

144 FERC ¶ 61,040
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Philip D. Moeller, John R. Norris,
Cheryl A. LaFleur, and Tony Clark.

Alaska Energy Authority

Project No. 14241-004

ORDER REJECTING AND DENYING REQUESTS FOR REHEARING

(Issued July 18, 2013)

1. On May 28, 2013, the National Marine Fisheries Service (NMFS) and the Center for Water Advocacy (Center) filed requests for rehearing of the formal study dispute determination issued by the Director of the Office of Energy Projects (Director) on April 26, 2013, with respect to the proposed 600- to 800-megawatt¹ Susitna-Watana Hydroelectric Project, to be located on the Susitna River, in Matanuska-Susitna Borough, Alaska. NMFS and the Center seek rehearing of the Director's finding that studies proposed by the potential applicant, the Alaska Energy Authority (AEA), and NMFS related to global climate change are unnecessary to conduct the Commission's environmental analysis and therefore will not be required to be conducted by AEA. As discussed below, we reject the Center's request for rehearing and deny NMFS' request for rehearing.

Background

2. On December 29, 2011, AEA filed a notice of intent to file a license application for the proposed Susitna-Watana Project, along with a pre-application document. This submittal initiated the pre-filing stage of the Commission's integrated licensing process (ILP) pursuant to Part 5 of the Commission's regulations.² As part of the ILP, AEA is required to consult with resource agencies, tribes, and other stakeholders to develop plans and subsequently conduct studies that will serve to inform Commission staff's environmental analysis and, ultimately, the Commission's decision on whether and, if so, under what conditions, to issue a license for the project. The studies also provide

¹ The exact size of the project is still under consideration.

² 18 C.F.R. Part 5 (2012).

information to resource agencies as they provide comments and in some cases terms and conditions for inclusion in any license that may be issued for the project.

3. Pursuant to section 5.9 of the Commission's regulations,³ on May 31, 2012, NMFS filed a request that AEA perform a climate change study. On July 16, 2012, pursuant to section 5.11 of the Commission's regulations,⁴ AEA filed its proposed study plan. After consultation with the stakeholders, AEA filed a revised study plan on December 14, 2012. Among other studies, AEA's plan included proposed Study 7.7, to analyze the potential effects of climate change on glacier wastage and retreat and the corresponding effects on streamflow entering the proposed reservoir, and to evaluate the effects of glacial surges on sediment delivery to the reservoir. AEA proposed the following components to the study:

- (a) review existing literature relevant to glacial retreat in south central Alaska and the upper Susitna watershed and summarize the current understanding of potential future changes in runoff associated with glacier wastage and retreat;
- (b) develop a hydrologic modeling framework that utilizes a glacier melt and runoff model (Hock, 1999) and a Water Balance Simulation Model (WaSiM) to predict changes in glacier wastage and retreat on runoff in the Susitna basin resulting from climate change;
- (c) simulate the inflow of water to the proposed reservoir and predict changes to available inflow using downscaled climate projections up to the year 2100; and
- (d) analyze the potential changes to sediment delivery from the upper Susitna watershed into the reservoir from glacial surges.

4. On February 1, 2013, as provided in section 5.13 of the Commission's regulations, the Director issued a study plan determination which set forth the studies, methodologies and schedules Commission staff deemed necessary. With respect to Study 7.7, the Director approved the fourth proposed component, the analysis of potential changes to sediment delivery into the reservoir. The Director did not approve AEA's three other proposed study components. He explained that, similar to other hydroelectric licensing cases,⁵ the effects of the project on environmental resources of the project area can be effectively studied and evaluated using conventional hydrologic studies,

³ 18 C.F.R. § 5.9 (2012).

⁴ 18 C.F.R. § 5.11 (2012).

⁵ Citing the study plan determinations for the Toledo Bend Project No. 2305 (August 2009) and the Lake Powell Pipeline Project No.12966 (January 2009).

monitoring techniques, and predictive models. He further explained that the proposed climate change assessment would be very costly and the results too uncertain to rely upon for the development of license requirements. Therefore, the Director concluded, AEA's proposed climate change assessment aspects of the study are not necessary to evaluate project effects.⁶ The Director also noted that the Commission's standard reopener article would be included in any license as a potential vehicle for making changes to the license if unforeseen and unanticipated adverse environmental effects occur, and that flexibility can be built into project operational requirements to accommodate fluctuations in hydrology during both high and low water years.⁷ In addition, while not requiring the climate change assessment component, the Director noted that Commission staff had no objection to AEA conducting this portion of the study on its own initiative.⁸

5. On February 21, 2013, NMFS filed a notice of study dispute pursuant to section 5.14 of the Commission's regulations, listing ten disputed study elements.⁹ With respect to Study 7.7, NMFS stated that the Director's determination reflected a misunderstanding of the nexus between the project's operation and effects on NMFS' trust resources. NMFS requested that all of the components of Study 7.7 be required and that the study consider the effects of climate change on aquatic, riparian, and terrestrial habitat and species to determine an appropriate baseline for assessing the project's effects on these resources. NMFS further stated that understanding climate change effects is necessary to understand the physical conditions under which fish passage would be prescribed.

6. In response to NMFS' notice of study dispute, the Commission convened a dispute resolution panel, as required by section 5.14(d), consisting of one Commission staff representative, one NMFS representative, and one independent panel member. The panel conducted a technical conference on April 3, 2013. The conference included representatives from NMFS, AEA, the Commission, and other licensing participants. The panel submitted its findings to the Commission on April 12, 2013. With respect to

⁶ See Study Plan Determination, Appendix B at B-8.

⁷ *Id.* at B-9. The study plan determination did not recommend extending the geographic range of the climate change assessment or adding a comprehensive analysis of the natural resource impacts. The study plan determination explained that Commission staff is requiring a comprehensive suite of environmental studies that will evaluate the effects of the project on natural resources. The geographic scope of these studies is being evaluated specific to the affected resources and, where appropriate, will be linked to the range of hydrologic effects.

⁸ *Id.* at A-5, B-10.

⁹ 18 C.F.R. § 5.14 (2012).

Study 7.7, the panel recommended modifications to require AEA to implement Study 7.7 in its entirety and three additional requirements that were discussed at the technical conference:

- (a) expand the geographic scope of the study to include the entire watershed upstream of the proposed dam at RM 184;
- (b) include a water temperature component to improve the hydrologic modeling results, estimate temperature of inflow to the reservoir, and evaluate reservoir stratification over a range of potential future climate regimes; and
- (c) develop criteria to define an acceptable level of uncertainty, such that the 5 percent and 95 percent flows used by NMFS for designing fish passage facilities can be estimated.

7. On April 26, 2013, pursuant to section 5.14(l),¹⁰ the Director issued a formal study dispute determination. The Director adopted in part the panel's modification to RSP 7.7, to require that AEA implement its proposed study component related to a review of existing literature relevant to glacial retreat and summarize the understanding of potential future changes in runoff associated with glacier wastage and retreat. The Director found that this review would be relatively low-cost and could be used in the Commission's environmental analysis to describe any general trends in glacier retreat and glacier runoff contributions to Susitna River streamflow.¹¹ With respect to the other two disputed study components related to modeling predictions, the Director explained that he was not aware of any new information or analysis that was presented in NMFS' notice of study dispute, at the technical conference, or in the panel's findings to persuade him that the conclusions in the study plan determination should be changed.¹² Finally, the Director found that the panel's three additional recommendations are expansions of the climate change study components. Consistent with his findings on those components, the Director stated that he was not aware of any new information or analysis filed after the study plan determination was issued that would suggest that the additional recommendations are necessary to conduct the Commission's environmental analysis.

8. On May 28, 2013, NMFS and the Center filed requests for rehearing of the study dispute determination.

¹⁰ 18 C.F.R. § 5.14(l) (2012).

¹¹ See Study Dispute Determination at B-3.

¹² *Id.*

Discussion

9. As an initial matter, we note that the Center did not file the study request at issue and, indeed, is not an entity entitled to file for dispute resolution.¹³ Accordingly, it lacks standing to seek review of the study dispute determination, and we reject its request for rehearing.¹⁴

10. The issue on rehearing is whether the Director erred in declining to adopt all of the dispute resolution panel's climate change study recommendations with respect to Study 7.7. As stated above, the Director adopted the panel's recommendation to require AEA to implement its proposed study component related to a review of existing literature relevant to glacial retreat and summarize the understanding of potential future changes in runoff associated with glacier wastage and retreat. However, the Director declined to adopt the panel's other recommendations for climate change study modifications on the basis that no new information or analysis was presented to suggest that the study plan determination's analysis and recommendations should change or to suggest that the additional recommendations of the panel are necessary to conduct the Commission's environmental analysis.

11. In its request for rehearing, NMFS argues that the study dispute determination is not supported by the record, is arbitrary, and misapplies the study criteria in section 5.9 of the Commission's regulations. Specifically, NMFS asserts that even before the study plan determination was issued, NMFS demonstrated that a climate change study met the applicable criteria in section 5.9.¹⁵ NMFS also argues that it provided additional

¹³ Only federal agencies with authority to impose mandatory conditions or fishway prescriptions and state agencies and Indian tribes with authority to issue Clean Water Act water quality certifications may file study disputes. *See* 18 C.F.R. § 5.14(a) (2012).

¹⁴ The Center also claims that it was excluded from attending the April 3, 2013 technical conference via a conference line and making a presentation to the panel, in violation of its rights as a party participant. We disagree with the Center's claim. The decision to limit presentations at the technical conference to NMFS, AEA, and the Commission was well within the panel's discretion. It was also within the panel's discretion to limit the Center and other interested parties to observer status and in-person attendance. In accordance with the regulations, the technical conference was open to all participants. Moreover, a transcript of the technical conference was made publicly available, and several interested parties filed information related to the disputed studies. Therefore, we find that the technical conference was conducted in compliance with section 5.15(j) of the regulations, and no interested parties were improperly excluded from participation.

¹⁵ NMFS Rehearing Request at 8.

information to the panel to further demonstrate the need for climate study and to support its position that the effects of the project could not be effectively studied using conventional monitoring techniques and predictive models.¹⁶ NMFS maintains that it presented information that future potential changes in streamflow conditions from climate change and any corresponding adverse effects on environmental resources in the Susitna River basin could not be addressed through operational flexibility or the Commission's standard reopener articles.¹⁷ Finally, NMFS asserts that it explained to the panel how global climate models, downscaled climate projections, and corresponding streamflow projections up to the year 2100 would provide the information needed to develop license requirements, and that the costs of the models would not be excessive.¹⁸

12. At each stage of the study plan determination process, in determining whether to require a license applicant to conduct a particular study or study component, the Commission considers whether a proposed study satisfies the criteria set forth in section 5.9(b) of the Commission's regulations.¹⁹ In this instance, the Director applied those criteria to the climate change assessment study components of Study 7.7 proposed by AEA and requested by NMFS and concluded that they were not necessary to conduct the Commission's environmental analysis or to develop license conditions.

13. Specifically, the Director determined in the study plan determination that, consistent with previous hydroelectric licensing cases, the effects of the project on environmental resources of the Susitna-Watana Project area can be effectively studied and evaluated using conventional hydrologic studies, monitoring techniques, and predictive models. This study methodology satisfies section 5.9(b)(6), which provides that any proposed study methodology be consistent with generally accepted practice in the scientific community. In addition, the Director determined that the climate change assessment proposed by AEA and NMFS would be very costly (a minimum of \$1 million), a factor set forth in section 5.9(b)(7), which requires the consideration of effort and cost for any proposed studies and why any proposed alternative studies would not be sufficient to meet the stated information needs. The Director also determined that the results of the proposed climate change studies may be too uncertain to rely upon for the development of license requirements, in accordance with section 5.9(b)(5), which requires a nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements. For these reasons, the Director concluded in the

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.* at 9.

¹⁹ 18 C.F.R. § 5.9(b)(2012).

study plan determination that AEA's proposed climate change assessment aspects of Study 7.7 are not necessary to evaluate project effects. The Director reached the same conclusion with respect to NMFS' requested climate change assessment.²⁰ Nevertheless, the study plan determination stated that the standard reopener article would be included in any license as the vehicle for making changes to the license if unforeseen and unanticipated adverse environmental effects occur in the future. In addition, the study plan determination stated that flexibility could be built into operational rule curves to accommodate fluctuations in hydrology during both high and low water years. Finally, the study plan determination stated that, while not recommending approval of all items in AEA's study proposal, AEA was free to conduct those portions of the study that were not required.²¹

14. Similarly, in the study dispute determination, the Director adopted the dispute resolution panel's recommendation that AEA review existing literature relevant to glacial retreat and summarize the understanding of potential future changes in runoff associated with glacier wastage and retreat. The Director found that this review would be relatively low-cost, in accordance with section 5.9(b)(7), and could be used in the Commission's environmental analysis to describe any general trends in glacier retreat and glacier runoff contributions to Susitna River streamflow, in satisfaction of section 5.9(b)(5).²²

15. However, the Director's study dispute determination found that no new information or analysis was presented after the study plan determination was issued to call into question the study plan determination's analysis and recommendations for the other two disputed study components, which are related to modeling effort's prediction of hydrologic response to future predictions of climate change. Specifically, the Director found in the study dispute determination that no new information was presented to suggest that: (1) the study costs would be lower than estimated (section 5.9(b)(7)); (2) the global climate models, downscaled climate projections, and corresponding streamflow predictions up to the year 2100 would be of sufficient accuracy to rely upon for the development of license requirements (section 5.9(b)(5)); (3) the effects of the project on environmental resources of the project area could not be effectively studied and evaluated using conventional hydrologic studies, monitoring techniques, and predictive models, as has been done in other hydroelectric licensing cases (section 5.9(b)(6)); or (4) future potential changes in streamflow conditions from climate change and any adverse effects on environmental resources of the Susitna River basin could not be addressed through flexibility built into operational rule curves or the Commission's

²⁰ See Study Plan Determination, Appendix B, B-8-9.

²¹ *Id.* at B-10.

²² See Study Dispute Determination, Exhibit B at B-3.

standard reopener articles.²³ With respect to the three additional panel recommendations, the Director found that they are expansions of the climate change study components and are not necessary to conduct the Commission's environmental analysis, consistent with the findings for the two disputed study components discussed above.²⁴

16. Although NMFS claims that it submitted new information to the dispute resolution panel, it appears that NMFS in its notice of study dispute, at the technical conference, and in its request for rehearing largely repeats the assertions made and re-summarizes the information submitted in its original study request. In both the study plan determination and the study dispute determination, the Director thoroughly considered the arguments and information presented by NMFS and other participants, and his analysis correctly addressed the study criteria in section 5.9 of the Commission's regulations, including the approach used in other hydroelectric licensing cases.

17. The Commission agrees with NMFS that the effects of climate change on streamflow conditions and any corresponding adverse effects on environmental resources are important issues, and any substantial information regarding these matters will be given due consideration in the Commission's environmental analysis and in any subsequent license order. However, the Commission does not agree that the climate change studies proposed by AEA and requested by NMFS are likely to yield reliable data that can be used in the development of license requirements, particularly when balanced against the cost of such assessments.

18. The panel found that AEA's proposed study would be "useful" to Commission staff as it conducts its environmental analysis and would assist NMFS in the exercise of its FPA section 18 authority. In addition, the panel stated that the study, as modified by the panel's additional recommendations, would provide "valuable" information that would inform potential project operations, resulting from the changes in the timing, magnitude and duration of inflows to the project across a range of potential future conditions.²⁵ However, the panel did not directly address the accuracy of the proposed study components, nor did it consider the cost of such components, other than to note that the fact that AEA plans on conducting its proposed study suggests that the information to be gained is worth the cost.²⁶ We are not convinced that the proposed study would yield specific information that would be of use in crafting a license.

²³ *Id.*

²⁴ *Id.*

²⁵ See April 12, 2013 Findings and Recommendations of the Study Dispute Resolution Panel at 4.

²⁶ *Id.*

19. We further agree with the Director that the effects of the project on environmental resources of the project area can be effectively studied and evaluated using conventional hydrologic studies, monitoring techniques, and predictive models, as has been done in other hydroelectric licensing cases (a matter on which the panel failed to make a finding). Further, as the panel agreed, the Commission's standard license reopener article would be a means for making changes to the license if any unanticipated adverse environmental effects occur during the course of the license.²⁷

20. In light of the foregoing conclusions, we affirm the Director's decision not to require the studies at issue.

The Commission orders:

(A) The request for rehearing filed by the Center for Water Advocacy on March 28, 2013, is rejected.

(B) The request for rehearing filed by NMFS on March 28, 2013, is denied.

By the Commission. Commissioner Norris is concurring with a separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

²⁷ *Id.* at 5. The panel also agreed with the study plan determination that the NMFS-recommended comprehensive assessment of the potential effect of climate change on water resources, geomorphology, and terrestrial, riparian and aquatic resources of the entire Susitna watershed is not needed, in light of the study plan determination's required environmental studies evaluating the effects of the project on natural resources upstream and downstream of the proposed dam site.

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Alaska Energy Authority

Project No. 14241-004

(July 18, 2013)

NORRIS, Commissioner, *concurring*:

The issue of whether the Commission needs to consider climate change when evaluating the potential environmental effects of a Commission-licensed hydroelectric facility is firmly before us in this order. The National Marine Fisheries Service (NMFS) and the Center for Water Advocacy asked that the Commission require the Alaska Energy Authority (AEA) to perform a climate change study as part of AEA's study plan. AEA itself proposed to analyze the potential effects of climate change on glacier waste and retreat, and to evaluate the effects of glacial surges on sediment delivery to the reservoir. Commission staff issued a study plan determination setting forth the required studies, methodologies, and schedules. After NMFS filed a notice of study dispute, Commission staff convened a dispute resolution panel. Commission staff ordered certain steps to consider climate change issues, but did not require all of the dispute resolution panel's recommendations.

Based upon the currently available climate change models, I agree that some of the climate change studies proposed here would impose additional significant costs¹ while being unlikely to yield data that can be sufficiently relied upon for use in the development of license requirements. However, as climate change modeling continues to advance, it may eventually yield data and knowledge that can and should be used to formulate license requirements that respond to environmental effects caused by climate change. In the meantime, I note that the Commission includes a standard license reopener provision in project licenses in case it later needs to address unanticipated environmental effects that occur during the license term.

In the interim, I agree with the decision to require AEA to implement its proposal to review existing literature relevant to glacial retreat and summarize the understanding of potential future changes in runoff associated with glacier wastage and retreat. I believe that this study will be helpful here and may also provide insight into future projects that face similar conditions. I commend AEA for its willingness to consider these important issues and its leadership in proposing innovative climate change studies.

¹ AEA estimates that the studies will cost \$1 million. See AEA's Revised Study Plan at page 7-63 (Dec. 14, 2012).

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For these reasons, I respectfully concur.

John R. Norris, Commissioner

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