Department of Energy
Western Area Power Administration
Colorado River Storage Project
1800 South Rio Grande Avenue
Montrose, CO 81401-4800

March 2, 2026

ELECTRONIC DELIVERY

Bureau of Reclamation
Attn: BCOO-1000
P.O. Box 61470
Boulder City, NV 89006
crbpost2026@usbr.gov

The Western Area Power Administration (WAPA) Colorado River Storage Project (CRSP) Region appreciates the opportunity to review and provide comments on the Bureau of Reclamation's (Reclamation) public draft environmental impact statement (DEIS) regarding the Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead. The DEIS was released on January 9, 2026, and published in the Federal Register on January 16, 2026. WAPA-CRSP's review specifically focuses on the potential impacts of the proposed actions on the federal hydropower resource. WAPA-CRSP commends Reclamation for its approach in developing the alternatives for this DEIS and for engaging cooperating agencies in establishing methodologies to analyze the impacts on resources potentially affected by the proposed actions within the DEIS.

Below, WAPA-CRSP presents a summary of our general comments and concerns. A separate matrix detailing more specific comments on various sections of the DEIS will also be submitted. Our comments primarily address impacts affecting the Glen Canyon Dam (GCD) hydropower resource (i.e., Lake Powell), as WAPA's Desert Southwest Region markets power from the Hoover, Parker, and Davis hydropower facilities. WAPA-CRSP offers the following general comments:

Lake Powell Elevation
WAPA-CRSP acknowledges the absence of a consensus agreement among the seven Basin states, which poses significant challenges to implementing actions aimed at preserving Lake Powell's elevations. As the Upper Colorado River Basin enters its 27th year of drought, a critical juncture has been reached where Lake Powell's elevation is at risk of falling to a level where hydropower generation is no longer feasible. Glen Canyon Dam accounts for approximately 75 percent of WAPA-CRSP's annual generation; therefore, the loss of this resource would significantly impact WAPA-CRSP and its customers.

WAPA-CRSP understands that, without an agreement among the Basin states, Reclamation intends to implement the "Basic Coordination Alternative." According to Figure TA 15-9, this alternative performs less effectively than the "Continued Current Strategies" comparative baseline in preserving Lake Powell elevations and, consequently, hydropower generation from

Glen Canyon Dam. Of particular concern are the lack of actions beyond releases from Upper Colorado River Basin reservoirs to protect Lake Powell elevations above 3,500 ft. We are concerned that an elevation of 3,500 ft is an insufficient buffer to protect critical infrastructure and likely poses significant risk not just to hydropower but also other resources. If no agreement is reached among the Basin states, we recommend that Reclamation consider incorporating strategies described in the "Enhanced Coordination" and "Max Flexibility" alternatives. These are the only alternatives analyzed that consistently preserve hydropower generation at Glen Canyon Dam. While tradeoffs between Lake Powell and Lake Mead must be considered, we note that Figure TA 15-13 indicates these two alternatives are robust in preserving the critical elevation of 1,035 ft at Lake Mead, below which Hoover Dam hydropower capacity is significantly reduced.

Upper Colorado River Basin Fund
WAPA-CRSP suggests utilizing the alternative language provided in Appendix A of this letter to describe the Upper Colorado River Basin Fund (Basin Fund) (TA-15, pg 15-17).

Power Marketing Colorado River Storage Project
The description of the Colorado River Storage Project (TA-15, pg 15-19) requires updating. Please use the revised language provided in Appendix B of this letter.

Tribal Benefit Crediting
A frequently overlooked benefit of the hydropower resource is the crediting of benefits to Tribes that do not own and operate their own electric utilities. This benefit is directly linked to the available hydropower generation. We request the inclusion of a section dedicated to this topic, incorporating the language provided in Appendix C of this letter.

Market Value of Hydropower Energy
Issue 5 (TA 15, pg 15-54), "How would changes in firm capacity and energy generation impact the electricity rates and the market value of electricity," combines three distinct issues. The market value of energy is determined by multiplying the amount of energy generated at the hydroelectric dams by a market energy price. This is an economic measure and does not influence the wholesale rate WAPA-CRSP establishes for energy. We propose including a separate issue addressing how changes in operations associated with the analyzed alternatives affect the market value of hydropower energy generation, utilizing the results provided in Yu (2025). This new issue should be placed immediately after Issue 3 (15.2.5), which pertains to energy generation.

Wholesale Electricity Rate Analysis
The wholesale electricity rate analysis by Argonne National Laboratory (Yu, 2025) described in TA 15.2.7 (pg 15-54 – 15-55) provides a simplified view of the Colorado River Storage Project's (CRSP) rate-setting process, focusing only on the relative direction and magnitude of rate impacts due to changes in annual generation from GCD. It is imperative to note that CRSP's Firm Electric Service rates include hydropower generation resources beyond just GCD. Consequently, any potential rate impacts described in the report are theoretical and represent uncertainty regarding future GCD hydrological conditions.

This study does not account for capacity or the full complexity of actual rate-setting, which involves numerous additional factors. Therefore, its results should not be interpreted as forecasts for actual rate impacts which may in turn infer the need for a rate adjustment process.

When analyzing wholesale rate impacts, it is advisable to refer to Section 6 of Yu (2025), which considers uncertainty across all traces, rather than Section 4, which is based on a single representative trace. This aligns the analysis more consistently with other hydropower elements.

The current framework, based on assumed revenue requirements and simulated electricity production, is highly simplified and provides only a directional analysis for comparing policy scenarios. Extreme hydrological conditions, potentially leading to very low or zero simulated electricity production from GCD, can result in unrealistic rate projections. These unprecedented scenarios are beyond the scope of the current analysis and would require extraordinary and non-standard rate adjustments, i.e., as the rate denominator representing megawatt-hours approaches a zero value, the standard rate design construct is no longer rational. We provide proposed language in Appendix D to include in the Wholesale Rates section in chapter 3, technical appendices 15, or both.

Inclusion of Experiments in the Analysis

A review of the stated purpose of the federal action on page 1-7 of the DEIS indicates that the described actions focus on coordinated annual operations of Lakes Powell and Mead, water delivery, conservation, and storage, and provide opportunities for Basin Tribes to benefit from their water rights. These purposes specifically address inter-annual operations. Experiments, however, are intra-annual operations, and their effects at Glen Canyon Dam are analyzed in the Long-term Experimental and Management Plan (LTEMP) Environmental Impact Statement (EIS). The analysis for this EIS should therefore concentrate on impacts associated with the proposed actions within the stated alternatives.

Sincerely,

RODNEY BAILEY

Digitally signed by RODNEY BAILEY
Date: 2026.03.02 15:50:47 -07'00'

Rodney Bailey
Senior Vice President
and CRSP Manager

Appendix A: Proposed Language for the Colorado River Storage Project Basin Fund

The Colorado River Storage Project Act (CRSPA); 43 U.S. Code 620d) established the Basin Fund for the collection of revenues from the operation of the Colorado River storage project and participating projects. These funds are available until expended to defray the costs of operation, maintenance and replacements for all facilities of the Colorado River storage project and participating projects. Maintaining a sufficient Basin Fund balance is critical to operating and maintaining the reliability of CRSP facilities. Reclamation and WAPA use this fund to repay the federal investment (with interest), operate and maintain facilities, purchase market power when necessary, provide funding under a Basin states' memorandum of agreement, support environmental and salinity programs, and provide irrigation assistance.

WAPA sells wholesale power to preference customers, including public utilities, municipalities, and tribes, which incorporate this power into the rest of their portfolio to fulfill their load requirements. Under WAPA's current rate structure, WAPA provides its long-term firm power customers with a set amount of power on a quarterly basis. The amount of power is based on the amount of water Reclamation forecasts to release from the CRSP units during that quarter. If the CRSP units do not generate enough power to fulfill these quarterly obligations, WAPA purchases power and necessary transmission to make up the difference. Revenues collected through WAPA's firm power rate from the sale of wholesale power are deposited into the Basin Fund. Changes in generation identified in the alternatives will not impact the Basin Fund.

The Basin Fund has historically funded environmental programs like the Glen Canyon Dam Adaptive Management Program (GCDAMP) and the San Juan River Basin Endangered Fish Recovery Programs. In recent years, appropriations have funded these base programs while the Basin Fund continues to fund related experiments. Experimental releases that bypass the electrical generators at Glen Canyon Dam reduce hydropower generation. Accordingly, WAPA purchases replacement power to fulfill contractual delivery obligations. Under the Grand Canyon Protection Act of 1992 (Public Law 102-575), WAPA records the financial cost of environmental experiments at Glen Canyon Dam as a non-reimbursable expense. WAPA accounts for such costs as a constructive return to the U.S. Treasury rather than as an operations and maintenance expense to be recovered through WAPA's cost-based power rates.

Appendix B: Power Marketing Colorado River Storage Project

In fiscal year 2025, WAPA marketed 4,268 gigawatt hours (GWh) of wholesale CRSP power to approximately 130 entities serving retail customers in Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. Customers are small to medium-sized municipalities that operate publicly owned electrical systems; irrigation cooperatives and water conservations districts; rural electrical associations or generation and transmission co-operatives who often act as wholesales to these associations; federal facilities such as Air Force bases, universities, and other state agencies, and tribes.

Capacity and energy from Glen Canyon Dam are bundled and marketed by WAPA as the Salt Lake City Area Integrated Projects (SLCA/IP). Electricity generated at SLCA/IP facilities in the Upper Colorado Region is marketed by WAPA under statutory criteria in the Reclamation Project Act of 1939, the Flood Control Act of 1944, CRSPA, and the Department of Energy Organization Act of 1977, along with associated marketing plans and contractual obligations.

The majority of CRSP power is sold under long-term firm electric service contracts. If WAPA is unable to supply contract amounts of firm capacity or energy from Reclamation hydroelectric resources, it must purchase the deficit from other (primarily non-hydropower) resources for delivery. The expense for this purchase power is shared by all SLCA/IP customers. Reliance on SLCA/IP capacity and energy varies considerably among customers. In general, rural customers are more reliant on hydropower resources as a percentage of their total resource portfolio compared to urban customers. .

Appendix C: Proposed Tribal Benefit Crediting

Tribes receive hydropower from WAPA, including hydropower from Glen Canyon Dam. Glen Canyon Dam is one component of a larger hydropower system and is included with other power plants for marketing purposes. Capacity and energy from Glen Canyon Dam are bundled and marketed by WAPA as the Salt Lake City Area Integrated Projects (SLCA/IP) to consumers across Arizona, Colorado, Nebraska, New Mexico, Nevada, Utah and Wyoming.

In the 2016 Long-Term Experimental and Management Plan (LTEMP) Final Environmental Impact Statement (FEIS), Tribal populations with the potential to be affected by project management include those who receive annual SLCA/IP allocations. The 2016 LTEMP FEIS (DOI 2016a, Appendix K, Attachment 12) provides a comprehensive list of the annual SLCA/IP allocations to American Indian Tribes and benefit information.

When originally allocated in 2002, WAPA anticipated serving about 55.7 percent of total Tribal electric use in the summer season and 58.8 percent in the winter season. There are 53 Tribes or Tribal entities that have signed firm electric service contracts with WAPA to receive power from SLCA/IP, which includes power from Glen Canyon Dam. Over the past 20 years, Tribal load growth and reductions in hydropower due to drought have reduced that original percentage.

There are currently seven Tribes or Tribal entities that operate electric utilities and receive power deliveries directly from WAPA. The remaining Tribes operate under benefit crediting arrangements. Under a benefit crediting arrangement, the Tribe's electric service supplier takes delivery of the SLCA/IP allocation and in return gives an economic benefit or a payment to the Tribe. In other words, the utility receives WAPA power on behalf of the Tribe; subsequently, the utility receives the benefit of the power and transfers the economic benefit of the federal hydropower allocation to the Tribe. Ideally, arrangements are made with public power utilities in areas that receive an allocation of power from WAPA such as a rural electric cooperative or municipality (however, exceptions apply for various reasons). Because benefit crediting arrangements are typically a function of megawatt-hours provided, a reduction in energy deliveries from WAPA translates directly into a reduced financial benefit to a Tribe.

Appendix D: Proposed Language to be Included for Wholesale Rates Analysis

TA 15.2.7 Issue 5: How would changes in energy generation at Glen Canyon Dam impact the Colorado River Storage Project's Firm Electric Service rates?

Glen Canyon Dam

Argonne National Laboratories and WAPA's report, "Post-2026 Environmental Impact Statement Rate Analysis for the Colorado River Storage Project" (Yu et al. 2025), assessed the relative impacts of various Glen Canyon Dam (GCD) hydrological scenarios on the Colorado River Storage Project's (CRSP) Firm Electric Service (FES) rates. This analysis utilized an advanced simulation tool to estimate future generation production along with a stepwise rate-adjustment framework. This framework is consistent with CRSP's obligation to remain financially self-sustaining and deliver cost-based power services (DOE, 2025) and was used to evaluate the rate implications of simulated GCD-only generation outcomes. It is important to note that CRSP's FES rates encompass hydropower generation resources beyond GCD; therefore, the identified rate impacts are theoretical, representing uncertainty associated with future GCD hydrological conditions.

The report found that the Enhanced Coordination and Maximum Operational Flexibility Alternatives consistently yielded more favorable hydropower generation outcomes, associated with higher electricity production. These alternatives also indicated fewer rate adjustments, smaller average increases per adjustment, and substantially lower maximum rate increases when an increase was identified. Specifically, under wet or average hydrologic conditions, these alternatives led to results similar to or slightly better than other alternatives. Under dry hydrologic conditions, they resulted in substantially smaller rate increases and less frequent rate adjustments. Overall, Enhanced Coordination and Maximum Operational Flexibility were identified as entailing less adverse economic impact on U.S. electricity consumers and providing greater protection against extreme adverse outcomes compared to the other five alternatives.

The modeling framework and key methodological choices supporting these findings, as documented in Yu et al. (2025), included comprehensive data on CRSP's plant characteristics, hydrological conditions, Argus forward prices, and CRSP's power purchase and sales transactions.

Another important point to note is that the rate adjustment framework used in the study is a simplified version of actual rate-changing processes, as it is based solely on assumed revenue requirements and simulated electricity production. Consequently, it provides a directional analysis for comparing policy scenarios rather than forecasting actual consumer rates, requiring careful contextualization to avoid misinterpretation. Extreme hydrological conditions, potentially leading to very low or even zero simulated electricity production, can result in a non-trivial subset of degenerate results, projecting unrealistic rate increases or decreases. These extreme events, particularly zero electricity production from GCD, are unprecedented and fall outside the scope of the current analysis framework, as they cannot be resolved through standard rate adjustments.

Post-2026 Colorado River Reservoir Operations
Public Draft EIS (Comments Due March 2, 2026)

Please record all of your comments in this spreadsheet, noting the line number or table row for each comment. Please be unambiguous, clear, and directive, with exact wording changes stated with your comments. Ambiguous comments, such as “What?,” “Poor,” or “Is this right?,” are not helpful and are not able to be addressed. If you have the same comment more than once, do not refer back to a previous comment. Instead, please copy and paste your comment to a new row in the matrix and provide the specific line number, etc. To facilitate responses to comments, please do not edit the formatting of this comment matrix to facilitate responses to comments.

Scientific Peer Review: Reclamation is using this process to also address scientific peer review requirements. Reclamation scientific information is subject to a high degree of transparency about data and methods to facilitate the reproducibility of such information by other qualified scientists. This information has a high degree of transparency regarding (1) the source of the data used, (2) the various assumptions employed, (3) the methods applied, and (4) the statistical procedures employed. In the provided column, note if your comment addresses these criteria as related to the science presented in the document (Y or N). Editorial comments or comments on content or conclusions are generally not subject to scientific peer review.

Cmt #	Section #	Line # / Table #	Page Number	Agency	Commenter	Scientific Peer Review (Y/N)	Comment	Response (reviewers leave blank)
	Purpose and Need 1.8.6		1-25				Hydropower is an authorized purpose of the system projects. WAPA recommends identifying it as such at section 1.8.6.	
	Sediment TA 5.1.1		5-1				DEIS states: "HFE releases may be as low as 31,500 cfs, though releases of 37,000 cfs or greater are necessary for sandbar deposition (increased sandbar size) (Hazel et al. 2022; Salter et al. 2025)." Why are HFEs below 37,000 cfs being proposed if no sandbar deposition would be expected at lower volumes?	
	Sediment TA 5.1.1		5-2				DEIS states: "Steadier flows erode bars at a lower rate than fluctuating flows (Wright et al. 2008)." Please clarify that it is not the fluctuating flow itself that leads to increased erosion but the higher velocities associated with higher flows is the primary mechanism	
	Sediment TA 5.1.1		5-5				The DEIS states: "Although higher turbidity is generally viewed as undesirable for recreational activities such as fishing, it more closely reflects the pre-dam conditions of the river.Turbidity in the Colorado River is a natural condition and not further considered in this section." Please clarify that turbidity, being the natural condition, may benefit native fish over nonnative fish that did not evolve in turbid environments like rainbow trout and smallmouth bass and those discussion will be had in the nonnative fish section.	
	Sediment TA 5.2.3						As stated for Bugflows on page TA 8-3 and CoolMix on page Att. 1-8-47, HFEs are also an experiment conducted under the 2016 LTEMP EIS and 2024 LTEMP SEIS and are not associated with this EIS. The HFE analyses in this document apparently use 2016 LTEMP assumptions (see comment on monthly volumes below) that are not described in this document and may change in future revisions of LTEMP. The conclusions regarding HFEs made in this document could be misleading or incorrect given that HFEs are implemented under a separate process. Please either combine the Post-2026 and LTEMP processes or remove those analyses, like this HFE analysis, that overlap the two processes. Also see the HFE discussion in River Flows in TA 8.2.3.	
	Sediment TA 5.2.4		5-22				Figure TA 5-10 make assumptions that HFEs could have durations of between 12 and 250 hours. These assumptions were specified in LTEMP and should not be carried forward in this document.	
	Water Quality TA 6						Water Quality section: no comments, no mention of LTEMP experiments or SMB bypass	
	Recreation TA 14.1.9		14-11				Update the section on Hite, the North Wash ramp, and the potential waterfall developing at the Colorado River inflow.	
	Recreation TA 14.1.10		14-13				Cite Shelby et al. 1992 (page 196) for the 8,000 cfs minimum flow for downstream rafting and Stewart et al. 2000 (page 44) for the 5,000 cfs minimum flow for upstream angling. Papers can be found here: https://gcdamp.com/index.php/Bishop_Study The Bishop study does not state "Flows of above 8,000 cfs have been identified by commercial guides as the minimum level necessary to safely run the river with passengers (Bishop et al. 1987). " https://gcdamp.com/index.php/Bishop_Study See Bishop et al. 1987 (page 433): (2) To enhance recreation, they should try to avoid extremes. Extremely low flows (flows significantly below 10,000 cfs), extremely high flow (flows in excess of power plant capacity), and extreme daily fluctuations (differences in daily releases of 10,000 cfs or more) are all detrimental.	
	Recreation TA 14.2.2		14-17				Cite Shelby et al. 1992 (page 196) for the 8,000 cfs minimum flow for downstream rafting and Stewart et al. 2000 (page 44) for the 5,000 cfs minimum flow for upstream angling. Papers can be found here: https://gcdamp.com/index.php/Bishop_Study	

	Recreation TA 14.2.4		14-22				The minimum releases of 8,000 cfs and 5,000 cfs were put into place for two different reasons and for two different reaches of the river. The 8,000 cfs minimum daytime release is to allow anglers (and those that now support the kayak backhauling services) to motor upriver from Lees Ferry to Glen Canyon Dam. That is why that minimum release occurs only during the daytime. The 5,000 cfs minimum nighttime release is to allow for safe passage of rafts and motor rigs downstream of the Lees Ferry to Lake Mead (see the 1996 EIS at https://www.usbr.gov/uc/envdocs/eis/gc/gcdOpsFEIS.html). In this EIS, the pre-ROD minimum releases were described as: 1996 EIS Page 3-152: “During flows of 3,000 cfs and less, few boaters are able to go upriver past 3-Mile Bar (RM -3), a shallow riffle (Welsh, verbal communication, 1991). Damage to boats and motors is more frequent than at higher water levels. In addition, fishing activities at flows less than 3,000 cfs are concentrated within the 3 miles above Lees Ferry, especially on weekends and other high-density days; some boats are stranded upstream of 3-Mile Bar following lowering of flows. If tied too tightly to banks, boats are left "high and dry" above water stage, only to become swamped when discharge increases. During 5,000-cfs flows, about 75 percent of boaters are able to negotiate 3-Mile Bar, while nearly all boaters can do so during 8,000-cfs or greater flows.” 1996 EIS Page 3-152: “Up to 23 rafts are launched daily by the rafting concession. Discharge from the dam becomes an influence on these rafts at constrictions in the channel, causing the most problems during periods of flows less than 5,000 cfs (O’Mary, verbal communication, 1993)”	
	Recreation TA 14.2.4		14-22				In September 2023, releases from Glen Canyon Dam were adjusted downwards on September 8 and again on September 12 to meet balancing requirements between Lake Powell and Lake Mead as described in the 2007 Interim Guidelines. At no time did releases violate the 2016 LTEMP ROD. The description on Page 14-22 says "flows were reduced to 5,000 cfs" is not a very precise description of releases that month as releases continued to fluctuate between an overnight minimum of between 5,000 to 6,000 cfs to a daytime maximum of 8,000 cfs in accordance with the ROD. Releases were not reduce to a steady 5,000 cfs as could be implied from the document. Additionally, gages at Phantom Ranch and at Diamond Creek show how the load-following wave attenuates downstream. At Phantom Ranch, minimum flows were about 5,710 cfs and at Diamond Creek they were about 6,230 cfs. Please consider elaborating on the description of the September 2023 releases if this is going to be used as an example of a safety situation for boaters. Please clarify whether this was more of a communications issue where releases were reduced without notice to trips that were still on the water. Also clarify whether this was more of an issue for commercial motor trips that was resolved later in the month when they were able to complete their trip. Please clarify why the overnight minimum release dropped down to 5,000 cfs on September 13, increased to 6,000 cfs from September 15-20, and then dropped back down to 5,000 cfs for the remainder of the month.	
	Recreation TA 14.2.4		14-23				Please clarify how the analysis of determining the percent of futures had daytime flows above 8,000 cfs. was done. For example, what were nightime releases (from 7pm to 7am) in these futures? Is this based off some monthly volume distribution? Seeing how monthly and daily volumes are determined by LTEMP, this analysis appears to conflate assumptions made in LTEMP with an analysis made for Post-2026. Please consider either completely separating or combining the two planning efforts.	
	Recreation TA 14.2.4		14-24				See previous comment. Consider removing the analysis of assessing futures where the daytime flows would be above 5,000 cfs as it would include daytime flows of below 8,000 cfs which would violate the daytime minimums specified in the LTEMP ROD.	
	Native Fish TA 8.1.2		8-3				As far as we are aware, there are no native fish species of the Colorado River basin that are extinct. If there are please identify them in Table TA 8-2. This might be referring to the three fish species that have been "extirpated" from the Grand Canyon reach (Colorado pikeminnow, roundtail chub, and bonytail).	
	Native Fish TA 8.2.2		8-36				Please clarify that Razorback sucker and Colorado pikeminnow are listed as endangered, not threatened as stated here.	
	Native Fish TA 8.2.3		8-50				The Sediment section (5.1.1 page 5-2 and pages 5-8, 5-9) says 37,000 cfs or greater are necessary for sandbar deposition, not 34,000 cfs as stated here. Please check for consistency.	
	Native Fish TA Attachment 1		1-8-14				In the paragraph starting with "The decline of the razorback sucker", please update this section noting the recent increases in native fish in Grand Canyon and the lack of a relationship to any changes in discharge patterns from Glen Canyon Dam. This would suggest there is little relationship between discharge patterns from Glen Canyon Dam and native fish abundance.	
	Chapter 3		3-86				The recent study indicating a reduced hydropower generation would be replaced primarily by natural gas was conducted by Argonne and National Lab of the Rockies. The study should be cited.	
	Chapter 3		3-93				Remove the paragraph describing HFEs impacts. See comments on TAs	
	Chapter 3		3-165				In the "Impact Indicators" rates and the market value of energy need to be separated. There is no link between the two (i.e., market value of energy has no bearing on FES customer rates. We provide additional language in our accompanying comment letter.	
	TA-15		15-6				Looking at Fig TA 15-4 Generation has been declining since well before 2007.	

	TA-15	first full paragraph	15-17				Over the past several years appropriations has funded the programs, but has **not** funded experiments. Costs of experiments are paid by the Basin Fund. Cost of experiments are descibed correctly in the last paragraph.	
	TA-15	15.2.1	15-21				Clarify the electricity rates are wholesale rates.	
	TA-15	15.2.4	15-32				Under critically dry categories the median value for CCS is highest, but interquartile range is also the largest and includes 0 MW of capacity. I would caution in stating the CCS performs as well as the other alternatives mentioned.	
	TA 7.1.3 (Regional Modeling and Studies)	14-15	7-15				The citation "(Argonne et al. 2024)" is incorrect. The report was prepared by T.D. Veselka, J. Jorgenson, M Pavičević, Q. Ploussard, and T. De Silva. Please be aware that there are multiple instances of such citation-format issues in the current draft.	
	TA 7.2.1 Methodology	35-45	7-25				Based on the response to Cmt #70 in the previous round, I did not find a clarifying context that explains the caveat of using the EIA 2050 WRCC/eGrid 2023 WRCC resource mix percentages as the "representative" replacement for the loss of hydropower. The current methodology assumes a representative mix will replace the loss of hydropower. However this assumption can be violated given the empirical evidence we have seen in the literature --- hydropower is likely to be replaced by coal boilers and gas turbines (for instance, Impact of Lost Generation at the Glen Canyon Powerplant due to the Environmental Requirements for the Years 2024 to 2027, by T.D. Veselka, J. Jorgenson, M Pavičević, Q. Ploussard, and T. De Silva, 2024; Dam Spillovers: The direct and indirect costs from environmental constraints on hydroelectric generation, by James Archsmith, 2024; and Does water scarcity shift the electricity generation mix toward fossil fuels? empirical evidence from the United States. by Eyer, J. and C. J. Wichman, 2018.). A description of the implication of violating the current underlying assumption is warrented.	
	TA 7.2 Environmental Consec	30-35	7-24				This comment is a follow-up to Cmt #71 in the previous round. I understand that CO2 emissions are the only pollutants within scope due to the current limitations in the emission factor data. However, emission data for SO2 and NOx are available from EPA's CEMS database for all the individual natural gas, coal, and oil generators >=25MW, allowing for a calculation of the emission factor for SO2 and NOx. For full transparency, the EIS should explicitly state that analyses for other pollutants (sulfur oxide, nitrogen oxide, and PMs) are outside the current scope due to data limitations from the emission factor data from NLR.	
	TA 15.1.2		15-2				"… , in total, serve approximately 40 million people across the following states: Nebraska, Wyoming, Utah, Nevada, Colorado, Arizona, and New Mexico." then in the following page 15-3, Figure TA 15-1, they figure says estimated customers served ~5.8 Mil. This inconsistency needs to be clarified.	
	TA 15.2.1		15-21				The 4th mention of CRiSPPy in this section should be written with a lower case "y" instead of upper case "Y"	
	TA 15.2.1		15-21				Please add "developped by Argonne National Laboratory for WAPA" after "The CRiSPPy model is a hydropower scheduling tool"	
	TA 15.2.1		15-21				It should be "Argonne National Laboratory" (singular) instead of "Argonne National Laboratories" (plural)	
	TA 15.2.2		15-22			Y	After "The Glen Canyon Dam electrical generation and firm capacity modeling results are direct outputs from the CRiSPPy model.", please add "The modeled firm capacity in a given month is calculated as the largest, or peak, value of the power output modeled by CRiSPPy in that month."	
	TA 15.2.4	18-19	15-28				"… the modeled historical median (658.3MW which is the average total…)" is the dashed line a meidan or an average? This inconsistency needs to be clarified.	
	TA 15.2.4	19-20	15-28				August firm capacity intuitively is an important metric, as elaborated in the draft. However, hydrological inflows and demand exhibit high volatility year-round. Perhaps the winter seasons may be more challenging now; for instance, SPP's 2026/27 planning reserve margins are 16% minimum for the summer months and 36% for the winter months. The term "August as a yearly representation" is too strong in my opinion. I suggest focusing on the fact that August is a peak month chosen for modeling the subject, and clarifying that the alternatives may have different impacts on the firm's capacities in other calendar months. An improved draft should acknowledge the importance of other months and the potential for very different results.	
	TA 15.2.4	Fig TA 15-14 to TA 15-19	15-29 to 15-39				The meaning of the percentage numbers in the box charts needs to be clarified (e.g., are they the share of inflow scenarios modeled?) Additionally, the vertical axis shows the annual Lees Ferry Natural Flow, but the analysis focuses only on August. There is a gap between the annual and August inflows, and a brief description to bridge it would be helpful to readers.	
	TA 15.2.4	3-4	15-30				Is the dashed line a modeled historical median or average for Hoover Dam? There is an inconsistency in the language, clarification needed.	
	TA 15.2.4	4-6	15-30				An improved version of the draft should acknowledge the limitations of using August as the representation. Specifically, the choice of using August should be clearly motivated for the general audience. An acknowledgement that other calendar months may produce very different results and Winter months might be of high importance should be included.	

	TA 15.2.6	Fig TA 15-20					Maintaining a safe reservoir elevation is important year-round, but Jan 1st was chosen as the date to benchmark the spillway infrastructure and life safety. The current presentation can give the impression that the Colorado River has so much water that a substantial percentage of the futures, regardless of the alternatives, could reach a structure-threatening level of elevation. This is not true based on the data I have seen. Moreover, the Spring runoff does not start until late-March/April. It is not obvious to the general audience what motivates the title "Lake Powell Preservation of Spring Runoff Space 3,684 Feet: Robustness. Percent of futures in which the January 1 Lake Powell elevation does not exceed 3,684 feet in the percent of years specified in each row". The choice of Jan 1st needs to be motivated/explained/ or, at a minimum stated as a modeling choice, with the caveat that March and April are both important given their closer positin to the Spring runoffs.	
	TA 15.2.6	Fig TA 15-22					Compared (Fig TA 15-20) with the current Fig TA 15-22, the analysis changes its scope to cover all months across all futures, instead of Jan 1st. A clarification for the change of the scope/target date needs to be included.	
	TA 15.2.6	Fig TA 15-21 v.s. 15-23 & 15-25					The change of the reference hydrological condition switched from the wettest 20-year average to the wettest 10-year wettest condition average without any explanation or motivation. This transition is abrupt/inconsistent. A clear description of the reasoning and motivation for the changes in reference hydro conditions is warranted.	
	TA 15.2.6	Fig TA 15-27 v.s. 15-29 & 15-31					Similar to the previous comment, for the Hoover Dam, the reference condition switches from the wettest 20-year average to the 5-year average (not the wettest condition), then ultimately the wettest 10-year average. The changes in the selection of the reference hydro condition need to be justified and clearly motivated in the text (especially in connection with the previous figures).	
	TA 15.2.7		15-54				It should be "Argonne National Laboratory" (singular) instead of "Argonne National Laboratories" (plural)	
	TA 15.3		15-56				Please include the osti number in the citation of Yu et al (last citation): https://www.osti.gov/biblio/3007073	
	TA 16.2.3	15	16-57				Typo in citation, "Duvel et al. 2022, …" should be "Duvel et al. (2022), … "	