

**BEFORE THE
UNITED STATES DEPARTMENT OF COMMERCE**

Carolina Power & Light Company,)
Yadkin-Pee Dee Hydroelectric Project)
(FERC No. P-2206-030)) Hearing No. _____

**CAROLINA POWER & LIGHT COMPANY’S
REQUEST FOR TRIAL-TYPE HEARING
UNDER SECTION 18 OF THE FEDERAL POWER ACT**

Pursuant to Section 18 of the Federal Power Act, as amended, 16 U.S.C. § 811, and regulations of the United States Department of Commerce (“Commerce”), 50 C.F.R. Part 221, promulgated thereunder, Carolina Power & Light Company, d/b/a Progress Energy Inc. (“Progress”) hereby requests a trial-type hearing before an Administrative Law Judge (“ALJ”) on certain disputed issues of material fact with respect to the fishway prescription filed by Commerce’s National Marine Fisheries Service (“NMFS”) on May 12, 2007, for the Yadkin-Pee Dee Hydroelectric Project (FERC No. P-2206).¹

I. Background

On April 25, 2006, Progress filed with the Federal Energy Regulatory Commission (“FERC”) an application for a new license for the continued operation of its Yadkin-Pee Dee Hydroelectric Project (FERC No. 2206). Progress Ex. 84.² The existing license for the project was issued in 1958 and is set to expire on April 30, 2008. The project consists of two hydroelectric developments located on the Yadkin-Pee Dee River system in North Carolina—the

¹ Progress is also filing a hearing request with the United States Department of the Interior (“Interior”) with respect to certain issues of material fact relating to prescriptions filed by Interior’s Fish & Wildlife Service for this project.

² A full list of exhibits supporting this hearing request is attached as Appendix A, as required by 50 C.F.R. § 221.21(c). Appendix A indicates whether each exhibit is contained in the license proceeding record before FERC. Exhibits that are not contained in the FERC record are submitted with this hearing request on the enclosed compact disc.

upstream Tillery Development and the downstream Blewett Falls Development. Each development consists of a dam, powerhouse, impoundment, and related structures, equipment, and property interests. A complete description of the developments, their current operation, and their proposed continued operation is provided in Progress' application filed with FERC. Progress Ex. 84.

On March 13, 2007, FERC issued a Notice of Application Ready for Environmental Analysis ("REA"). NMFS filed its fishway prescription on May 12, 2007. As required by FERC's regulations, NMFS' filing sought to "identify and explain the [] prescriptions and their evidentiary and legal basis." 18 C.F.R. § 4.34(b)(1).

II. Legal Framework for Section 18 Trial-Type Hearings

Section 18 of the Federal Power Act says that FERC shall require the construction, maintenance, and operation by a hydroelectric project licensee of "such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate." 16 U.S.C. § 811. In 1992, Congress defined the term "fishway" as used in Section 18 by providing that "the items which may constitute a 'fishway' under section 18 [] for the safe and timely upstream and downstream passage of fish *shall be limited to physical structures, facilities, or devices necessary to maintain all life stages of such fish*, and project operations and measures related to such structures, facilities, or devices which are necessary to ensure the effectiveness of such structures, facilities, or devices for such fish." Pub. L. No. 102-486, Title XVII, § 1701(b), 106 Stat. 3008 (Oct. 24, 1992) (emphasis added).

Congress amended Section 18 of the Federal Power Act in 2005 to provide licensees with the opportunity for a trial-type hearing on disputed issues of material fact with respect to

fishways prescribed by Commerce and/or Interior. Section 18 now contains the following provision:

The license applicant . . . shall be entitled to a determination on the record, after opportunity for an agency trial-type hearing of no more than 90 days, on any disputed issues of material fact with respect to such fishways. All disputed issues of material fact raised by any party shall be determined in a single trial-type hearing to be conducted by the relevant resource agency in accordance with the regulations promulgated under this subsection and within the time frame established by the Commission for each license proceeding. Within 90 days of August 8, 2005, the Secretaries of the Interior, Commerce, and Agriculture shall establish jointly, by rule, the procedures for such expedited trial-type hearing, including the opportunity to undertake discovery and cross-examine witnesses, in consultation with the Federal Energy Regulatory Commission.

Id. (codified at 16 U.S.C. § 811). Commerce issued interim procedural regulations implementing this provision, effective November 17, 2005. 70 Fed. Reg. 69804 (Nov. 17, 2005) (codified at 50 C.F.R. Part 221, subparts A & B).³ These interim regulations remain in effect.

Also in 2005, Congress added a provision to the Federal Power Act requiring Commerce to accept alternative fishway prescriptions proposed by licensees in lieu of prescriptions filed by the department, if certain factual prerequisites are present. Pub. L. No. 109-58, Title II, § 241(c), 119 Stat. 675 (Aug. 8, 2005) (codified at 16 U.S.C. § 823d). Under this new provision,

(2) [The Departments] shall accept and prescribe, and the Commission shall require, the proposed alternative [of the license applicant], if the Secretary of the appropriate department determines, based on substantial evidence provided by the license applicant, any other party to the proceeding, or otherwise available to the Secretary, that such alternative—

(A) will be no less protective than the fishway initially prescribed by the Secretary; and

(B) will either, as compared to the fishway initially prescribed by the Secretary—

(i) cost significantly less to implement; or

³ Notwithstanding any procedural requirements in these regulations to the contrary, Progress Energy reserves its right under Section 18 to request a trial-type hearing and propose alternatives to NMFS' final prescriptions.

(ii) result in improved operation of the project works for electricity production.

(3) In making a determination under paragraph (2), the Secretary shall consider evidence provided for the record by any party to a licensing proceeding, or otherwise available to the Secretary, including any evidence provided by the Commission, on the implementation costs or operational impacts for electricity production of a proposed alternative.

16 U.S.C. § 823d(b).

Like the provision on trial-type hearings, Commerce has issued interim procedural regulations implementing this provision. 70 Fed. Reg. 69804 (Nov. 17, 2005) (codified at 50 C.F.R. Part 221, subparts A & C). Contemporaneously with this request for a trial-type hearing, Progress is submitting proposed alternative fishway prescriptions to NMFS, which Progress contends must be accepted by NMFS and required by FERC in lieu of NMFS' prescription, if any fishway is required.

Trial-type hearings are limited to “disputed issues of material fact with respect to [the prescribed] fishways.” 16 U.S.C. § 811. Under Commerce’s regulations, a “material fact” subject to a hearing is “a fact that, if proven, may affect a Department’s decision whether to affirm, modify, or withdraw any condition or prescription.” 50 C.F.R. § 221.2. Given the legal framework controlling fishway prescriptions, there are at least three types of facts that, if proven, may affect Commerce’s decision whether to affirm, modify, or withdraw the prescriptions previously submitted to FERC: 1) facts that would undermine the scientific, biological, or other evidentiary basis or rationale for the prescription filed by NMFS; 2) facts that would demonstrate that the prescription filed by NMFS does not in fact constitute a “fishway” as defined by statute; or 3) facts that are prerequisites to the requirement that Commerce accept an alternative prescription submitted by Progress. The disputed issues of fact set forth by Progress below fall within one or more of these categories and are thus “material.”

III. Disputed Issues of Material Fact

Below is a list of disputed factual issues, each stated in a single concise sentence. Under each issue are 1) the specific factual statements made or relied upon by NMFS that Progress disputes; 2) the basis for Progress' position that such statements by NMFS are unfounded or erroneous; 3) the basis for Progress' position that the factual dispute is material; and 4) with respect to any scientific studies, literature, and other document information supporting Progress' position, specific citations to the information relied upon. *See* 50 C.F.R. § 221.21(b).

In addition, attached to this submission are a list of exhibits (Appendix A) and a list of witnesses (Appendix B) which Progress intends at this time to present at the hearing. *See* 50 C.F.R. § 221.21(c). For each exhibit listed, Appendix A states whether the exhibit is contained in the FERC record; if not, a copy is provided with this request on the enclosed compact disc. For each witness listed, Appendix B provides his or her name, address, telephone number, and qualifications and a brief narrative summary of his or her expected testimony. Progress reserves the right to amend both lists, introduce rebuttal exhibits, call rebuttal witnesses, and to present demonstrative exhibits at the hearing.

Disputed Issue #1: Fish passage at Blewett Falls Dam is necessary to maintain all life stages of American Shad in the Yadkin-Pee Dee River system.

1. Specific factual statements by NMFS that are unfounded or erroneous

“Higher quality or optimum spawning habitat” for American shad in the Yadkin-Pee Dee River system consists of “higher-gradient rapids complex reaches with bedrock, boulder, and cobble-gravel substrates with low imbeddedness.” NMFS at 7.⁴ Higher quality to optimal historically available spawning habitat for American shad in the Yadkin-Pee Dee River system has been blocked by dams, limiting higher quality spawning habitat to the 23 river miles

⁴ The notation “NMFS at #” refers to specific page numbers in NMFS' May 12, 2007 prescription filing.

immediately below Blewett Falls Dam. *Id.* at 7. The remaining 170 miles of mainstem riverine habitat below Blewett Falls is of limited spawning habitat suitability for American shad. *Id.*

In the Yadkin-Pee Dee basin, the fall line shoals areas extend well into the Piedmont past High Rocks Dam. *Id.* at 12. Lack of fish passage at Blewett Falls Dam continues to deny American shad access to historical spawning habitats. *Id.* at 13. The life history and distribution of American shad have been previously provided in detail in NMFS' comments on the Initial Consultation Document and Draft License Application. *Id.* at 14.

2. Why NMFS' statements are unfounded or erroneous

Upstream fish passage at Blewett Falls Dam is not necessary to maintain all life stages of American shad in the Yadkin-Pee Dee River system. There are no essential or critical habitats located upstream that are necessary for the long-term viability of the American shad population in the river downstream of the dam. The Pee Dee River below Blewett Falls Dam currently supports a stable, healthy, reproducing, and self-sustaining population of American shad. This population is sizeable enough to support a commercial gill netting fishery in South Carolina waters and recreational fisheries in both North Carolina and South Carolina waters. There is no evidence to suggest that the river and associated larger tributaries below Blewett Falls Dam have reached the carrying capacity of the American shad population. Progress Energy's proposed additional instream flow enhancements during the next license term will expand the existing habitat carrying capacity for adult spawning as well as young-of-year recruitment for the Pee Dee River below Blewett Falls Dam. These instream flow enhancements will provide more direct benefits to expanding the existing population as compared to attempts at expanding the physical area potentially available within the watershed through passage at an existing dam.

The Fall Line does not extend well into the Piedmont physiographic region past High Rock Lake as asserted by NMFS. The Fall Line Zone runs approximately north to northeast through North Carolina from Richmond County (southern state border) to Northhampton County (northern state border). Its name arises from the occurrence of waterfalls and rapids that are the inland barriers to navigation where the upstream limit of navigation is near Cheraw, South Carolina.

3. Why the factual dispute is material

This is a material fact with respect to NMFS' prescription and thus properly included in this trial-type hearing. *See* 16 U.S.C. § 811. If proven, this fact may affect Commerce's decision whether to affirm, modify, or withdraw NMFS' prescription because it would undermine the scientific, biological, or other evidentiary basis or rationale for the prescription filed by NMFS; would demonstrate that the prescription filed by NMFS does not in fact constitute a "fishway" as defined by statute; and speak to the protectiveness of the alleged fishway prescribed by NMFS and thus inform Commerce's consideration of Progress' alternatives. *See* 50 C.F.R. § 221.2.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 21, 33, 38, 41, 42, 47, 48, 54-9, 74, 84, 89, 90, 94-7, 102, 107.

Disputed Issue #2: Lack of fish passage at Blewett Falls Dam is suppressing the existing American Shad population in the Yadkin-Pee Dee River system.

1. Specific factual statements by NMFS that are unfounded or erroneous

The construction of Blewett Falls Dam resulted in a reduction of the American shad population in the Yadkin Pee-Dee River system. NMFS at 6-7. The historic records do not show a dramatic decline in the American shad fishery in the Yadkin Pee-Dee River system until

the construction of Blewett Falls Dam. *Id.* Lack of fish passage facilities at Blewett Falls Dam suppresses the American shad population in the Yadkin-Pee Dee River system and perpetuates the continued decline or stabilized low population levels of American shad in the Yadkin-Pee Dee River system. *Id.* at 13-15.

2. Why NMFS' statements are unfounded or erroneous

Lack of fish passage has not suppressed the American shad population in the Yadkin-Pee Dee River system. The Pee Dee River below Blewett Falls Dam currently supports a stable, healthy, reproducing, and self-sustaining population of American shad. This population is sizeable enough to support a commercial gill netting fishery in South Carolina waters and recreational fisheries in both North Carolina and South Carolina waters. The Atlantic States Marine Fisheries Commission ("ASMFC") is currently drafting a comprehensive stock assessment of the American shad population for the Pee Dee River, and preliminary data analysis indicates the population is stable, neither declining nor increasing in abundance.

Contemporary as well as historic data indicates that over fishing, water pollution, and non-native fish introductions have played major roles in suppressing Atlantic East Coast shad fisheries, including in the Yadkin-Pee Dee River, rather than just the presence of dams. Stevenson's 1898 account of the American shad population in the Yadkin-Pee Dee River system noted overfishing as a major concern in the late 1800s based on the amount of commercial fishing activity in the lower Coastal Plain sections of the river. Overfishing is playing a major role in American shad declines, as evidenced by the closing of the ocean intercept fishery by the ASFMC in 2005 to reduce fishing mortality. Population declines have occurred in rivers where dams are not present, suggesting other factors are influencing declines of American shad populations along the Atlantic East Coast.

Stevenson's (1898) account, relied on by NMFS to justify passing fish upstream, itself acknowledges that the degree of impact on shad populations is dependent upon the amount of spawning habitat located downstream of the obstruction. Today, the Pee Dee River has a substantial amount of habitat available downstream for shad spawning and rearing irrespective of the lack of passage at Project dams. Contrary to NMFS' assertion, access to high gradient, coarse substrate habitat is not critical for shad reproduction. Shad spawning data from the river shows that the fish utilize a variety of spawning habitats in both Coastal Plain and Piedmont sections of the river. Approximately 188 miles of free-flowing river—and several hundred miles of larger tributaries such as the Waccamaw, Little Pee Dee, and Lynches Rivers—exist from the Blewett Falls Dam to the mouth of Winyah Bay. The main stem river and tributaries currently provide substantial amounts of spawning and rearing habitat for American shad. Suitable spawning habitat exists and is utilized by American shad in the Piedmont Fall Line Zone in North Carolina and South Carolina and the Coastal Plain portion of the river in South Carolina.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 4, 7, 9, 14, 21, 33, 38, 41-2, 44, 47-8, 51, 54-9, 72-4, 84, 89, 90, 94-7, 102-4, 107, 113.

Disputed Issue #3: Fish passage at Blewett Falls Dam would increase the size of the American shad population in the Yadkin-Pee Dee River system.

1. Specific factual statements by NMFS that are unfounded or erroneous

Passage above Blewett Falls Dam would reopen 21 miles of mainstem Pee Dee River rocky shoal habitat and 225 miles of tributaries to American shad and other target species.

NMFS at 7-8. Passage above both Blewett Falls and Tillery Dams would open an additional 29 miles of mainstem and tributaries reaches, for a total of 275 miles. *Id.* at 8. Removal of all impediments in the Yadkin-Pee Dee River would make 4,700 to 5,000 acres of suitable habitat available to shad above Blewett Falls and increase the river's carrying capacity for shad by 239,000 to 250,000 fish. *Id.* at 7-8. Fishways designed to be compatible with NMFS-approved engineering criteria would result in the timely, safe, and effective passage of shad. *Id.* at 14.

2. Why NMFS' statements are unfounded or erroneous

Passage of American shad upstream of Blewett Falls Dam is of questionable value and poses a negative risk to the existing healthy population located below the dam. There is a substantial risk that moving a sizeable portion of the American shad population upstream, as NMFS proposes, will harm the population existing downstream of Blewett Falls Dam due to several uncontrollable factors that would prevent successful recruitment of young-of-year, including poor water quality and habitat degradation due to ongoing sedimentation from non-point sources and point source discharges; predation from non-native and stocked predators; competitive interactions with native and non-native species; and cumulative passage mortality effects. Juveniles may also become trapped in upstream river areas or delayed in out migration due to the number of reservoirs in the system and thereby exposed to additional mortality sources. In the Yadkin-Pee Dee River system, the majority of American shad are one-time spawners. This biological fact presents a high risk to a migratory population if upstream passage efforts fail to produce successful recruitment of young into the population given that anadromous populations have strong fidelity to their natal rivers. Poor or failed recruitment of successive year classes of shad due to these factors would result in a net decrease to the existing healthy

downstream population within a relatively short period of time (one to two life generations or six to twelve years).

Shad reproduction is not dependent on only high gradient shoal habitat in the Piedmont region of the river but can occur over a variety of small to large substrate types including sand, gravel, cobble, boulder, and bedrock. Life history studies and commercial fishery data indicate that reproducing populations exist in Coastal Plain rivers and other river systems that are low gradient with finer substrates such as sand and gravel.

NMFS overstates the amount of habitat available for spawning and rearing of American shad in the river basin above Blewett Falls Dam and the carrying capacity benefits of upstream passage. American shad are primarily main stem river spawners. NMFS incorrectly assumes that American shad will use smaller fifth order streams, which comprise 17% and 42% of NMFS' estimated carrying capacity numbers and available habitat, respectively. NMFS' analysis includes stream habitat in its target shad estimates that was identified as impaired due to poor water quality in the desktop analysis, NMFS had agreed with other parties to exclude these tributaries. The desktop methodology relied on by NMFS has not been verified.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 8-13, 21-2, 33, 38, 41-2, 44, 47-8, 50-1, 54-9, 86, 89, 90, 92, 94-7, 109, 102, 107, 113.

Disputed Issue #4: Fish passage at Blewett Falls Dam is necessary to maintain all life stages of American eel in the Yadkin-Pee Dee River system.

1. Specific factual statements by NMFS that are unfounded or erroneous

Information is lacking on the status and population of American eel in the Winyah Bay-Pee Dee system. NMFS at 6. Implementation of upstream and downstream passage as prescribed by NMFS will protect and enhance the abundance of American eel in the Yadkin Pee-Dee River system. *Id.* at 10-11. Lack of fish passage facilities at Blewett Falls Dam suppresses the American eel population in the Yadkin Pee-Dee River system. *Id.* at 13. The life history and distribution of American eel have been previously provided in detail in NMFS' comments on the Initial Consultation Document and Draft License Application. *Id.* at 14.

2. Why NMFS' statements are unfounded or erroneous

Upstream fish passage at Blewett Falls Dam is not necessary to maintain all life stages of American eel in the Yadkin-Pee Dee River system. There are no essential or critical habitats located upstream that are necessary for the long-term viability of the American eel population. Given that American eel spawn in the Sargasso Sea, there is no eel spawning habitat within the Yadkin-Pee Dee River above the Blewett Falls Dam.

The Pee Dee River below Blewett Falls Dam currently supports an abundant population of American eel. There is no evidence to suggest that the river and associated larger tributaries below Blewett Falls Dam have reached the carrying capacity of the American eel population. Progress Energy's proposed additional instream flow enhancements during the next license term will expand the existing habitat carrying capacity for the Pee Dee River below Blewett Falls Dam. These instream flow enhancements will provide more direct benefits to expanding the existing population rather than passing a portion of an established population upstream. Data from a year of high elver captures indicates that the Pee Dee River below the Blewett Falls Dam has yet to reach its carrying capacity for the American eel.

Passage of eel above Blewett Falls Dam would subsequently expose the eel to increased risk of mortality associated with their downstream passage. Downstream eel passage is currently unproven, and, under certain circumstances, downstream passage through hydroelectric facility turbines may result in increased mortality rates for the American eel. There are no records of successful downstream passage rates for American eel at hydroelectric facilities.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 5, 20, 23-5, 27-8, 30-32, 35, 37, 52-3, 60, 70, 74-6, 79-84, 98, 106, 110-2, 114-5.

Disputed Issue #5: Fish passage of American eel above Blewett Falls Dam would increase the size of the American eel population in the Yadkin-Pee Dee river system.

1. Specific factual statements by NMFS that Progress disputes

Information is lacking on the status and population of American eel in the Winyah Bay-Pee Dee system. NMFS at 6. Peak activity for American eel “elvers” migrating upstream in the Yadkin-Pee Dee River system is July and August. *Id.* at 10. Implementation of upstream and downstream passage as prescribed by NMFS will protect and enhance the abundance of American eel in the Yadkin Pee-Dee River system. *Id.* at 10-11. In order to facilitate expanded eel populations in the Yadkin-Pee Dee basin, implementation of upstream and downstream passage is needed at the project. *Id.* at 11. Lack of fish passage facilities at Blewett Falls Dam suppresses the American eel population in the Yadkin Pee-Dee River system. *Id.* at 13. Fishways designed to be compatible with NMFS-approved engineering criteria would result in the timely, safe, and effective passage of American eel at Blewett Falls Dam. *Id.* at 14.

2. Why NMFS' statements are unfounded or erroneous

There is no evidence to suggest that the river and associated larger tributaries below Blewett Falls Dam have reached the carrying capacity of the American eel population. Progress' proposed additional instream flow enhancements during the next license term will expand the existing habitat carrying capacity for the Pee Dee River below Blewett Falls Dam. These instream flow enhancements will provide more direct benefits to expanding the existing population than will passing a portion of a persistent and abundant stable population upstream. Data from years of high elver captures indicates that the Pee Dee River below the Blewett Falls Dam has yet to reach its carrying capacity for the American eel.

Passage of eel above Blewett Falls Dam would expose the eel to increased risk of mortality associated with downstream passage. Downstream eel passage is unproven, and, under certain circumstances, downstream passage through hydroelectric facility turbines may result in increased mortality rates for the American eel. There are no records of successful downstream passage rates for American eel at hydroelectric facilities. Actively moving eel upstream of Blewett Falls Dam will accelerate the spread of the exotic eel parasite *Anguillicola crassus* present in the Yadkin-Pee Dee River system, thereby negatively impacting the existing eel population and moving this parasite further up the river basin.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 5, 20, 23-5, 27-8, 30-32, 35, 37, 52-3, 60, 70, 74-6, 79-84, 98, 106, 110-2, 114-5.

Disputed Issue #6: Fish passage at Blewett Falls Dam is necessary to maintain all life stages of blueback herring in the Yadkin-Pee Dee river system.

1. Specific factual statements by NMFS that are unfounded or erroneous

“Higher quality or optimum spawning habitat” for blueback herring in the Yadkin-Pee Dee River system consists of “higher-gradient rapids complex reaches with bedrock, boulder, and cobble-gravel substrates with low imbeddedness.” NMFS at 7. Higher quality to optimal historically available spawning habitat for blueback herring in the Yadkin-Pee Dee River system has been blocked by dams, limiting higher quality spawning habitat to the 23 river miles immediately below Blewett Falls Dam. *Id.* at 7. The remaining 170 miles of mainstem riverine habitat below Blewett Falls is of limited spawning habitat suitability for blueback herring. *Id.*

Herring upstream migrations and distributions in Atlantic river basins are similar to American shad. *Id.* at 10. Lack of fish passage facilities at Blewett Falls Dam suppresses the blueback herring population in the Yadkin Pee-Dee River system. *Id.* at 13. Fishways designed to be compatible with NMFS-approved engineering criteria would result in the timely, safe, and effective passage of blueback herring at Blewett Falls Dam. *Id.* at 14. The life history and distribution of blueback herring have been previously provided in detail in NMFS’ comments on the Initial Consultation Document and Draft License Application. *Id.* at 14.

2. Why NMFS’ statements are unfounded or erroneous

Passage of blueback herring above Blewett Falls Dam is not necessary to maintain all life stages of blueback herring in the Yadkin-Pee Dee River system. The Pee Dee River below Blewett Falls Dam supports a self-sustaining blueback herring population that is stable enough to support a commercial fishery in the Coastal Plain region. Populations of blueback herring have been reported as presumably secure in the Waccamaw-Pee Dee and Santee-Cooper river system. There are significant amounts of spawning habitat, including mainstem river, tributary, and

backwater area, located in the Coastal Plain section of the Pee Dee River below Blewett Falls Dam. These habitats serve as the major areas of blueback spawning and larval and juvenile rearing habitat. There are existing self-sustaining land-locked populations of blueback herring in the Yadkin-Pee Dee River chain of reservoirs. Introducing a portion of the anadromous population upstream will pose risk through genetic, behavioral, and competitive interactions with these land-locked populations.

Blueback herring utilize a variety of riverine habitats for spawning and larval rearing. The species spawns in large rivers, small streams, ponds, and large lakes over a wide range of substrates such as gravel, sand, detritus, and submerged vegetation. Upstream spawning migration of blueback herring may be partly dependent upon the availability of suitable substrate for egg adhesion near the coast. Therefore, if a large amount of spawning habitat is available in the lower riverine areas, the fish will spawn in these areas. The ratio of herring to shad decreases with distance upriver. This spatial pattern occurs in the Yadkin-Pee Dee River system. In migratory fish surveys on the Yadkin-Pee Dee River system, 87% of the adult blueback herring in spawning condition were collected from the middle and lower Coastal Plain portions of the river.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 29, 39, 45, 49, 54-9, 71, 74, 84, 96-7.

Disputed Issue #7: Fish passage above Blewett Falls Dam would increase the size of the blueback herring population in the Yadkin-Pee Dee River system.

1. Specific factual statements by NMFS that are unfounded or erroneous

Fish passage above Blewett Falls Dam would reopen 21 miles of mainstem Pee Dee River rocky shoal habitat and 225 miles of tributaries to blueback herring. NMFS at 7-8. Fish passage above both Blewett Falls and Tillery Dams would open up an additional 29 miles of mainstem and tributaries reaches, for a total of 275 miles. *Id.* at 8.

2. Why NMFS' statements are unfounded or erroneous

There are significant amounts of spawning habitat, including mainstem river, tributary, and backwater area, located in the Coastal Plain section of the Pee Dee River below Blewett Falls Dam. These habitats serve as the major areas of blueback spawning and larval and juvenile rearing habitat. Upstream spawning migration of blueback herring may be partly dependent upon the availability of suitable substrate for egg adhesion near the coast. Therefore, if a large amount of spawning habitat is available in the lower riverine areas, the fish will spawn in these areas. The ratio of herring to shad decreases with distance upriver. This spatial pattern occurs in the Yadkin-Pee Dee River system. In migratory fish surveys on the Yadkin-Pee Dee River system, 87% of the adult blueback herring in spawning condition were collected from the middle and lower Coastal Plain portions of the river.

NMFS has overstated the amount of habitat available for spawning and rearing of blueback herring in the river basin above Blewett Falls Dam and subsequently the carrying capacity benefits of upstream passage. NMFS' reliance on the desktop GIS methodology overstates the potential habitat and restoration capacity benefits in the system. NMFS incorrectly assumes that blueback herring will use the smaller fifth order streams which comprise 17% of NMFS' estimated available habitat and carrying capacity numbers. NMFS' analysis also

includes stream habitat in its target shad estimates that was identified as impaired due to poor water quality in the desktop analysis, after agreement with other cooperating parties to exclude these tributaries. The desktop methodology relied on by NMFS has not been verified with a systematic quantifiable field-based habitat study to determine what is actually suitable habitat based on field measurements of substrate type, water depth and velocity, water quality, and other influential habitat parameters.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 29, 39, 45, 49, 54-9, 71, 74, 84, 96-7.

Disputed Issue #8: The upstream migration period for American shad and blueback herring is February 15 through May 15

1. Specific factual statements by NMFS that are unfounded or erroneous

The upstream migration period for American shad and blueback herring is February 15 through May 15. NMFS at 21.

2. Why NMFS' statements are unfounded or erroneous

The upstream migration passage window relied on by NMFS is too early for the bulk of the American shad and blueback herring spawning runs in the Yadkin-Pee Dee River system. American shad spawning can occur with water temperatures ranging from 6 to 26°C. However, the bulk of upstream migration and subsequent spawning of American shad occurs primarily during the March through May period when water temperatures are consistently greater than 12°C. Most spawning run activity usually occurs from 13-25°C. Adult and egg and larval data indicate peak upstream American shad migration and spawning occurs in April and May with

most adult shad caught from early March through early June. Water quality data show that that water temperatures throughout the river reach below Blewett Falls Dam do not consistently remain above 12°C until early to mid March. The timing of inland migration, spawning, and development of blueback herring closely follows the behavior of American shad. Peak catches of adult blueback herring in the lower Pee Dee River occurred in March and April with water temperatures ranging from 10.9 to 14.2°C. Peak catches of eggs and larvae occurred in April and May.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 8, 9, 12-3, 44, 59, 74, 84, 104, 113.

Disputed Issue #9: The downstream migration period for American shad and blueback herring is year round

1. Specific factual statements by NMFS that are unfounded or erroneous

The downstream migration period for American shad and blueback herring is year round. NMFS at 21.

2. Why NMFS' statements are unfounded or erroneous

The downstream out-migration period of American shad and blueback herring in the Pee Dee River occurs during September through early December. Out-migration of juvenile shad is triggered by water temperatures (decreasing), flow rates, and day light length (decreasing) and varies considerably latitudinally along the Atlantic East Coast river systems. It is reported that

juvenile out migration in south, mid Atlantic, and northeastern rivers occurs when temperatures ranged from 15.5 to 21.5°C.

3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 15, 34, 44, 59, 93, 104, 113.

Disputed Issue #10: Fish passage at Blewett Falls Dam is necessary to maintain all life stages of Atlantic and shortnose sturgeon in the Yadkin-Pee Dee river system.

1. Specific factual statements by NMFS that are unfounded or erroneous

Reduced flows due to hydropower operations impedes movements of Atlantic and shortnose sturgeon in the Yadkin-Pee Dee River system. NMFS at 11. Spawning habitat zones typically include boulder-bedrock, cobble and gravel shoal habitats with substrate, water quality, and current characteristics suitable for spawning and survival of egg and larval stages. *Id.* at 12. In the Yadkin-Pee Dee basin, the fall line shoal areas extend well into the Piedmont past High Rocks Dam. *Id.* Trapping sturgeon species below Blewett Falls Dam and returning them to the river below Blewett Falls Dam provides for the safe and timely upstream and downstream passage of fish. *Id.* at 15, 22.

2. Why NMFS' statements are unfounded or erroneous

The Pee Dee River below Blewett Falls Dam currently provides sufficient mobility and utilization of habitat by resident Atlantic and shortnose sturgeon. There is no information demonstrating that Blewett Falls Dam places any impediments to reproductive success,

population viability, or mobility of resident Atlantic and shortnose sturgeon in the Pee Dee River.

Shortnose sturgeon populations within the Pee Dee River system prefer spawning habitat in the Coastal Plain region of the river, which is thirty or more river miles below Blewett Falls Dam. There would be no benefits to the existing shortnose or Atlantic sturgeon populations from NMFS' prescription.

It has been documented that the deterioration of water quality, which negatively impacts the nursery function of the shortnose sturgeon's summer refugia habitat, is a critical element to the growth of the sturgeon population in southeast rivers. The water quality found in the narrow band of salinity that defines the sturgeon habitat during the summer is the most critical threat to the success and future growth of the existing sturgeon populations in southeastern rivers, not lack of upstream passage.

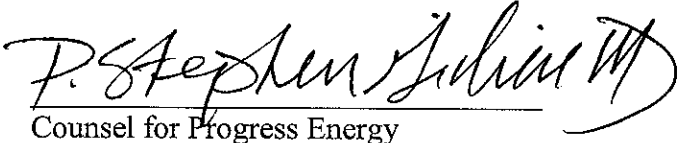
3. Why the factual dispute is material

Progress incorporates by reference its answer under heading 3 of Disputed Issue #1.

4. Specific citations to scientific studies, literature, and other information

The following numbered exhibits listed in the attached Appendix A support Progress' position on this issue: Exhibits 2, 6, 16-9, 24, 26, 36, 40, 43, 61, 63, 65, 66, 69, 74-6, 78-80, 82-4, 91, 99-101.

Respectfully submitted,


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CERTIFICATE OF FILING AND SERVICE

Pursuant to 50 C.F.R. § 221.12, I hereby certify that this request for a hearing was filed by sending an original document by express mail on June 8, 2007, for delivery by the next business day to the following:

Chief, Habitat Protection Division
Office of Habitat Conservation
National Marine Fisheries Service
United States Department of Commerce
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Silver Spring, Maryland 20910
301-713-4300 (telephone)
301-713-4305 (facsimile)

Pursuant to 50 C.F.R. § 221.13(a)(1), I hereby certify that this request was served on June 8, 2007, by sending a copy by express mail on that date for delivery by the next business day to the following:

Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

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**BEFORE THE
UNITED STATES DEPARTMENT OF COMMERCE**

Carolina Power & Light Company,)
Yadkin-Pee Dee Hydroelectric Project)
(FERC No. P-2206-030)) Hearing No. _____

**APPENDIX B
LIST OF WITNESSES SUPPORTING PROGRESS ENERGY’S REQUEST FOR
SECTION 18 TRIAL-TYPE HEARING**

1. **Stephen H. Arnold**, Devine Tarbell & Assocs., Inc., 970 Baxter Boulevard, Portland, ME 04103, (207) 775-4495. Mr. Arnold has Bachelor’s degrees in both Biology and Natural Resources, and a Master’s degree in Biology – Aquatic Ecology. Mr. Arnold currently serves as Senior Aquatic Scientist with Devine Tarbell, where he has more than 22 years of consulting experience in aquatic ecology, fisheries, wetland, and water quality studies, general environmental impact analysis and assessments, and Federal and State licensing and permitting activities.

Mr. Arnold is expected to testify on the state of the American eel population in the Yadkin-Pee Dee river system and the negative impacts on that population the Departments’ prescriptions will have.

2. **John U. Crutchfield**, Progress Energy Carolinas, Inc., 410 S. Wilmington Street, Raleigh, NC 27502-1551, (919) 546-7095. Mr. Crutchfield has Bachelor’s and Master’s degrees in zoology (the latter with an emphasis on Aquatic Ecology). He is a Certified Fisheries Professional with the American Fisheries Society. Mr. Crutchfield currently serves as Lead Environmental Specialist for Progress, where he applies his more than 20 years of professional

experience in environmental and aquatic analysis of North Carolina river systems, including the Yadkin-Pee Dee.

Mr. Crutchfield is expected to testify on the current status of the American shad, American eel, bluback herring, and Atlantic and shortnose sturgeon populations in the Yadkin-Pee Dee River, including their habitat in the river and the ecological consequences fish passages will have on these populations.

3. **John Devine**, Devine Tarbell & Assocs., Inc., 970 Baxter Boulevard, Portland, ME 04103, (207) 775-4495. Mr. Devine has a Bachelor's degree in Civil Engineering, graduate coursework in Water Resources, and is a registered professional engineer. Mr. Devine currently serves as the president of the hydropower specialty firm of Devine Tarbell, and in the course of his more than 30 years experience, he has worked on well over one hundred hydro projects.

Mr. Devine is expected to testify about the operation of the Blewett Falls and Tillery hydroelectric projects along the Yadkin-Pee Dee river system and the merits of various proposals for fish passage facilities at those projects.

4. **Paul Jacobson**, Langhei Ecology, LLC, 14820 View Way Court, Glenelg, MD 21737, (410) 489-3675. Mr. Jacobson has a Bachelor's degree in Biology, and Master's and Doctorate degrees Oceanography and Limnology. Currently the managing partner and principal scientist of Langhei Ecology, an environmental consulting firm specializing in the application of ecology and quantitative methods to environmental assessment, management, restoration, and compliance, Mr. Jacobson has provided analysis and consultation to both private and governmental entities at federal, state, and local levels.

Dr. Jacobson's testimony will focus on the technical basis for the restoration goals set forth for American shad and American eel in the Restoration Plan for the Diadromous Fishes of

the Yadkin-Pee Dee River Basin, North Carolina and South Carolina (2006) and the technical information needed to provide reasonable assurance that the restoration goals will be achieved. He will testify about the current state of knowledge regarding habitat and potential habitat for these species in the Yadkin-Pee Dee River Basin. He will testify regarding the current utilization of accessible habitat and the ecological factors surrounding development of defensible restoration targets for these species. His testimony will address what steps are required to address gaps in the technical information needed to guide the restoration program and to provide a reasonable chance of meeting restoration goals. Biological effectiveness and necessity of restoration measures will be addressed in the context of population dynamics and the life stages of these species that utilize the Yadkin-Pee Dee River basin to complete their respective life cycles.

5. **Brandon Kulik**, Kleinschmidt Energy & Water Resources, 75 Main Street, Pittsfield, ME 04967. Mr. Kulik has a Bachelor's degree in Environmental Studies and a Master's degree in Aquatic Zoology. Mr. Kulik has over 20 years experience in the field of anadromous fish passage, fish biology, and fisheries restoration on rivers in the eastern United States. Since 1986, Mr. Kulik has served as Senior Fisheries Biologist for Kleinschmidt, where he designs, performs, and reviews environmental studies pertaining to fish passage, ecology, instream flow, and aquatic habitat.

He will testify to the methods, need, and timing for upstream fish passage as it relates to the biology of American shad populations and restoration and management of American shad stocks in the Pee Dee River watershed. He will offer an opinion as to whether the fishway prescribed by National Marine Fisheries Service and the U.S. Fish and Wildlife Service for the Yadkin-Pee Dee River Hydroelectric Project (FERC No. P-2206) represent the most cost-

effective and biologically strategic measure for meeting fishery management goals set for this species in the Pee Dee River watershed.

6. **Phillip Lucas**, Progress Energy Carolinas, Inc., 410 S. Wilmington St., Raleigh, N.C. 27601, (919) 546-2640. Mr. Lucas has a Bachelor's degree in Civil Engineering and Master's degree in Business Administration. Mr. Lucas has 26 years experience working in the electric utility industry and 13 years on issues related to hydroelectric projects. Since 2001, Mr. Lucas has served as the Manager of FERC Licensing Program for Progress.

Mr. Lucas is expected testify on the facts and circumstances surrounding the Blewett Falls and Tillery hydroelectric projects on the Yadkin-Pee Dee river system, including those related to the relicensing efforts at the projects, the current operation of the projects, and the proposal for their continued operation.

7. **William A. Richkus**, Versar, Inc., 9200 Rumsey Road, Columbia, MD 21045, (410) 740-6078. Mr. Richkus has a Bachelor's degree in Zoology, and a Master's and Doctorate degrees in Oceanography. He currently serves as Vice President, Operations Manager, of Versar, Inc., where he has more than 30 years experience in the application of high quality, rigorous science to environmental issues such as resource management, impact assessment, impact mitigation and ecosystem restoration.

Dr. Richkus will testify on habitat requirements of American shad, the potential value of habitat throughout the Yadkin-Pee Dee watershed for shad, methods for assessing potential production of shad from various water bodies and types of habitat, and factors that may impact such production. In addition, Dr. Richkus will provide testimony regarding American shad restoration programs with which he has been involved. In particular, he will discuss the restoration program that was implemented and has been ongoing in the Susquehanna River

watershed since the 1970s, the manner in which that program was implemented, factors taken into account in planning, and the accomplishments of that program to date.

8. **Jonathan Truebe**, Lakeside Engineering, 4 Tuftonboro Neck Rd., Mirror Lake, NH 03853, (603) 569-1930. Mr. Truebe has a Bachelor's degree in Civil Engineering, graduate coursework in Ocean Engineering and Environmental Engineering, and is a registered professional engineer. Since 1978, Mr. Truebe has served as president of Lakeside Engineering, Inc., and has over 30 years experience with fish passage issues, having prepared fish passage designs for more than 200 hydroelectric projects involving resident, anadromous and catadromous species, including Atlantic salmon, Pacific salmon, American shad, blueback herring, American eels, sturgeon, and striped bass. Mr. Truebe has served as an instructor at the U.S. Fish & Wildlife's Fish Passage School and is experienced with fish passage engineering technologies utilized in agency Section 18 prescriptions.

Mr. Truebe will testify about the construction details and physical mechanics of various upstream and downstream fish passage at the project dams; the likely behavioral response of American shad, blueback herring, and American eel to the fish passage structures prescribed by the Departments; and the success or failure of fish passage structures at other Atlantic coast hydroelectric projects.

9. **Richard Christie**, Environmental Coordinator, Wildlife and Freshwater Fisheries Division, South Carolina Department of Natural Resources, 1771-C Hwy. 521 By-pass S., Lancaster, SC 29720, (803) 289-7022. Mr. Christie has worked for South Carolina DNR for 28 years. In addition to two years studying the spawning habits of blueback herring in graduate school, he spent nine years with the South Carolina DNR working with American shad and

blueback herring, and with the remainder devoted to fisheries resource management and environmental management.

Mr. Christie is expected to testify about the current status of American shad and blueback herring populations in the Yadkin-Pee Dee River below Blewett Falls Dam and in other South Carolina rivers, including those that do not have access to piedmont streams for spawning purposes. He is expected to testify as to the Department's concerns with the suitability of the upstream habitat for the American Shad and the protection and enhancement of the existing fishery. He is also expected to testify that the Licensee and agency jointly prepared implementation plan is the best means of implementing fish passage while protecting diadromous fish populations, and that it is fully consistent with the agency prepared Restoration Plan for the Diadromous Fishes of the Yadkin-Pee Dee River Basin, North Carolina and South Carolina.

10. **Danny Johnson**, Project Manager, Land, Water, and Conservation Division, South Carolina Department of Natural Resources, Rembert C. Dennis Building, 1000 Assembly Street, Columbia, South Carolina 29201, (803) 734-9099. Mr. Johnson has worked for South Carolina DNR in its Land, Water, and Conservation Division for 28 years, including as Assistant Deputy Director. He currently serves as the Project Manager representing South Carolina DNR in the on-going relicensing of the Yadkin-Pee Dee Projects and has done so for the past four years.

Mr. Johnson is expected to testify that American shad are successfully spawning in the Yadkin-Pee Dee River below Blewett Falls Dam and that sufficient information does not currently exist to conclude that fish passage above Blewett Falls Dam will result in successful American shad spawning above the dam and any significant recruitment into the downstream

population. He is expected to further testify that water quality degradation, the presence of abundant non-native fish species, and the presence of predatory fish in hydropower impoundments above Blewett Falls are factors that could impair shad spawning and recruitment. He is expected to testify regarding the potential detriment to the existing population of American shad from the Services' prescriptions. He is expected to testify that the Implementation Plan for Diadromous Fish Passage on the Yadkin-Pee Dee River developed by Progress and other stakeholders is the most scientifically safe and sound approach to addressing fish passage.

[end]