

**BEFORE THE UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

Alabama Power Company)	
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Martin Dam Hydroelectric Project)	Project No. 349-150
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**COMMENTS OF THE STATE OF GEORGIA ON
PRELIMINARY LICENSING PROPOSAL**

On January 7, 2011, the Alabama Power Company (“APC”) filed its Preliminary Licensing Proposal (“PLP”) for the Martin Dam Hydrologic Project (the “Martin Project”) and requested that comments be filed with the Federal Energy Regulatory Commission (the “Commission”) by April 7, 2011. The State of Georgia, in its individual capacity as trustee of its natural resources and in its representative capacity as *parens patriae* for the citizens of the State of Georgia, hereby respectfully submits the below comments regarding the PLP and the re-licensing process for the Martin Project. These comments are timely filed, and a copy of the comments will be served on the applicant, APC.

The State of Georgia filed its Comments on Pre-Application Documents, Comments on Scoping Documents, and Study Request (“PAD Comments”) on October 10, 2008. Many of the concerns that Georgia raised in the PAD Comments still remain and, in some cases, have become more acute. Georgia continues to believe strongly that APC should expand the scope of its analysis to include the entire Alabama-Coosa-Tallapoosa (“ACT”) Basin, and that the Commission should combine the licensing process for the Martin Project with the licensing process for APC’s projects on the Coosa River (FERC No. 2146-111) (the “Coosa Project”). In addition, because APC’s operation of the Martin Project can and will have an impact on, and is

affected to some degree by, the U.S. Army Corps of Engineers' reservoirs in the ACT Basin, the Commission should not issue or approve any of APC's proposed operations until the Corps has completed the process of updating its water control manuals for the ACT Basin. Finally, APC has yet to provide adequate modeling and explanation of its drought operations for the Martin Project and the impact of its drought operations on the ACT Basin as a whole.

These concerns are discussed in greater detail below, along with a number of specific technical issues raised as a result of the Georgia Environmental Protection Division's ("EPD") review of the PLP.

I. GEORGIA'S INTEREST

In Georgia's 2008 PAD Comments, the State explained that it has a significant interest in how APC operates the Martin Project. That interest remains unchanged and bears repeating.

The Tallapoosa River, on which the Martin Project is operated, originates in Georgia. So does the Coosa River, which joins the Tallapoosa River at Montgomery, Alabama, to form the Alabama River. Local governments in Georgia withdraw water from the Tallapoosa River to meet municipal and industrial water supply needs, and future plans for northwest Georgia could involve increasing use of the Tallapoosa River to meet reasonable needs within this growing area of the State. In evaluating APC's proposed operations, the Commission should take into account these existing and projected future needs.

In addition, the manner in which APC operates the Martin Project could have a major impact on Georgia's substantial interests within the Coosa River Basin in Georgia. APC currently coordinates releases from its projects on the Coosa and Tallapoosa Rivers to meet certain flow requirements downstream in the Alabama River. The Martin Project is by far the largest APC reservoir within the ACT River Basin and comprises nearly 50% of all storage

within the ACT Basin (including the federal reservoirs). Yet, at least in recent years, APC has drawn more water from its projects on the Coosa River than from its Tallapoosa River projects (including the Martin Project) to meet the flow requirements in the Alabama River downstream. APC then has turned to the Corps and asked it to release more water from the federal reservoirs upstream in Georgia to replenish the APC reservoirs. Similarly, if APC does not draw upon the Martin Project to meet its share of systemwide hydropower demands, APC is more likely to make disproportionately high releases from its projects on the Coosa River, with the same resulting pressure upon the Corps' reservoirs upstream.

The two federal reservoirs in Georgia, Lake Allatoona on the Etowah River and Carters Lake on the Coosawattee River, are major sources of water supply to northwestern Georgia. They also provide important environmental and recreational benefits. The Corps has an obligation to operate these reservoirs to meet various needs including water supply, and must do so in a manner that is prudent, taking into account that these projects are located at the headwaters of the ACT Basin and have smaller drainage areas than Lake Martin and the other APC reservoirs. Lake Allatoona impounds only 4.9% of the ACT Basin and provides only 11.4% of the storage within the ACT Basin. Carters Lake impounds only 1.6% of the ACT Basin and provides 5.7% of the total reservoir storage within the ACT Basin.

Given the relatively small drainage areas of the federal reservoirs and the substantial amount of alternative storage available in the APC projects within the ACT Basin, the Corps should not operate Lake Allatoona and Carters Lake to meet flow requirements below the APC reservoirs. Nevertheless, this is precisely what APC has asked the Corps to do. In the spring and summer of 2007, for example, APC repeatedly pressured the Corps to increase flows from the federal projects in Georgia to augment APC's own flow requirements. How APC operated the

Martin Project had a major impact on APC's overall operations within the system, and therefore had a bearing on APC's demands for higher releases from the federal reservoirs in Georgia.

II. COMMENTS ON PRELIMINARY LICENSING PROPOSAL

A. **The Re-Licensing of the Martin Project Should Be Coordinated with the Re-Licensing of APC's Coosa Project and the Scope of APC's License Application Should Cover the Entire ACT Basin**

APC's Coosa and Martin Projects are part of an integrated reservoir system, and it is impossible to separate the mutually-dependent operations of the Martin Project and the Coosa Project. For this reason, Georgia recommended in its PAD Comments that the Commission consolidate the re-licensing processes for the Martin and Coosa Projects. Despite the Commission's prior rejection of this recommendation, Georgia continues to believe that consolidation of the re-licensing processes is necessary.

In its November 14, 2008 Scoping Document, the Commission responded to Georgia's request to consolidate the re-licensing processes by stating that "an application for the Martin Dam Project is not expected until June 2011 and consolidating the processes could delay the Coosa Project by 3 to 5 years." Scoping Document at 5. Georgia respectfully submits that delay should be less of a concern than the risk of incomplete analysis and inconsistent or unintended outcomes as a result of handling separately the licensing for these interrelated projects. Moreover, the issuance of a new license for the Coosa Project has been delayed notwithstanding (and likely, in some respects, because of) APC and the Commission's decision to keep the proceedings separate. In general, delay has resulted from APC's failure to properly analyze the impacts of its proposed operations on the system as a whole. Consolidating the re-licensing processes now could help APC and the Commission avoid additional delays.

The Commission also reasoned that it would “evaluate the cumulative effects of continued operation of the Martin Project.” *Id.* In responding to Georgia’s suggestion that the scope of the Martin Project be expanded to include the entire ACT Basin, the Commission stated that while it supported “the need to adequately describe the interaction of flows and project operations between the Coosa and Tallapoosa Rivers,” it had determined “that it is not necessary to expand the geographic scope of the Martin Dam Project to accomplish this task.” Scoping Document at 6. The Commission did not explain, however, how such interactions and cumulative effects would be evaluated using the current scope of the Martin Project as described in the PLP.

It is not possible for the Commission to evaluate the cumulative effects of APC’s operations at the Martin Project if the scope of the analysis presented in the PLP and related studies extends only to below the Martin Project on the Tallapoosa River. That limited scope of analysis would not allow the Commission to evaluate the impacts of APC’s Martin Project operations on both the APC and federal projects located in the Coosa River Basin.

In explaining the rationale for allowing the Commission proceedings for the Coosa and Martin Projects to be separate, the Commission also has maintained that it would be preparing a separate environmental assessment (“EA”) for the Coosa Project that would “address the Coosa Project’s impact on flows in the ACT River Basin,” and that the EA for the Martin Project will likewise “address Martin’s impact on flows in the ACT River Basin.” *Id.* The Commission’s EA for the Coosa Project, however, discussed impacts on flows downstream in the Alabama River but included little to no discussion on the impact to APC’s operations on the Tallapoosa River. This suggests that it is unlikely that the EA for the Martin Project will address impacts on operations in the Coosa River Basin. The scope of the PLP should be expanded to provide the

Commission with information that is sufficient to allow the Commission to evaluate the impact of APC's proposed operations at the Martin Project upon the operation of projects in the Coosa River Basin, including the federal projects located in Georgia.

B. The Re-licensing Application for the Martin Project Should Be Coordinated with the Corps' Development of Water Control Manuals for the ACT River Basin and Should Be Dependent upon Those Manuals

The interaction of APC's operations on the Coosa and Tallapoosa Rivers further highlights the need for the Commission to coordinate the re-licensing process for the Martin Project with the Corps' efforts to update the water control manuals for the federal projects in the ACT River Basin. As Georgia explained in its PAD Comments, the Commission cannot adequately evaluate the impact of APC's proposed operations on navigation and flood control within the ACT Basin until the Corps' water control manual update is complete. Moreover, the Corps' flexibility must not be constrained in any way by the terms of APC's license for the Martin Project. The Commission can make a more informed decision concerning the license and one that does not interfere with the Corps' plans after the Corps' water control manuals are completed.

Although the Commission has not responded directly to Georgia's request that the re-licensing process for the Martin Project be coordinated with the process for updating the ACT Basin water control manuals, the Commission has noted that the Corps "will principally be responsible for determining navigation flow requirements in the ACT River Basin." Scoping Document at 6. The Commission has stated further that it assumes that the interaction of flows and project operations between the Coosa and Tallapoosa Rivers "will be addressed as part of the Corps' revision of the Water Control Manuals for the ACT River Basin." *Id.*

The Corps is responsible for navigation and flood control operations on the Coosa and Alabama Rivers. Because the Martin Project controls almost half of the conservation storage

and a large percentage of seasonal flood control storage (19% by APC's HEC ResSim model configuration) in the ACT Basin, APC's operation of the Martin Project will have a profound impact on the Corps' ability to meet the needs of navigation interests and provide adequate protection from floods.

For navigation, the Corps has established a navigation flow target on the Alabama River at the confluence of the Coosa and Tallapoosa Rivers. The Commission should allow the Corps to make a determination as to the appropriate minimum flow, if any, that is reasonable and appropriate for the maintenance of navigation in the future, consistent with and balancing other needs, before the Commission establishes future terms for the operation of the Martin Project, so as to avoid inconsistency between the terms of the FERC license and any flows that the Corps might reasonably establish.

Similarly, APC's flood control operations at the Martin Project should be coordinated with the Corps' flood control operations throughout the ACT Basin to avoid placing an inequitable burden for flood control on projects in the Coosa Basin. Please note that APC is proposing to reduce the seasonal flood control storage to different extents with its five contemplated alternatives, which would certainly put flood control burdens onto other projects within the ACT Basin.

The Corps currently estimates that it will issue the final ACT water control manual in early 2012. The Commission should delay the development of an EA for the Martin Project until after the Corps releases its ACT water control manuals, and APC should update its license application in response to the contents of the Corps' water control manuals.

C. APC's PLP Fails To Adequately Evaluate Or Anticipate Drought Operations For The Martin Project

The PLP contains only a high-level overview of APC's proposed drought operations for the ACT Basin as described in its Alabama-ACT Drought Response Operations Proposal ("ADROP") and provides no discussion as to how ADROP will actually work as applied to the Martin Project. In addition, APC gives no indication in either the PLP or in any of the included study plans that APC has modeled or analyzed the impact of the ADROP operations on the other projects in the system in general or on the federal projects in Georgia in particular.

In the Addendum to the Coosa River Project Biological Assessment that it filed with your office on January 24, 2011, APC included a more detailed description of ADROP. This appears to be the first time that APC has made its drought operations plan available for public review, and this more detailed description is not included in any of APC's studies or analysis for the Martin Project.

Georgia EPD's initial calculations based on the limited information available suggest there might be major differences between the effects of the operations that APC has proposed in the PLP and the conditions that could result from the newly-proposed drought operations. First, the minimum flow in the Alabama River near Montgomery could be reduced under ADROP from 4,640 cubic feet per second ("cfs") to 2,000 cfs, with flows less than 350 cfs released from the Thurlow project on the Tallapoosa River and flows as low as 1,600 cfs released from the Jordan project on the Coosa River. Second, according to Georgia EPD's calculations based on historical flows and lake elevations from 1984 through 2008, under ADROP, APC's Martin and Coosa Projects would have been operating under drought conditions for 1,300 days during that period, or 14% of the time. Finally, based on the rule curve variances proposed in ADROP, it

appears ADROP will cause a significant change in total available system storage as compared to the operations proposed in the PLP.

Georgia has evaluated APC's computer modeling of its operations. It appears that APC's modeling does not accurately capture its likely drought operations for the Martin Project. Georgia EPD used APC's HEC-ResSim model for the Martin Project to simulate "current operations" for the 2007 drought period. The minimum reservoir elevation in 2007 under this modeled scenario was found to be 452.9 feet, while the actual observed minimum reservoir elevation was 474.5 feet. This illustrates that, in practice, APC protects the elevation of the Martin Project during periods of low flow. If APC plans to continue to operate the Martin Project in this manner in the future, that should be included as part of any model so the Corps, the Commission, and interested parties can evaluate operations for the Martin Project.

APC's failure to include a plan for drought operations in the early stages of the development of its application for the Coosa Project has led to significant delays in that re-licensing process. The Commission and APC should take action to avoid similar delay here. APC should provide the Commission with a detailed description of how ADROP will impact operations for both the Martin Project and for projects on the Coosa River. APC should update its models and studies to account for its planned drought operations.

D. Specific Technical Questions and Comments

1. Flood Control Analysis

In reviewing Final Study Report 12(A): Flood Control Guideline Change Modeling Analysis, Georgia EPD identified a potential error regarding APC's calibration of its Project Routing model using the flood that occurred in March 1990. Specifically, when the modeled results are compared to the actual March 1990 flood elevations, there is a discrepancy of about 1.2 feet, such that the reservoir elevation for the Martin Project in the model is 1.2 feet lower

than what actually occurred. This difference in elevation corresponds to a storage amount of roughly 95,000 acre-feet. In other words, APC underestimated the potential flooding elevation by 1.2 feet and the potential flooding storage by about 95,000 acre-feet. APC did not improve the calibration of the model or address the discrepancy before using the model to evaluate its five contemplated alternatives to rule curve changes, in effect reducing available seasonal flood control storage, at the Martin Project. APC concluded that its flood control operations under each of these alternatives would be sufficient to maintain the maximum pool below the required limit of 490 feet Martin Datum. Under APC's model, however, the peak reservoir elevations for all of the contemplated alternatives were only a fraction of a foot (within approximately 0.25) below the 490 feet limit. Georgia EPD analyzed the discrepancy in the calibration process, and believes that when the storage discrepancy in the calibration process is considered in modeling of the contemplated alternatives, the maximum simulated reservoir elevation of the Martin Project would exceed the 490 feet limit under all 5 winter flood pool alternatives. In light of this finding by Georgia EPD, APC should be required to conclusively demonstrate that the 1.2 feet discrepancy in its model calibration did not impact its results.

2. Storage Inconsistencies

Storage calculations in the PLP vary from storage calculations in APC's Pre-Application Document. Page 4-2 of the Pre-Application Document states: "The gross storage capacity of Lake Martin is 1,622,000 af. The active storage in the available 45.5 ft drawdown is 1,381,077 af." On page 2-4 of the PLP, APC states: "The gross storage capacity of Lake Martin is 1,628,000 acre-feet; active storage in the available 45.5 ft drawdown is 1,202,000 acre-feet." APC should explain this discrepancy.

3. Model Inconsistencies

In addition to the issues regarding low-flow operations discussed above, based on Georgia EPD's review of APC's HEC-ResSim model, we have a number of other questions regarding APC's operations:

- The rule curves that APC uses in the PLP are not consistent with the rule curves in APC's HEC-ResSim model. In the HEC-ResSim model, the top of flood control is set as 490 feet throughout the year, and top of the operating guide curve ranges from 480 to 489.5 feet. In the PLP rule curve, however, the flood control elevation ranges from 480 to 490 feet, and the top of the operating guide curve ranges from 477 to 489 feet. APC should explain this inconsistency.
- The power generation used for the HEC-ResSim model is not consistent with the power generation stated in the PLP. Page 68 of Final Report 12A contains the following statement regarding the model setting for Lake Martin power generation:

A power guide factor was used in the HEC-ResSim model to capture the existing generation at Martin. The power guide factor relates plant factors to the percentages of the power storage remaining in the reservoir. The factors represent the hours of generation per day as a function of the remaining power storage. With full power storage available, Martin is programmed to generate 3.84 hours per day.

Page 2-15 of the PLP, however, states as follows:

During the wetter periods (December through April), the project usually operates eight to twelve hours daily on weekdays and for five to seven hours on Saturday. The project will not typically operate on Sunday. During dry periods (May through November), the Project usually experiences reduced inflows. Daily operation then becomes four to six hours Monday through Saturday and little or no operation on Sundays.

APC should explain this inconsistency.

Respectfully submitted this 7th day of April, 2011,

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CERTIFICATE OF SERVICE

I certify that I have this day served a copy of the foregoing COMMENTS ON PRE-APPLICATION DOCUMENTS, COMMENTS ON SCOPING DOCUMENTS, AND STUDY REQUESTS, by first class mail or electronically, as appropriate.

Dated the 7th day of April, 2011

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