April 29, 2013. The License Order requires Duke Energy to implement the Reasonable and Prudent Measures NMFS deemed necessary to avoid unlawful take of the listed sturgeon. As discussed in Part Two, Duke Energy sought judicial review of that BO. On April 17, 2015, NMFS issued a Revised BO, which modifies the Reasonable and Prudent Measures of the BO based on bilateral negotiations with Duke Energy.

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The first gap relates to the feasibility of retrofit of the Tillery Plant to generate power on minimum flow. Before filing the New License Application (“NLA”) in 2006, the Licensee conducted two preliminary studies which did not reach conclusions on feasibility. Staff did not require further study. Petitioners submitted expert reports demonstrating the feasibility of retrofit to increase the power value of the Tillery Development coincident with a higher minimum flow for non-developmental uses of that reach. We moved for Staff to test our results. Staff did not respond.

The second gap relates to the availability of fish habitat under alternative flow releases from the Tillery Development. The Licensee undertook an Instream Flow Incremental Methodology (“IFIM”) study that could have been adequate for this purpose but did not complete a critical part: the “Dual Flow” analysis of the duration of fish habitat across time. This analysis takes into account minimum flows (which are continuous) and power flow releases (which occur up to 50% of the time). Petitioners filed a motion requesting that Staff direct the completion of this analysis: the Licensee had not submitted the software used to analyze study results, and Staff (and Petitioners alike) could not complete the analysis. We submitted a report by the expert who wrote the standard guidance for IFIM studies showing that the Dual Flow analysis is necessary to properly evaluate Project impacts on fish habitat in the Tillery Reach, and that the other methods Staff relied upon were unsuitable for this purpose. We offered to make this expert available to Staff for a technical workshop or some other procedure to complete the IFIM study here. Staff did not respond.

The third gap relates to the comparative suitability of minimum flows for boating and other recreational uses in the Tillery Reach. The licensee undertook a desktop study of navigability but did not conduct the field study required by the study plan. Petitioners requested the field study. We submitted testimony by experts who wrote the nation’s standard guidance for recreational use studies, concluding that Licensee’s untested results were not adequate to resolve the comparative suitability of alternative minimum flow schedules for boating and other recreational uses. We offered to make these experts available for a field study, and we offered to secure volunteers to participate. We conducted an informal field study of canoe use, showing that boaters must routinely exit their boats and drag them across exposed shoals at the minimum flow in the Staff Alternative. We moved that Staff require a study of the recreational potential (or carrying capacity) of the Tillery Reach, again using standard methods. We offered to make our experts available, for collaboration with Staff and Licensee. Concurrent with this proceeding, the City built access and other improvements and then opened a blue trail on Hitchcock Creek, just downstream of Blewett Falls Development. This has attracted more than 30,000 user-days of recreation, including churches, schools, and scouts, just two years after the trail opened. We asked Staff to consider this as an indicator of the potential capacity of the Tillery Reach if the Tillery Development released steady flows at times critical for recreation. Staff did not respond to any of these requests.

In Part Three, we request a brief remand to undertake or complete the studies which would fill these specific gaps in the record. The remand would be limited to the minimum flow schedule for the Tillery Reach, and thus, would primarily focus on Article 403. The remand would permit evaluation of Petitioners’ alternative, which includes a higher minimum flow.
schedule and a retrofit of the Tillery Plant. The record to date shows that our alternative would preserve 96% of the power value of the Project under the License Order and, indeed, could increase that value by 22%.

The stakes for non-developmental uses of the Tillery Reach are high. Recreation in this 19-mile reach has averaged roughly 3,400 users per year (10 per day) under the Original License. It would likely remain at that level under the License Order, as a result of the Project’s flow releases which would continue to fluctuate daily by a factor of 5 to 50 times. Our alternative would provide much more stable releases at the times that matter for recreation. This would enhance recreational opportunities for the 6.1 million people who live within 100 miles of the Tillery Reach. It would likely increase recreation on the reach by an order of magnitude or more, with particular emphasis on families and youth. It would provide jobs, sales, and other economic benefits, in a rural area which seeks to enhance ecotourism to replace the historical textile-mill economy.

I.
PETITIONERS

A. City of Rockingham, North Carolina

The City of Rockingham, North Carolina is the official county seat of Richmond County and serves as the center of commerce. It is located in the Sandhills Region of North Carolina within a two hour drive of Charlotte, Raleigh, and the triad area of Winston-Salem, Greensboro and High Point. It is a party to this proceeding, having timely intervened on February 26, 2007.

The Yadkin-Pee Dee River Basin is important to City residents’ quality of life. Many residents fish and boat on the Blewett Falls Reservoir. Fewer recreate on the Tillery Reach due to lack of public access and Project operations that make the river unsuitable for most forms of water-based recreation. The river is also important to the City’s economy, which is transitioning away from textile mills toward more tourism and recreation related industries.

The City has invested in river-based recreation for its citizens. It has actively participated in this relicensing for over a decade. In partnership with American Rivers and others, the City also restored Hitchcock Creek and established a 14-mile Blue Trail that flows through the downtown area to the creek’s confluence with the Pee Dee River immediately below the Project.

B. American Rivers

American Rivers is a non-profit conservation organization headquartered in Washington, D.C., and with offices throughout the nation, including Durham, North Carolina and Columbia, South Carolina. We are dedicated to the protection and restoration of the nation’s streams. With over 200,000 supporters across the country, including those that live in the project vicinity,

6 eLibrary no. 20070226-5029.
American Rivers is one of the nation’s leading river conservation groups. American Rivers’ members use and recreate on the Yadkin and Pee Dee Rivers. It is a party to this proceeding, having timely intervened on September 26, 2009. It has actively participated in this relicensing for over a decade.

II. BACKGROUND


The Project consists of two hydroelectric developments: the Tillery Development located on the Yadkin River, and the Blewett Falls Development located nineteen miles downstream on the Pee Dee River. This Rehearing Request focuses on the Tillery Development, and more specifically the minimum and recreational flow schedules proposed to be released from that development into the nineteen mile river reach that extends to the Blewett Falls Reservoir (“Tillery Reach”).

The flow release schedule from the Tillery Development is a central issue in this Rehearing Request, as it has been a disputed issue since 2003. In the Applicant Proposal, Duke Energy proposed to release a continuous year-round minimum flow of 330 cfs, except for an 8-week shad spawning period when it would release a minimum flow of 725 cfs. By way of comparison, the natural flow in this reach is 7,978 cfs on a mean annual basis, ranging from

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7 eLibrary no. 20060929-5010.

8 Progress Energy was the previous licensee and applicant. In July 2012, Progress Energy merged into Duke Energy. For the sake of simplicity, this Rehearing Request follows the License Order’s convention of primarily referring to Duke Energy, even in instances where the action originated with Progress Energy.

9 License Order, Ordering ¶ (A).


12 The FEIS defined the Applicant’s Proposal as Duke Energy’s New License Application as modified by the Comprehensive Settlement Agreement. FEIS, p. 17.

monthly means of 5,301 cfs in July to 13,518 cfs in March.\textsuperscript{14} The 7Q10 flow – the lowest weekly flow that naturally occurs once every 10 years – is 766 cfs.\textsuperscript{15} Duke Energy also proposed to release a block of 1,750 acre feet/year to enhance recreational boating in the Tillery Reach.\textsuperscript{16} Separate from minimum flows, Duke Energy has discretion to determine when and at what level to operate the Tillery Plant. Power flows vary from 1,500 cfs up to 18,000 cfs.\textsuperscript{17} Office of Energy Projects Staff (“Staff”) subsequently identified these measures as its preferred alternative (“Staff Alternative”) in the Final Environmental Impact Statement (“FEIS”).\textsuperscript{18}

We intervened in the relicensing to protect our respective interests in a new license that would protect and enhance native fish and recreation on the Yadkin-Pee Dee River basin, particularly the Tillery Reach.\textsuperscript{19} The City of Rockingham stated its interest in returning some of the economic value of the river to the region in the form of recreational tourism.\textsuperscript{20}

We presented an alternative flow release schedule for the Tillery Development. To enhance fish and wildlife in the Tillery Reach, we proposed a minimum flow schedule between 800 and 1,000 cfs, increasing to 1,500 to 1,800 cfs from March 1 to May 15.\textsuperscript{21} The U.S. Fish and Wildlife Service (“FWS”) recommended the same minimum flows pursuant to its authority under FPA section 10(j).\textsuperscript{22} Further, to enhance recreation in the Tillery Reach, we proposed a


\textsuperscript{15} \textit{Id.} at B-34; \textit{see also} City of Rockingham, North Carolina and American Rivers, “Motion to Supplement the Record,” eLibrary no. 20130724-5018; 201307-5126 (July 24, 2013) (“Motion to Supplement the Record”), Exhibit 1 (First Stalnaker Deposition), p. 900.

\textsuperscript{16} \textit{See} FEIS, pp. 23, 198. “This recreational release volume can be increased to 1,950 acre-feet per year if releases for recreation purposes are made for at least four days within the period May 16 to May 31 or September 1 to September 15. These four days can occur in the designated May time period or the designated September time period or any combination thereof.” \textit{Id.} at 198. The flows will be released in accordance with a Recreational Flow Release plan to be developed in consultation with DENR and the North Carolina Wildlife Resources Commission and filed with the Commission one year after the new license issues.

\textsuperscript{17} \textit{Id.}, p. 62.

\textsuperscript{18} \textit{Id.} at xxii, 285.

\textsuperscript{19} City of Rockingham, “Motion to Intervene and Scoping Comments,” eLibrary no. 20070226-5029 (Feb. 26, 2007) (“Rockingham Motion to Intervene”), p. 2; American Rivers and Coastal Conservation League, eLibrary no. 200070226-5014 (Feb. 26, 2007) (“American Rivers Motion to Intervene”), pp. 2-3.

\textsuperscript{20} Rockingham Motion to Intervene, Exhibit 2 (First Crump Declaration), pp. 1-2.

\textsuperscript{21} City of Rockingham, “Comments on Notice of Readiness for Environmental Analysis” (“NREA Comments”), eLibrary no. 20070514-5158 (May 14, 2007), pp. 5-7.

\textsuperscript{22} FWS, “Comments, Section 10(j) Recommendations Terms and Conditions for the Yadkin-Pee Dee Project” (“FWS 10(j) Recommendations”), eLibrary no. 200705095039 (May 9, 2007) p. 7.
constant flow schedule of 1,200 cfs during daylight hours on weekends and holidays each year from May 16 to September 15, subject to refinement based on a recreation flow study.\textsuperscript{23} We also proposed a retrofit of the Tillery Plant to permit generation with minimum flow releases.\textsuperscript{24} We refer to these proposals collectively as the City/AR Alternative in this Rehearing Request.

The License Order adopts the Staff Alternative as the new license. The License Order relies on the FEIS, which found that the Staff Alternative for relicensing the Project would be best adapted to a comprehensive plan of development.\textsuperscript{25} The FEIS, in turn, primarily relied on New License Application as the evidentiary basis for its findings.\textsuperscript{26} In selecting the Staff Alternative, the License Order affirms Staff’s finding in the FEIS that the potential benefits of the City/AR Flow Alternative would not provide benefits sufficient to justify the costs.\textsuperscript{27}

We submitted evidence in support of our alternative, including expert testimony regarding scientific methods used in preparing the instream flow, recreational, and developmental analysis in the FEIS, scientific, peer-reviewed articles on methods for instream flow analysis, and non-expert testimony regarding conditions for and recreational use of the Tillery Reach. We filed a Motion to Supplement the Record with post-FEIS evidence (July 24, 2013),\textsuperscript{28} a Motion for a Recreational Flow Study in 2014 (May 23, 2015),\textsuperscript{29} and a Motion to Supplement the Developmental Analysis in the FEIS (June 23, 2014).\textsuperscript{30} Staff did not respond to these motions prior to license issuance.

The new license will affect two federally-endangered fish species, shortnose sturgeon and Atlantic sturgeon, which are present below Blewett Falls Dam. On April 29, 2013, NMFS issued a final BO for relicensing,\textsuperscript{31} which accepted Duke Energy’s minimum flow schedule for the Blewett Falls Development. The BO does not specifically address minimum flows adequate for sturgeon in the Tillery Reach because NMFS concluded that retrofitting the lower development to permit sturgeon passage was infeasible at present.\textsuperscript{32} The new license incorporates the BO and

\textsuperscript{23} NREA Comments, pp. 21-24.

\textsuperscript{24} Motion to Supplement the Record, p. 48.

\textsuperscript{25} FEIS, pp. xxii, 285.

\textsuperscript{26} \textit{Id.} at 37.

\textsuperscript{27} \textit{See id.} at 300, 314-15.

\textsuperscript{28} eLibrary nos. 20130724-5126, 20130725-5009.

\textsuperscript{29} eLibrary no. 20140523-5120.

\textsuperscript{30} eLibrary no. 20140623-5097.

\textsuperscript{31} NMFS, “Yadkin-Pee Dee Hydroelectric Project (FERC Project No. 2206-030) Biological Opinion,” eLibrary no. 20130429-4011 (Apr. 29, 2013).

\textsuperscript{32} \textit{Id.} at 113.
includes a specific reopener to amend the license. The specific reopener was included in response to the ongoing negotiations between NMFS and Duke Energy to amend the BO. NMFS issued a final Revised BO on April 17, 2015, after the license issued.

III. STATEMENT OF ISSUES

A. Whether the Office Director Exceeded Delegated Authority in Issuing a License in this Contested Proceeding.

Administrative Regulations

18 C.F.R. § 375.308
18 C.F.R. part 600
18 C.R.F. § 602(h)(1)

Court Decisions

Green Island Power Authority v. FERC, 577 F.3d 148 (2d Cir. 2009)

B. Whether the Office Director Erred in Not Timely Responding to Petitioners’ Motions Submitting New Evidence and Addressing Changed Circumstances.

Statutes

5 U.S.C. § 555(e)
5 U.S.C. §706

Administrative Regulations

18 C.F.R. § 385.212

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33 License Order, Article 404.
34 eLibrary no. 20150422-4001.
35 The section, Statement of Issues, is followed by Standards of Review and then by the issues themselves. The authorities for individual issues are summarized in this statement as required by 18 C.F.R. § 385.713, while the authorities for the Standards of Review are stated once in that section.

Rehearing Request
Duke Energy Progress, Yadkin-Pee Dee Project (P-2206-030)
Court Decisions

*Armstrong v. Commodity Futures Trading Commission*, 12 F.3d 401 (3d Cir. 1993)

*Butte County v. Hogen*, 613 F.3d 190 (D.C. Cir. 2010)

*Northeast Broadcasting Inc. v. Federal Communications Commission*, 400 F.2d 749 (D.C. Cir. 1968)


*Roelofs v. Secretary of Air Force*, 628 F.2d 594 (D.C. Cir. 1980)

*Smith Lake Improvement & Stakeholders Association v. FERC*, 768 F.3d 1 (D.C. Cir. 2014)

C. Whether the Office Director Erred in Not Requiring Amendment of the License Application to Describe Project Need Following the Duke Energy Merger.

Statutes

16 U.S.C. § 808(a)

16 U.S.C. § 824e

Administrative Regulations

18 C.F.R. § 16.10(a)

Administrative Decisions


*Progress Energy Carolinas et al.*, 146 FERC ¶ 62,098 (2014)

*Trafalgar Power*, 150 FERC ¶ 61,100 (2015).

D. Whether the License Order Errs in Not Stating a Plan of Development that Includes Objectives for Non-Developmental Resources over the Forty Year License Term.

Statutes

16 U.S.C. § 803(a)

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*Duke Energy Progress, Yadkin-Pee Dee Project (P-2206-030)*
Administrative Regulations

18 C.F.R. § 2.7
18 C.F.R. § 2.19(b)

Court Decisions

Bangor Hydro-Electric Company v. FERC, 78 F.3d 659 (D.C. Cir. 1996)

Confederated Tribes and Bands of Yakima Indian Nation v. FERC, 746 F.2d 466 (1984)


Green Island Power Authority v. FERC, 577 F.3d 148 (2d Cir. 2009)

La Flamme v. FERC, 945 F.2d 1124 (9th Cir. 1991)


Scenic Hudson Preservation Conference v. FPC, 354 F.2d 608 (2d Cir. 1965)

Udall v. FPC, 387 U.S. 428 (1967)

Administrative Decisions

FPL Energy Maine Hydro, LLC, 95 FERC ¶ 51,016 (2001)

Power Authority of the State of New York, 25 FERC ¶ 61,084 (1983)

E. Whether the License Order Errs in Not Considering a Reasonable Range of Alternatives.

1. Whether the License Order Errs in Not Thoroughly Considering Alternatives under NEPA sections 102(2)(C)(iii) and 102(2)(E).

2. Whether the License Order Errs in Not Thoroughly Considering Alternatives under FPA section 10(a)(1).

3. Whether the License Order Errs in Not Providing a Detailed Analysis of an Alternative to Retrofit the Tillery Plant to Generate Power Continuously.

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Statutes

16 U.S.C. § 803(a)(1)
42 U.S.C. § 4332(2)(C)
42 U.S.C. § 4332(2)(E)

Administrative Regulations

18 C.F.R. § 213(a)(2)
18 C.F.R. § 380.1
18 C.F.R. Part 500
40 C.F.R. § 1502.14
40 C.F.R. § 1502.23
40 C.F.R. § 1503.4

Court Decisions

Center for Biological Diversity v. National Highway Traffic Safety Administration, 538 F.3d 1172 (9th Cir. 2008)

Coalition for Canyon Preservation v. Bowers, 632 F.2d 774 (9th Cir. 1980)

Dubois v. United States Department of Agriculture, 102 F.3d 1273 (1st Cir. 1996)

Environmental Defense Fund v. U.S. Army Corps of Engineers, 492 F.2d 1123 (5th Cir. 1974)

Green Island Power Authority v. FERC, 577 F.3d 148 (2d Cir. 2009)

‘Ilio’ulaokalani Coalition v. Rumsfield, 464 F.3d 1083 (9th Cir. 2006)


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F. Whether the License Order Errs in Treating Enhancement of Baseline as Adequate Mitigation of Project Impacts on Non-Developmental Issues.

1. Whether the License Order Satisfies NEPA’s Procedural Requirement to Consider Mitigation that Would Minimize or Avoid Project Impacts.

2. Whether the License Order Satisfies the FPA’s Substantive Requirement to Consider Mitigation that Would Minimize or Avoid Project Impacts.

3. The License Order Does not Disclose the Cost-Effectiveness Criteria that Staff Used to Evaluate Alternative Mitigation Measures

4. The License Order Does not Give Equal Consideration to Non-Developmental Uses

Roosevelt Campobello Int’l Park Comm’n v. USEPA, 684 F.2d 1041 (1st Cir. 1982)

Scenic Hudson Preservation Conference v. FPC, 354 F.2d 608 (2d Cir. 1965)

Sierra Club v. Morton, 510 F.2d 813 (5th Cir. 1975)


Administrative Decisions

Consolidated Edison, 33 FPC 428 (1965)

Energy Transfer Partners, L.P. 123 FERC ¶ 61,168 (2008)

Erie Boulevard Hydropower, 118 FERC ¶ 61,101 (2007)


Mead Corporation, Publishing Paper Division, 72 FERC ¶ 61,027 (1995)

Mahoning Hydro Associates, 51 FERC ¶ 62,098 (1990)

Otter Tail Power Company, 57 FERC ¶ 62,186 (1991)

Power Authority of the State of New York, 25 FERC ¶ 61,084 (1983)

**Statutes**

16 U.S.C. § 797(e)

16 U.S.C. § 803(a)(1)

42 U.S.C. § 4332

**Administrative Regulations**

18 C.F.R. § 380.1

40 C.F.R. § 1502.14(f)

40 C.F.R. § 1508.20

40 C.F.R. § 150.2(c)

**Court Decisions**

*Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162 (10th Cir. 1999)

*Friends of Ompompanoosuc v. FERC*, 968 F.2d 1549, 1553 (2d Cir. 1992)


**Administrative Decisions**

*Boott Hydropower*, 144 FERC ¶ 61,211 (2013).

*Ohio Power Co.*, 71 FERC ¶ 61,092 (1995)


**G. Whether the License Order Errs in Concluding that the Proposed Action is Cost-Effective to the Greatest Extent Possible under FPA section 15(a)(2)(F).**

**Statutes**

16 U.S.C. § 803(a)(1)

16 U.S.C. § 808(a)(2)(F)
Administrative Decisions


Erie Boulevard Hydropower, 131 FERC ¶ 61,036 (2010)

Erie Boulevard Hydropower, 134 FERC ¶ 61,205 (2011)

First Light Hydro Generating Company, 145 FERC ¶ 61,157 (2013)

Holyoke Water Power Company, 88 FERC ¶ 61,186


Wisconsin Public Service Corporation, 43 FERC ¶ 62,042 (1988)

H. Whether the License Order Errs in Not Completing the Instream Flow Study Which is Necessary to Predict the Effect of Flow Alternatives on Aquatic Resources in the Tillery Reach.

1. Whether the License Order Errs in Relying on Maximum WUA to Predict Habitat Availability in the Tillery Reach.

2. Whether the License Order Errs in Relying on Index C, which is Not a Reliable Scientific Method to Predict the Duration of Available Habitat in the Tillery Reach.

3. Whether the License Order Errs in Not Relying on Dual Flow Analysis to Predict the Duration of Available Fish Habitat in the Tillery Reach.

4. Whether the Office Director Erred in Not Requiring Disclosure of the Licensee’s Software to Test IFIM Results.

Statutes

16 U.S.C. § 803(a)(1)
Administrative Regulations

40 C.F.R. § 1502.22
40 C.F.R. § 1506.5

Court Decisions

Scenic Hudson Preservation Conference v. FPC, 354 F.2d 608 (2d Cir. 1965)

Administrative Decisions

Central Nebraska Public Power and Irrigation District, 62 FERC ¶ 61,057 (1993)
Henwood Associates, 41 FERC ¶ 62,284 (1987)
Midwest Hydro, 113 FERC ¶ 61,125 (2005)
Modesto Irrigation District, 131 FERC ¶ 62,110 (2010)
Oconto Electric Cooperative, 56 FERC ¶ 61,148 (1991)
PacifiCorp, 80 FERC ¶ 62,008 (1997)
Turlock Irrigation District, 65 FERC ¶ 61,373 (1993)
Wisconsin Valley Improvement Company, 80 FERC ¶ 61,054 (1997)

I. Whether the License Order Errs in Its Rejection of FWS’s Recommended Flows for the Tillery Reach under FPA section 10(j).

1. Whether the License Order Shows FWS’s Flow Recommendation is Inconsistent with Applicable Law.

2. Whether the License Order Shows that Article 403 Will Protect and Enhance Fishery Resources in the Tillery Reach.

Statutes

16 U.S.C. § 803(j)
Court Decisions

*Kelley ex rel. Michigan Department of Natural Resources v. FERC*, 96 F.3d 1482 (D.C. Cir. 1996)

Administrative Decisions


*Otter Tail Power Company*, 57 FERC ¶ 62,186 (1991)

J. Whether the License Order Errs in Not Completing the Analysis of Project Impacts on Recreation in the Tillery Reach.

1. Whether the License Order Errs in Not Analyzing the Recreation Potential of the Tillery Reach.

2. Whether the License Order Errs in Not Analyzing the Economic Benefits of Recreation on the Tillery Reach.

3. Whether the License Order Errs in Not Completing the Analysis of Navigability in a Jon Boat.


6. Whether the License Order Errs in Finding that the City/AR Flow Proposal Would Impact Herons.

7. Whether the License Order Errs in Finding that the Commission Cannot Consider Recreation Measures Beyond the Water Quality Certification.

Statutes

16 U.S.C. § 803(a)(1)

Administrative Regulations

18 C.F.R. § 2.7

Court Decisions

*Illinois Commerce Commission v. FERC*, 2014 WL 2873936 (7th Cir. 2014)

*Snoqualmie Indian Tribe v. FERC*, 545 F.3d 1207 (9th Cir. 2008)

Administrative Decisions

*Carex Hydro*, 52 F.E.R.C. ¶ 61,216 (1990)

*Grand River Dam Authority*, 59 FERC ¶ 62,073 (1992)

*Grand River Dam Authority*, 105 FERC ¶ 61,100 (2003)

*Idaho Power Company*, 147 FERC ¶ 61,056 (2014)

*Noah Corp.*, 57 FERC ¶ 61,170 (1991)


*Otter Tail Power Company*, 57 FERC ¶ 62,186 (1991)

*Public Service Company of Colorado*, 82 FERC ¶ 61,334 (1998)

K. **Whether the License Order Errs in Not Considering Whether the Required Recreation Measures Seek the Ultimate Development of Recreation Resources at the Project.**

Administrative Regulations

18 C.F.R. § 2.7

L. **Whether the Office Director Erred in Not Supplementing the FEIS in Light of Changed Circumstances, New Evidence, and Passage of Time.**

Statutes

42 U.S.C. § 4332(2)

Administrative Regulations

40 C.F.R. § 1502.9


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Court Decisions


Scenic Hudson Preservation Conference v. FPC, 354 F.2d 608 (2d Cir. 1965)

Warm Springs Task Force v. Gribble, 621 F.2d 1017 (9th Cir. 1980).

Administrative Decisions

South Carolina Electric and Gas Company, 109 FERC ¶ 61,331 (2004)

M. Whether the License Order Errs in Its Exclusion of Certain Water Quality Certification Conditions.

Statutes

33 U.S.C. § 1341

Court Decisions

American Rivers, Inc. v. FERC, 129 F.3d 99 (2d Cir. 1997)


N. Whether the Office Director Erred in Not Providing NMFS with the Best Available Scientific Data for Formal Consultation under Endangered Species Act.

Statutes

16 U.S.C. § 1536

Administrative Regulations

50 C.F.R. § 402.14

Court Decisions


IV.
STANDARDS OF REVIEW

This section sets out standards which apply in judicial review of the Commission’s final actions and thus are the basis for our arguments that the License Order erred in the specific ways specified in the Statement of Issues. These standards apply to all of the issues identified for rehearing by the Commission (Part One) and NMFS (Part Two).

This relicensing proceeding under the Federal Power Act (“FPA”) is an adjudication as defined by the Administrative Procedures Act (“APA”) section 554.\(^{36}\)

The APA’s “arbitrary and capricious standard” applies to Commission orders issued under the FPA.\(^{37}\) Under APA section 706(2),\(^{38}\) a court “. . . shall hold unlawful and set aside agency action, findings, and conclusions found to be . . . (A) arbitrary, capricious, abuse of discretion, or otherwise not in accordance with the law; (D) without observance of procedure required by law; or (E) unsupported by substantial evidence . . . .”

Under this standard, a court will uphold the Commission’s decisions under the FPA if it “examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including

\(^{36}\) 5 U.S.C. § 554. Under APA section 556, the Commission is required to conduct a hearing for a relicensing proceeding. 5 U.S.C. § 556. In any hearing required under APA section 556, parties are entitled to a reasonable opportunity to submit for the consideration of the employees participating in the decisions – (1) proposed findings and conclusions; or (2) exceptions to the decisions or recommended decisions of subordinate employees or to tentative agency decisions; and (3) supporting reasons for the exceptions or proposed findings or conclusions.

An agency must make, and the record must show, a “ruling on each [proposed] finding, conclusion, or exception presented [by a Party].” \textit{Id.} Its final decision must include “. . . findings and conclusions, and the reasons or basis therefore, on all material issues of fact, law, or discretion presented on the record. . . .” \textit{Id.} “The purposes of the APA provision requiring specific findings and conclusions are to prevent arbitrary agency decisions, provide parties with a reasoned explanation for those decisions, settle the law for future cases, and furnish a basis for effective judicial review.” \textit{Armstrong v. Commodity Futures Trading Commission}, 12 F.3d 401, 403 (3d Cir. 1993); see also \textit{Northeast Broadcasting Inc. v. Federal Communications Commission}, 400 F.2d 749, 758-759 (D.C. Cir. 1968) (citations omitted).

\(^{37}\) \textit{Wisconsin Public Power v. FERC}, 493 F.3d 239, 256 (D.C. Cir. 2007).

\(^{38}\) 5 U.S.C. § 706(2).

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a ‘rational connection between the facts found and the choice made.’” While the scope of judicial review is “narrow and a court is not to substitute its judgment for that of the agency,” the agency “. . . must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choices made.’” This standard applies to the license articles as well as the interlocutory decisions that determine what evidence is in the record.

FPA section 313(b) further provides that “the finding of the Commission as to the facts, if supported by substantial evidence, shall be conclusive. Under this standard, substantial evidence is record evidence which is expressly found to be: (A) reliable and probative for the purpose of supporting a finding and (B) superior to competing evidence with respect to a given finding.


40 Motor Vehicle, 463 U.S. at 43. Thus:

[i]f the administrative action is to be tested by the basis upon which it purports to rest, that basis must be set forth with such clarity as to be understandable. It will not do for a court to be compelled to guess at the theory underlying the agency's action; nor can a court be expected to chisel that which must be precise from what the agency has left vague and indecisive.


We noted in [a prior case] that we do not pretend to have the competence or the jurisdiction to resolve technical controversies in the record, or . . . to second-guess an agency decision that falls within a ‘zone of reasonableness.’ Rather, our task is to ‘ensure public accountability,’ by requiring the agency to identify relevant factual evidence, to explain the logic and the policies underlying any legislative choice, to state candidly any assumptions on which it relies, and to present its reasons for rejecting significant contrary evidence and argument.

United Steelworkers of America et al. v. Marshall, 647 F.2d 1189, 1207 (D.C. Cir. 1980) (internal citations omitted).

“Most fundamentally, our task is ‘to ensure that the [agency] engaged in reasoned decisionmaking.’” Farmers Union Cent. Exh., Inc. v. FERC, 734 F.2d 1486, 1500 (D.C. Cir. 1984) (“Farmers Union”) (quoting International Ladies' Garment Workers' Union v. Donovan, 722 F.2d 795, 815 (D.C.Cir.1983)).

41 See City of Centralia, Washington v. FERC, 213 F.3d 742, 748 (D.C. Cir. 2000).


. . . an agency’s refusal to consider evidence bearing on the issue before it constitutes arbitrary agency action within the meaning of § 706. This proposition may be deduced from case law applying the substantial evidence test, under which an agency cannot ignore evidence contradicting its position. The

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ARGUMENT

A. The Office Director Exceeded Authority by Issuing a License for a Contested Proceeding.

The Office Director issued the License Order. This exceeded the Director’s delegated authority under 18 C.F.R. section 375.308.

Under its regulations, the Commission has authorized the Office Director to:

(a) Take appropriate action on uncontested applications and on applications for which the only motion or notice of intervention in opposition is filed by a competing preliminary permit or exemption applicant that does not propose and substantiate materially different plans to develop, conserve, and utilize the water resources of the region for the following:

(1) Licenses (including original, new, and transmission line licenses) under part I of the Federal Power Act. . . . .

The term “uncontested” is not defined at 18 C.F.R. section 375.308. As used in 18 C.F.R., part 600, “uncontested” is used to mean not contested “in whole or in part” by any party. It is an established “rule of statutory construction that identical words used in different parts of the same act are intended to have the same meaning.” The plain meaning of “uncontested” is “not disputed or that all issues are agreed upon by both the parties.”

The Commission must administer its Rules of Practice and Procedure as written in 18 C.F.R. Part 385. For example, the failure to solicit a motion to intervene for “reasons not contemplated by [the regulations]” is a ground for reversal. Hence, the Director’s issuance of a license where the proceeding is contested in part is a ground for reversal.

substantiality of evidence must take into account whatever in the record fairly detracts from its weight. Although we are dealing with the question whether agency action is arbitrary or capricious, in their application to the requirement of factual support the substantial evidence test and the arbitrary or capricious test are one and the same.

Id. (internal citations and quotation marks omitted).

18 C.F.R. § 375.308 (emphasis added).

See, e.g., 18 C.F.R. § 385.602(h)(1).


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Duke Energy’s application for new license was contested. Petitioners filed comments on the DEIS and several motions to supplement the record which challenged the adequacy of Duke Energy’s New License Application, the environmental analysis as finalized in the FEIS, and the adequacy of Staff’s proposed license conditions. Our comments on the DEIS and FEIS, and several motions to supplement the FEIS included evidence that demonstrated the inadequacies of Duke Energy’s and Staff’s respective proposals. Petitioners proposed alternative license conditions that would better protect the beneficial uses affected by the Project. So, while we did not object to issuance of a new license to Duke Energy, we repeatedly objected to the sufficiency of the proposed license articles, which have now been adopted in the License Order, to protect, mitigate and enhance beneficial uses of the Yadkin-Pee Dee River basin.

The Office Director did not explain why the license was not required to be issued by the Commission under these circumstances.

The Office Director’s issuance of the new license in this contested proceeding is arbitrary and capricious and not supported by substantial evidence.

B. The Office Director Erred in Not Timely Responding to Our Post-FEIS Motions Submitting New Evidence and Addressing Changed Circumstances.

Before the License Order, Staff did not respond to our several motions to supplement the record, undertake a recreational flow study, and supplement the developmental analysis. These were pending from eight to fourteen months. The License Order treats these motions as comments.49 It does not provide any authority for treating motions, which provide new evidence and request specific relief, as comments.

The Commission’s rules provide that “[a] motion may be filed: (1) At any time, unless otherwise provided; (2) By a participant or a person who has filed a timely motion to intervene which has not been denied; (3) In any proceeding except an informal rulemaking proceeding.”50 Although the rules do not establish a deadline for the Commission to rule on motions, APA section 706(1) provides that action may not be “. . . unlawfully withheld or unreasonably delayed.”51

Here, the sub rosa denial of our motions (and other post-FEIS requests for consideration of additional information) was unreasonable under APA 706(1). This materially harmed Petitioners by constraining our ability to exhaust administrative review. This Rehearing Request is the first opportunity we have to respond the Director’s treatment of the evidence and requests in those motions. If the order on this Rehearing Request were to include new rationale or

49 License Order, p. 4, n. 13.
50 18 C.F.R. § 385.212.
51 5 U.S.C. § 706(1).

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authority but not change the substance of the new license, we would be compelled to seek judicial review and address such new rationale or authority before the court, without prior exhaustion of administrative review.

Further, the sub rosa denial of our motions and other post-FEIS requests violates APA section 555(e). That statute provides for “prompt notice” of the denial, in whole or part, of any request by an interested party in connection with any agency proceeding. “Except in affirming a prior denial or when the denial is self-explanatory, the notice shall be accompanied by a brief statement of the grounds for denial.”

The requirement of “a brief statement of the grounds for denial” obtains even though the request pertains to a matter of discretion or grace, not one of entitlement. The legislative history of section 555(e) supports its applicability, and thus with the requirement of a statement of the basis for denying a request, even where there is no formal proceeding or hearing. The requirement of a statement of denial comports with the purposes of the APA, and abets the understanding and perception, by both the individual affected and the public, that the official or agency has made a considered disposition.

Indeed, the statement “... must be one of reasoning; it must not be just a conclusion; it must articulate a satisfactory explanation for its action ... . A response [that] provides no basis ... [has] all of the explanatory power of the reply of Bartleby the Scrivener to his employer: ‘I would prefer not to.’

Here, the License Order does not respond to the vast majority of the evidence included in our motions. It does not respond directly to specific questions and related proposed findings of

52 Smith Lake Imp. & Stakeholders Ass’n v. F.E.R.C., 768 F.3d 1, 2-3 (D.C. Cir. 2014) (“a second rehearing petition must be filed if—and only if—the first rehearing order ‘modifie[d] the results of the earlier one in a significant way.’ Town of Norwood, Mass. v. FERC, 906 F.2d 772, 775 (D.C.Cir.1990). We subsequently explained that means a change in the ‘outcome,’ not merely a change in reasoning.”).

53 Id. at 3.

54 5 U.S.C. § 555(e).

55 Roelofs v. Secretary of Air Force, 628 F.2d 594, 600 (D.C. Cir. 1980) (internal citations and quotation marks omitted).

56 Butte County v. Hogen, 613 F.3d 190, 194-5 (D.C. Cir. 2010) (internal citations and quotation marks omitted).

57 Incident to formal hearing under 18 C.F.R. Parts 500 - 700, the Commission may reopen the record on request if “warranted by changes of fact or law or by the public interest.” A request filed after an initial decision under Rule 708 may be approved if “new evidence would compel or persuade a contrary result.” Public Utilities District No. 1 of Pend Oreille County, Washington, 117 FERC ¶ 61,205, 62,009 – 62,010 (2006). Our evidence meets this threshold, although the circumstances are different and presumably involve a lower threshold: we filed the motions in the absence of a formal hearing and well in advance of the licensing order.

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facts in the motions. Hence, we file this Rehearing Request, which details this non-response in
the issues below. One example will suffice here.

Our 2013 motion to supplement the record challenged Staff’s reliance on Index C to interpret the IFIM results, and specifically, the duration of available habitat. Our motion stated that the FEIS did not cite any authority for using Index C. In response, the License Order cites our motion itself as authority that Index C is “commonly” used in some circumstances. This misstates our statements that Index C is not appropriate in any reach subject to non-constant flows, such as the Tillery Reach; and that FWS only used it once in a 1992 training workshop. The License Order does not respond specifically to any of the attached evidence on this issue: testimony by North Carolina Department of Natural Resources (“DENR”) staff that the 1992 workshop materials were their only authority for asking the Licensee to use Index C in the Instream Flow Study: a declaration by Dr. Clair Stalnaker, who co-invented IFIM and then co-authored the standard guidance, and by other experts, concluding that Dual Flow analysis is necessary to evaluate the duration of available habitat in the Tillery Reach; and multiple peer-reviewed articles by fish biologists to the effect that peaking flows tend to impair native fisheries and thus must be considered in establishing flow regulation. The License Order does not respond to six clarifying questions, and four proposed findings, which the motion stated on this issue alone.

C. The Office Director Erred in Not Requiring Amendment of the License Application to Describe Project Need Following the Duke Energy Merger.

The License Order rejects Petitioners’ motion to require an amendment to the New License Application to reflect the merger of Progress Energy into Duke Energy. “As Duke Energy points out, the effect of the merger on the holder of the license was a change in its name and the licensee’s holding company; it was not a transfer. Neither of these changes requires additional or different analyses, or an update to Duke Energy’s Exhibit B.” This conclusion is error under FPA section 15(a) (2)(C) - (D) and 18 C.F.R. § 16.10(a), because the merger as approved under FPA Part II changes the dispatch and functionality of the Project in fundamental ways that bear on need for power.

58 License Order, n. 89. It also refers to FEIS, p. 109, which itself does not state any authority for use of Index C.

59 Motion to Supplement Record, ¶¶ 129 et seq.

60 See generally id., Exhibits 33 – 52.

61 Id., pp. 46-47.

62 License Order, ¶ 192; see id. at ¶¶ 216-218.

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FPA section 15(a)(2) (C) requires that an existing licensee describe its “plans . . . to operate . . . the project . . . .” Section 15(a)(2)(D) requires many types of information that bear on need for power:

(D) The need of the applicant over the short and long term for the electricity generated by the project or projects to serve its customers, including, among other relevant considerations, the reasonable costs and reasonable availability of alternative sources of power, taking into consideration conservation and other relevant factors and taking into consideration the effect on the provider (including its customers) of the alternative source of power, the effect on the applicant’s operating and load characteristics, the effect on communities served or to be served by the project, and in the case of an applicant using power for the applicant’s own industrial facility and related operations, the effect on the operation and efficiency of such facility or related operations, its workers, and the related community. In the case of an applicant that is an Indian tribe applying for a license for a project located on the tribal reservation, a statement of the need of such tribe for electricity generated by the project to foster the purposes of the reservation may be included.63

The Commission’s regulations (see 18 C.F.R. section 16.10(a)(2)) restate these requirements as information which an existing licensee “must file.”

In the New License Application, Exhibit H (“Information Required for a New License”) and, to a lesser extent, Exhibit B (“Resource Utilization”), reported information under these requirements as of April 2006. The application described Progress Energy’s service area as a retail utility, its projected load growth, and the costs of alternative sources of power.64 The application described the exact functions that the Project serves in these utility operations, reporting that Tillery Plant is “. . . Progress Energy’s only hydro project of sufficient size and operational capacity to operate in Automatic General Control (AGC) mode. This constitutes a unique role for the Tillery Plant as it is often called upon to operate at the peak of demand, control frequency and voltage, and assist with load transfers across control areas.”65 The FEIS used this information as the basis of its analysis of Project need.66

Three years later, on April 4, 2011, Duke Energy Corporation and Progress Energy submitted an application to effect a merger pursuant to FPA sections 203(a)(1) and 203(a)(2).67

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65 Id. at H-6.
66 FEIS, pp. 3-4.
On September 30, 2011, the Commission approved the application, subject to later approval of market power mitigation measures.68

On March 26, 2012, these entities applied for approval of a Joint Dispatch Agreement (“JDA”) pursuant to FPA section 205.69 The purpose of the JDA is “. . . to allow [Duke Energy and Progress Energy Carolinas] to achieve efficiencies by dispatching their generation facilities on a joint basis to serve their loads.” Duke Energy will serve as the Joint Dispatcher and will perform the dispatch “. . . on a least-cost basis . . . .”70 The Commission approved the JDA, describing the “savings” in fuel and purchased power that will benefit retail and wholesale customers.71

On March 7, 2013, Progress Energy applied to the Commission to change the name to the licensee from Carolina Power & Light, d/b/a/ Progress Energy Carolinas, to Duke Energy Progress. It reported that Progress Energy is now a “wholly owned subsidiary” of Duke Energy Corporation and is d/b/a Duke Energy Progress; and that Progress Energy Carolinas (as a subsidiary of Duke Energy Progress) is now an “indirect subsidiary” of Duke Energy Corporation.72 The Commission found that “. . . there has been no change in the legal entity” which is the licensee, and more specifically, that the “name changed does not affect the licensee’s qualifications to be a licensee . . . .”73 This order was limited to name change and did not address any pending issue in the relicensing proceeding.

The merger has changed the dispatch and benefits of the Project in many ways recognized by FPA section 15(a)(2)(C) – (D) and 18 C.F.R. § 16.10(a). With respect to “plan to . . . operate,” Duke Energy dispatches the Project under the 2012 JDA in an integrated manner with sixteen other hydropower plants,74 while the New License Application described the Project as uniquely situated for load-following or black-start purposes.

With respect to “energy and capacity resources,” the Project is now one in a fleet of hydropower projects, whereas before it was not. By contrast to the New License Application’s

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69 16 U.S.C. § 824e.
70 eLibrary 20120326-5022, p. 4.
71 Duke Energy Corporation et al., 139 FERC ¶ 61,193 (2012).
72 eLibrary no. 20130307-5023, p. 1.
73 Progress Energy Carolinas et al., 146 FERC ¶ 62,098 (2014).
74 See http://www.duke-energy.com/power-plants/hydro.asp (last checked April 30, 2015) for a list.

“Although a small percentage of Duke Energy’s electricity is generated using hydroelectric stations, these plants are an important energy resource. They supply “peaking power” – extra electricity needed to meet demand when it is needed most (typically hot summer days and cold winter mornings). Duke Energy’s hydro plants can be started to begin generating electricity in a matter of minutes.” Id.
conclusions that wind, fuel cell and solar are not economical in this region,75 Duke Energy has made “significant investments” in these renewable technologies since the merger.76 “We believe generating electricity from renewable resources will play an increasingly important role in the transition to cleaner energy.”77 Duke Energy has also brought five combined -cycle natural gas powerplants on-line since 2011.78 Duke Energy approaches energy efficiency as the “fifth fuel joining coal, natural gas, nuclear and renewables as a critical resource needed to serve the growing energy needs of the communities we serve.”79 It is undertaking initiatives and making investments80 that are “load modification measures (such as conservation . . .).”

These generation assets and initiatives significantly change the licensee’s “operating and load characteristics” described in the New License Application. With respect to “communities served,” Duke Energy in 2015 serves more than twice as many customers as Progress Energy in 2006.81

In all of these respects, Exhibits B and H as submitted in 2006, and the FEIS which relied on these exhibits, contain information which is outdated and incorrect for purpose served by FPA section 15(a) (2) (C) – (D) and 18 C.F.R. § 16.10(a): namely, determining how the Project as licensed meets the power need for the licensee and region. The License Order does not cite any independent source to correct this information.

The Office Director’s decision not to require amendment of the license application following the Duke Energy merger is arbitrary and capricious and not supported by substantial evidence.

D. The License Order Errs in Not Stating a Plan of Development that Includes Objectives for Non-Developmental Resources over the Forty Year License Term.

The License Order finds

Based on Commission staff’s independent review and evaluation of the Yadkin-Pee Dee Project, recommendations from the resource agencies and other stakeholders, and the no-

77 Id.
80 Id.
action alternative, as documented in the EIS, the proposed Yadkin-Pee Dee Project, with
the staff-recommended measures, is best adapted to a comprehensive plan for improving
or developing the Yadkin-Pee Dee River system.82

In reaching this conclusion the License Order does not state any goals or objectives for
beneficial uses over the forty-year term of the license, or reference any of the dozens of goals
established by other agencies with jurisdiction over these uses. This violates the Commission’s
specific planning responsibility under FPA section 10(a)(1).

FPA section 10(a)(1),83 requires that any license be, in the Commission’s judgment,

best adapted to a comprehensive plan for improving or developing a waterway or
waterways for the use or benefit of interstate or foreign commerce, for the improvement
and utilization of water-power development, for the adequate protection, mitigation, and
enhancement of fish and wildlife . . . and for other beneficial public uses, including
irrigation, flood control, water supply, and recreational and other purposes . . . .

As recognized by Congress, the Commission “and the courts have held the Section 10(a)
standard to be [a] broad public interest standard, requiring consideration of all factors affecting
the public interest.”84 “Thus the statute does not merely require that the license suit the public
interest, or be appropriate, but in effect imposes a ‘highest and best use’ standard.”85

In meeting this standard the Commission has a “specific planning responsibility.”86 This
obligation has been fundamental to the FPA since 1920:

the time has come for merging local projects and uses of the inland waters in a
comprehensive plan designed for the benefit of the entire country. Such a plan should
consider and include all the uses to which streams may be put, and should bring together
and coordinate the points of view of all users of waters.87

82 License Order, ¶ 229.
84 Green Island, 577 F.3d at 166. See also Confederated Tribes and Bands of Yakima Indian Nation v. FERC,
“grant of servitudes upon the public’s rivers requires our special scrutiny.” Id.
86 Scenic Hudson, 354 F.2d at 613-14 (citing First Iowa Hydro-Elec. Coop. v. FPC, 328 U.S. 152, 180-81
(1946)).
87 Scenic Hudson, 354 F.2d at 613 n. 9; see also Udall v. FPC, 387 U.S. 428, 450 (1967) (‘‘Udall’’).

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“Section 15(a)(2) of the FPA mandates a similar analysis with respect to applications for new licenses,” requiring that the Commission issue the new license “to the applicant having the final proposal the Commission determines is best adapted to serve the public interest.” 88 “The purpose of § 15(a)(2) is to ensure that FERC rigorously scrutinizes any application for a new license for an existing hydroelectric project, so that it can determine that the existing project is ‘best adapted to serve the public interest.’” 89 New licenses are new decisions, not simply permit renewals; the Commission is to “make the same inquiries on relicensing as on initial licensing.” 90

The License Order bases the best adapted finding on Staff’s finding that the Project would continue to provide reliable, economical power and would enhance the baseline condition of fish and wildlife, recreation, water quality, and historic properties.91 The License Order does not explain how the new license is a plan within the plain meaning of the word: a commitment of actions to achieve goals or other results in the river basin across time. A plan is more than a series of findings that the new license will provide some improvement over baseline conditions of various resources.

We agree that the new license will improve the baseline condition for some resources affected by the Project. However, Sections 10(a)(1) and 15(a) require that the Commission do more in deciding the terms on which to issue a new license.

In our Motion to Supplement the Record, we raised the absence of a plan for the fish community over the term of any new license:

OEP has not described any objectives or desirable future conditions for the fish community. Although its inherent objective is enhancement of habitat availability under the original license, that could be any amount of enhancement; it does not address whether the fish community will continue to be dominated by exotics; and it does not

88 Green Island, 577 F.3d at 166 (emphasis in original). Congress anticipated that the public interest in a waterway would evolve over time and that the Commission’s decisions would need to reflect changing societal values:

Congress explained that it intended § 10(a) to provide FERC with the flexibility to weight different public-interest factors differently on a case-by-case basis, so that “[a]s the public interest changes over time, [FERC’s] considerations under the section 10(a) standard likewise change, encompassing new criteria or reevaluating the weight given established criteria.”

Id.

89 Id. at 167.

90 Confederated Tribes, 746 F.2d at 470.

91 Id. at ¶ 230.
target those native species subject to special protections under the Endangered Species Act or other applicable laws.\textsuperscript{92}

\textsuperscript{92} Motion to Supplement the Record, ¶ 112.
In response, the License Order concludes:

It is not the Commission staff’s obligation to define desired future conditions or river restoration goals. Rather, this is the responsibility of federal and state fish and wildlife agencies charged with managing the resource(s) in question. As it typically does, staff relied on applicable resource agencies’ comprehensive plans and the consultation record to identify the resources of interest and desired goals and objectives for the resources affected by the Yadkin – Pee Dee Project.\footnote{License Order, ¶ 155 (internal citations omitted).}

We agree that the Commission must consider the desired future conditions and river restoration goals established in other comprehensive plans under FPA section 10(a)(2). The Office Director and Staff did not do that here with any specificity.\footnote{In our comments on the DEIS we objected that Staff had not made findings of consistency with applicable comprehensive plans, or stated the basis for any implicit finding of consistency. Staff responded in the FEIS that it must provide explanation only if it makes a finding of inconsistency: we typically do not provide summaries or descriptions of all the comprehensive plans that we have reviewed unless we identify inconsistencies with a plan. In that case we would provide a summary and disclose the nature of the inconsistency. Finally, we consider the consistency of the measures in the staff alternative to the goals and purposes of the relevant comprehensive plans to make sure that we are not in conflict with any federal, state, or local comprehensive plan approved by the Commission. While we agree that several of the measures recommended by the City of Rockingham and American Rivers are consistent with several of the North Carolina comprehensive plans, that, in itself, is not a sufficient basis to include a measure in our staff alternative. FEIS, p. A-23. Staff offered no basis for treating a finding of consistency differently than a finding of inconsistency. Staff’s response violates CEQ’s regulations implementing NEPA, which require that an agency’s response to comments on an EIS cite “the sources, authorities, or reasons which support the agency’s position . . . .” 40 C.F.R. § 1503.4.}

The License Order and FEIS do not cite to a single of the seventeen plans with respect to desired future conditions for the Yadkin-Pee Dee River Basin.

In any event, consideration of comprehensive plans prepared by other agencies under Section 10(a)(2) does not satisfy the Commission’s independent planning responsibility under Section 10(a)(1). As the Commission has explained, its obligation to make a comprehensive planning determination under Section 10(a)(1) is broader than its obligation under Section 10(a)(2) to consider the plans of other agencies:

Section 10(a)(1) requires the Commission, based on the record developed in a proceeding, to make a public interest determination which balances the various, and often competing, interests that will be affected by the project. In making this determination, the Commission is also required, under Section 10(a)(2)(A), to consider the extent to which the project is consistent with any comprehensive plans filed by state or federal agencies. In contrast to the comprehensive plan referred to in Section 10(a)(1), these
state and federal plans are not required to balance all public interest uses of a waterway, and usually they do not. These plans are thus separate and distinct from the public interest balancing requirement of Section 10(a)(1). Moreover, the Commission is not required to ensure that licensing a project is consistent with Section 10(a)(2)(A) plans as long as it has given due consideration to all recommendations from relevant agencies, reconciled inconsistencies between those agencies' recommendations and the Commission's plans to the extent possible, and explained its reasons for departing from the agencies' recommendations.95

Further, the Commission’s policy directs other agencies to include goals and forecasts in comprehensive plans under FPA section 10(a)(2). Such plans must “specify goals, objectives, and recommendations for improving developing, or conserving the waterway” in relation to beneficial uses,96 while stating analytical standards, methods, and data.97 The License Order does not explain why this criterion should not apply equally to the Commission. Yet the License Order does not state any goals or objectives for the Yadkin-Pee Dee River Basin through 2055.

Taking the example above, the License Order finds that Staff’s proposed minimum flows for the Tillery Reach would enhance habitat conditions for the fish community in that reach.98 However, it does not establish how much enhancement is appropriate over the next forty years in terms of the public interest. It does not dispute the evidence in the record that shows the fish community in the Tillery Reach is dominated by invasive species due in large part to Project operations.99 It does not dispute that under the Staff Alternative, the fish community will continue to be dominated by invasive species.100

95  FPL Energy Maine Hydro, LLC, 95 FERC ¶ 61,016, 61,032 (2001) (internal citations omitted).
97  18 C.F.R. § 2.19(b)(2).
98  License Order, ¶ 153. We note that Article 401(a) requires Duke Energy to develop “success criteria” in the Aquatic Life Monitoring Plan. License Order, ¶ 90. This article does not correct the error addressed in this Issue D, with respect to aquatic resources. The License Order does not explain why such criteria were not developed in the twelve-year course of this proceeding to date, how the plan of development is complete without such criteria, or whether they may ever be a specific basis for adjusting the minimum flow schedule. The Commission has routinely held that, given the requirements of FPA section 6, 16 U.S.C. § 799, it will not use Standard Article 15 to reopen a plan of development approved in a license, merely because there is new information thereafter. See, e.g., Trafalgar Power, 150 FERC ¶ 61,100, 2015 WL 724726 * 5- 7 (2015).
99  The New License Application states:

Generally, the fish and benthic macroinvertebrate communities in the Pee Dee River reach below the Tillery Development were characterized by lower species richness and abundance with a predominance of habitat and feeding generalists when compared to the river reach below the Blewett Falls Development (Progress Energy 2003, 2005b). . . . Several environmental factors were present in this reach which may affect the species richness and structure of the fish and benthic macroinvertebrate communities to varying degrees. These factors include the greater degree of flow fluctuations and the dissolved oxygen (DO) regime in the river reach immediately below Tillery Dam as well as the degraded water quality effects of the Rocky River, a major tributary, approximately 5 miles below Tillery Dam.

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The License Order does not establish that a fish community dominated by invasive species is a desirable condition now or in 2055. It does not consider whether this is consistent with the objectives established in relevant comprehensive plans prepared by other agencies. For example, the beneficial uses of the Tillery Reach under North Carolina’s water quality laws include a community of native fishes comparable to natural conditions. North Carolina Wildlife Resources Commission’s *Wildlife Action Plan*, prioritizes restoration of native aquatic species in the Yadkin-Pee Dee River Basin and states that non-native species “are not a priority for conservation. Rather, monitoring and possible control of range expansion of the [non-native species] should be initiated.”

Similarly, the License Order finds that Staff’s proposed minimum flow (330 cfs) and supplemental recreational flow release (1,750 acre-feet annually) “would improve boating conditions over the existing conditions of 40 cfs.” The License Order finds the unquantified benefit of these measures would justify the costs “and, therefore, would be in the public interest.” However, it does not make a finding as to how much improvement the new license likely would provide. It does not dispute that presently there is minimal boating recreation on the Tillery Reach, making any improvement a low threshold.

As stated in Issue K, the Director did not make a finding pursuant to the Commission’s Recreation Policy that the new license seeks or will achieve, within the Commission’s authority, “the ultimate development of these resources, consistent with the needs of the area to the extent that such development is not inconsistent with the primary purpose of the project.”

The License Order does not consider whether the marginal improvement in navigability is consistent with the objectives established by the state for recreational resources in the Yadkin-Pee Dee River Basin. As stated in the New License Application, North Carolina’s *State New License Application*, p. E4-36.

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100  Motion to Supplement the Record, ¶ 116.

101  15A N.C. Admin. Code §§ 2B.0211 (“Best Usage of Waters: aquatic life propagation and maintenance of biological integrity”), .0219 (“Water quality standards applicable to Class C waters as described in Rule .0211 of this Section also apply to Class B waters.”), .0202(11) (“Biological integrity means the ability of an aquatic ecosystem to support and maintain a balanced and indigenous community of organisms having species composition, diversity, population densities and functional organization similar to that of reference conditions.”).


103  License Order, ¶ 164.

104  Id. at ¶ 167.

105  18 C.F.R. § 2.7.
Comprehensive Outdoor Recreation Plan ("SCORP")\textsuperscript{106} calls for “improved outdoor recreational services to meet the needs of a growing and changing population.” This includes “greater public accessibility.” The plan also calls for conservation of natural resources, which includes “expanded protection of important natural resources.” The North Carolina Wildlife Resources Commission has priorities including “develop and maintain canoe, kayak, and whitewater paddling access points;” “develop and maintain canoe trails along major stream and rivers;” and “encourage commercial guided trips through development of wildlife training programs and informational materials.”\textsuperscript{107}

The License Order’s omission of desired future conditions here is inconsistent with precedent where the Commission weighed the effects of alternatives into the future in making its determination that the project would be in the public interest. In \textit{Power Authority of the State of New York}, the Commission was presented with a contested application for a license for a pumped storage hydroelectric project in Prattsville, New York.\textsuperscript{108} The EIS for the proceeding “considered a wide variety of alternatives which might be used in lieu of” the project.\textsuperscript{109} The Commission vacated the administrative law judge’s exclusion of two alternatives from detailed analysis, including the “coal alternative.” In reviewing the judge’s decision, the Commission considered the state’s “long-range plan for the power pool and the state.” Based on the state’s findings that “new coal-fired plants should be a significant part” of that long-range plan, the Commission concluded that the “the judge clearly erred in declining to evaluate the coal alternative because of uncertainty concerning its environmental effects.”\textsuperscript{110} The Commission explained:

The fact of the matter is that in matters such as this the Commission is faced with an extremely difficult task of weighing the effects of alternatives into the distant future. A pumped storage project may last 70 to 100 years. A new coal plant may last 35 years. In evaluating the alternatives, the Commission is required to take into consideration several highly speculative questions. These include the future course of the nation’s economy, and the likely future availability and cost of alternative sources of energy.\textsuperscript{111}


\textsuperscript{107} As quoted in New License Application, Exhibit E7, pp. E7-2-5 – E7-2-6.

\textsuperscript{108} 25 FERC ¶ 61,084, 61,264 (1983).

\textsuperscript{109} \textit{Id.} at ¶ 61,275.

\textsuperscript{110} \textit{Id.} at ¶ 61,276.

\textsuperscript{111} \textit{Id.} at ¶ 61,277.
Given the context of the Commission’s planning mandate, the Commission held that “[t]he judge’s refusal to evaluate the coal alternative because of a degree of uncertainty concerning its environmental impact” was “unacceptable.”

In arguing that the Commission’s planning responsibility requires it to articulate objectives for developing the waterway in relation to beneficial uses, we do not suggest that Section 10(a)(1) requires that the Commission prepare a single document entitled “comprehensive plan.” In *LaFlamme v. FERC*, the Ninth Circuit U.S. Court of Appeals held that the administrative record may itself evince a comprehensive plan if it shows the Commission has considered the project’s impacts on all aspects of the public interest relating to comprehensive development of the waterway. However, *LaFlamme* does not mean that every new license constitutes a comprehensive plan, *ipso facto*. License conditions must be “reasonably related” to a stated “goal.”

The License Order’s wholesale omission of goals or objectives for non-developmental uses of the Yadkin-Pee Dee River over the forty-year term of the license is arbitrary and otherwise not in accordance with the law.

E. **The License Order Errs in Not Considering a Reasonable Range of Alternatives.**

The License Order considers only three alternatives: No Action, Applicant Proposal, and the Staff Alternative. It finds the new license (based on the Staff Alternative) is best adapted to a comprehensive plan of development under Section 10(a)(1) as compared to the No-Action Alternative. The Staff Alternative is simply a variation of Duke Energy’s operational proposal, subject to different mitigation measures. Under the Staff Alternative, there is a fundamental conflict between power and non-developmental uses of the Tillery Reach. See Issues H and J. We submitted evidence that feasible alternatives are available to avoid or reduce this conflict. The License Order’s cramped range of alternatives under these circumstances is arbitrary and capricious and not supported by substantial evidence.

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112  *Id.*

113  *See La Flamme v. FERC*, 945 F.2d 1124, 1128 (9th Cir. 1991) (“La Flamme”).

114  *Id.*


116  License Order, ¶ 229.
1. **The License Order Errs in Not Thoroughly Considering Alternatives under NEPA sections 102(2)(C)(iii) and 102(2)(E).**

The License Order’s consideration of just three alternatives despite evidence of unmitigated project impacts and the feasibility of alternatives violates the Commission’s obligation under NEPA sections 102(2)(C)(iii) and 102(2)(E) to thoroughly consider alternatives to a proposed action.

In the License Order the Office Director claimed discretion to select the range of alternatives considered in the License Order.\(^{117}\) We agree the Commission has discretion under NEPA and the FPA. That discretion is not unbounded.

NEPA section 102(2)(C)(iii) requires a detailed statement of “alternatives to the proposed action.”\(^{118}\) Under this section an EIS must present the alternatives to the proposed action. This discussion-of-alternatives requirement is intended to provide evidence that those charged with making the decision have actually considered other methods of attaining the desired goal, and to permit those removed from the decisionmaking process to evaluate and balance the factors on their own. A thorough consideration of all appropriate methods of accomplishing the aim of the proposed action is expected.\(^{119}\)

CEQ’s regulations require that an EIS:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.\(^{120}\)

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\(^{117}\) *Id.* at ¶ 193.

\(^{118}\) 42 U.S.C. 4332(2)(C)(iii).

\(^{119}\) *Sierra Club v. Morton*, 510 F.2d 813, 825 (5th Cir. 1975) (internal citations and notes omitted). *See also Sierra Club v. Watkins*, 808 F.Supp. 852, 874, fn. 40 (D.C. Cir. 1991) (“[E]ven if a project is found to be environmentally beneficial, an agency must still consider alternatives.”).

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.\textsuperscript{121}

The statute and rules do not limit “reasonable alternatives” to those that contain all elements of the proposed action.\textsuperscript{122} Rather, the duty under NEPA section 102(2)(C) to consider a reasonable range of alternatives includes such alternatives which consist of different environmental measures.\textsuperscript{123}

CEQ has issued guidance that explains:

The CEQ Regulations specifically identify procedures agencies must follow when developing and considering mitigation alternatives when preparing an EIS. When an agency prepares an EIS, it must include mitigation measures (not already included in the proposed action or alternatives) among the alternatives compared in the EIS. Each EIS must contain a section analyzing the environmental consequences of the proposed action and its alternatives, including “[m]eans to mitigate adverse environmental impacts.”\textsuperscript{124}

CEQ interprets NEPA and implementing rules to require consideration of a reasonable

\textsuperscript{121} 40 C.F.R. § 1502.14.

\textsuperscript{122} Under administrative practice and case law,

Alternatives can be divided into primary and secondary categories . . . .

A primary alternative is a substitute for agency action that accomplishes the action in a different manner. Increased coal production is a primary alternative to the construction of a nuclear power plant. . . . Agency opponents presenting a secondary alternative concerned that the agency action is necessary but suggest that it be carried out in a different manner. They may offer a secondary alternative that requires a different location for a project, or project changes that mitigate harmful environmental impacts.


\textsuperscript{123} See \textit{Methow Valley Citizens Council v. Regional Forester}, 833 F.2d 810 (9th Cir. 1987) (alternative sites), rev’d on other grounds, 490 U.S. 332 (1989); \textit{Coalition for Canyon Preservation v. Bowers}, 632 F.2d 774 (9th Cir. 1980) (two-lane rather than four-lane highway); \textit{Ilio'ulaokalani Coalition v. Rumsfeld}, 464 F.3d 1083 (9th Cir. 2006) (alternative sites); \textit{People ex re. Van De Kamp v. Marsh}, 687 F. Supp. 495 (N.D. Cal. 1988) (alternative site and project modifications).

range of alternatives for scaling operations.

“Q. How many alternatives have to be discussed when there is an infinite number of possible alternatives?

A. For some proposals there may exist a very large or even an infinite number of reasonable alternatives. For example, a proposal to designate wilderness areas within a National Forest could be said to involve an infinite number of alternatives from 0 to 100 percent of the forest. When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS. An appropriate series of alternatives might include dedicating 0, 10, 30, 50, 70, 90, or 100 percent of the Forest to wilderness. What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.”

In addition, NEPA section 102(2)(E) requires that the federal lead agency “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources . . . .” The purpose is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project or of accomplishing the same result by entirely different means.”

The Commission has adopted regulations to supplement CEQ’s. It also has adopted guidelines for Staff to use in preparing environmental documents. The guidelines state: “[m]ost staff environmental documents will have, at a minimum, three alternatives: the applicant’s proposal, a staff alternative, and a no-action alternative.”

According to the Commission’s guidelines, “alternatives could also include, depending on the circumstances, an agency alternative or a project retirement alternative.” However,

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128 18 C.F.R. § 380.1. “The Commission will comply with the regulations of the Council on Environmental Quality except where those regulations are inconsistent with the statutory requirements of the Commission.” *Id.*
130 *Id.* at 24 (emphasis added).
131 *Id.*
Typically, resource agency recommendations (e.g., minimum flow releases, wetland mitigation) are not analyzed as a discrete NEPA alternative . . . . On occasion, however, to improve clarity of the document we may look an operational alternative (e.g., run-of-river operation) or alternative location of a project facility as a distinct alternative throughout the document. In rare situations, we may evaluate agency recommendations as a distinct alternative, but only if they comprise a complete package of measures addressing all affected resource areas.

Here the License Order interprets this guidance to permit consideration of just one operational alternative to Duke Energy’s proposal, namely the Staff Alternative. The order in essence finds that, so long as the Commission has discretion to exclude a particular operational alternative from its Staff recommendation, then it follows that the Commission also has discretion under NEPA to exclude a particular alternative from the range of alternatives evaluated in the EIS.

For example, as described in Issue E.3, the License Order does not require a study of an alternative involving retrofit of the Tillery Plant. The License Order states that “staff concluded that the limited additional benefits to aquatic habitat and low recreational use of the Tillery Reach do not justify the added cost of providing Rockingham’s and American Rivers’ recommended flow . . . . Therefore, no further study of a retrofit is needed.” According to the this logic, if Staff does not adopt a proposed condition as part of its recommended alternative then there can be no obligation under NEPA for the Commission to evaluate this proposed condition as an alternative in the EIS.

This logic is wrong under the statute and implementing regulations, which plainly call for consideration of more than one operational alternative absent a showing that no other feasible alternatives exist. The agency’s “duty under NEPA is to study all alternatives that ‘appear reasonable and appropriate for study at the time’ of drafting the EIS, as well as ‘significant alternatives’ suggested by other agencies or the public during the comment period.”

132 Id. at 32.

133 License Order, ¶ 198.

134 See, e.g., 40 C.F.R. § 1500.2 (“Federal agencies shall to the fullest extent possible . . . Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment.”); 40 C.F.R. § 1502.1 (the EIS “shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.”).

135 Roosevelt Campobello Int’l Park Comm’n v. U.S. E.P.A., 684 F.2d 1041, 1047 (1st Cir. 1982) (“Roosevelt Campobello”). See also 40 C.F.R. § 1503.4 (agency may broaden the scope of alternatives considered in the DEIS in response to comments received).
The requirement to identify at least one “preferred alternative” presumes that the obligation to evaluate all reasonable alternatives extends to alternatives that the agency would not recommend.\(^\text{136}\)

The License Order’s scope of alternatives is inconsistent with relevant court precedent as described below.

As described in Issue E.3, the Office Director did not expand the scope of alternatives to include consideration of an alternative to retrofit the Tillery Plant to permit generation at any minimum flow release, notwithstanding expert testimony that the City/AR retrofit proposal is both technically and economically feasible.

A similar approach was rejected in *Dubois v. United States Department of Agriculture*.\(^\text{137}\) There the petitioner alleged the federal agency had not considered a reasonable range of alternatives for a proposed ski facility expansion on federal lands. More specifically, the petitioner maintained that the agency had acted arbitrarily and capriciously in refusing to evaluate a proposal to construct an artificial pond (rather than using a natural pond that supported fish and wildlife) to store water for snowmaking, notwithstanding the submission of detailed information in the administrative record showing that similar artificial ponds had been used nearby for this purpose. The First Circuit U.S. Court of Appeals found:

> in the instant case, the final EIS contains *no* “description” or “discussion” whatsoever as to why an alternative source of water such as an artificially created storage pond would be impractical. The agency has discretion to balance competing concerns and to choose among alternatives, but it must legitimately assess the relative merits of reasonable alternatives before making its decision.\(^\text{138}\)

It held that “because the Forest Service did not satisfy the requirement that it “rigorously explore and objectively evaluate” all reasonable alternatives . . . its decision was not in accordance with law.”\(^\text{139}\)

The License Order does not consider the City/AR Alternative as an action alternative, in part, because it did not meet Staff’s internal cost-benefit criteria.\(^\text{140}\) It makes this finding even

\(^{136}\) 40 C.F.R. § 1502.14(e).

\(^{137}\) 102 F.3d 1273 (1st Cir. 1996).

\(^{138}\) *Id.* at 1289 (emphasis in original).

\(^{139}\) *Id.* at 1289-90.

\(^{140}\) License Order, ¶ 194.
though Staff did not analyze the City/AR Alternative in Section 4.0 of the FEIS, “Developmental Analysis.”

Petitioners submitted evidence in the form of an expert report (see Issue E.3) that analyzed the power benefits of the City/AR Alternative. The expert report relied on the Staff’s assumptions and methods in the Developmental Analysis to permit an apples-to-apples comparison of the operational alternatives. The report concludes that “the City/AR Flow and Retrofit Alternatives would provide substantial annual net benefits,” under Mead Corporation. On June 23, 2014, Petitioners moved for Staff to supplement the developmental analysis in the FEIS to include the City/AR Alternative and this new evidence. The Office Director waited until the License Order, approximately nine months, to deny this request. In addition to unreasonably narrowing the range of alternatives under NEPA, the Office Director’s decision not to complete the cost-benefit analysis for Petitioners’ proposals is inconsistent with CEQ’s regulations requiring disclosure of such analysis where it “is relevant to the choice among environmentally different alternatives.”

A similar approach was rejected in Center for Biological Diversity v. National Highway Traffic Safety Administration. There the agency refused to conduct NEPA analysis of any proposed Corporate Average Fuel Economy (“CAFE”) standards that did not satisfy its internal cost benefit analysis. When the agency was challenged for restricting the alternatives on this basis, it responded that it had discretion under NEPA to select alternatives for analysis that were “economically practicable.” The Ninth Circuit U.S. Court of Appeals found the agency’s approach too narrow and restrictive. The court clarified that an agency’s discretionary use of cost-benefit methodology to support its preferred alternative is not synonymous with a federal agency’s obligation under NEPA to evaluate a reasonable range of alternatives.

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141 This section states Staff’s analysis of the costs and benefits of operating the project under the action alternatives.


143 Id. at ¶ 27.

144 40 C.F.R. § 1502.23.

145 538 F.3d 1172 (9th Cir. 2008).

146 Id. at 1219.

147 Id.

148 Id.
The scope of alternatives considered in the License Order here was constrained as compared to analyses the Commission has undertaken for other projects. The Commission plainly has discretion to consider more than one operational alternative.

In *Mahoning Hydro Associates*, the Commission considered an application for a project that would use surplus water from a government dam. Appropriate mitigation for the project’s impacts on water quality in the creek was a disputed issue. The Commission prepared an Environmental Assessment that considered six alternatives to meet various dissolved oxygen and fishery objectives. It undertook a cost-benefits analysis for purposes of evaluating the alternatives that quantified not just the power benefits, but also the fishery benefits. By contrast, here the License Order considers just one operational alternative and does not quantify any of the non-developmental benefits of the Project under proposed or alternative operations.

In *Otter Tail Power Company*, the Commission considered an application to relicense a project originally licensed in 1939. There the Commission used the applicant’s “flow model to expand the analyses to include three additional alternatives: a recommendation of MDNR for a single-tiered (average) flow scenario; and two additional flow scenarios that Commission staff identified. It then conducted detailed analysis of those alternatives. The Commission selected a flow alternative that would provide greater enhancement of habitat for target species as compared to the applicant’s proposal and adequate flows for canoeing during summer months. It selected this alternative even though it would result in energy losses. By contrast, here Staff did not modify the range of alternatives based on comments received and did not conduct detailed analysis of any operational alternative that would have provided greater environmental enhancements than those provided in Staff’s Alternative.

In *Lehigh Portland Cement Company v. Florida Gas Transmission Company et al.*, the Commission considered a range of alternative plans to permanently curtail gas deliveries. The

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150 Id. at ¶ 63,118.
151 Id. at ¶ 63,119.
152 Id. at ¶ 63,122.
153 Id.
155 Id. at ¶ 63,362 (emphasis added).
156 Id.
157 Id. at ¶ 63,363.
The Commission upheld Staff’s use of potential environmental impacts to bracket the range of alternatives it considered: “the environmental extremes would be represented at one end of the spectrum by the interim and FGT-10 plans which contain both elements, and on the other side, by the Ellis plan, which includes neither.”159 By contrast, here the License Order does not consider any operational alternative that would optimize aquatic or recreational resources.

2. **The License Order Errs in Not Thoroughly Considering Alternatives under FPA section 10(a)(1).**

The License Order’s consideration of just three alternatives despite evidence of unmitigated project impacts and the feasibility of alternatives violates the Commission’s obligation under FPA section 10(a)(1) to thoroughly study licensing alternatives prior to license issuance.

As stated above, the FPA section 10(a)(1) is a “broad public interest standard, requiring consideration of all factors affecting the public interest.”160 This includes a duty to undertake a thorough study of alternatives to the proposed license that is based on a complete record.161 This substantive duty under Section 10(a)(1) parallels the Commission’s procedural obligation under NEPA to consider a reasonable range of alternatives prior to making a licensing decision, as discussed above.

In the licensing which resulted in *Scenic Hudson*, the Commission considered four complete alternatives to the proposed project, three of which involved power generation not under its jurisdiction (e.g., steam powerplants).162 The court remanded because the Commission had not required study or hearing on two of the alternatives.163 The court found: “[t]he failure of the Commission to inform itself of these alternatives cannot be reconciled with its planning responsibility under the [FPA].”164

The existence of a more desirable alternative is one of the factors which enters into a determination of whether a particular proposal would serve the public convenience and necessity. That the Commission has no authority to command the alternative does not mean that it cannot reject the (original) proposal.165

159 *Id.* at ¶ 61,379.
160 *Green Island*, 577 F.3d at 166.
161 *See Scenic Hudson*, 354 F.2d at 612; *Green Island*, 577 F.3d at 168; *see also Power Authority of the State of New York*, 25 FERC at ¶ 61,276.
162 *Consolidated Edison*, 33 FPC 428, 440-43 (1965).
163 *Scenic Hudson*, 354 F.2d at 621-22.
164 *Id.* at 622.
165 *Id.* at 617-18 (internal citations omitted).
The court further found that the Commission must assure a complete record for the purpose of evaluating alternatives.\[^{166}\] It must supplement the record if the information submitted by the parties is inadequate.

The agency does not do its duty when it merely decides upon a poor or nonrepresentative record. As the sole representative of the public, which is a third party in these proceedings, the agency owes the duty to investigate all the pertinent facts, and to see that they are adduced when the parties have not put them in . . . . The agency must always act upon the record made, and if that is not sufficient, it should see the record is supplemented before it acts. It must always preserve the elements of fair play, but it is not fair play for it to create an injustice, instead of remedying one, by omitting to inform itself and by acting ignorantly when intelligent action is possible . . . .\[^{167}\]

As described above, the EIS prepared in *Power Authority of the State of New York* provided “comprehensive and exhaustive consideration of the multitude of alternative sources of energy.”\[^{168}\] The presiding administrative law judge gave preliminary consideration to at least two alternatives outside of the Commission’s jurisdiction: coal-fired plant and conservation program. The judge excluded the coal alternative from detailed analysis despite evidence that coal was important to the state’s long-term energy portfolio. The Commission reversed that decision as inconsistent with its specific planning responsibility under FPA section 10(a)(1).\[^{169}\]

It is true that Staff considered our proposals incident to its analysis of the Staff Alternative. However, Staff did not consider our proposals as discrete action alternatives. It did not include these proposals in its developmental analysis for the alternatives. This violated the Commission’s duty under FPA section 10(a)(1) to “seriously consider” all feasible alternatives.\[^{170}\]

Further, neither Staff nor the Office Director found that any other alternatives which Duke Energy could implement to develop the river would be infeasible. This violated the Commission’s duty to ensure that a new license will be best adapted to a comprehensive plan for the Yadkin-Pee Dee River Basin, taking into account actions which Duke Energy could implement at the Tillery Plant or its other power facilities. As *Scenic Hudson* found in the related context of an original license:

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\[^{166}\] *Id.* at 612.

\[^{167}\] *Id.* at 621. “In viewing the public interest, the Commission’s vision is not to be limited to the horizons of the private parties to the proceeding.” *Id.*

\[^{168}\] *Power Authority of the State of New York*, 25 FERC at ¶ 61,274.

\[^{169}\] *Id.* at ¶ 61,277.

\[^{170}\] *Scenic Hudson*, 354 F.2d at 622; *Green Island*, 577 F.3d at 168.
In framing the issue before it, the [FPC] properly noted: “We must compare the Cornwall project with any alternatives that are available. If on this record Con Edison has available an alternative source for meeting its power needs which is better adapted to the development of the Hudson River for all beneficial uses, including scenic beauty, this application should be denied.”

As stated above, the License Order does not address our expert evidence that “the City/AR Alternative would provide substantial net benefits,” making it economic under Mead Corporation. Instead, the License Order rests on Staff’s finding that the benefit of higher instream flows would be so minor as to make the economic feasibility of the City/AR Alternative immaterial. As described in Issue F.3, Staff’s finding regarding the comparative benefits of the Staff Alternative and the City/AR Alternative is untestable.

3. **The License Order Errs in Not Providing a Detailed Analysis of an Alternative to Retrofit the Tillery Plant to Generate Power Continuously.**

The License Order does not provide a detailed analysis of an alternative to retrofit the Tillery Plant prior to finding that the Staff Alternative is best adapted to a comprehensive plan of development under FPA section 10(a)(1). The License Order omits such study despite expert testimony that retrofit was feasible, both technically and economically. This is error because it does not comply with the Commission’s obligations to undertake a thorough study of reasonable alternatives, as described in Issues E.1 and E.2.

Under the 18 C.F.R. section 4.38(b)(2), a license applicant must describe the existing project design and operation and disclose any proposed changes. Under 18 C.F.R. section 16.10(a)(7), an existing licensee who proposes to modify the powerhouse must include a “reconnaissance-level study” of effects and costs.

As placed in service in 1928, the Tillery Plant has four turbines, each sized to operate only at a flow release exceeding 1,500 cfs. Thus, under the existing design, all minimum flows less than 1,500 cfs bypass the turbines and so represent lost generation. By contrast,

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171 *Scenic Hudson*, 354 F.2d at 612.


173 License Order, ¶ 194.

174 *Id.* at, ¶ 198 (“no further study of a retrofit [of the Tillery Plant] is needed.”).

175 *See Scenic Hudson*, 354 F.2d at 612; *Green Island*, 577 F.3d at 168; *Environmental Defense*, 492 F.2d 1135.

modern turbines have the capacity to operate across a wide range of flows, including those proposed in the Staff and City/AR Alternatives.\textsuperscript{177}

In 2002 and 2006, before the FEIS was published, Duke Energy conducted preliminary studies of the feasibility of retrofitting the Tillery Plant to permit continuous generation.\textsuperscript{178} These studies expressly did not reach a conclusion on feasibility and recommend further study.\textsuperscript{179} The New License Application reported that Duke Energy did not plan any capital modification to the Tillery Plant on the ground that “initial evaluations” showed that such modification was not feasible.\textsuperscript{180}

On December 10, 2007,\textsuperscript{181} we proposed a retrofit of Tillery Plant to permit continuous power generation at any minimum flow up to 1,500 cfs. The FWS made a similar recommendation under its FPA section 10(j) authority.\textsuperscript{182} We subsequently submitted expert testimony by Dr. Michael Sale, an engineer who directed the hydropower program at the U.S. Department of Energy’s Oak Ridge National Laboratory. This testimony concluded that a retrofit of the Tillery Plant appears to be feasible, creating power value that would repay capital

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\textsuperscript{178} Motion to Supplement the Record, Exhibit 10 (Duke Engineering and Services, “Blewett Falls & Tillery Hydropower Projects Life Extension and Expansion Options” (Mar. 2002)); id. at Exhibit 11 (Progress Energy, “Minimum Flow Powerhouse Concept Study” (Feb. 2006)).

\textsuperscript{179} See id.

\textsuperscript{180} New License Application, p. B-55.


\textsuperscript{182} FWS recommended that minimum flows from the Tillery Development

be required through that sluice gate [at the top of the dam] or turbine upgrades or refurbishments if the flows cannot be provided through other means. Further, should the turbines at Tillery Dam require future upgrades of refurbishments, we recommend that the FERC require PE to install turbines capable of providing the 800 cfs to 1,000 cfs as indicated in the IFIM studies conducted by the licensee. Restoration of the [Tillery Reach] is very important to the Department due to the nature of the aquatic resources affected and the potential for significant aquatic resource restoration and enhancement for the river and the citizens of the United States.

FWS’s 10(j) Recommendations, p. 7. In the License Order the Director reports that FWS did not pursue this recommendation based on Duke Energy’s representation that the existing sluice gate at the top of the dam could release up to 1,000 cfs. License Order, ¶ 130; see also FEIS, p. 325.
expense in only six years.\footnote{Motion to Supplement the Record, Exhibit 9 (Sale Expert Report), ¶¶ 25-26.} On June 23, 2014, we submitted expert testimony by Dr. Nancy Ryan and Kushal Patel, Energy + Environmental Economics (“E3”). This evidence shows: retrofit of the Tillery Plant would increase power generation by 17% and would increase the net economic benefit of the Project (as calculated under \textit{Mead Corporation}) by 22%, relative to the Applicant Proposal and Staff Alternative.\footnote{Expert Report of E3, ¶ 23 and Table 3. E3 used the data and assumptions in the FEIS with respect to power value, interest rates, and other variables, to assure an apples-to-apples comparison. \textit{Id.}, ¶ 15.}

On August 8, 2013 and July 23, 2014, Duke Energy submitted briefs purporting to rebut these expert testimonies in certain respects.\footnote{“Duke Energy’s Answer in Opp’n to the Motion By the City of Rockingham, North Carolina and American Rivers to Supplement the Record,” eLibrary no. 20130803-5158 (Aug. 8, 2013); “Duke Energy’s Answer is Opp’n to Motion to Supplement the Developmental Analysis of the Final Environmental Impact Statement,” eLibrary 20140723-5125 (July 23, 2014).} Its attorneys argued that E3 overestimated the new power generation, used an incorrect power value per kwH, and underestimated the capital cost of construction per kW.\footnote{Duke Energy’s Answer on Developmental Analysis, pp. 8-12.} The brief attributed calculations to Duke Energy’s staff but did not disclose worksheets, methods, identities, or expertise of any staff involved. In sum, the brief made technical statements that are untestable. In an adjudication like this, mere argument in briefs does not rebut expert testimony on issues requiring expert judgment.\footnote{Federal Rules of Evidence (“FRE”) 701 – 703. The Commission has stated: [the] Rules are not binding in proceedings before regulatory agencies such as the FERC. Indeed, most agencies, including the FERC have their own rules of evidence. It is only when the agency lacks applicable evidentiary rules in a given situation that it may turn to the Federal Rules of Evidence for guidance. Thus, regulatory agencies regard the Federal Rules of Evidence in the same way as the Church views the Apocrypha — that they are instructive but not authoritative. We turn therefore to the Commission’s Rules. \textit{Southern California Edison}, 51 FERC ¶ 63,002, 65,005 (1990). Here, if the licensing proceeding had been conducted as a formal hearing under 18 C.F.R. Part 500, Duke Energy’s briefs would have been an improper method to advance or rebut expert testimony. \textit{See, e.g.,} Rules 506 - 7 (requiring opinion by a witness to be in the form of oral or written testimony which is testable on cross-examination). As another example, the Commission has stated that Rule 509 is “broader” than FRE 702, which encompasses \textit{Daubert, supra}. The Commission thus permits testimony which does not strictly comply with \textit{Daubert} and instead assigns appropriate “weight.” \textit{Energy Transfer Partners}, L.P. 123 FERC ¶ 61,168, 62,129 (2008). Under Rule 509 as well, however, such weight attaches to evidence, not argument by a party’s attorneys as a substitute for evidence.\textit{Id.}, ¶ 15.} Duke Energy then attacked credentials, speculating that E3 has a “lack of familiarity with utility economics.”\footnote{Duke Energy’s Answer on Developmental Analysis, p. 13.}

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This is untrue, as demonstrated by E3’s representation of utilities, public utilities commissions, and independent system operators across the nation. 189

Taken at face value, Duke Energy’s briefs challenged certain data and methods used by Dr. Sale and E3 to demonstrate the feasibility of the proposed retrofit. In that circumstance, the Commission must undertake to resolve conflicts in evidence material to this part of the licensing decision. 190 However, the Office Director did not convene a technical conference, solicit a general answer (otherwise prohibited under 18 C.F.R. section 385.213(a)(2)) to Duke Energy’s briefs, or use any other procedure to resolve whether the retrofit would be feasible. The License Order reports that Staff reviewed the new evidence of the Petitioners, and the response by Duke Energy, as submitted since the FEIS. 191 This merely recites that Staff did their job. The License Order does not disclose their methods, worksheets, or calculations (other than escalating the FEIS’s 2007 dollars into 2015 dollars). 192

The License Order does not respond directly to E3’s finding that the retrofit would substantially increase power generation, or the net economic benefit of the Project under Mead Corporation, relative to the Staff Alternative. It does find that the City/AR Alternative would shift some power generation from peak to non-peak periods, and that peak power is substantially

As one example, the brief argued that “Duke Energy Progress does not consider rates of ROI or rates of return when analyzing resource options or resource modifications. Duke Energy Progress’s primary criterion to measure resource allocations is to select the resource that is least costly to Duke Energy Progress’ ratepayers.” Duke Energy’s Answer on Developmental Analysis, p. 13. We agree. The brief misstates E3’s testimony.

E3 did not state or suggest, nor did the Petitioners at any point in this proceeding, that Duke Energy uses “greatest profit” (id.) as a criterion for such decisions. E3 merely stated that rate of return is a “good way” to evaluate the feasibility of a potential capital expense by a utility. That is because that rate of return, as set by its public utilities commission, determines whether and how quickly such an expense may be recovered through the rates charged to customers. See North Carolina Public Utilities Commission, “Order Granting General Rate Increase,” Docket No. E-2, Sub 1023 (2013) (approving a return on equity for Duke Energy based in part on its expert testimony about “. . . the importance of a utility being allowed to earn an ROE that is adequate to attract capital at reasonable terms, under varying market conditions, and that will enable the utility to provide safe, reliable electric service while maintaining its financial integrity”). Id., p. 22.

E3 was also perfectly clear that rate of investment as used in paragraphs 11, 13, 21, and 24 of their testimony was a utility perspective on feasibility and was not part of the regulatory perspective inherent in net benefit analysis under Mead Corporation. Expert Report of E3, ¶ 11. Their testimony (other than these paragraphs) addressed that regulatory perspective.

189 See https://ethree.com/expertise/index.php. Indeed, Dr. Ryan is a former Commissioner of the California Public Utilities Commission.

190 Farmers Union, 734 F.2d at 1514 (“If FERC, in the exercise of informed discretion, decides that the suretyship premium approach is more reliable or easier to administer than hypothetical capital structures, then it should state why”).

191 License Order, ¶ 197.

192 Id. at ¶ 134.
more valuable. While we agree, this qualitative statement is not quantitative analysis under Mead Corporation.

The License Order also cites Staff’s finding in the FEIS that a new turbine would reduce the water quality benefits of minimum flow releases and increase the potential for fish entrainment mortality. The FEIS does not provide evidence to support these findings of impact. The License Order’s finding of increased entrainment risk is plainly inconsistent with the record of this proceeding and others. In its entrainment study for Tillery Plant, Duke Energy found that the existing turbines caused entrainment between 5 – 15%. It found that such entrainment does not affect the fishery in the Tillery Reach, or Blewett Falls Lake, at the population level. These existing turbines were designed and installed between 1912 and 1926. Modern “fish friendly” turbines are designed to reduce entrainment to 2% or less. The retrofit proposal means that some flow which would otherwise pass through existing turbines during peak generation, would instead pass through a new turbine during continuous generation. Provided that the new turbine has a lower entrainment rate, it is a logical impossibility that the retrofit would increase entrainment.

The Commission generally accepts a licensee’s choice not to retrofit a powerplant incident to a relicensing proceeding. Here, however, the choice has significant consequences for

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193 Id. at ¶ 197.
194 The Staff Alternative would require Duke Energy to bypass the minimum flow of 330 cfs whenever the Tillery Plant is not operating. That is roughly half the time. That bypass flow is as much as 660 acre-feet per day across the license term of 40 years. The City/AR Alternative would increase the minimum flow by roughly 800 cfs on a continuous basis but would direct all such flow through a new turbine. Thus, the alternative would shift some generation from peak to non-peak periods while, on the other hand, substantially increasing overall generation relative to the License order.
195 This implies that peak power from this Project is not just more valuable but actually needed for reliable utility service in the system as a whole. The record does not support that inference. Staff did not require Duke Energy to amend the 2006 New License Application to describe the peak v. non-peak demands of the merged system, or the Project’s functionality in meeting those demands.
196 License Order, ¶ 197; see also FEIS, p. 120.
197 License Order, ¶ 197.
200 Erie Boulevard Hydropower, 118 FERC ¶ 61,101, 61,519 (2007). See also Electric Power Research Institute, “Fish Friendly” Hydropower Turbine Development and Deployment: Alden Turbine Preliminary Engineering and Model Testing (2012), p. 7-2 (estimating survival rate of 98.4% for 200 mm fish, and nearly 100% for fish 100 mm and less in length).

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the public interest. It means that the Project will not “fully develop”201 the hydropower potential at the Tillery Development, bypassing 330 cfs on a regular basis across the next 40 years. It means that non-developmental uses of the Tillery Reach will necessarily continue to conflict with power value of the Tillery Development, because the minimum flow will not generate power whenever Tillery Plant is not operating. In this circumstance, the Commission has an obligation to evaluate whether the Tillery Plant would be better adapted to a comprehensive plan if retrofitted with a modern turbine that operates continuously on the minimum flow.202

Contributing to this error, Staff did not consider any specific alternatives to optimize the power value of the Alcoa Power Generating Company’s Yadkin Project (P-2197) and this Project. The Yadkin Project is the source of almost all inflow for this Project, which is located downstream. As the License Order reports, the FEIS covered both projects, and Staff confirmed that operations of the Yadkin Project would be sufficient to meet the minimum flow schedule here, except during drought.203 However, Staff did not consider alternatives to coordinate operations to increase and even optimize power value, given current designs and a possible retrofit of the Tillery Plant. We submitted expert testimony that such cooperation could significantly increase power value.204

F. The License Order Errs in Treating Enhancement of Baseline as Adequate Mitigation of Project Impacts on Non-Developmental Resources.

The License Order finds that the new license is best adapted to a comprehensive plan of development. As stated in Issue D, this is based merely on the Director’s several findings that the new license would improve baseline conditions of non-developmental resources. The License Order does not show that Staff considered all practicable measures to avoid, minimize, or mitigate for project impacts on the Tillery Reach. This is legal error under NEPA and the FPA.

1. The License Order Does Not Satisfy NEPA’s Procedural Requirement to Consider Mitigation that Would Minimize or Avoid Project Impacts.

The purpose of NEPA’s requirement that federal agencies prepare an EIS prior to any decision that could significantly affect environmental quality is “to guarantee that agencies take a

201 See Issue G.

202 In other proceedings, the Commission has evaluated the comparative merits of a retrofit to better balance power and non-developmental benefits. See, e.g., Erie Boulevard Hydropower, 134 FERC ¶ 61,205, 62,019 (2011); City of Watertown, New York, 71 FERC ¶ 62,193, 64,385 (1995).

203 License Order, ¶ 199.

204 Motion to Supplement the Record, p. 15 and Exhibit 9 (Sale Expert Report), ¶ 12.
‘hard look’ at the environmental consequences of proposed actions utilizing public comment and
the best available scientific information.”\textsuperscript{205}

CEQ’s regulations implementing NEPA make clear that this “hard look” standard applies
to the agency’s consideration of measures to mitigate the environmental effects of the proposed
and alternative actions.\textsuperscript{206}

[O]mission of a reasonably complete discussion of possible mitigation measures would
undermine the “action-forcing” function of NEPA. Without such a discussion, neither the
agency nor other interested groups and individuals can properly evaluate the severity of
the adverse effects\textsuperscript{207}

CEQ’s regulations governing procedures for preparing an FEIS require that the statement
include “appropriate mitigation measures not already included in the proposed action or
alternatives.”\textsuperscript{208}

The regulations define mitigation as more than any improvement. “Mitigation” includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its
implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected
environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance
operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or
environments.\textsuperscript{209}

The record of the agency’s decision must “[s]tate whether all practicable means to avoid
or minimize environmental harm from the alternative selected have been adopted, and if not,

\textsuperscript{205} Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162, 1171-72 (10th Cir. 1999) (citing Robertson
v. Methow Valley Citizens Council, 49 U.S. 332, 350 (1989)).

\textsuperscript{206} 18 C.F.R. § 380.1 (Commission will comply with CEQ regulations).


\textsuperscript{208} 40 C.F.R. § 1502.14(f).

\textsuperscript{209} 40 C.F.R. § 1508.20.

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why they were not.”\textsuperscript{210} The License Order does not include such a statement. Staff’s analysis in the FEIS would not support such a statement. The FEIS does not show that Staff developed or considered any mitigation measures that would accomplish the objectives set out in 40 C.F.R. section 1508.20.

2. \textbf{The License Order Does Not Satisfy the FPA’s Substantive Requirement to Consider Mitigation that Would Minimize or Avoid Project Impacts.}

Under FPA section 10(a)(1), the Commission has a substantive obligation to consider mitigation measures that would minimize project effects, which parallels its procedural obligation under NEPA as discussed in Issue E.1. As discussed in Issue D, the new license requires conditions to enhance baseline conditions rather than minimize project impacts. The record does not show that the Office Director or Staff provided detailed analysis of any mitigation measures not otherwise recommended by Staff to minimize the impacts to fishery and recreational resources that would continue under the new license.

The License Order finds that the City/AR Alternative would not provide sufficient benefits to justify the reduction in power benefits at the Project. Leaving aside the issues of whether the record shows the benefits to fish and recreation under our alternative to be inconsequential – this is discussed in Issues H and J – the License Order does not demonstrate any inquiry by Staff into whether compensatory mitigation would be appropriate here. This is in contrast to other proceedings where the Commission has required compensatory mitigation for project impacts that could not otherwise be mitigated.\textsuperscript{211}

In \textit{Ohio Power Company}, the Commission expressly affirmed its authority to require compensatory mitigation:

\begin{quote}
In the current proceeding, we have concluded that it is infeasible to avoid or minimize the project’s impact on fish. Consequently, as an alternative we are requiring a level of expenditures to develop compensatory mitigation of fishery resources for the unavoidable fish losses. This is an appropriate alternative in the circumstances.\textsuperscript{212}
\end{quote}

The Commission referenced CEQ’s definition of mitigation to include compensatory mitigation.\textsuperscript{213} It also treated this as a substantive obligation. It referenced the FWS’s Mitigation Policy, which defines “compensation” as meaning “full replacement of project-induced losses to fish and wildlife resources, provided such full replacement has been judged by the Service to be

\begin{footnotesize}
\begin{itemize}
\item[\textsuperscript{210}] 40 C.F.R. § 1505.2(c).
\item[\textsuperscript{211}] \textit{Ohio Power Co.}, 71 FERC ¶ 61,092, 61,311 (Apr. 27, 1995).
\item[\textsuperscript{212}] 71 FERC ¶ 61,092, 61,312 (1995).
\item[\textsuperscript{213}] \textit{Id.}
\end{itemize}
\end{footnotesize}
consistent with the appropriate mitigation planning goal.”214 The Commission stated that in issuing a license, “[a] threshold question is therefore whether the project's adverse impacts on environmental resources, even with mitigation, outweigh the developmental benefits of the project.”215 It explained that in some circumstances the potential harm to the resource might warrant mitigation measures that “would significantly erode the economic benefits of the project.” In other cases, the project benefits might outweigh the unavoidable harm to a resource and the license should therefore be granted. However, even in that circumstance, the Commission would still examine mitigation measures to reduce the harm.216

3. The License Order Does Not Disclose the Cost-Effectiveness Criteria that Staff Used to Evaluate Alternative Mitigation Measures.

The License Order finds that the cost of the minimum flow schedule in the City/AR Alternative would outweigh the benefits. See Issues H and J. The order does not disclose the method that Staff used to weigh the benefits relative to the cost. The conclusion thus is untestable, arbitrary and capricious, and not supported by substantial evidence.

Staff showed their work to calculate the power cost of alternatives to No Action. The FEIS reports that the Staff Alternative would reduce the power value under the original license, $15.96 million per year, by $640,000;217 and that the higher minimum flow schedule in our alternative (assuming no retrofit of the Tillery Plant) would reduce power value by $1.2 million per year.218 (All estimates are 2007 dollars.) Our alternative would thus reduce the power value of the Staff Alternative, by 4%. Similarly, the Licensee analyzed the economic impacts of the alternative minimum flow schedules.219 It estimated that the Applicant Proposal, including 330 cfs as the minimum flow schedule, would result in $1.722 billion in power value over the next 40 years, and that an alternative minimum flow of 1,000 cfs (1,200 cfs during spawning season) would reduce that total by $70.5 million, or 4.1%.220

However, the License Order does not disclose the method that Staff used to weigh the benefits relative to such costs of the flow alternatives. Relative to No Action, the order finds that the benefit of fish habitat under the Staff Alternative would outweigh the cost of $640,000 per year in foregone power value. It describes the benefit in terms of Weighted Usable Area

214 Id. at ¶ 61,313 (internal citations omitted; emphasis added).
215 Id. at ¶ 61,313.
216 Id. at ¶ 61,314.
217 FEIS, p. 284, Table 58.
218 See FEIS, p. 261. This estimate of cost appears to be relative to the original license.
219 See Motion to Supplement the Record, Exhibit 7.
220 See id., Exhibit 8.
It is impossible to know whether the weighing Staff did was based on dollar per WUA unit or some other method. It is also impossible to test the weighing that drove the contrary conclusion that the incremental benefit of even more WUA under the City/AR Alternative would be outweighed by the incremental cost of another $600,000 in foregone power value. And contrary to precedent cited in footnotes 380-381, the License Order does not even purport to estimate the economic benefits of recreation, or respond to our evidence on such benefits, under the Staff Alternative and City/AR Alternative.

4. The License Order Does Not Give Equal Consideration to Non-Developmental Uses.

FPA section 4(e) requires that the Commission give “equal consideration” to power, fish and wildlife, and recreation. While such consideration is not “equal treatment,” it does require the “same thorough consideration” for developmental and non-developmental values alike. The License Order does not comply with this statute. As stated in Issue F.3, while the order estimates power value with precision, it does not explain how it weighs the value of fish habitat, and it ignores the economic value of recreational use.

G. The License Order Errs in Concluding that the Staff Alternative is Cost-Effective to Greatest Extent Possible under FPA section 15(A)(2)(F).

The License Order concludes that a new license as proposed by Duke Energy is “likely to be carried out in a cost-effective manner.” This conclusion appears in the section of the License Order demonstrating compliance with FPA section 15(a), relating to subsection (2)(F) in that statute. The Director listed two environmental enhancements, including the minimum flow schedule, in her conclusion. The Director erred in concluding that the proposed action is more cost-effective than the Retrofit Alternative.

221 With respect to American shad, the License Order acknowledges the greater WUA under the City/AR Alternative and then finds: “...additional shad spawning habitat is not needed because spawning habitat would not be a limiting factor in their recovery in Tillery reach for the foreseeable future.” License Order, ¶ 133. It cites to the FEIS, pp. 110-114, as authority. See id. at n. 106. However, those pages simply do not address whether spawning habitat is a limiting factor for shad or any other species. Indeed, the Licensee did not conduct a limiting factors analysis in its Instream Flow Study.

222 16 U.S.C. § 797(e). See also Friends of Ompompanoosuc v. FERC, 968 F.2d 1549, 1553 (2d Cir. 1992) (“In deciding whether to grant a license to build such a plant, the FPA requires FERC to, among other things, give equal consideration to power and development purposes . . . .”)


225 License Order, ¶ 220.
FPA section 15(a)(2) requires that the “final proposal” must be “...best adapted to serve the public interest...” The Commission must consider seven specified factors “in addition” to the factors required by FPA section 10(a)(1). Factor (F) is: “whether the plan of the applicant will be achieved, to the greatest extent possible, in a cost effective manner.” In analyzing that factor, the Commission uses the analytical approach of Mead Corporation to confirm the net economic benefit of the final proposal. This confirmation is limited to a restatement of that benefit, where the final proposal “fully develops” the hydropower potential of the site. By contrast, the confirmation of net economic benefit is comparative (and incremental) when there is a competing application for a license or a proposed modification of an existing powerplant.

As discussed in Issue E.3, Petitioners submitted expert testimony that the Retrofit Alternative will substantially increase the net economic benefit of the Staff Alternative now adopted in the License Order. Our expert consultant, E3, applied the analytical method in Mead Corporation in a manner which is consistent with the developmental analysis in the FEIS as restated in the License Order. It found that the Retrofit Alternative would produce 22% more in net economic benefit that the Staff Alternative, by generating power continuously. The Office Director erred in not comparing the annual net benefits of these alternatives for the purpose of determining whether the final proposal is “...cost-effective to the greatest extent possible” under FPA section 15(a)(2)(F).

H. The License Order Errs in Not Completing the Instream Flow Study, which is Necessary to Predict the Effect of Flow Alternatives on Fish Resources in the Tillery Reach.

The License Order considers minimum flow releases to benefit aquatic resources in the Tillery Reach in the course of finding that the new license is best adapted to a comprehensive

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227 Id.
228 Id.
232 E3 Expert Report, Table 3.
plan of development under FPA section 10(a)(1). However, the License Order errs in not completing the Instream Flow Study that is necessary to support a finding on this issue.

The License Order adopts Duke Energy’s proposed minimum flows for the Tillery Reach based on Staff’s finding that “the incremental increase in available habitat (about 25 percent) provided by the higher flows recommended by the FWS, Rockingham, and American Rivers, would not justify the higher costs.”\textsuperscript{233}

In the FEIS, Staff relied on the partial results of Duke Energy’s Instream Flow Study, specifically the maximum Weighted Useable Area (“WUA”) and Index C results, to predict the effects of the proposed and alternative flow schedules on aquatic resources. The License Order defends Staff’s reliance on these methods: “[b]oth methods can be and were used in this proceeding to assess flow effects on large groups of organisms . . . and habitats . . . . This approach provides a comprehensive review and analysis of flow needs in the Tillery Reach.”\textsuperscript{234} It denies that Staff should have considered the Dual Flow Analysis submitted by Duke Energy:

no entity made recommendations for flows based specifically on the dual flow analysis. Because the focus of flow enhancement efforts for most stakeholders was on minimum flows, rather than peaking effects (the focus of dual flow analysis), and the fact that maximum WUA methods were adequate to address low flows, Commission staff did not include the dual flow analysis in the EIS.\textsuperscript{235}

Throughout this proceeding, we have supported IFIM as a valid method for instream flow study. The Commission has used IFIM for more than thirty years to analyze the relationship between flow and habitat. For example, in 1987, the Commission concluded that:

. . . the IFIM method was preferable to a population study in this proceeding. The chief advantage of the habitat-based IFIM study is the ability to evaluate many alternatives in a relatively short time. In contrast, it would take at least 30 years using a population study to acquire reasonably good data on the effects of three minimum flow regimes. We found such a delay in obtaining the results to be a major, perhaps dispositive, drawback in light of the important anadromous fish restoration effects now underway in the Susquehanna River Basin.”\textsuperscript{236}

Duke Energy prepared an IFIM Study Plan (including channel transects and habitat types, target fish species, hydrology models, and habitat suitability curves), and conducted the field study, with our active participation and support. Our dispute here concerns the analytical

\textsuperscript{233} License Order, ¶ 153 (citing FEIS at 298-300).
\textsuperscript{234} Id. at ¶ 157.
\textsuperscript{235} Id. at ¶ 158.
methods used to interpret study results, and specifically, to analyze habitat duration across time. Since there are more than 100,000 permutations of habitat duration potentially derived from the raw data on flow-habitat relationships, the analytical method is critical to avoid “data overload.”

We presented evidence that maximum WUA and Index C are not reliable methods to predict available habitat in a peaking reach where peaking flows can exceed minimum flows by a factor of 5 to 50 times. We requested that Staff consider the results of Duke Energy’s Dual Flow Analysis. Staff did not respond prior to license issuance.

The License Order’s failure to complete the Instream Flow Study, which is necessary to predict the effect of flow alternatives on fish resources in the Tillery Reach is arbitrary and capricious and not supported by substantial evidence.

1. The License Order Errs in Relying on Maximum WUA to Predict Habitat Availability in the Tillery Reach.

In the FEIS, Staff used maximum WUA to compare the alternatives based on their effects on the seven life stages/types as included in the Duke Energy’s instream flow study. “WUA is the building block upon which other analyses depend, including the habitat duration analyses and the effective habitat analyses, among others.”

Maximum WUA is not a form of habitat duration analysis. As the License Order states, “maximum WUA focuses on the amount of habitat available at distinct flows,” rather than the


238  Id.

239  Id.

240  FEIS, p. 111. Staff used instantaneous WUA because the record does not contain Index C analysis for the City/AR Alternative, and the Licensee did not disclose the software used for that purpose.


242  License Order, ¶ 157.

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range of flows that may occur over the course of a day.\textsuperscript{243} Staff similarly stated, “[t]his statistic, however, \textit{does not show the duration (in time) of that habitat or the habitat that would be temporarily available during higher project releases made during parts of the day.}”\textsuperscript{244}

We agree with the License Order that maximum WUA may be useful to predict habitat availability under steady, minimum flow alternatives. However, maximum WUA is not the best scientific method for evaluating habitat availability in a reach where peaking flows may exceed minimum flows by a factor of 5 to 50 because it does not consider habitat availability across time.\textsuperscript{245}

The License Order does \textit{not} find that maximum WUA is a superior scientific method to Dual Flow Analysis to predict the response of the aquatic community to a flow schedule.

As discussed below, Duke Energy undertook Dual Flow Analysis for selected life stages/species in the sub-reaches immediately below the Tillery and Blewett Falls Developments. Dual Flow Analysis is a method of Habitat Duration Analysis. “An HDA integrates WUA with hydrology and project operations to provide a dynamic analysis of flow versus habitat.”\textsuperscript{246}

The Instream Flow Study Group convened for this relicensing “elected to use a Dual Flow Analysis as the primary tool for assessing the effects of peaking on the fishery resources.”\textsuperscript{247} Duke Energy explained:

\begin{quote}
The underlying concept of the Dual Flow Analysis is that when flows fluctuate from a non-peaking to a peaking flow, a specific habitat cell is only suitable for a non-mobile organism as long as the conditions (i.e., depth and velocity) remain (at that specific cell) within the organism’s habitat preferences through the range of flows experienced by the organism.\textsuperscript{248}
\end{quote}

Despite evidence that it is the leading method for assessing the effects of peaking on aquatic resources, Staff did not consider Duke Energy’s Dual Flow Analysis results in addition to maximum WUA.\textsuperscript{249} The License Order states this was unnecessary because the stakeholders


\textsuperscript{244} FEIS, p. 111 (emphasis added).

\textsuperscript{245} Motion to Supplement the Record, Exhibit 42 (Bowen 1998), pp. 455-68; \textit{id.} at Exhibit 43 (Shea 2007), pp. 943-58.

\textsuperscript{246} Instream Flow Study Report, p. 8-7.

\textsuperscript{247} \textit{Id.} at 8-11.

\textsuperscript{248} \textit{Id.}

\textsuperscript{249} \textit{Id.}
did not focus on peaking effects in the course of relicensing. The record shows this to be false.

In its 10(j) recommendations, FWS stated concern regarding the effects of peaking on fish resources in the reach:

Extreme hydropeaking operations also occur in which flows in the river can go from dam leakage (approximately 50-80 cfs) upwards to 18,000 cfs in a short period of time depending on generation . . . affecting habitat type and availability (Freeman et al., 2006). This extreme impact has adversely affected the native aquatic community and potentially precluded adequate reproduction of native riverine fisheries . . . .

In our Motion to Supplement the Record we submitted evidence showing the impacts of peaking operations on a native fish community in support of concerns we had raised previously regarding such operations in the Tillery Reach.

We cited scientific literature which shows that peaking operations, not just low minimum flows, tend to disrupt and impair native fishes. Indeed, the extent of flow alteration is a primary predictor of biological integrity of native fishes. “[A]cross divergent natural and anthropogenic settings the likelihood of biological impairment grows with increased reductions of maximum and minimum streamflow magnitudes.”

Pulsed, high velocity water flows (i.e., rapid hourly or daily fluctuations of instream flow) caused by water release during hydropower generation are unnatural disturbances that decrease habitat stability in a riverine environment. Hydropower generation often increases the frequency of both high-velocity flow pulses while decreasing their duration. As a result, the extended, stable-velocity flow periods characteristic of natural water-flow patterns are substantially reduced (Richter et al. 1996; Bowen et al. 1998; Freeman et al. 2001). Pulsed, high velocity water flow creates an unstable environment that adversely

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250 License Order, ¶ 158.

251 FWS’s 10(j) Recommendations, p. 6.


253 Motion to Supplement the Record, Exhibit 37 (Weyers 2003), pp.84-91. See also id., Exhibit 38 (Freeman 2001), pp.179-90; id. at Exhibit 40 (Poff 1997), pp. 769-84.

254 See id. at Exhibit 40 (Carlisle 2010), pp. 264-70.

255 Id.
affects habitat variable such as water velocity, depth, temperature, dissolved oxygen, sediment transport, and channel morphology (Cushman 1985; Bain et al. 1988; Allan and Flecker 1993). Consequently, pulsed, high-velocity water flow has been implicated in declining aquatic insect and fish abundance in dam-regulated rivers (Travnichek and Maceina 1994; Kubecka et al. 1997; Cereghino and Lavandier 1998).256

We cited scientific studies that show peaking operations tend to favor macrohabitat generalists, and reduce the abundance and diversity of fish communities.257

The science shows that re-establishing suitable habitat on a persistent basis across time (day, season, and year) contributes to restoration of a native fish community.258 A flow pattern more consistent with natural variability contributes to this result.259 “[R]estoring critically important features of the natural flow regime (Poff et al. 1997), or managing so as to avoid habitat bottlenecks (Orth 1987, Stalnaker et al. 1995) could alleviate negative effects.”260 There is evidence that increased minimum flows and reduced flow fluctuations below hydroelectric dams can result in more abundant and diverse river fish communities.261

In the water quality certification hearing convened by the DENR’s Environmental Management Commission, we hired experts to evaluate the impacts of the Staff Alternative in combination with power discharges. Dr. Emily Bernhardt, Assistant Professor of Biology at Duke University, testified that flow depth, width, and velocity control habitat for native aquatic species. She specifically testified that the Staff Alternative will continue to impair those habitat elements.262 Similarly, Dr. Clair Stalnaker testified that the Staff Alternative will only “guarantee that the species are not going to become extinct” and will “sustain[] a low-level population.”263 He explained that the “biological significance” of that flow schedule would be

256  See id. at Exhibit 37 (Weyers 2003), pp. 84-91; id. at Exhibit 38 (Freeman 2001), pp. 179-90 (“Flow management for hydropoeaking alters seasonal occurrence of stable habitat, an aspect of the natural flow regime critical to persistence of riverine fisheries.”).

257  See id. at Exhibit 41 (Travnichek 1995), pp. 836-44.

258  See id. at Exhibit 42 (Bowen 1998), pp. 455-68; id. at Exhibit 43 (Shea 2007), pp. 943-58.

259  See id. at Exhibit 42 (Bowen 1998), pp. 455-68. “Hydrologic variability is a critical feature of natural flow regimes (Richter et al. 1996) because it creates a dynamic mosaic of environmental conditions that influences stream fish populations (Toth et al. 1982; Coon 1987; Nesler et al. 1988; Bovee et al. 1994; Matheny and Rabeni 1995) and assemblages (Schlosser 1985; Pearsons et al. 1992; Poff and Allan 1995).” Id.

260  Id. at Exhibit 38 (Freeman 2001), pp. 179-90 (“Flow management for hydropoeaking alters seasonal occurrence of stable habitat, an aspect of the natural flow regime critical to persistence of riverine fisheries.”).

261  Id. at Exhibit 41 (Travnichek 1995), pp. 836-44.

262  Id. at Exhibit 44 (Bernhardt Expert Report), pp. 5-11.

263  Id. at Exhibit 45 (Second Stalnaker Deposition), p. 2690; id. at Exhibit 33 (Stalnaker Report), pp. 6-8.
“disastrous,” whether the goal is to “restore” an aquatic community or even merely “maintaining a healthy population.” He testified specifically that the Staff Alternative will not enhance native aquatic resources because it will not track natural flow pattern and will not dampen the adverse impacts of daily flow swings up to 18,000 cfs.

Other witnesses testified at the state hearing about specific species of native fish and mussels. For example, Dr. Shawn Young testified that American shad, redhorse, and other native fishes which specialize in natural flow patterns will remain in “decline,” due to such continuing flow fluctuations. Dr. Dave Strayer testified about native mussels, and opined that impounding rivers has caused many species to decline. He concluded that, other than “rudimentary” data about comparative availability of wetted habitat at different flows, Duke Energy did not develop any of the specific data (age distribution abundance and age structure of mussels in this reach) necessary to evaluate whether the community will improve under the Staff Alternative.

The License Order does not address any of this evidence.

Assuming arguendo that maximum WUA is a reliable method to assess habitat in a peaking reach, the results still do not support the minimum flow schedule required under Article 403. Those results show that the City/AR Flow Proposal would provide a significantly higher percentage of maximum WUA than the Staff Alternative for all but three of the life stages studied. For example, the results show that our alternative would provide a significantly higher percentage of maximum WUA throughout the year than the Staff Alternative for Golden redhorse in the subreach immediately below the Tillery Development. The same is true for American shad and sturgeon.

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264 Id. at Exhibit 1 (First Stalnaker Deposition), pp. 901-02.
265 Id. at Exhibit 45 (Second Stalnaker Deposition), pp. 2681, 2690-91; id. at Exhibit 33 (Stalnaker Report), pp. 15, 28-30, 36-37.
266 Id. at Exhibit 45 (Second Stalnaker Deposition), pp. 2671-72, 2683.
267 Id. at Exhibit 46 (Young Expert Report); id. at Exhibit 47 (Young Deposition), pp. 812-14.
268 Id. at Exhibit 48 (Strayer Deposition), pp. 729-31, 776.
269 Id. at 756-58; see also id. at Exhibit 49 (Strayer Expert Report).
270 Gerrit Jöbsis, American Rivers’ Director for Southeast Conservation, prepared several tables showing Maximum WUA values based on data disclosed in Duke Energy’s Response to the Office’s September 14, 2006 Additional Information Request (see eLibrary no. 20061215-0242) as evidence in the state 401 certification proceedings. See id. at Exhibit 59 (Jöbsis Maximum WUA Analysis); id. at Exhibit 60 (Jöbsis, “Flow at Which WUA Attains Maximum Value”); id. at Exhibit 61 (Jöbsis, “Flow at Which WUA Attains Maximum Value [cont’d]”); id. at Exhibit 62 (Jöbsis, “Comparative Habitat Availability”).
271 FEIS, p. 114, Table 28.
2. The License Order Errs in Relying on Index C, which is Not a Reliable Scientific Method to Predict the Duration of Available Habitat in the Tillery Reach.

The Instream Flow Study used Index C as one metric to interpret the PHABSIM results. The study plan does not cite any authority for this metric. The FEIS relied, in part, on Duke Energy’s Index C results to support 330 cfs as the minimum flow schedule for the Tillery Reach. The License Order does not cite any basis other than Staff for its reliance on Index C in support of Article 403. In other proceedings, Staff has cited to FWS’s guidance manuals on such study plan issues.

Petitioners dispute that Index C is a reliable method to interpret WUA results in a reach, like the Tillery Reach, where power discharges exceed minimum flows by a factor of 5 to 50. The License Order describes the dispute, but does not address the evidence we provided to challenge the use of Index C here.

In the FEIS, Staff explained Duke Energy’s use of the Index C method as follows:

The study stimulated [WUA] for these 29 life stages at flows ranging from 70 . . . to about 17,000 cfs . . . . Because of the scale of the study and the number of simulations, Progress Energy reported the results as a habitat duration analysis, specifically as Index C . . . . Index C is one method for examining the results of the habitat duration analysis for this complex instream flow study . . . . [It] provides an estimate of habitat availability at the lower end of the habitat duration curve, which was judged by the study team to be the more critical part of the curve.

Index C essentially restricts habitat duration analysis to 50% of the available data by comparing habitat duration under constant minimum flow conditions to the lower half of the habitat duration curve under natural flows. It omits flows providing above-average habitat altogether.

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274 License Order, ¶ 157.
275 Id.
276 Midwest Hydro, 113 FERC ¶ 61,125 (2005), n. 14 (citing to Dr. Stalnaker, The Instream Flow Incremental Methodology: A Primer, p. 99).
277 FEIS, p. 109; see also Instream Flow Study Report, pp. 8-10 (Duke Energy’s explanation of Index C).
278 Instream Flow Study Report, pp. 8-10.
In the early 2000’s DENR had recommended this method to the Instream Flow Subgroup in this proceeding. In 2007 it used the method to develop minimum flow schedule for the water quality certification. DENR staff later testified that they relied on a 1992 training manual as the sole scientific authority for this use.

While at the FWS, Dr. Stalnaker co-authored the practice manuals for IFIM used today. He also periodically conducted training workshops. He conducted such a workshop that DENR staff attended in 1992, and he prepared associated materials. Dr. Stalnaker testified that he used these materials just that once, and that FWS never stated that workshop materials may substitute for a practice manual for the actual conduct of instream flow studies. Index C is not included as a method for developing minimum instream flows in the FWS’s current practice manuals, including the U.S. Department of the Interior’s “Instream Flow Incremental Methodology” and the U.S. Geological Survey’s “Stream Habitat Analysis Using the Instream Flow Incremental Methodology.”

The 1992 workshop materials listed Index C as one of six possible methods to interpret WUA results. Dr. Stalnaker testified that Index C was included to instruct trainees how to evaluate habitat in a river with constant flows. An example is a “run-of-river” operation where a dam (including its powerplant) always releases in-flows, never stores water for later power operations, and is not subject to the fluctuation of peaking flows. The Tillery Development is not a “run-of-river” operation and does not provide constant flows.

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279 Motion to Supplement the Record, Exhibit 50 (Letter from Jim Mead (DENR) to John Dorney (DWR) (July 6, 2007)), p. 2.

280 Id. at 7-8; Exhibit 53 (First Mead Deposition), pp. 1208-1212.

281 Motion to Supplement the Record, Exhibit 45 (Second Stalnaker Deposition), pp. 2666-67, 2676-77; id. at Exhibit 34 (Primer for IFIM), pp. 2-7; id. at Exhibit 51 (U.S. Geological Survey, Stream Habitat Analysis Using Instream Flow Incremental Methodology (1998); id. at Exhibit 52 (FWS, Problem Analysis and Negotiating Solutions Using IFIM (Dec. 1992)).

282 Id. at Exhibit 53 (First Mead Deposition), p. 1210; id. at Exhibit 45 (Second Stalnaker Deposition), pp. 2667-69.

283 Id. at Exhibit 45 (Second Stalnaker Deposition), pp. 2668-69; id. at Exhibit 54 (Second Mead Deposition (July 8, 2010), p. 2967.

284 Id. at Exhibit 45 (Second Stalnaker Deposition), pp. 2676-77; id. at Exhibit 35 (Barclay Deposition), pp. 1364-65.

285 Id. at Exhibit 45 (Second Stalnaker Deposition), p. 2667.

286 Id. at 2668.
As one of the nation’s leading experts in instream flow studies, Dr. Stalnaker testified that application of Index C is “very inappropriate” and could be “disastrous” at a river reach controlled by peaking power operations, such as the Tillery Reach. The License Order does not evaluate the competing evidence, including the testimony by DENR’s expert Jim Mead and Dr. Clair Stalnaker, to determine which evidence was more reliable. The License Order does not address Dr. Stalnaker’s testimony at all.

Assuming arguendo that 80% Index C was a reliable method for establishing minimum flows for the Tillery Reach (e.g., when used in combination with Dual Flow Analysis), the record still would not support Article 403 as a minimum flow protective of aquatic resources. Eighty percent Index C, which in the mid-2000’s was DENR’s informal standard for IFIM studies, ranges from approximately 940 to 1,440 cfs per month in the Tillery Reach. Article 403 is thus based on some unknown percentage of Index C.

3. The License Order Errs in Not Relying on Dual Flow Analysis to Predict the Duration of Available Fish Habitat in the Tillery Reach.

The License Order relies on Staff’s maximum WUA analysis and Duke Energy’s partial Index C results to compare the effects of the Staff and City/AR flow Proposals on the aquatic community in the Tillery Reach. As stated above, neither of these methods are the best scientific method for determining a minimum flow that is protective of a native aquatic community in the Tillery Reach. The License Order does not consider the results of Duke Energy’s Dual Flow Analysis, which is a reliable method for this purpose.

In addition to Index C, Duke Energy used Dual Flow Analysis, with the support of the Instream Flow Subgroup, “to evaluate the impacts of hydro-peaking on young fish and aquatic macroinvertebrates . . . .”

287 Id. at 2671-72, 2678.
288 Motion to Supplement the Record, Exhibit 50, p. 3.
289 Id. at Exhibit 55 (Water Resources Working Group Final Meeting Summary (July 12-15, 2005)), p. 18. In a June 2009 affidavit, Mr. Mead confirmed that 80% Index C flows in the Tillery Reach range from 935 to 1440 cfs. Id. at Exhibit 56 (Mead Affidavit), ¶ 15. See also id. at Exhibit 57 (Letter from Jim Mead (DENR) to Phil Lucas (Progress Energy) (Feb. 14, 2006)); id. at Exhibit 58 (Letter from Todd Ewing (WRC) to Phil Lucas (Progress Energy) (Feb. 11, 2006).
290 Instream Flow Study Report, p. 8-11 (citing Bovee 1985; Bovee et al. 1998). The Instream Flow Study Report explained Peaking Flow Analysis as follows:

Effective habitat is calculated for each cell by comparing the suitability of the cell at each of two stream flows. In the overall comparison of the two discharges, a cell may be more suitable at a higher flow than at a lower flow, or vice versa. The Dual Flow Analyzer only records the lower (or effective) of the two paired values of the cell (e.g., overlapping habitat). If the habitat value is zero at either the low or high flow, it is not counted. The effective composite suitability is then multiplied by the cell’s surface area for the calculation of WUA.

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We supported the Instream Flow Subgroup’s decision to use Dual-Flow Analysis. This is consistent with science that shows the temporal aspect of habitat is an important consideration in predicting the effects of a flow schedule on aquatic resources.\textsuperscript{291}

The License Order states that Staff did consider Duke Energy’s “limited” Dual Flow Analysis.\textsuperscript{292} The FEIS does not show such consideration. Thus, the record does not demonstrate that the Office Director or Staff knew which flow alternative would optimize effective habitat across the foreseeable range of power discharges. The License Order suggests this gap in the record is inconsequential since a majority of stakeholders did not express sufficient concern about peaking effects to warrant further Staff investigation.\textsuperscript{293} This is post-hoc rationalization.

Further, we disagree with the License Order’s finding that the Commission’s obligation to inform itself of the effects of Article 403 can be waived by the stakeholders in this way. The Commission is the “representative of the public interest,” not just an umpire blandly calling balls and strikes for adversaries appearing before it; the right of the public must receive active and affirmative protection at the hands of the Commission . . . . [FERC] must see to it that the record is complete. [It] has an affirmative duty to inquire into and consider all relevant facts.\textsuperscript{294}

Dual Flow Analysis may produce results very different than maximum WUA.\textsuperscript{295} For example, maximum WUA for the Shallow Slow Early Lifestage occurs at 70 cfs.\textsuperscript{296} By contrast, the dual flow graph for Shallow Slow Early Lifestage shows that effective habitat is still increasing at a minimum flow greater than 1,200 cfs when the power discharge is 1,500 cfs. The

\textit{Id.} “The IFSG chose to conduct the dual flow analysis only in the sub-reaches immediately below the two developments because this is where the impacts of peaking would be greatest.” \textit{Id.} at 9-7.

\textsuperscript{291} Motion to Supplement the Record, Exhibit 42 (Bowen 1998), pp. 455-68; \textit{id.} at Exhibit 43 (Shea 2007), pp. 943-58.

\textsuperscript{292} License Order, ¶ 159.

\textsuperscript{293} \textit{Id.} at ¶ 158.

\textsuperscript{294} \textit{Scenic Hudson}, 354 F.2d at 620 (footnotes omitted).

\textsuperscript{295} Motion to Supplement the Record, Exhibit 45 (Second Stalnaker Deposition), p. 2683. “[T]he ratio of unusable to usable habitat (suitable) area under the wetted surface of the river often becomes quite large (ranging from 10/1 to 100/1) during the hydro-peaking cycle and this can be a major limitation for less mobile aquatic organisms, nest builders and young-of-year.” The Nature Conservancy, “Comments on Final Multi-Project Environmental Impact Statement For Hydropower Licenses, Susquehanna River Hydroelectric Projects,” eLibrary no. 20150416-5198 (Apr. 16, 2015), Attachment 1 (Second Stalnaker Expert Report), ¶ 9.

\textsuperscript{296} Progress Energy, “Response to Sept. 14, 2006 Request for Additional Information,” eLibrary 20061215-0242 (Dec. 12, 2006), Attachment 1

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same graph shows that effective habitat is still increasing at the highest modeled minimum flow of 3,000 cfs when the power discharge is 3,200 cfs or 4,700 cfs. However, it is not possible to directly compare flows that maximize effective habitat for the other life stages studied (e.g., American Shad Spawning 2 and Sturgeon Spawning and Incubation) because the minimum flow that provides maximum WUA for these lifestages exceeds 3,000 cfs.

The published dual flow results show that minimum flows higher than Article 403 provide more effective habitat under all power discharges modeled for all of the lifestages studied. In fact, for each lifestage flows over 1,000 cfs maximize effective habitat under all power discharges.

Dr. Stalnaker previously testified in the related water quality certification hearing before DENR’s Environmental Management Commission (“EMC”) that habitat availability for a given species may vary significantly at different flows at the same location – up to a factor of 100 times. Power discharges may move, injure, or destroy juvenile fish or eggs at a location where, at a different time on the same day, the minimum flow otherwise provides suitable habitat. Relying in part on the results of the Dual Flow Analysis, Dr. Stalnaker testified that a higher minimum flow tends to mitigate the adverse impacts of peaking flows.

In other proceedings, the Commission has used persistent or effective habitat as the metric for comparison of minimum flow schedules. This is the habitat which persists across minimum and power flow releases in a given reach, according to habitat duration analysis. Beginning not later than 1987, it has recognized that habitat duration analysis is helpful or necessary to address unsteady conditions, such as daily or seasonal flow fluctuations that affect habitat availability. As Duke Energy stated in the Instream Flow Study Report: “The WUA function is a static relationship between discharge and habitat and does not present how often a

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297  Id. See also Gomez and Sullivan Engineers (prepared for Exelon), “Final Study Report Instream Flow Habitat Assessment Below Conowingo Dam RSP 3.16, Conowingo Hydroelectric Project, FERC Project Number 405” (Conowingo Study), eLibrary no. 20120831-5048 (Aug. 2012).


300  Id.

301  Motion to Supplement the Record, Exhibit 45 (Second Stalnaker Deposition), p. 2683.

302  Id. at 2672; see also id. at Exhibit 44 (Bernhardt Report), p. 8; id. at Exhibit 46 (Young Report), pp. 6-8.

303  Id. at Exhibit 1 (First Stalnaker Deposition), p. 919. See Conowingo Study at ii (“Persistent habitat analyses showed that more divergent minimum/generation flow pairs had less common, or persistent, habitat.”).

304  Modesto Irrigation District, 131 FERC ¶ 61,110, 64,258 (2010).

specific flow/habitat relationship occurs. For this reason, WUA is generally not considered the final result of an instream flow study. The next step is the Habitat Duration Analysis (HDA).”  

The License Order’s finding that the Staff Alternative will provide adequate protection of the aquatic community is based on incomplete study. Dual Flow Analysis is the most reliable scientific method for predicting the effects of a given flow schedule on the aquatic community. The License Order errs in not evaluating the complete results of Duke Energy’s Dual Flow Analysis to determine which minimum flow alternative would optimize effective habitat for the targeted life stages/species across the foreseeable range of power discharges.

4. **The Office Director Erred in Not Requiring Disclosure of Licensee’s Software to Test IFIM Results.**

The License Order finds that the new license, and specifically the minimum flow schedule required by Article 403 will be best adapted to a comprehensive plan of development under FPA section 10(a)(1). This is based in large part on Duke Energy’s Instream Flow Study. The Office Director did not require Duke Energy to disclose the models it used to analyze PHABSIM results. This violates the Commission’s obligation to independently evaluate information submitted by the applicant on which the agency relies in making its decision.

In this relicensing, and as a matter of practice in other proceedings, the Commission relies on hydrologic modeling to analyze how existing and alternative operations affect water flow and flow-dependent beneficial uses in the river. The Office Director did not dispute the use of hydrologic modeling here for this type of analysis.  

In the Instream Flow Study Report, Duke Energy’s consultant used proprietary computer model, “Flow Time Series,” to analyze habitat duration under alternative flow schedules. Incident to the New License Application or the FEIS, Staff did not require submittal of this software to permit testing of reported results, or analyze alternatives. In response to our 2013 motion submitting an expert declaration by Dr. Stalnaker that habitat duration analysis is necessary to analyze flow-habitat relationships across time, the Office Director held that is not possible – because the proprietary software was not used in that way by the Instream Flow Study Group which last met more than 10 years ago.

Under 40 C.F.R. section 1506.5(a), the Commission must “independently evaluate” any information submitted by the applicant. This same duty arises under APA section 556(d)

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307 See License Order, ¶ 157.
309 License Order, ¶ 158.
(whereby applicant has burden of proof) and the FPA section 10(a)(1).310 Indeed, the Commission has “a variety of procedures to . . . ensure that [it] has a complete record for its decision and that the parties . . . have access to all relevant information and a reasonable opportunity to prepare their cases and probe the positions of other parties on all the issues involved.” 311 It has used specific procedures when an applicant uses a computer model to predict project impacts on fish and other resources. These include: a technical conference to address disputes regarding the model;312 and Staff and other parties’ having the capacity to run the model to validate or modify its protocols and data,313 if necessary under a protective order.314

The License Order states that Staff’s evaluation of alternative flow schedules was limited to review of Duke Energy’s incomplete modeling results.315 It does not show that Staff validated the proprietary model or undertook any independent investigation.316 The License Order does not cite to any other record evidence in support of its findings regarding the impacts of alternative flow schedules on aquatic resources below the project dams.

The Office Director’s decision not to require disclosure of Duke Energy’s model so as to permit independent verification of the reported results is arbitrary and capricious and otherwise not in accordance with the law.

I. The License Order Errs in Not Properly Considering FWS’s Recommended Flows for the Tillery Development under FPA section 10(j).

The FWS made a recommendation under FPA section 10(j) that the Commission require Duke Energy “to provide minimum flows from the Tillery development in the range of 800 cfs to 1,000 cfs year round” and spring spawning flows in the range of 1,500 cfs to 1,800 cfs “to sustain native riverine species evaluated in the IFIM studies.”317 Staff made a preliminary finding of that this recommendation was inconsistent with the Commission’s statutory duties. The inconsistency remained unresolved until license issuance.318 In the License Order the Office

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310 Scenic Hudson, 354 F.2d at 620 (the Commission “has an affirmative duty to inquire into and consider all relevant facts.”)

311 Turlock Irrigation District, 65 FERC ¶ 61,373, 63,016 (1993).


313 Wisconsin Valley Improvement Company, 80 FERC ¶ 61,054, 61,169 (1997).

314 Central Nebraska Public Power and Irrigation District, 62 FERC ¶ 61,057 (1993).

315 License Order, ¶¶ 157, 158.

316 Id.

317 FWS 10(j) Recommendations, p. 7.

318 License Order, ¶¶ 129-130.
Director rejected FWS’s recommended flows based on Staff’s finding in the FEIS that FWS’s recommendation was not cost effective. The Director found, “[a]ccordingly, FWS’s recommendation is inconsistent with the public interest standard of section 4(e) and the comprehensive planning standard of section 10(a) of the FPA.” The Director then found that the minimum flow schedule required under Article 403 “will adequately and equitably protect, mitigate damages to, and enhance fish and wildlife resources affected by this project.”

FPA section 10(j) requires that each license include conditions for protection, mitigation, and enhancement of fish and wildlife resources affected by the project. It requires that such conditions “be based on recommendations received pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) from the National Marine Fisheries Service, the United States Fish and Wildlife Service, and State fish and wildlife agencies.” However, the Commission may reject a recommendation if it determines that a recommendation is inconsistent with its statutory duties and it is unable to resolve the inconsistency after meeting with and “giving due weight to the recommendations, expertise, and statutory responsibilities of such agency.” In that circumstance, the Commission is required to publish each of the following findings (together with a statement of the basis for each of the findings):

(A) A finding that adoption of such recommendation is inconsistent with the purposes and requirements of this subchapter or with other applicable provisions of law.
(B) A finding that the conditions selected by the Commission comply with the requirements of paragraph (1).

As stated above, the License Order includes the required findings. However, the record does not support those findings. The License Order’s rejection of FWS’s 10(j) recommendations is arbitrary and capricious and not supported by substantial evidence.

319  Id. at ¶ 134.
320  Id.
321  Id. at ¶ 135.
323  Id.
324  Id.  See also Kelley ex rel. Michigan Dept of Natural Res. v. FERC., 96 F.3d 1482, 1487 (D.C. Cir. 1996) (“As should be apparent, the question whether the Commission legitimately treated Michigan's recommendations as falling outside of § 10(j) and therefore not entitled to the deference that section carries nor requiring the specific finding FERC must make before rejecting such recommendations . . . is a weighty one.”).
325  Id. at 803(j)(2).
1. **The License Order Does Not Show FWS’s Flow Recommendation is Inconsistent with other Applicable Law.**

The License Order finds that FWS’s recommendation is not cost effective; therefore, it is not in the public interest and would not contribute to a comprehensive plan of development for the basin. The FEIS does not quantify the benefits of non-developmental resources in dollars. However, the FEIS states costs as reductions in project power as measured in dollars. Thus, Staff’s finding in the FEIS, on which the License Order relies, that FWS’s 10(j) recommendation is not cost effective is based solely on the reduction in the economic benefits of project power.

This logic violates the policy expressed in *Mead Corporation*, where the Commission stated that the projected economic benefits of project power is just one of “a number of public interest factors” it considers in determining whether to issue a new license. 326 “Thus, where our consideration and balancing of all public interest factors leads us to conclude that licensing a project is in the public interest, we will offer a license to the applicant, even if there appear to be negative economic benefits. The applicant must ultimately decide whether to accept the license and any financial risk that entails.” 327

In addition, the License Order does not address Petitioners’ evidence that a license alternative that included FWS’s recommended flows would be economic under *Mead Corporation*. 328

The License Order’s finding is also inconsistent with precedent where the Commission has required mitigation measures that reduce the economic benefits of project power. In *Otter Tail Power Company*, the Commission selected a higher flow alternative because, while it would result in energy losses, it would provide greater recreation and fishery benefits:

The projected benefits to recreation in the Hoot Lake bypassed reach justify our predicted energy losses. The MDNR estimates the bypassed reach would attract a level of use that would generate about $23,000 worth of recreational spending per season. It is reasonable to expect that, if flows were provided according to our requirements, the resulting recreational spending would be equal to the $23,000 projected by the MDNR. The benefits to recreation outweigh the $17,355 loss in generation. 329

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327 *Id.* at ¶ 61,069.
328 Motion to Supplement Developmental Analysis, Attachment 1, p. 8.
329 57 FERC at ¶ 63,363.
2. **The License Order Does Not Show that Article 403 Will Protect and Enhance Fishery Resources in the Tillery Reach.**

The License Order does not demonstrate that Article 403 will “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife resources” in the Tillery Reach,\(^{330}\) as required by FPA section 10(j)(2)(B).

FWS explained the basis for its recommendation, “[t]he IFIM studies and other flow studies conducted by the licensee indicate that year round minimum flows should be in the order of 800 cfs to 1,000 cfs to sustain native riverine species evaluated in the IFIM studies.”\(^{331}\)

As stated in Issue H, Duke Energy’s Instream Flow Study included two methods of habitat duration analysis – Index C and Dual Flow Analysis – for purposes of evaluating flow alternatives on aquatic resources affected by the Project. Petitioners have submitted overwhelming evidence that Index C is not a reliable method of analysis in a peaking reach. As stated in Issue H, this includes expert testimony from Dr. Stalnaker that Index C was only used in a training exercise to illustrate methods of analysis for a stream with constant flow. Dual Flow Analysis is the most reliable method of habitat duration analysis in a reach subject to peaking flows. See Issue H.3.

Duke Energy’s partial Dual Flow Analysis supports the FWS’s recommendation as being significantly more protective than Article 403. The published results show that for each lifestage flows over 1,000 cfs maximize effective habitat under all power discharges.\(^{332}\)

Even Duke Energy’s Index C results do not support Article 403 as being protective of the fish resources in the Tillery Reach. Eighty percent Index C in the Tillery Reach ranges from approximately 940 to 1,440 cfs per month.\(^{333}\) By comparison, 330 cfs is based on some unknown percentage of Index C. As stated above, 330 cfs is lower than the 7Q10 flow for this reach. Contrary to the License Order’s finding, the evidence in the record shows that Article 403 will not protect or enhance a native aquatic community in the Tillery Reach.

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\(^{330}\) License Order, ¶ 135.

\(^{331}\) FWS 10(j) Recommendations, p. 7.

\(^{332}\) Id.

\(^{333}\) Motion to Supplement the Record, Exhibit 55(Water Resources Working Group Final Meeting Summary (July 12-15, 2005)), p. 18. In a June 2009 affidavit, Mr. Mead confirmed that 80% Index C flows in the Tillery reach range from 935 to 1440 cfs. Id. at Exhibit 56 (Affidavit of Jim Mead (June 15, 2009)), ¶ 15. See also id. at Exhibit 57 (Letter from Jim Mead (DENR) to Phil Lucas (Progress Energy) (Feb. 14, 2006)); id. at Exhibit 58 (Letter from Todd Ewing (WRC) to Phil Lucas (Progress Energy) (Feb. 11, 2006)).
J. The License Order Errs in Not Completing the Analysis of Project Impacts on Recreation in the Tillery Reach.

The License Order finds that the new license is best adapted to a comprehensive plan of development for the Yadkin-Pee Dee River. To protect and enhance recreation in the Tillery Reach, the Office Director included in the new license Duke Energy’s proposed recreational measures: 330/725 cfs minimum flow schedule, supplemental block of 1,750 to 1,950 acre-feet annually, development of a recreational flow release plan post-licensing, and various capital improvements for access and gaging.\footnote{License Order, Articles 403, 406 – 408.} This was error under FPA section 10(a)(1) which requires the Commission to base a licensing decision on thorough consideration of alternatives based on complete record, and to undertake independent investigation if necessary to complete the record.

The License Order rejects the City/AR Alternative, which, in addition to the 800 to 1,000 cfs minimum flow (1,500 to 1,800 cfs during spawning season), preliminarily includes a steady flow release of 1,200 cfs during daylight hour on weekends and holidays each year from May 16 to September 15 for recreational uses. This decision is based on Staff’s findings in the FEIS regarding need and cost: “[g]iven the low recreational use of the Tillery Reach, the $197,700 annual cost of releasing these recommended flows do not justify the limited benefits, and are not in the public interest.”\footnote{Id. at ¶ 165.}

In the FEIS Staff acknowledged that “navigation in the reach below Tillery dam is difficult under existing conditions,” which are driven by the 40 cfs minimum flow under the original license. It found that the recommended non-power flow releases “... would enhance recreational boating opportunities as compared to existing conditions.”\footnote{FEIS, p. 201.} It estimated that these releases “... could provide about 20 days of flows sufficient to allow downstream navigation” in the Tillery Reach during the summer months.\footnote{Id. at 202.} The License Order does not dispute that the supplemental water block of 1,950 acre feet would be exhausted if a flow of 1,000 cfs were released for 24 hours.\footnote{One cfs of continuous flow cumulates to 1.9835 acre-feet per day.}

The record on recreation on which the License Order relies is incomplete in several respects that are material to the public interest in outdoor recreation. For example, the License Order does not explain why the proposed recreation flow study required under Article 406 was not done in the 12 years since this proceeding started, or why it could not have been done in the year and a half our Motion to Supplement the Record was pending. In addition to violating

\begin{thebibliography}{9}
\bibitem{1} License Order, Articles 403, 406 – 408.
\bibitem{2} Id. at ¶ 165.
\bibitem{3} FEIS, p. 201.
\bibitem{4} Id. at 202.
\bibitem{5} One cfs of continuous flow cumulates to 1.9835 acre-feet per day.
\end{thebibliography}
Section 10(a)(1), this is inconsistent with the Commission’s obligation to obtain “information relevant to reasonably foreseeable significant adverse impacts [that] is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant” and included it in the EIS.\textsuperscript{339}

The License Order’s failure to investigate facts necessary to complete the record for its decision regarding recreation measures is arbitrary and capricious and not supported by substantial evidence.

1. **The License Order Errs in Not Analyzing the Recreation Potential of the Tillery Reach.**

The License Order rejects the City/AR Alternative based, in part, on the low recreational demand under the existing license. As stated above, flows under the existing license can range from 50-80 cfs to 18,000 cfs in the course of a day at Duke Energy’s discretion. The License Order relies on the fact that conditions under the existing license limit recreation as a basis for allowing the Project to continue to limit recreation for the next forty years under the new license. The License Order does not show investigation of recreation demand and capacity on the Tillery Reach even though such investigation is necessary to determine whether the new license is best adapted to a comprehensive plan of development.

Duke Energy conducted a Recreation Needs Assessment.\textsuperscript{340} This included analysis of recreation carrying capacity for the two Project lakes. It used standard methods to evaluate physical capacity, social carrying capacity, and facility capacity.\textsuperscript{341} It stated that these methods allow prediction of the “maximum use level that can occur in an area without degrading biophysical resources or recreation experiences.”\textsuperscript{342} However, this assessment focused on the lakes, and Duke Energy simply did not analyze the carrying capacity of the Tillery Reach under alternative flow schedules.

In other proceedings, Staff has used the concept of carrying capacity, defining it as “the level of use … that would begin to detract from a safe and enjoyable experience.”\textsuperscript{343} The License Order does not dispute our argument and evidence\textsuperscript{344} that it is common for Staff to require a licensee to study recreation demand and capacity for project waters. The License Order does not explain why the Staff did not require such a study here.

\textsuperscript{339} 40 C.F.R. § 1502.22.

\textsuperscript{340} New License Application, Exhibit E7, p. E7-2-1.

\textsuperscript{341} Id. at p. E7-1-52.

\textsuperscript{342} Id.

\textsuperscript{343} Grand River Dam Authority, 59 FERC ¶ 62,073, 63,230 (1992).

\textsuperscript{344} See Motion to Supplement the Record, ¶ 57.

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In the absence of such study, the evidence in the record shows that recreation demand and the carrying capacity of the Tillery Reach exceed existing use.

We submitted evidence of the Tillery Reach has significant carrying capacity for boats and bank recreation. The size of the river channel, which is 1200 feet across in some locations make it suitable for motorized and non-motorized boating.

We submitted evidence that the Tillery Reach is a unique resource which has been rated for its potentially outstanding recreation value and scenery. The License Order only addresses this evidence in a footnote, casting doubt on whether the Tillery Reach should be included in the Nationwide Rivers Inventory (“NRI”) because it is impounded by the Project dams. It did not dispute the Tillery Reach’s potentially Outstanding Remarkable Values for recreation, just its official classification in the NRI. The License Order denies that Staff had any responsibility to consult with the National Park Service or evaluate the Project’s effects on the Outstanding Remarkable Values for which the reach is classified: “the Secretary of the Interior, not the Commission, is responsible for reviewing a proposed project’s consistency with the Wild and Rivers Act.” The Secretary of Interior’s failure to object does not waive the Commission’s duty of further investigation.

The License Order does not respond to our evidence that the demand for recreation is very high in the immediate vicinity.

As shown in Table 1, the demand for riverine recreation is significant and has increased over the last decade. The State predicts growth of 30-60% per decade in this region.

345 See id. at ¶ 72. Hitchcock Creek, which is only 40 feet across at most locations, is attracting 1,000 to 1,500 visitors a month. Id., Exhibit 15 (Second Crump Declaration), ¶ 6, 11. By comparison, the channel of the Tillery Reach is 700 to 1,200 feet in width. Id. at ¶ 11.

346 Id. at ¶ 11. Hitchcock Creek, which is only 40 feet across at most locations, is attracting 1,000 to 1,500 visitors a month. Id. at ¶¶ 6, 11.

347 Id. at ¶¶ 65 – 66.

348 License Order, p. 49, n. 151.

349 Id.

350 Scenic Hudson, 354 F.2d at 620 (footnotes omitted).

351 SCORP, p. II-5.
Table 1. 
Outdoors Recreation Uses by North Carolina Residents

<table>
<thead>
<tr>
<th>Use</th>
<th>Percentage of Population</th>
<th>Percentage Growth in Demand over Past Decade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camping</td>
<td>29</td>
<td>59</td>
</tr>
<tr>
<td>Canoeing</td>
<td>6.7</td>
<td>31</td>
</tr>
<tr>
<td>Fishing</td>
<td>44</td>
<td>53</td>
</tr>
<tr>
<td>Kayaking</td>
<td>3.1</td>
<td>260</td>
</tr>
<tr>
<td>Swimming outdoors</td>
<td>53</td>
<td>26</td>
</tr>
<tr>
<td>Wildlife observation</td>
<td>70</td>
<td>56</td>
</tr>
</tbody>
</table>

The Tillery Reach is part of the Uwharrie Lakes Region. As stated in the New License Application:

The Uwharrie Lakes provide a variety of recreational opportunities including boating, canoeing, swimming, fishing, and most other water sports. The lands surrounding the Project offer scenic beauty and a variety of activities including hiking, camping, hunting, biking, horseback riding, and nature viewing. This region of the state has also been termed North Carolina’s “Central Park” with the idea that the area could serve as a rural hub for outdoor recreation and tourism for local residents and the growing urban population of the metro areas in the region (ASU 1999). The Project is located within four counties - Anson, Montgomery, Richmond, and Stanly. Outdoor public recreation facilities are available in each of the counties . . . . There are a number of regional attractions in proximity to the Project area providing recreational opportunities and facilities. These attractions include the Uwharrie National Forest, Morrow Mountain State Park, Pee Dee National Wildlife Refuge, and the Pee Dee River Canoe Trail.

The proximity of this reach to such outdoor attractions increases its recreation potential, since visitors could combine multiple locations in a single visit.

We submitted evidence of the demand for recreation on nearby, recently restored Hitchcock Creek. Since a 14-mile blue trail was opened in 2012, recreation on the creek has

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353  New License Application, Exhibit E, p. E7-3.

gone from zero to an estimated 1,000 – 1,500 people on a monthly basis.\(^{356}\) The creek is being used by families, church groups, Boy Scouts, schools, and birthday parties.\(^{357}\) Use of the creek is mostly local, but is becoming regional.\(^{358}\) As stated above, the Tillery Reach has far greater carrying capacity for boats and bank recreation than Hitchcock Creek.\(^{359}\)

The License Order does not address our evidence that demand for recreation is significantly greater than existing use of the Tillery Reach.

The License Order finds that existing use is limited. The record confirms this. Staff’s inquiry into use ended there. In other proceedings, Staff has estimated existing use of a river reach, by season and even time of day.\(^{360}\)

The New License Application reports the results of a recreation survey of project waters, including the Tillery Reach, as conducted in March and April 2005. Tables E7-6 and E7-7 estimate annual user-days within the project boundaries.\(^{361}\) There are 3,413 user-days of recreation per year in the Tillery Reach.\(^{362}\) Tables E7-8 and E7-9 estimate the relative frequency of various recreation activities across project waters. Relying on these tables, we estimated the user-days per year, by activity, in the Tillery Reach today.\(^{363}\)

\(^{355}\) Hitchcock Creek runs through the City and discharges into the Pee Dee River at the Diggs Tract just below Blewett Falls Development.

\(^{356}\) Id. ¶¶ 3, 6. Hitchcock Creek has natural flow which is adequate for canoeing and other recreational uses on a regular basis.

\(^{357}\) Motion to Supplement the Record, Exhibit 18 (Bennett Declaration), ¶ 6; id. at Exhibit 15 (Second Crump Declaration), ¶ 6.

\(^{358}\) Id. ¶ 8.

\(^{359}\) Motion to Supplement the Record, ¶ 72. Hitchcock Creek, which is only 40 feet across at most locations, is attracting 1,000 to 1,500 visitors a month. Id., Exhibit 15 (Second Crump Declaration), ¶¶ 6, 11. By comparison, the channel of the Tillery Reach is 700 to 1,200 feet in width. Id. at ¶ 11.

\(^{360}\) Idaho Power Company, 147 FERC ¶ 61,056 (2014), Tables 1-2.

\(^{361}\) New License Application at E7-22.

\(^{362}\) Id. at E7-24 – E7-25. Tables E7-6 and E7-7 in the New License Application estimate annual recreation (without distinguishing by activity) at 17 locations on Tillery Reservoir, the Tillery Reach, and Blewett Falls Reservoir, from 2004 to 2005. Id. at E7-22. Three of these locations are in the Tillery Reach: Tillery Canoe Portage, Tailwater Access, and Highway 109. These tables show the following respective usage at these locations: 728 user-days, 2,176 user-days, and 509 user-days. This totals 3,413 user-days per year in the Tillery Reach.

\(^{363}\) Tables E7-8 and E7-9 use the same locations as the annual survey. Each table shows frequency of each activity at each location. Petitioners use simple arithmetic calculations to estimate frequency of each activity across the locations.

(1) Add the frequency of recreation activity at each location in the Tillery Reach, to show such frequency at all locations, during the monthly survey. For example, these tables show 11 users swimming at the

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This analysis shows there are ten users per day in the Tillery Reach.\textsuperscript{364} The majority of that use, seven days, is bankfishing. All other activities (\textit{e.g.}, swimming, camping, canoeing, boating, picnicking, hiking) account for just three users per day.\textsuperscript{365}

Some recreational users for the two Project lakes are locals (roughly half, including residents of Rockingham),\textsuperscript{366} while others drive up to 100 miles. Major cities within that driving distance include: Charlotte, Raleigh-Durham, Fayetteville, Greensboro and Winston-Salem, North Carolina; and Columbia, South Carolina.\textsuperscript{367} More than 6.1 million people live within 100 miles of the Tillery Reach. Table 2 shows actual use of the Tillery Reach as compared to the potential recreation use.

\textit{Add frequencies for all recreation activities, to show the total in the monthly survey.} For example, Tables E7-8 – E7-9 show 431 users at the Tillery Canoe Portage, 135 users at the Tailwater Access Area, and 41 users at Highway 109, during this survey. Thus, there were 640 users for all recreation activities in the Tillery Reach, during the monthly survey.

\textit{Divide the frequency for each recreation activity, by the survey total, to estimate the relative frequency (percentage) of each recreation activity.} Thus, swimming is 20 divided by 650, or 3\% of recreation, in the Tillery Reach, during the monthly survey.

\textsuperscript{364} Motion to Supplement the Record, ¶ 60.

\textsuperscript{365} \textit{Id.} By comparison, boating on a 10-mile reach of the Saluda River, which is located a 2-hour drive from this reach in South Carolina’s Piedmont Region, exceeds 49,000 user-days, and secondary recreation there totals 185,695 user-days, per year. Kleinschmidt Associates (on behalf of South Carolina Gas & Electric) “Saluda Hydroelectric Project Final Downstream Recreation Flow Assessment Report” (Saluda Recreation Report), eLibrary no. 20080828-4003 (Nov. 2007), pp. 22-26.

\textsuperscript{366} The Tillery Reach is located within 10 miles of the City of Rockingham, which has a population of 9,500, and within a 30 minute drive from Village of Pinehurst, a resort community with a population of almost 15,000.

\textsuperscript{367} New License Application, Exhibit E7, pp. E7-1-6, E7-2-9.
Table 2.
Actual Recreation Use of Tillery Reach versus Potential Recreation Users

<table>
<thead>
<tr>
<th>Use</th>
<th>Actual Use/Year of Tillery Reach</th>
<th>Potential Recreation Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camping</td>
<td>103</td>
<td>1.8 million</td>
</tr>
<tr>
<td>Canoeing</td>
<td>34</td>
<td>400,000</td>
</tr>
<tr>
<td>Fishing</td>
<td>2,491 (bankfishing); 443 (fishing from motor boat)</td>
<td>2.7 million</td>
</tr>
<tr>
<td>Kayaking</td>
<td>--</td>
<td>190,000</td>
</tr>
<tr>
<td>Swimming outdoors</td>
<td>103</td>
<td>3.3 million</td>
</tr>
<tr>
<td>Wildlife observation</td>
<td>239</td>
<td>4.3 million</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,413</strong></td>
<td><strong>--</strong></td>
</tr>
</tbody>
</table>

2. **The License Order Errs in Not Analyzing the Economic Benefits of Recreation on the Tillery Reach.**

The License Order affirms Staff’s finding in the FEIS that the $197,700 annual cost of the City/AR Recreation Flow Proposal would not outweigh the benefits. As discussed in Issue F.3, the License Order does not disclose the methods or data Staff relied upon to make this finding.

The Office Director did not require Duke Energy to study the economic benefits of recreation on the Tillery Reach prior to issuing the License Order. The License Order does not respond to our evidence that such studies are commonplace in relicensing proceedings.

In the FEIS, Staff “acknowledge[d] the benefits of recreational boating opportunities that could be afforded through the provision of recreational boating opportunities.” Rather than quantify the benefits, Staff simply concluded that the City/AR Recreation Flow Proposal would be too costly based on its estimate of $129,600 in lost energy annually.

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368 See n. 362-363, *supra*.

369 This is calculated by multiplying the percentages in Table 1, times the population of the metropolitan areas in North Carolina that are within 100 miles of the Tillery Reach as depicted in New License Application Exhibit E, p. E7-1-6. That population is 6.13 million, according to 2012 census data. See [http://en.wikipedia.org/wiki/List_of_metropolitan_areas_of_North_Carolina](http://en.wikipedia.org/wiki/List_of_metropolitan_areas_of_North_Carolina) (last visited April 30, 2015).


371 *Id.* at 274.
Although it did not undertake one here, the Commission has previously acknowledged the advantages of a straightforward benefit-cost approach. It has pointed to the difficulty of estimating the dollar values of non-developmental resources as cause for not adopting such an approach as a matter of practice.

In a recent decision under the FPA, the Seventh Circuit U.S. Court of Appeals found that the Commission had “given up the struggle” to estimate the benefits of new transmission facilities “prematurely, without demonstrating that even a rough estimate of the benefits to be conferred . . . is impossible.” The court stated, “cost-benefit analysis is the standard method for valuing large public or commercial projects.” It acknowledged the difficulty of obtaining “reliable predictions of costs and benefits, as long recognized in the extensive academic literature on cost-benefit analysis of big public infrastructure projects with long expected lives.” However, it found that “the literature does not infer impossibility from difficult, as FERC apparently does.” The court did not reject the Commission’s finding regarding benefits; rather, its “concern [was] with the absence from the Commission’s orders of even an attempt at empirical justification.” It remanded the case, stating: “If [the Commission] continues to argue that a cost-benefit analysis of the new transmission facilities is infeasible, it must explain why that is so and what the alternatives are.”

In other proceedings, Staff has estimated and considered the beneficial effects of increased recreation on employment, tax revenues, and tourism in other proceedings. In the licensing of ten hydropower projects located in the Wisconsin River Basin, Staff estimated in dollars the annual benefit of proposed recreational facilities and the thirty-year total benefit and net benefit of recreational measures at the projects.

373 See id.
375 Id.
376 Id.
377 Id.
378 Id.
379 Id. at 8.
380 Grand River Dam Authority, 105 FERC ¶ 61,100, 61,507 (2003).
381 FERC, “Final Environmental Impact Statement for Wisconsin River Basin,” eLibrary no.19981103-0204 (June 1996), pp. 4-98 (Table 4-14), 4-156, 4-157 (Table 4-36). See also FERC, “Final Environmental Impact Statement for the Cushman Hydroelectric Project,” eLibrary no. 20080607-0129, et seq. (Dec. 2, 1996), p. C-21 (Table C-7) (estimating the economic value of fish passage benefits); FERC, “Final Environmental Impact

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We submitted evidence that the potential recreation use would provide substantial economic benefits for the regional economy. The License Order does not address this evidence.

As stated above, the Tillery Reach is located in the Uwharrie Lakes Region, North Carolina’s Central Park. An estimated 3.6 million visitors visit the region for outdoors recreation and other tourism. These visitors spend an estimated average of $50 to $80 per day or $360 million as an annual total, employing 9,568 people. Expenditures for tourism may quadruple between 1995 and 2025, reaching $1.2 billion per year and supporting more than 16,300 jobs.

According to National Park Service sources, expenditures for canoeing and other forms of river recreation average $27 to $63 per user-day. As discussed above, the License Order estimates that the City/AR Recreation Flow Proposal would reduce annual power value of the Tillery Development by $197,700. However, the economic benefit of more recreation on the Tillery Reach could easily exceed that amount. Only 7,322 user-days per year on top of baseline use, valued conservatively at $27 per user-day, would create that amount of economic benefit for the project vicinity. Taking into account recreation on Hitchcock Creek (12,000 – 18,000 user-days per year) and Saluda (232,000 user-days per year), the recreation potential of the Tillery Reach would easily exceed 4,800 user-days per year, if flow conditions were suitable.


Motion to Supplement the Record, ¶¶ 73 – 81. The City has stated that ecotourism is vitally important to its future, given the loss of the textile mill economy over the past generation. Id. at Exhibit 16 (Crump Deposition) 180-83.

Motion to Supplement the Record, Exhibit 20 (Wayne Williams & Paul Gaskill, North Carolina’s Central Park: Assessing Tourism and Outdoor Recreation in the Uwharrie Lakes Region (Sept. 1999)).


Id. at 171.


Saluda Recreation Report at 22.

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3. **The License Order Errs in Not Completing the Analysis of Navigability in a Jon Boat.**

The Office Director required a study of navigation limited to jon boats. More specifically, Duke Energy conducted a Navigability Study of the Tillery Reach, as a component of the Instream Flow Study. This study was designed to estimate navigability for a 14-foot motorized jon boat. As reported in Table 9-2 of the Instream Flow Study Final Report, it found that 671 cfs is the minimum flow for downstream navigation in a jon-boat, and 5,395 cfs for upstream navigation, within the Tillery Reach.

According to the Instream Flow Final Study Plan, the management objective for both the North Carolina Wildlife Resources Commission and South Carolina Department of Natural Resources (“SCDNR”) with regard to navigation was to “[e]nhance access to the river by fishermen and insure that sufficient stream flow is present to facilitate recreational navigation.” In order to meet this objective, Duke Energy “propose[d] to evaluate the river channel bed profile, [water surface levels], depth, and stage-discharge relationships relative to the SCDNR navigation criteria in the instream flow analyses . . .”

The SCDNR method for determining minimum navigation flows is articulated in “Instream Flow Study-Phase II; Determination of minimum flow standards to protect instream uses in priority stream segments” (1988). Duke Energy omitted the step of field testing, which is included in SCDNR’s method:

List the minimum flows needed to support the desired level of navigation at each site and select the highest of these flows as the minimum flow needed to maintain navigation throughout the stream segment. The final minimum flow determination may be adjusted based on field observations and navigation experienced at known flows.

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388 License Order, ¶ 164.

389 It is undisputed that the minimum flow required under Article 403 (330 cfs) is unsuitable for jon boat navigation. Mr. Monty Crump, a life-long jon boater on the Tillery Reach, testified that downstream navigation is very difficult at the required minimum flow, necessitating routine scraping through shoals and associated risk of damage to the stern motor, except where the Tillery Reach broadens into Blewett Falls Reservoir. See Motion to Supplement the Record, Exhibit 26 (Second Crump Affidavit), ¶¶ 9-10; id. at Exhibit 16 (Crump Deposition), pp. 168-72; id. at Exhibit 27 (Third Affidavit of Monty Crump (Oct. 11, 2010)); see also id. at Exhibit 14 (Bryant Declaration), ¶ 2 (flows are generally too low to use an outboard motor).


391 Id. at 1-3.

392 Id. at 9-2, 9-12.

Id. at 54. In applying the methodology to a reach on the Saluda River in South Carolina, the minimum navigation flow “was determined following application of the navigation method and extensive field navigation experiences at known flows.”

Duke Energy found that 671 cfs is the minimum flow for downstream navigation and 5,395 for upstream navigation in the Tillery Reach, taken as a whole. The Final Study Report confirms that the modeled navigation results are only “initial results.” It states, “the [Instream Flow Study Group] will analyze each of these flow/channel response functions in conjunction with their professional judgment, local knowledge, and experience to arrive at recommended base flows that assures [sic] recreational boating navigation . . . within the Project affected areas.” This analysis required field-testing.

North Carolina Wildlife Resources Commission Staff undertook a float test at Duke Energy’s proposed minimum flow release of 330 cfs on July 14, 2006. Staff described the test as a complete failure. FWS described poor navigability on this demonstration trip:

The majority of the river had gravel-cobble bars, bedrock and some sand and was no more than knee deep all of the way across the approximately 700 foot wide river channel, and many gravel bars were exposed at the demonstration flow. . . . [T]he Wildlife Resources Commission attempted one way navigation in a 14-foot jon boat and were unsuccessful . . . . [T]he water was just not deep enough for a river the size of the Pee Dee.

After the one failed test, Duke Energy refused to conduct further field testing. At that time, we objected to Duke Energy’s implementation of the Final Study Plan as incomplete. We submitted expert opinion that “[t]he navigation model results were not field verified to test the accuracy of the model. Without field verification, model outputs are meaningless.” In response to Staff’s Notice of Readiness for Environmental Analysis, we proposed a preliminary recreational flow release that would be refined following a recreational flow study that included

394 Id. at 66 (emphasis added).
396 Id. at 9-12.
field testing and evaluation of a range of recreational uses, including swimming, which was identified for study by the Land Use and Recreation Working Group.\textsuperscript{400}

The Office Director did not require field-testing of Duke’s navigation model results to confirm that 671 cfs is suitable for downstream navigation, taking into consideration quality of the boating experience. The License Order does not respond to evidence that downstream navigation actually is very difficult at the minimum flow required under Article 403.

4. **The License Order Errs in Not Requiring Study of the Comparative Suitability of the New License for Non-Motorized Boating.**

The Office Director did not require Duke Energy to undertake a study of navigability by non-motorized boats, including canoes and kayaks, in the Tillery Reach prior to issuing the license. The License Order was the first time the Director or Staff addressed our request for a pre-licensing recreational flow study, even though the request was first made it in 2007 and reiterated in May 2014.\textsuperscript{401}

Instead the License Order adopts Staff’s recommendation in the FEIS\textsuperscript{402} that Duke Energy conduct a post-licensing study of flows suitable for non-motorized boats.\textsuperscript{403} This study would address “...the amount, timing, and extent of the proposed additional recreational flows would provide sufficient flows to ensure downstream navigation at least every other weekend and holidays during the recreation season (May 15 through September 15).\textsuperscript{404} The License Order does not explain why this study should not occur before licensing. Recreation is a beneficial use of this basin under FPA section 10(a)(1). It is undisputed that adequate flow is essential for non-motorized boating recreation.\textsuperscript{405} In any event, the study would be limited to the allocation of 1,950 acre-feet to supplement the minimum flow schedule.\textsuperscript{406}

\textsuperscript{400} Id. at 22. We argued that the Progress Energy had not verified the implicit assumption that navigation and other requirements for jon boats are representative of other forms of recreation. Id., App. 2 (Review of the Pee Dee River Navigation Report), p. 5-6. However, flows that permitted jon boat navigation presumably would also permit navigation of watercraft with less draft, such as canoes.

\textsuperscript{401} Scoping Comments at 13-14; see also Motion for 2014 Recreational Flow Study.

\textsuperscript{402} FEIS, p. 314.

\textsuperscript{403} License Order, Article 406

\textsuperscript{404} FEIS, p. 314.

\textsuperscript{405} Motion to Supplement the Record, Exhibit 22 (Whittaker, Shelby & Gangemi) at 1.

\textsuperscript{406} Article 406 states: “The purpose of this plan is to determine how to allocate the 1,750 to 1,950 acre-feet of water from Lake Tillery for boating and angling during the recreation season....”
Standard methods exist to evaluate the comparative suitability of alternative flows for non-motorized recreation.\textsuperscript{407} As discussed above, Duke Energy and other licensees have undertaken such studies in other relicensings.\textsuperscript{408} Applying a depth criteria used in such studies,\textsuperscript{409} the Navigability Study in this proceeding suggests that 671 cfs is the minimum flow appropriate for canoeing in the Tillery Reach.

In our Motion for a 2014 Recreational Flow Study, we consulted with Dr. Shelby and Dr. Whittaker (Confluence Research and Consulting) and National Park Service staff to confirm their willingness to consult in the design of a recreational flow study and in reviewing the results if Staff granted the request. We also stated our willingness to provide volunteers for a flow study, as we for the informal field study organized by American Rivers. Staff did not respond.

The License Order states: “[t]he study results indicate that recreational users are able to canoe and kayak the Tillery Reach at Duke Energy’s proposed minimum flow of 330 cfs.”\textsuperscript{410} This is consistent with Staff’s finding that the Staff Alternative “. . . would enhance recreational boating opportunities as compared to existing conditions.”\textsuperscript{411} We agree, since 330 cfs would raise the water stage that exists today at 40 cfs.\textsuperscript{412}

However, the License Order does not make a finding whether the Staff Alternative is suitable for canoeing and other non-motorized boating.\textsuperscript{413} This is consistent with Staff’s finding that the information in the record is “. . . not sufficient to determine the timing and duration” of the flow schedule for this purpose.\textsuperscript{414}

\textsuperscript{407} OASIS Pee Dee Navigability Report Review at 6-10, 7-11, App. 2-1.
\textsuperscript{408} For example, Duke Energy, South Carolina Gas and Electric, and Alcoa Power Generating, Inc., each prepared such studies in the relicensing of their respective projects, the Catawba Wateree Project (P-2232), the Saluda Project (P-516), and the Tapoco Project (P-2169). See Motion to Supplement the Record at 17 n. 94-96.
\textsuperscript{409} One foot is a water depth often used for navigability of non-motorized boats, taking into account the draft of the boat, the weight carried, the draw of a paddle, and other variables. See Otter Tail, 57 FERC at 63,382. Like the study in Otter Tail, the Navigability Study in this proceeding used one foot as the criteria for jon boats in the Tillery Reach. Progress Energy, Pee Dee River Instream Flow Final Study Plan (Aug. 2004), p. 1-6.
\textsuperscript{410} License Order, ¶ 161.
\textsuperscript{411} FEIS, p. 201.
\textsuperscript{412} Using the model which Duke Energy developed to predict wetted perimeter for mussels, it appears that the Staff Alternative would raise baseline water stage by a few inches at various transects in the Tillery Reach. See Motion to Supplement the Record, Exhibit 29 (Progress Energy, “Wetted Perimeter Spreadsheet Model” (undated)).
\textsuperscript{413} License Order, ¶ 161.
\textsuperscript{414} FEIS, p. A-24.
The administrative record includes undisputed evidence that downstream navigation by canoe or kayak occurs at 330 cfs and indeed, even at 40 cfs. For example, Mr. John Crutchfield (Progress Energy) and Mr. Jim Mead (DENR) have testified to that effect. However, the record also shows that boats frequently scrape in the shoals at the required minimum flow, forcing boaters to disembark and drag their boats.\footnote{NREA Comments, Attachment 3 (Ferguson Declaration); Motion to Supplement the Record, Exhibit 31 (Rice Affidavit), ¶¶ 12-17.}

Even with his relatively low-draft canoe, Mr. Mead’s submission states that he “use[d] [his] paddling skills to read the water and wind [his] way down the river” and that he “had to get out of the canoe once because of running aground on rocks.”\footnote{American Rivers and City of Rockingham, “Response to DEIS Comments of Progress Energy and NCDENR,” eLibrary no. 20080123-5050 (Jan. 23, 2008), p. 4 (internal citations omitted).}

On July 31, 2010, Matthew Rice, then employed as American Rivers’ Associate Director of Southeast Conservation, organized and participated in a recreation flow study on the Tillery Reach when the Tillery Development was releasing 330 cfs.\footnote{Motion to Supplement the Record, Exhibit 31 (Rice Affidavit), ¶ 3. In its “Answer in Opposition to the Motion” (eLibrary no. 20140609-5165), Duke Energy argued that the results of our non-motorized boating test were not probative because we could not be certain of the flows in the Tillery Reach at the time of the test. Duke Energy is correct that we cannot independently verify the flows at the time of our test. However, Duke Energy can. We requested that Duke Energy use its own operational records to disclose project releases at the time of our boating tests. This information, along with U.S. Geological Survey gage data from the Rocky River, should have been sufficient to establish the flows in the river at the time of our tests. Duke Energy did not respond to this request.}

He recorded video clips of participants during the study.\footnote{Motion to Supplement the Record, Exhibit 31.4.} He concluded that the upper 3 miles of the Tillery Reach was “marginally navigable for paddlers that chose the correct route” at 330 cfs, but the next large shoal complex downstream “was impassable for kayaks or canoes.”\footnote{Id. at Exhibit 31 (Rice Affidavit), ¶ 12. See also id. at Exhibit 14 (Bryant Declaration), ¶ 6 (“The water was shallow so everyone else had to drag their kayak at least part of the way.”).}

Mr. Rice concluded that, while conditions improved somewhat below the confluence of the Pee Dee and Rocky Rivers, most study participants “[i]ndicated both water depth and velocity at 330 cfs were unacceptable . . .” and reported having to drag their boats around shoals several times due to inadequate water depth.\footnote{Id., Exhibit 31 (Rice Affidavit), ¶ 16. Ron Bryant was the one participant in the 2010 study who did not conclude that the flow conditions were largely unacceptable. He only completed the first leg of the trip, from the access point near Tillery Dam to his property located 1.5 miles downstream. Id. at Exhibit 14 (Bryant Declaration), ¶ 6. He has subsequently stated that a flow release of 330 cfs was not sufficient for a good boating experience. Id.}

By contrast, Ron Bryant, a boater who also owns
riparian land 1.5 miles downstream of the Tillery Development, had a very enjoyable paddling experience at a flow release of 2,800 cfs on August 3, 2010.422

The License Order does not address the undisputed difference between minimum navigability and suitability for these boats, or for that matter, jon boats. Staff did not address it in the FEIS. This difference drives the standard methods used to evaluate recreation flows. These methods are widely used to evaluate the comparative suitability of alternative flows for enjoyable experiences. Baseline recreation on the Tillery Reach proves the fundamental truth of this concept. Today, although the Tillery Reach is technically navigable by any boater willing to drag or scrape a canoe through multiple shoals, use totals an estimated 34 user-days per year.

5. **The License Order Errs in Not Studying the Suitability of Flow Alternatives for Swimming, Wading, and other Water-Contact Recreation.**

The License Order finds that the new license, including the flow schedules required under Articles 403 and 406 would be best adapted to a comprehensive plan of development for recreation and other beneficial uses of the Yadkin-Pee Dee River Basin. However, the License Order does not address the suitability of the Article 403 and 406 flows for swimming,423 wading, and other forms of water-contact recreation. We submitted evidence that these are popular forms of recreation throughout the region.424 Despite this, the FEIS did not analyze the suitability of the flows for these purposes. The Office Director did not require Duke Energy to conduct a flow study for these purposes prior to license issuance, and they are excluded from the post-licensing study required by Article 406.

The License Order does not analyze whether the Staff Alternative would be suitable for organized recreation by families and scout, church, and other youth clubs. It does not respond to our evidence that, due to existing flow conditions, youth clubs do not use the Tillery Reach today for recreation.425 The License Order does not address the resulting loss to the local economy and welfare, given the potential of that reach for outdoor education, leadership training, and camping.

In the FEIS, Staff did not analyze the comparative suitability of the City/AR Flow Proposal for swimming, wading, and similar recreation. The License Order does not dispute that

422  See also id. ¶¶ 1, 7.

423  The record contains undisputed evidence that swimming occurs in the Tillery Reach under baseline conditions. As discussed above, swimming is an estimated 104 user-days per year. While wading is possible in shoals and other locations,423 there are few pools with adequate water stage for safe swimming. Motion to Supplement the Record, Exhibit 14 (Bryant Declaration), ¶ 5. Duke Energy’s wetted perimeter model shows that 330 cfs would raise water stage by several inches. Id. at Exhibit 29 (Wetted Perimeter Model). The resulting water stage in this reach would continue to provide very limited opportunities for swimming. Id. at Exhibit 32 (Jöbsis Deposition), pp. 2813-17.

424  NREA Comments, p. 4.

425  Id. at Exhibit 16 (Crump Deposition), pp. 173, 177-78.
this alternative would raise the water stage in the Tillery Reach, relative to the Staff Alternative. The License Order does not respond to our evidence that a stable flow on summer weekends and holidays would also remove the safety risks associated with the rapid flow fluctuations that occur today and would continue under the new license.426

6. **The License Order Errs in Finding that the City/AR Flow Alternative Would Impact Herons.**

In addition to finding that the City/AR Flow Proposal would be expensive and is not warranted based on existing use, the License Order finds that “flows between 800 and 1,800 cfs . . . would reduce the foraging habitat for great blue heron.”427 The License Order cites to Staff’s findings in the FEIS as support.428 However, Staff did not provide any evidentiary basis for its findings.429 Further, the License Order does not address how power releases, which range from 4,700 to 18,000 cfs affect foraging habitat.

7. **The License Order Errs in Finding that the Commission Cannot Consider Recreation Measures Beyond the Water Quality Certification.**

The License Order finds that the water quality certification precludes a higher recreation flow: “[r]egardless, the certification limits the volume of water available for recreational boating flows to 1,950 acre-feet . . . ”430 This finding is in error because it is inconsistent with Commission precedent which holds that the Commission “may require additional license conditions that do not conflict with or weaken the protections provided by the WQC.”431

K. **The License Order Errs in Not Considering Whether the Recreation Measures Would Contribute to the Ultimate Development of Recreation at the Project.**

The License Order adopts Staff’s finding that “Duke Energy’s proposed recreation measures, in combination with the additional staff-recommended environmental measures, would enhance recreational opportunities at the project, as well as along the Pee Dee River downstream.”432 As stated in Issues D and F, the Director’s acceptance of enhancement of

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426 See also id. at Exhibit 14 (Bryant Declaration), ¶ 5.
427 License Order, ¶ 165.
428 Id. at n. 163.
430 License Order, ¶ 165.
432 License Order, ¶ 171.

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baseline condition as mitigation for Project impacts is legal error under NEPA and the FPA. It is also error under the Commission’s recreation policy, which requires the “ultimate development” of recreation resources at licensed projects.

Under the Commission’s recreation policy, “ultimate development” is directed to the future, not just existing use. In enacting the policy, the Commission stated:

A larger number of Americans than ever before are participating in one form or another of outdoor recreation at established recreational areas. Reservoirs at federally licensed projects currently provide a significant source of outdoor recreation opportunity, but here is every indication that greatly expanded recreational development at such sites is possible both at existing projects and at those to be licensed in the future.

As stated above, we proposed higher, more stable flows to provide suitable opportunities for recreation in the Tillery Reach. As discussed in Issues F.3 – F.4 and J, the License Order rejects our proposal as not cost-effective in light of existing use. Instead it finds that the supplemental flow required in Article 406, when added to the minimum flow required in Article 403, will improve current boating conditions.

As stated above, we recommended several non-flow recreation measures for Staff’s consideration in preparing the DEIS. As the License Order reports, Staff recommended some measures “because the anticipated benefits of recreation of these measures would be worth the cost.” However, it rejected others (upgrade to the Highway 109 Access Area, and feasibility assessment for new boat access in the Tillery Reach) because “no significant recreational use demand has been demonstrated, based on Duke Energy’s Recreation Needs Assessment, to require Duke Energy to provide these measures.

As stated above, Duke Energy did not complete its Recreation Needs Assessment with respect to the Tillery Reach. That aside, we support the recreation measures required by the new license as enhancing current conditions. However, in these circumstances the Commission’s recreation policy demands more.

435 License Order, ¶ 165.
436 Id.
438 License Order, ¶ 172 (citing FEIS, pp. 311-12).
439 Id. at ¶ 175.
As stated above, the evidence in the record shows that there is an increasing and unmet demand in the area for outdoor, water-based recreation. Despite this, the License Order does not demonstrate that Staff sought or made a determination that the recreation measures included in the license would result in the ultimate development of recreation resources at the Project consistent with evidence of unmet demand for recreation in the region and non-interference with project purpose.

L. **The Office Director Erred in Not Supplementing the FEIS in Light of Changed Circumstances, New Evidence, and Passage of Time.**

The Office Director decided not to issue a supplement to the FEIS prior to the new license, despite the fact that our several motions for supplementation were pending at the time of license issuance. The Office Director’s decision not to supplement is inconsistent with CEQ’s rule for preparation of a supplement.

Similar to FPA section 10(a)(1), the ongoing duty to complete the record for necessary findings also arises under NEPA. “[A] federal agency has a continuing duty to gather and evaluate new information relevant to the environmental impact of its actions.” Under NEPA, the Commission is required to prepare a supplement to an FEIS if “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” The Commission “[m]ay also prepare supplements when the agency determines that the purposes of [NEPA] will be furthered by doing so.”

A “rule of reason” applies to the decision whether to prepare a supplemental environmental document.

. . . NEPA does require that agencies take a “hard look” at the environmental effects of their planned action, even after a proposal has received initial approval . . . . Application of the “rule of reason” thus turns on the value of the new information to the still pending decisionmaking process. In this respect the decision whether to prepare a supplemental EIS is similar to the decision whether to prepare an EIS in the first instance: If there remains a “major Federal action” to occur, and if the new information is sufficient to show that the remaining action will “affec[t] the quality of the human environment” in a

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440 See Scenic Hudson, 354 F.2d at 612 (“The agency must always act upon the record made, and if that is not sufficient, it should see the record is supplemented before it acts.”)

441 Warm Springs Task Force v. Gribble, 621 F.2d 1017, 1023 (9th Cir. 1980) (“Warm Springs”).

442 40 C.F.R. § 1502.9(c)(1)(ii); South Carolina Electric & Gas Co., 109 FERC ¶ 61,331 (2004) (citing FERC’s discretion to give greater scrutiny to land sales in light of new information and circumstances since last environmental review).

443 Id. § 1502.9(c)(2).


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significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.\textsuperscript{445}

Under CEQ’s guidance for implementing NEPA, there is a presumption that agencies will review environmental documents that are more than five years old to determine whether the data and analyses are still reliable.\textsuperscript{446} The FEIS was seven years old at the time of license issuance. The Staff analysis provided in the FEIS was largely unchanged from the DEIS published in 2007, and the data cited pre-dated that.

In our Motion to Supplement the Record, we requested that Staff consider new evidence that was both timely and material to certain disputed issues regarding how the Staff Alternative would change baseline conditions in the Tillery Reach, or how it would compare to alternatives. For example, we requested that Staff consider new evidence that: the need for Project power had changed as a result of the merger of Duke Energy and Progress Energy (Issue C), Licensee’s IFIM study was incomplete and omitted critical results (Issue H), its navigation study was incomplete (Issue J), and a retrofit of the Tillery Plant was feasible (Issue E.3).

The Office Director’s unexplained decision not to supplement the FEIS despite evidence that the criteria requiring supplementation under 40 C.F.R. section 1502.9 had been met was arbitrary and capricious and not supported by substantial evidence.

M. \textbf{The License Order Errs in Its Exclusion of Certain Water Quality Certification Conditions.}

On February 11, 2008, DENR’s Division of Water Quality (“DWQ”) issued the water quality certification required by Clean Water Act section 401. It approved Duke Energy’s proposed flow schedule. We challenged the adequacy of the water quality certification to attain all the beneficial uses of the Tillery Reach under North Carolina’s water quality laws. Following a Contested Case Hearing, DENR’s Environmental Management Commission upheld the certification in July 2011. The North Carolina Superior Court and the North Carolina Court of Appeals upheld the Environmental Management Commission’s decision on appeal. A central issue in the Contested Case Hearing was whether DWQ had improperly accepted land preservation to mitigate the unmitigated adverse impacts of a 330/725 cfs minimum flow schedule.

\textsuperscript{445} Id. at 374 (alteration in original; emphasis added).

Reasonableness depends on such factors as the environmental significance of the new information, the probable accuracy of the information, the degree of care with which the agency considered the information and evaluated its impact, and the degree to which the agency supported its decision not to supplement with a statement of explanation or additional data.

\textit{Warm Springs}, 621 F.2d at 1024-25 (9th Cir. 1980) (internal citations omitted).

\textsuperscript{446} \textit{Forty Questions}. Answer 32.

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The License Order states that the water quality certification includes conditions, which are set forth in Appendix A of this order, and incorporated into the license by Ordering Paragraph D. However, the License Order excludes certain certification conditions related to land preservation from the new license.\footnote{License Order, ¶ 93.} It states:

In the EIS, Commission staff did not recommend the measures pertaining to donating lands to North Carolina and placing restrictive covenants on non-project lands because these parcels of land are not necessary for project purposes or to ameliorate a project effect. Although these are conditions of the certification, they are beyond the scope of the license and not related to the project. While . . . it is expected that the licensee will implement [these measures] as it has agreed to do, they are beyond the Commission’s jurisdiction and are not included as conditions of this license.\footnote{Id. (internal citations omitted).}

The License Order’s exclusion of certain certification conditions is error under CWA section 401(d).

Under CWA section 401(a)(1), the Commission may not issue a new license unless the state water quality agency has either issued water quality certification for the project or has waived certification. Under CWA section 401(d), the certification “shall become a condition on any Federal license or permit subject to the provisions of this section.”\footnote{Id. (emphasis added). See also American Rivers, Inc. v. FERC, 129 F.3d 99, 102 (2d Cir. 1997).} Thus, the “limitations included in the certification become a condition on any federal license.”\footnote{PUD No. 1 of Jefferson Cnty. v. Washington Dep’t of Ecology, 511 U.S. 700, 708 (1994).}

In \textit{American Rivers, Inc. v. FERC}, the Second Circuit U.S. Court of Appeals held that the Commission has no authority under the CWA or FPA to modify or reject 401 certification conditions. The Court found that CWA section 401 is a limitation on the Commission’s otherwise broad authority to regulate non-federal hydropower under the FPA:

We have no quarrel with the Commission's assertion that the FPA represents a congressional intention to establish “a broad federal role in the development and licensing of hydroelectric power.” . . . Nor do we dispute that the FPA has a wide preemptive reach. \textit{Id.} The CWA, however, has diminished this preemptive reach by expressly requiring the Commission to incorporate into its licenses state-imposed water-quality conditions.\footnote{\textit{American Rivers, Inc. v. FERC}, 129 F.3d 99, 111 (2d Cir. 1997).}
The License Order’s exclusion of certain water quality certification conditions from the new license is arbitrary and capricious and otherwise not in accordance with the law.

N. **The Office Director Erred in Not Providing NMFS the Best Available Scientific Data for Use in the Formal Consultation under ESA section 7(a)(2).**

The License Order states that Shortnose and Atlantic Sturgeon are known to occur in the lower Pee Dee River below Blewett Falls Dam.\(^{452}\) It states that “staff consulted with NMFS and obtained its BO, finding that the proposed relicensing of the Yadkin-Pee Dee Project would not jeopardize the continued existence of shortnose sturgeon or the Carolina [Distinct Population Segment] of Atlantic sturgeon.”\(^ {453}\) The License Order describes our dispute regarding the information Staff provided as the basis for the BO:

[Petitioners] argue that the BO relies on an inappropriate and inadequate metric (Index C) to identify available habitat and to define appropriate minimum flows for the Tillery Reach. They contend that a dual flow analysis is more appropriate in this instance. Rockingham and American Rivers filed multiple declarations, depositions, and information to support this claim.\(^ {454}\)

However, the License Order then states the relicensing “is not the appropriate venue to address Rockingham’s and American Rivers’ assertion that the BO does not satisfy NMFS’ obligations under ESA.”\(^ {455}\) This is error under the ESA section 7(a)(2) and implementing regulations which assign responsibilities to the federal action agency in the course of consultation.

ESA section 7(a)(2) requires

Each Federal agency shall, in consultation with . . . the Secretary, insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical habitat] . . . .\(^ {456}\)

If the action agency determines that the proposed action may affect listed species, it has an obligation to initiate formal consultation with FWS or NMFS pursuant to 50 C.F.R. section 402.14. That regulation requires the action agency to provide best scientific and commercial data available as the basis for consultation:

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\(^{452}\) License Order, ¶ 107.

\(^{453}\) *Id.* at ¶ 122.

\(^{454}\) *Id.* at ¶ 121 (internal citations omitted).

\(^{455}\) *Id.* at ¶ 123 (internal citations omitted).

The Federal agency requesting formal consultation shall provide the Service with the best scientific and commercial data available or which can be obtained during the consultation for an adequate review of the effects that an action may have upon listed species or critical habitat.457

Using the best available or obtainable data is an “overriding factor in carrying out consultations.”458 “Under this standard, an agency must not ‘‘disregard [] available scientific evidence that is in some way better than the evidence [it] relies on.’’”459

Staff submitted the instream flow analysis it undertook for the FEIS as the basis for NMFS’s evaluation of the minimum flow requirements proposed for each development.460 As discussed above, Staff’s analysis is based on Duke Energy’s partial maximum WUA and Index C results. As stated in Part Two, Issue C, the Revised BO relies on this information, specifically the Index C results, to find that the proposed minimum flow schedule will increase spawning habitat and juvenile survival in the reach below the Blewett Falls Development to an extent that will aid in the recovery of the species. The Revised BO does not discuss whether the proposed new license will increase the availability of suitable habitat downstream of the Tillery Dam.

As stated in Issue H, maximum WUA and Index C are not the most reliable scientific methods for predicting available fish habitat in a reach where power releases may exceed minimum flows by factor of 5 to 50. We submitted evidence that Dual Flow Analysis is the most reliable method for habitat duration analysis in the Tillery Reach. This evidence is consistent with the findings of the Instream Flow Study Group that Dual Flow Analysis is necessary to understand impacts of peaking flows on aquatic resources.

The License Order does not address this evidence. Staff did not provide NMFS with the complete results of Duke Energy’s Dual Flow Study, or any Staff analysis of those results. Contrary to the License Order’s response to us, the mere fact of Staff’s consultation with NMFS does not “divest [the Commission] of discretion to make a final decision that ‘it has taken all necessary action to insure that its actions will not jeopardize the continued existence of an endangered species.’”461

457  50 C.F.R. § 402.14
460  Letter from Mark Pawlowski (OEP) to David Bernhart (NMFS), eLibrary no. 20071109-3029 (Nov. 9, 2007), p. 1 (“The draft EIS also presents our analysis of the effects of the proposed minimum flow regime downstream of the Blewett Falls development on shortnose sturgeon habitat, including habitat for spawning and egg incubation.”).
The Office Director’s decision not furnish NMFS with the complete results of Duke Energy’s Dual Flow Analysis for purposes of consultation under ESA section 7(a)(2) was arbitrary and capricious and not supported by substantial evidence.
PART TWO.
REHEARING BY THE NATURAL MARINE FISHERIES SERVICE

I. STATEMENT OF ISSUES

A. NMFS Erred in Not Responding to our Requests for Use of Best Available Evidence to Evaluate the Duration of Available Habitat

Statute

5 U.S.C. § 555(e)

B. Whether the Revised BO is Based on Improper Consultation between a Non-Federal Party and NMFS.

Statutes

16 U.S.C. § 1536

Administrative Regulations

50 C.F.R. § 402.14

C. Whether the Revised BO Uses the Best Available Information Regarding the Impacts of the Minimum Flow Schedules on Listed Sturgeon and Their Habitat.

Statutes

16 U.S.C. § 1536

Administrative Regulations

50 C.F.R. §402.14

Court Decisions

Conner v. Burford, 848 F.2d 1441 (9th Cir. 1988)

Dow AgroSciences LLC v. Nat'l Marine Fisheries Service, 707 F.3d 462 (4th Cir. 2013)


San Luis & Delta-Mendota Authority v. Locke, 776 F.3d 971 (9th 2014)
D. Whether the Revised BO Adequately Addresses the Impacts of the New License’s Minimum Flow Requirements on the Survival and Recovery of Listed Sturgeon.

Statutes

16 U.S.C. § 1536

Administrative Regulations

50 C.F.R. § 402.14

Court Decisions

Aluminum Co. of America v. Bonneville Power Administration, 175 F.3d 1156, 1162 n. 6 (9th Cir. 1999).


National Wildlife Federation v. NMFS, 481 F.3d 1224, 1235 (9th Cir. 2007);

E. Whether the Revised BO is Arbitrary and Capricious Because It Does Not Adequately Consider Reasonable and Prudent Measures to Minimize Harm.

Statutes

16 U.S.C. § 1536(a)(2)

Administrative Regulations

50 C.F.R. § 402.14

Court Decisions

City of Tacoma, Washington v. FERC, 46 F.3d 53 (D.C. Cir. 2006)

Oregon Natural Res. Council v. Allen, 476 F.3d 1031 (9th Cir. 2007)

Administrative Decisions

II. STANDARDS OF REVIEW

This section sets out standards, which apply in judicial review and are the basis for our arguments that the BO erred in the specific ways described below. The authorities cited herein apply to all of the issues identified in Part Two for rehearing by NMFS. We incorporate the Standards of Review from Part One.

Actions taken by NMFS pursuant to the ESA are reviewed as agency actions subject to the standards of review under the APA.462 “Under the APA, the Court must assess whether the actions of the FWS were ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law’ or ‘without observance of procedure required by law.’” 5 U.S.C. § 706(2)(A), (D).463 “A biological opinion is arbitrary and capricious and will be set aside when it has failed to articulate a satisfactory explanation for its conclusions or when it has entirely failed to consider an important aspect of the problem.”464 Alternatively, a BO may be invalid if it fails to use the best available scientific information as required by 16 U.S.C. § 1536(a)(2).465

III. ARGUMENT

NMFS issued the BO for the proposed relicensing and continued operation of the Project on April 29, 2013. It issued a Revised BO on April 17, 2015. The Revised BO concludes that the proposed action is not likely to jeopardize the continued existence of listed shortnose and Atlantic sturgeon, provided the Commission undertakes the reasonable and prudent measures contained in the Revised BO.

The purpose of the ESA is the “conservation” of endangered and threatened species.466 “Conservation” is defined as “the use of all methods and procedures which are necessary to bring

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463 Fund for Animals, 903 F. Supp. at 105.

464 Greenpeace v. NMFS, 80 F. Supp. 2d 1137, 1147 (W.D. Wash. 2000); see also Pacific Coast Federation Fishermen’s Association v. Gutierrez, 606 F. Supp. 2d 1122, 1168 (E.D. Cal. 2008) (“Pacific Coast”) (a BO will be set aside “[w]hen an agency’s factual findings and analyses are contradictory, or when such findings and analyses contradict the BO’s conclusion . . .”); National Association of Home Builders v. Defenders of Wildlife, 127 S. Ct. 2518, 2530 (2007); Motor Vehicle, 463 U.S. at 43.

465 Pacific Coast, 606 F.Supp. 2d at 1144.

466 16 U.S.C. § 1531(b).
any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.” 467

ESAs section 7(a)(2) requires

Each Federal agency shall, in consultation with . . . the Secretary, insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical habitat] . . . .

Formal consultation concludes with the issuance of a BO that assesses “whether the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species . . . .” 468 An action is found likely to cause jeopardy to a species if it “reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” 469

As described in Part One, Issue N, the Revised BO is not based on the best available data. For this and other reasons stated below, the Revised BO is arbitrary and capricious and otherwise not in accordance with law.

A. **NMFS Erred by Not Responding to Our Requests for Use of Best Available Evidence to Evaluate the Duration of Available Habitat.**

In the course of consultation we requested that NMFS reconsider its reliance on Index C to prepare the BO. NMFS did not respond. NMFS’s failure to respond to our specific requests violates APA section 555(e), as described in Part One, Issue B.

The Revised BO’s description of the “Consultation History” for the relicensing omits our participation. 470 In fact, we participated actively. We provided comments in response to the Draft and Final BOs. 471 In our Draft BO comments we objected to NMFS’s reliance on Index C to evaluate the effects of Project flow-releases on listed sturgeon. We requested that NMFS supplement the Draft BiOp to analyze: (i) comparative habitat availability throughout the action.


468 50 C.F.R. § 402.14(g)(4), (h); see also 16 U.S.C. § 1536(b)(3)(A).

469 50 C.F.R. § 402.02.

470 Revised BO, pp. 10-13.

471 See letter from Richard Roos-Collins (WPLG) to Roy E. Crabtree (NMFS), eLibrary no. 20120420-0017 (Apr. 11, 2012) (“Draft BO comments”); letter from Julie Gantenbein (WPLG) to Roy E. Crabtree (NMFS), eLibrary no. 20130726-5009 (July 25, 2013) (“Final BO comments”). We also participated as observers in the consultation meetings convened by NMFS.
area under the proposed minimum flows and alternatives, based on the . . . [Dual] Flow Analysis methods; and (ii) whether passage for sturgeon into or above the Tillery Reach is reasonable and prudent, taking into consideration the passage required for shad and eel and the experience with sturgeon passage at other projects.472

Our Final BO comments reiterated our objection that “the partial results on which the BiOp relies are not the best available science” to consider Project impacts on listed sturgeon.473 We requested that NMFS “reconsider the findings, conditions, and recommendations in the BiOp following review of the complete requests of Progress Energy’s Dual Flow Analysis,” as well as the evidence contained in our Motion to Supplement the Record filed with the Commission.474 In the alternative, we requested that NMFS “identify the basis for its finding that Index C is the best available scientific data.”475 We requested a written response.476

NMFS erred under APA section 555(e) in not responding to our requests. Hence, we file this Rehearing Request, which details this non-response in the issues below.

B. The Revised BO is Based on Improper Consultation between a Non-Federal Party and NMFS.

On April 17, 2015, NMFS issued the Revised BO following bilateral negotiations with Duke Energy. These negotiations did not include the Commission as the federal action agency. This was legal error under ESA section 7(a)(2) and implementing regulations which require consultation between NMFS and the action agency.


We sought to intervene in the case before the district court. We argued that the court lacked jurisdiction to hear Duke Energy’s challenge to the BO; jurisdiction for such a challenge resting exclusively with the U.S. Court of Appeals after the license issued.477 In the alternative,

472 Draft BO Comments, p. 16.
473 Final BO Comments, p. 1.
474 Id. at 3.
475 Id.
476 Id.
if the district court determined it had jurisdiction, we concurrently sought to bring cross-claims raising our disputes with the BO. NMFS took no position on our intervention, but opposed our contingent cross-claims. 478 Duke Energy opposed our intervention, arguing we lacked standing because we did not have a specific interest in the monitoring program that was the primary subject of Duke Energy’s challenge. 479 It argued that our contingent cross-claims had “no relation to the instant lawsuit,” and threatened “to stall a quickly-evolving settlement between Duke Energy and NMFS.” 480 It further argued we would not be prejudiced by denial of our motion:

Although Duke Energy would oppose any action to revisit the basic conclusions in the BiOp regarding jeopardy and flow, it could not hold AR-Rockingham to the outcome of an action to which it was not a party. In any event, AR-Rockingham’s challenges to the BiOp should not be directed to the license applicant, Duke Energy, through an intervention in this action, but should instead be brought against NMFS, as the Resource agency, or FERC as the action agency. 481

The district court denied our Motion to Intervene, finding that “Proposed-Intervenors’ interests are much broader in scope” than the issues raised in Duke Energy’s complaint. 482

In December 2014, NMFS issued a draft Revised BO to Duke Energy and Office of Energy Projects Staff for review. Staff declined to review the Draft Revised BO. 483 The Office Director stated that this process was outside of the formal consultation. The Director found “no basis for reinitiating formal consultation at this time.” 484

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480 Id. at 4.

481 Id. at 10.


483 Letter from Julie Gantenbein (WPLG) to Allan Creamer (FERC), eLibrary no. 20150106-5014 (Jan. 5, 2015), Attachment 1.

484 Letter from Jeff C. Wright (FERC) to Richard Roos-Collins (WPLG), eLibrary no. 20150122-3043 (Jan. 22, 2015). The Director stated:

When NMFS issued its Biological Opinion on the effects of relicensing the Yadkin – Pee Dee Project, that action concluded the Commission’s formal consultation with NMFS. The court-mandated settlement process that resulted in the revised draft Biological Opinion occurred outside the formal ESA consultation process, and does not provide a role for the Commission. Commission staff have not been involved in that process and find no basis for reinitiating formal consultation at this time. If a revised Biological Opinion is filed with the Commission, staff will review it, ensure that it is available in eLibrary, and decide what

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Section 7(a)(2) provides that “[e]ach Federal agency shall, in consultation with . . . the Secretary, insure that any action authorized . . . by such agency . . . is not likely to jeopardize the continued existence of any endangered species . . . .”

NMFS has adopted regulations implementing this statute that clearly state that consultation is between the federal agency and NMFS:

Each Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. . . . The Director may request a Federal agency to enter into consultation if he identifies any action of that agency that may affect listed species or critical habitat and for which there has been no consultation.

NMFS has not adopted any regulations that provide for consultation with a non-federal representative in the absence of the federal action agency, as occurred here.

The Commission has adopted regulations for complying with the ESA. Such regulations permit the Commission to designate the licensee as the non-Federal representative “for purposes of informal consultations” with NMFS under the ESA. However, the regulations require that the Commission actively participate in any formal consultation undertaken after NMFS determines the project may affect listed species or critical habitat:

During formal consultation, the consulted agency, the Commission, and the project sponsor will coordinate and consult to determine potential impacts and mitigation which can be implemented to minimize impacts. The Commission and the consulted agency will schedule coordination meetings and/or field visits as necessary.

action may be required to implement any modified Reasonable and Prudent Measures that appear in the document.

Id.


50 C.F.R. § 402.14(a).

NMFS’s regulations define “informal consultation” as “an optional process that includes all discussions, correspondence, etc., between the Service and the Federal agency or the designated non–Federal representative, designed to assist the Federal agency in determining whether formal consultation or a conference is required. If during informal consultation it is determined by the Federal agency, with the written concurrence of the Service, that the action is not likely to adversely affect listed species or critical habitat, the consultation process is terminated, and no further action is necessary.” 50 C.F.R. § 402.13.

18 C.F.R. § 380.13(b)(1) (emphasis added); see also 50 C.F.R. § 402.08.

18 C.F.R. § 380.13(d); see also 50 C.F.R. § 402.14 (describing responsibilities of the federal action agency during formal consultation).

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We have not located any authority for NMFS consulting with a non-federal representative for the express purposes of revising a BO that was finalized in consultation with the action agency, without the action agency’s participation. NMFS cannot claim that such action was necessary by order of the district court. The court simply approved a course of action proposed by NMFS itself.

NMFS’s revision of the BO based on consultation with a non-federal representative and in the absence of the federal action agency was arbitrary and capricious.

C. **The Revised BO Does Not Use the Best Available Information to Evaluate the Impacts of the Minimum Flow Schedules on Listed Sturgeon and Their Habitat.**

The Revised BO finds:

Based on the best available data, the proposed project operations will continue to affect sturgeon by blocking access to habitat above the dam . . . . However, downstream, increases in flows, water quality, and habitat availability will improve existing spawning habitat compared to previous operations, and in turn should increase survival and recruitment. We believe that over the 40-year time frame of the proposed action, the population will retain the potential to recover and population growth is expected under the proposed operational changes. Thus, it is our opinion that the proposed action will not result in an appreciable reduction in the likelihood of shortnose sturgeon’s recovery in the wild. 490

Under ESA section 7(a)(2), 491 the Service is required to use the best available scientific and commercial data for purposes of formal consultation. 492

An overriding factor in carrying out consultations should always be the use of the best available scientific and commercial data to make findings regarding the status of a listed species, the effects of a proposed action on the species or critical habitat, and the determination of jeopardy/no jeopardy to listed species . . . 493

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490 Revised BO, pp. 142, 150 (stating the same conclusion for Atlantic sturgeon).


492 See Dow AgroSciences LLC v. Nat'l Marine Fisheries Serv., 707 F.3d 462, 465, 472 (4th Cir. 2013) (“Dow AgroSciences”) (“At bottom, we conclude that the Fisheries Service's failure to explain why it used the 96–hour exposure assumption renders the BiOp arbitrary and capricious.”);

“Under this standard, an agency must not ‘disregard[ ] available scientific evidence that is in some way better than the evidence [it] relies on.’”

The Revised BO finds that “current conditions, which include fragmented habitat, altered/reduced flow, and decreased water quality, have, in part, led to the continued low abundance of the Winyah Bay shortnose sturgeon population.” It finds that the minimum flow schedules proposed by the Commission will increase spawning habitat and survival of more juveniles below the Blewett Falls Development, thereby helping to rebuild the population, stabilize recruitment, and ultimately aid in the recovery of the species.

It does not make a specific finding regarding habitat availability in the Tillery Reach under the proposed new license because NMFS is not requiring listed sturgeon to be passed above Blewett Falls Dam at this time. This omission is inconsistent with NMFS’s recommendation to the Commission that it construct upstream and downstream volitional passage ways for listed sturgeon at both project dams in order to minimize or avoid adverse effects of the “proposed action on listed species or critical habitat to help implement recovery plans or to develop information.” It also is inconsistent with NMFS’s reservation of authority to require fish passage in the future.

The Revised BO relies on Index C to find that the proposed minimum flow schedule will increase spawning habitat and juvenile survival in the reach below the Blewett Falls Development to an extent that will aid in the recovery of the species.

As stated in Part One, Issue H.2, Index C is not a reliable scientific method to predict habitat availability under a minimum flow schedule in a reach where power discharges exceed the proposed minimum flows by a factor of 5 to 50.

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495 Revised BO, p. 141.

496 Id. at 142, 149.

497 Revised BO, p. 169.

498 Revised BO, p. 142.

499 Id. at 103-106.

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In addition to Index C, Duke Energy’s Instream Flow Study included Dual Flow Analysis. As stated in Part One, Issue H.3, we submitted evidence to NMFS that Dual Flow Analysis is the most reliable scientific method for predicting the effects of a minimum flow schedule on fish in a reach with non-constant flow. It predicts effective habitat, i.e., suitable habitat that is available when a development is making both minimum and power releases.

The Revised BO does not evaluate the Dual Flow results. NMFS has not responded to our requests that it do so. Those results show that effective habitat (measured in WUA) in the reach below Blewett Falls is still sharply increasing at 3000 cfs – the highest modeled minimum flow reported in the Instream Flow Study Report for all power discharges modeled. Three thousand cfs provides approximately 30-85% more effective habitat than the proposed minimum flow schedule for the Blewett Falls Development (1,200/2,400 cfs).

NMFS’s decision not to consider the Dual Flow Analysis in preparing the Revised BO, specifically the impacts analysis of the Project’s flow schedules on listed sturgeon, was arbitrary and capricious.

D. The Revised BO Does Not Adequately Address the Impacts of the New License’s Minimum Flow Requirements on the Survival and Recovery of Listed Sturgeon.

In the Revised BO, NMFS concludes that the new license is not likely to jeopardize the continued existence of shortnose or Atlantic sturgeon in the wild. This is based on its related

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501 See letter from Richard Roos-Collins (WPLG) to Roy E. Crabtree, Ph.D (NMFS), eLibrary no. 20120411-5248 (April 11, 2012); letter from Julie Gantenbein (WPLG) to Roy E. Crabtree, Ph.D (NMFS) (July 25, 2013) (transmitting Motion to Supplement the Record filed with FERC).

502 See letter from Julie Gantenbein (WPLG) to Roy E. Crabtree, Ph.D (NMFS), eLibrary no. 20140428-5023 (April 25, 2014).

503 Duke Energy did not disclose the model results for minimum flows greater than 3,000 cfs, so we do not know what minimum flow optimizes effective habitat for sturgeon spawning and incubation across a foreseeable range of power discharges. NMFS did not respond to our request that it request this information from the Commission.


505 Id.

506 Jeopardize “means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” 50 C.F.R. § 402.02.

507 Revised BO, p. 150.
finding that the Project will not appreciably reduce the likelihood of both survival and recovery of sturgeon despite the ongoing project impacts on sturgeon.\textsuperscript{508}

As stated in Part One, Issue H and Part Two, Issue C, the Revised BO’s analysis of project impacts on sturgeon is not based on the best available data.

Leaving aside the dispute as to whether Index C constitutes the best available data, the Index C results still show that the Project will continue to adversely affect listed sturgeon. The Index C data on which the Revised BO relies shows the flow schedules required by the new license will improve habitat, but not that they will provide good habitat.

The Revised BO states that, “FERC and the applicants expect the proposed modifications in operations to alleviate some of the chronic effects to sturgeon due to poor water quality.”\textsuperscript{509} The Revised BO agrees that there will be continuing impacts:

Although the proposed action will improve hydrologic conditions in the Yadkin-Pee Dee River from the status quo, the project will still affect the river through the presence of the dam, which will continue to alter the normal pattern of the river’s flow regime, and water quality parameters such as D.O. and water temperature.\textsuperscript{510}

The ESA requires no less than conservation of the species to the point where it no longer requires the protection of the Act.\textsuperscript{511} This means more than slowing the prolonged decline or marginally increasing the survivability rate, which is essentially what the Revised BO accepts. While population estimates have not been done and current population trends are unknown, according to NMFS, the best available information indicates the listed sturgeon in the Project area are at very low numbers, suggesting low survival and recruitment rates.\textsuperscript{512}

NMFS stated:

Given the assumption of a small population of spawning shortnose sturgeon (approximately 300 annual spawners) residing in this system, and given that this population has been under protection for approximately 40 years (listed in 1973), NMFS must assume that the Yadkin-Pee Dee River population of shortnose sturgeon is currently persisting, but not surviving. Said another way, this species continues to exist in this system, however it has not retained the potential for recovery due to persisting conditions

\textsuperscript{508} \textit{Id.}, pp. 142, 150 (stating the same opinion with regard to Atlantic sturgeon).

\textsuperscript{509} Revised BO, p. 109 (emphasis added).

\textsuperscript{510} \textit{Id.} at 109.

\textsuperscript{511} See 16 U.S.C. §§ 1531(b), 1532(3).

\textsuperscript{512} Revised BO, pp. 80, 119.
caused by the dam operations, fisheries (bycatch), and poor water quality, just to list a few. Survival is characterized by a species with a sufficient population, represented by all necessary age classes, genetic heterogeneity, and number of sexually mature individuals producing viable offspring, which exists in an environment providing all requirements for completion of the species' entire life cycle, including reproduction, sustenance, and shelter.\footnote{Id. at 139.}

NMFS did not explain how marginal enhancement over baseline conditions will be sufficient to contribute to survival and recovery, not just persistence, of the species. The Revised BO does not explain how an incremental increase of available habitat will do anything other than continue the slow decline into oblivion that the species are experiencing under current conditions. This is not reasoned decisionmaking.\footnote{See Gifford Pinchot Task Force v. U.S. Fish and Wildlife Serv., 378 F.3d 1059, 1072 (9th Cir. 2004) amended sub nom. Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv., 387 F.3d 968 (9th Cir. 2004).}

The Revised BO essentially finds that the river will still be inhospitable to listed sturgeon, though ever-so-slightly less so than before. Its “marginal benefit” analysis would allow these species to continue to be pushed down a “slow slide into oblivion,” which is “one of the very ills the ESA seeks to prevent.”\footnote{Nat’l Wildlife Fed’n v. NMFS, 481 F.3d 1224, 1235 (9th Cir. 2007) (“Under this approach, a listed species could be gradually destroyed, so long as each step on the path to destruction is sufficiently modest. This type of slow slide into oblivion is one of the very ills the ESA seeks to prevent.”).} In Aluminum Co. of America v. Bonneville Power Admin., the court reached the same conclusion:

We agree with NMFS that the regulatory definition of jeopardy, i.e., an appreciable reduction in the likelihood of both survival and recovery, 50 C.F.R. § 402.02, does not mean that an action agency can “stay the course” just because doing so has been shown slightly less harmful to the listed species than previous operations. Here, the species already stands on the brink of extinction, and the incremental improvements pale in comparison to the requirements for survival and recovery.\footnote{Id., 175 F.3d 1156, 1162 n.6 (9th Cir. 1999).}

The Revised BO’s finding that the minimal habitat gains provided by the flow requirements in the new license will be sufficient to contribute to survival and recovery, not just persistence, of the listed sturgeon species is arbitrary and capricious and otherwise not in accordance with the law.

\footnote{Id. at 139.}


\footnote{Nat’l Wildlife Fed’n v. NMFS, 481 F.3d 1224, 1235 (9th Cir. 2007) (“Under this approach, a listed species could be gradually destroyed, so long as each step on the path to destruction is sufficiently modest. This type of slow slide into oblivion is one of the very ills the ESA seeks to prevent.”).}

\footnote{Id., 175 F.3d 1156, 1162 n.6 (9th Cir. 1999).}

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E. The Revised BO Does Not Adequately Consider Reasonable and Prudent Measures to Minimize Harm.

In the Revised BO, includes an Incidental Take Statement (“ITS”), which states: “[d]espite mitigation measures aimed at reducing the negative impacts of this project to shortnose and Atlantic sturgeon, NMFS anticipates that the proposed action will result in incidental take of these listed species.” The ITS includes Reasonable and Prudent Measures and terms and conditions with which the Commission must comply for take under the ITS to be considered lawful. The Reasonable and Prudent Measures do not include additional flow releases. NMFS erred in not considering alternative minimum flow releases that would minimize harm to the listed sturgeon.

When issuing a biological opinion that concludes the agency action may result in the incidental taking of a listed species, NMFS must provide an ITS that specifies the impact of the taking and “[s]pecifies those reasonable and prudent measures that the Director considers necessary or appropriate to minimize such impact.” Reasonable and Prudent Measures must be based on the best scientific and commercial data available. NMFS must make an independent determination that such measures are appropriate to minimize take on the listed species.

The BO finds that the Project “will continue to alter the normal pattern of the rivers flow regime, and water quality parameters,” to the detriment of “fish movement, spawning, and community structure.” NMFS described the extent of flow-related disruption:

Although the increases in flow regime and water improvements over the status quo, for shortnose and Atlantic sturgeon, the project dams will continue to regulate flows, reducing peak flow rates, riverine flushing, floodplain inundation, foraging habitat quality and quantity, and spawning habitat quantity and quality, which will impact sturgeon.

Yet NMFS did not consider any alternative flow schedules for Tillery or Blewett Falls that would better mitigate the effect of the Project’s curtailment of “the extent of available

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“habitat” and modification of “sturgeon habitat downstream through a reduction in flow and water quality” in the course of developing the reasonable and prudent measures that would minimize the impacts of incidental take.\textsuperscript{524} As stated in Issue C, NMFS’s analysis of Project effects on sturgeon was not based on the best available scientific information. It did not consider the best available data in the form of Duke Energy’s Dual Flow Analysis results. This error affected its identification, development, and consideration of appropriate mitigation measures.

Although Reasonable and Prudent Measures, cannot alter the basic design, location, scope, duration, or timing of the action and may involve only minor changes,\textsuperscript{525} they may require a higher flow schedule.\textsuperscript{526} As stated in Part One, Issues E.3, F.3 – F.4, the Project would still be economically feasible under the City/AR Alternative. It would remain a sound investment from Duke Energy’s perspective.\textsuperscript{527} Yet NMFS did not evaluate higher minimum flow schedules as potential Reasonable and Prudent Measures in order to satisfy its obligations under the ESA.\textsuperscript{528}

NMFS did not make an independent determination that the measures it did include in the BO would minimize take of listed species.

NMFS’s decision not to consider Reasonable and Prudent Measures that include higher instream flow requirements despite evidence that the flow requirements under the new license would provide minimal habitat improvements where habitat is a factor limiting survival and recovery and that higher instream flows were economically feasible was arbitrary, capricious, abuse of discretion, and otherwise not in accordance with the law under APA section 706(2)(A).

\begin{itemize}
  \item \textsuperscript{524} Id. at 149.
  \item \textsuperscript{525} 50 C.F.R. § 402.14(i)(2).
  \item \textsuperscript{526} See City of Tacoma, Washington v. FERC, 460 F.3d 53, 75 (D.C. Cir. 2006) (upholding a reasonable and prudent measure that required a minimum instream flow of 240 cfs); Alabama Power Company, 56 FERC ¶ 61,173 (1991) (FERC accepted ramping flow schedule as a reasonable and prudent measure), \textit{pet’n for rev. denied, Ala. Power Co. v. FERC}, 979 F.2d 1561 (D.C. Cir. 1992) (declining to review FERC order that power company “increase the minimum amounts of water regularly released from its Jordan Dam on the Coosa River”).
  \item \textsuperscript{527} Expert Report of E3, ¶¶ 12-13 (“Duke would have a 22\% ROI on the YPD Project under the City/AR Flow Alternative. Specifically, Duke Energy would continue to receive value exceeding 22\% of its net capital investment in the entire project annually for the long, i.e. 30-50-year, term of the project license. The ROI’s for each alternative in FEIS Table 58, and for the City/AR Flow Alternative, would still be much higher than Duke’s current NCUC regulated ROR on its assets, which is only 7.88\%) (internal citations omitted).
  \item \textsuperscript{528} See Oregon Natural Res. Council v. Allen, 476 F.3d 1031, 1039 n. 7 (9th Cir. 2007) (criticizing Incidental Take Statement’s “failure to provide any meaningful measures to attempt to minimize incidental takings associated with the project”).
\end{itemize}

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PART THREE.
RELIEF REQUESTED

I.
RELIEF REQUESTED FROM THE COMMISSION

We request that the Commission consider the merits of Part One, vacate the License Order, and undertake further procedures consistent with its rules and policies to determine conditions for new license that will assure that the new license is best adapted to a comprehensive plan of development for the Sipsey Fork and Black Warrior River, and that will otherwise comply with the Commission’s statutory and regulatory obligations. Such procedures should include, but are not limited to the remedies listed below. The Commission should remand the proceeding to Staff to:

A. Undertake a technical conference to develop a work plan, and procedures for the participation of the Licensee, Petitioners, and other parties, to complete the tasks specified below.

B. Complete the Dual Flow Analysis in the Instream Flow Study. Duke Energy should be directed to submit the software used to prepare limited Dual Flow results, along with all related databases. Staff, Petitioners, and other parties should be permitted to run the software to evaluate the duration of available habitat in the Tillery Reach under the Staff Alternative and City/AR Alternative.

C. Conduct a recreational flow study in summer 2015, using standard methods to evaluate the comparative suitability of flow alternatives for boating and other forms of non-motorized recreation in the Tillery Reach. The study should evaluate the recreational capacity of the Tillery Reach for this purpose.

D. Complete a reconnaissance-level study of the feasibility of a retrofit to the Tillery Plant.

E. Supplement the FEIS to include the City/AR Alternative in the Developmental Analysis and reflect this other information.

II.
RELIEF REQUESTED FROM THE NATIONAL MARINE FISHERIES SERVICE

We request that the Secretary of Commerce consider the merits of Part Two, vacate the Revised BO, and undertake further procedures consistent with its rules and policies to determine conditions that would insure that the Project will not adversely affect listed sturgeon or their habitat and will in fact contribute to the survival and recovery of such resources.
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Dated: May 1, 2015

Respectfully submitted,

_________________________

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Attorneys for CITY OF ROCKINGHAM,
NORTH CAROLINA and AMERICAN
RIVERS
CERTIFICATE OF SERVICE

I, Jessica Mangaccat, hereby certify that I have caused a copy of the foregoing document to be served on each person designated on the official service list compiled by the Secretary of the Commission in this proceeding on this 1st day of May 2015.

_________________________
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