

**RESPONSE TO PEER REVIEW COMMENTS ON
THE RETAIL RATE ANALYSIS METHODOLOGY USED IN THE
GLEN CANYON DAM LONG-TERM ENVIRONMENTAL AND MANAGEMENT
PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT**

Prepared by

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The following report addresses peer review comments pertaining to the proposed retail rate methodology for the Glen Canyon Dam Long-Term Experimental and Management Plan (LTEMP) Draft Environmental Impact Statement (DEIS). Responses are provided to major comments only.

Comment: Although this latter level of sophistication does not seem to be required by the nature of the study in question, the appropriateness and consequences of ignoring elasticity of demand completely should be discussed at greater length than is proposed in the draft methodology paper. The following comments assume that an “economic impact analysis” has been requested, rather than an “economic welfare analysis”.

Response: The author determined that secondary price elasticity effects of rate changes was not necessary. This decision was made in the interest of keeping the report focused on direct rate impacts and not excessively long. The decision to not address theoretical price elasticity impacts also considered the fact that retail rate impacts were very small relative to even low incomes. Price elasticity impacts are driven by the effects of changed prices on substitution of electricity consumption for other goods. It is doubtful that a bill impact of 15 cents per month (the largest impact in any LTEMP alternative) will cause the consumption behavior of customers to change. The decision not to include discussion of price elasticity impacts was further supported by the comments of another reviewer who stated that the issue was adequately addressed in the proposed methodology document.

Comment: Effective comparison to the 1995 GCDEIS, including the price elasticity issue, pages 26 - 27.

Response: None necessary.

Comment: The discussion after Figure 12 concludes that price elasticity should not be taken into account in the retail rate impact analysis. The arguments presented in favor of this conclusion are not convincing, especially in the context of a long-run planning study. Representative and reasonable price elasticities for specific customer classes can be assumed based on existing studies; no new studies are required.

Response: See the responses above.

Comment: The scope of the analysis appears appropriate in that it addresses potential retail rate impacts on WAPA customers of alternative Glen Canyon operations. Reasonable efforts have been taken to identify all relevant customers and many characteristics of those customers (e.g., share of total retail revenues from different customer classes).

Response: None necessary.

Comment: The logical approach to the analysis requires some refinement and clarification. (See also the embedded comments in the draft methodology paper.) A significant portion of the proposed methodology addresses the fact that federal power is sold to various joint action agencies (JOAs), which leads to assumptions about how those JOAs pass costs along to individual utilities. Some of this discussion appears redundant. It should be sufficient to note that power is sold to JOAs, but that the ultimate retail rate impacts fall at the level of individual utilities, so assumptions are required to allocate costs among JOA members.

Response: This comment was addressed in the final report. Efforts were made to eliminate redundancy and clarify the methodology.

Comment: One significant shortcoming in the proposed analysis is the assumption that capacity markets throughout the Western Interconnection function perfectly, so that surplus capacity can easily and inexpensively be transferred among WAPA customers. This may be important to the conclusions reached when the methodology is applied, because to the extent that such capacity markets do not function well, surplus capacity in some locations will not be available to utilities who receive reduced reductions in capacity from Glen Canyon. This assumption will thus inappropriately bias downward the estimated impact on retail rates, if operations lead to lower allocations of capacity.

The assumption of perfectly operating capacity markets seems highly unlikely, for many reasons. There are large geographical distances among Glen Canyon customers, which operate in multiple control or balancing areas, are separated from each other by transmission constraints that are certainly binding in the short run, and would face pancaked transmission and ancillary service rates that would exacerbate transaction costs when attempting to put together deals across multiple transmission systems. In some cases, reserve sharing groups (RSGs) may already exist that can help transfer surplus capacity among some utilities, but there is no discussion in the draft methodology paper of any such RSGs. Thus, the assumption that surplus capacity is and will be easily shared seems unwarranted. Similarly, the discussion of markets for capacity in section 5 could lead to incorrect conclusions. “Organized markets” do not exist in all parts of the WECC, and even where such organized markets exist (e.g., parts of California), it is not obvious that Glen Canyon customers can or do actually transact in these markets. The lack of such capacity markets heightens the need to clarify how any reductions in capacity caused by different operations at Glen Canyon will be replaced, by individual utilities or joint operating agencies.

Response: This comment appears to arise from statements in the proposed approach document that, for purposes of rate analysis, attempts were not made to attribute incremental capacity

changes resulting from the manner in which GCD is operated to individual utility systems. Instead, incremental capacity was allocated on the basis of the relative size of the system in terms of SLCA/IP allocations. The proposed approach intended to address the issue of whether attempts should be made to allocate incremental capacity resulting from LTEMP alternatives to different utility systems in a different manner than according to their SLCA/IP allocations. The suggestion in the proposed approach was that a different allocation approach would add unnecessary complexity and require arbitrary allocation assumptions. The comments of quoted above relate to the amount of new capacity that results from changes in GCD operations and not to the allocation of the new capacity among utility systems after the capacity has been determined. As such the comments relate entirely to the power systems analysis and have been addressed separately.

Comment: The methodology proposes the construction of a database of retail revenues by utility, which would be used to estimate the retail rate impacts. It is not clear whether these revenues have been and will be clearly identified by customer class, which is necessary because different customer classes might be affected in different ways by changes in WAPA’s rates. Utilities may effectively pass through the cost of federal power to specific classes or even individual customers. Absent a utility-specific analysis, the assumption that costs are passed through proportionately to all classes should be explicit. The proposed methodology includes “documentation of the ratemaking process used by municipalities, cooperatives and native tribes (wholesale utilities) when new capacity is added to the systems and when energy costs change”. This documentation should show how the cost of federal power is passed through to various end-user classes, in the long run.

Response: The database does include separation between residential and non-residential consumers. Due to this comment, the allocation methodology has been clarified in Appendix K.4 of the final report.

Comment: Models Employed. The methodology proposes the construction of a database of retail revenues by utility, which would be used to estimate the retail rate impacts. It is not clear whether these revenues have been and will be clearly identified by customer class, which is necessary because different customer classes might be affected in different ways by changes in WAPA’s rates. Utilities may effectively pass through the cost of federal power to specific classes or even individual customers. Absent a utility-specific analysis, the assumption that costs are passed through proportionately to all classes should be explicit. The proposed methodology includes “documentation of the ratemaking process used by municipalities, cooperatives and native tribes (wholesale utilities) when new capacity is added to the systems and when energy costs change”. This documentation should show how the cost of federal power is passed through to various end-user classes, and may therefore identify how changes in Glen Canyon operations will affect different end-user classes.

Response: See response above.

Comment: The discussion around Figure 3 should be replaced by a discussion of specific contractual provisions.

Response: Contract provisions important to the rate impact analysis involved the allocation of capacity and energy by Western to individual utility systems. This contract information has been referenced and discussed in the final report.

Comment: The use of equations to illustrate the proposed analysis is potentially helpful, but only if the equations are fully specified (all terms defined, parentheses inserted as necessary, and appropriate units such as dollars and MWh or MW identified). Although the reader can in many cases understand the proposed calculations, one equation is not logical (e.g., $A = A + B$, where B is not obviously zero), and several proposed equations use undefined terms.

Response: The equations were corrected and carefully specified in the final report.

Comment: Quality of Data. Although the discussion of the required data is straightforward, it is not clear that the data are appropriate to the tasks, based on the discussion here. Figure 1 is specifically confusing. How many utilities are represented in this figure?

Response: Figures have been clarified in the final report based on this comment.

Comment: However, Figure 2 is a problem; it is not clear what the message is. It may be important to distinguish the customer class shares of individual utilities, but only if that has something to do with the way costs are passed along from WAPA, and thus the consequences of changes at Glen Canyon. Figure 2 suggests an extremely wide range of residential share of total revenues, which implies that some utilities have almost entirely commercial, agricultural and/or industrial loads. For those utilities with high nonresidential shares of total revenues, long-run elasticities of demand will be important.

Response: There is a very wide diversity in the customer mix for different systems. This is clarified in the final report (see the discussion of the No-Action Alternative).

Comment: Use flow chart to present inter-relationships among the three steps listed in page 1.

Response: The final report has been revised as suggested.

Comment: Priority suggestion: Relate the three step procedure/process to the cost of service model, which includes functionalization, classification, allocation, and rate/tariff design that is typically used by regulated electric utilities at state regulatory commissions. See these references:

- (1) Jonathan A. Lesser and Leonardo R. Giacchino, Fundamentals of Energy Regulation, 2nd edition, Public Utilities Reports, Inc., 2013, chapters 7 and 8.
- (2) J. Robert Malko, Darrell Smith, and Robert G. Uhler, Costing for Ratemaking: Topic Paper, Electric Utility Rate Design Study, EPRI, August 1981, chapters 5 and 6.

Response: The final report clarifies how the task involves allocation of increased SLCA/IP costs to alternative entities.

Comment: Priority suggestion: Clarify the level of detail (each month vs. each year) of retail rate impacts for the time period, 2014 to 2033. Also, define or clarify the typical or representative residential customer and non-residential customer (commercial, industrial, etc.) in this retail rate impact analysis.

Response: The final report has been revised as suggested. The methodology section explains that the analysis is made on an annual basis and profiles of consumers are discussed explanation of the No-Action Alternative.

Comment: Development of SLCA/IP Power Allocation and Retail Rate Database (pages 4 - 11). Use flow chart/diagram to show inter-relationships among the four tasks listed on page 4.

Response: The final report has been revised as suggested..

Comment: Specify time period and percent of total coverage for Table 3 (page 5).

Response: The sources of the table are documented along with the time period in the final report.

Comment: Specify time period for information presented in Table 4 (page 6) and Table 5 (page 7).

Response: The sources of the table are documented along with the time period in the final report.

Comment: Priority suggestion: Present and explain rationale, including relationship to costing objectives, for the alternative allocations (pages 7 - 11). Costing objectives include efficiency and fairness considerations.

Response: The allocation basis for the cost changes caused by LTEMP scenarios is the SLCA/IP allocation. Allocation for customers within a system is made on the basis of residential/non-residential revenues and the only part of the process that involves utility-specific ratemaking processes is the computation of residential bill impacts. To compute the residential bill impact an allocation must be made to allocate costs between residential and non-residential consumers as shown in green. Rather than attempting to simulate detailed allocation and rate design systems for each system, the assumption is made that capacity and energy costs are allocated in the same proportion as existing overall rates. This is explained in the report.

Comment: Measurement of Aggregate Generation Rate Impact from Argonne Power System Analysis (pages 11 - 17): Specify time periods for analysis on revenue requirements on page 16.

Response: The time periods are specified in the power systems section.

Comment: Priority suggestion: Discuss the rationale for alternative discount rates (page 17). Present advantages and disadvantages of using alternative discount rates.

*Response: This has been incorporated in a separate section of the report -- K.3.1.2
Incorporation of Power Systems Analysis and Capital Recovery Factors.*

Comment: Priority suggestion: Discuss the importance of and the implications of the assumptions made at the end of this section (page 17).

*Response: This has been incorporated in a separate section of the report -- K.3.1.2
Incorporation of Power Systems Analysis and Capital Recovery Factors.*

Comment: Page 20: Regarding cost allocation, I would simply assume that preference power is allocated (directly or indirectly) to the SLCA/IP entity and that the additional costs of replacing GCD power are allocated across all customers based on their relative energy consumption.

Response: See response above.

Comment: Use a flow chart/diagram to show inter-relationships among the 7 equations on page 20.

Response: The final report has been revised as suggested.

Comment: Clarify the time periods and time intervals associated with the equations on page 20.

Response: The equations have been re-structured showing time periods.

Comment: Priority suggestion: Is the pro-forma residential bill increase for an average usage residential customer? What about low usage vs. high-usage residential customers?

Response: The bill increase is computed on the basis of total revenues and total customers meaning it is an average. Given the large amount of systems, computing multiple bill impacts for low and high use consumers would be impractical.

Comment: What are the assumptions concerning potential rate design changes during the 2014 to 2033 time period for distribution system/utilities?

Response: The residential/non-residential ratio of revenues is assumed to remain constant.

Comment: Include a "time (t) variable" or sub-script in the equations on page 20.

Response: The equations have been re-structured showing time periods.

Comment: Will the pro-forma residential bill changes (increases) be presented in both % and dollar terms?

Response: Retail rate changes are presented on a percentage basis while residential bills are presented in real 2015 dollars.

Comment: What are the assumptions concerning the changes in the source/suppliers of electricity and associated sales mix for the distribution systems during the 2014 to 2033 period?

Response: This is addressed in the power systems' section.

Comment: Priority suggestion: Concerning "non-residential customers", what are the assumptions concerning commercial customers and industrial customers? How will differences in rate designs and usage levels for non-residential customers be addressed for a given distribution system to compute pro-forms bill increases? Is there really a typical non-residential customer?

Response: A typical non-residential customer is not defined. Non-residential impacts are incorporated in the overall retail percentage statistics.

Comment: Priority suggestion: Will sample or representative rate design/tariff schedules for different types of customers be presented in the appendix of the report?

Response: See the responses above – average residential bill impacts for selected systems and percentage overall retail rate impacts are presented.

Comment: Priority suggestion: Need to present and summarize the primary conclusions from each of the previous three major sections. Discuss any inter-relationships among conclusions.

Response: The report has been revised to summarize the data in various different ways.

Comment: Priority suggestion: Consider having a separate conclusions section and a separate alternative calculations section.

Response: Alternative methods including using Western computed wholesale rates are discussed throughout the report.

Comment: My initial conclusion regarding ANL's proposed rate impact analysis methodology write-up ("ANL Report") is that the ANL investigators have taken a relatively straightforward exercise and turned it into an overly complex one.

Response: The fundamental computation of rate impacts is an allocation of power systems cost impacts measured for LTEMP alternatives. The allocation is based on the current SLCA/IP power allocations. Necessary complication involves data collection and presentation of results for a diverse group of utility systems. The report as presented in K.3 has been written to reflect the fundamental simplicity of the approach where increases in power costs driven by changes in the GCD operation are allocated to different parties.

Comment: I am also concerned that ANL intends to simulate "the Western SLCA/IP capacity and energy allocation process."¹ Even though ANL has indicated that WAPA is not participating

¹ ANL Report, p. 2.

in the rate analysis, the process by which WAPA currently allocates power generated at GCD to the SLCA/IP members should be known with certainty.

Response: This comment relates to the manner in which Western allocates energy and not to rate changes. The word “simulate” should not have been used. The sentence should have stated that “current SLCA/IP allocations are used to measure impacts on individual systems.” Allocations are directly made from the current Western Energy Allocation. These allocations have been provided by WAPA. This has been clarified in Appendix K.3 of the final report.

Comment: It also appears that ANL is making a basic error in estimating rate impacts for small and large systems. Specifically, the rate impact for a given system will be based on the change in the annual cost of electricity supplied under the different LTEMP alternatives. Given ANL’s proposed methodology for estimating the overall cost impacts of the LTEMP alternatives, the change in cost for each SLCA/IP member will be based on their individual GCD allocations as a percentage of their total electric supplies, times the increase in generation cost found using the Aurora model. Alternatively, the cost increase will equal the difference between the projected market price at the corresponding hub and the projected GCD price, times the amount of replacement power needed by each member.

Response: This statement reflects a misunderstanding of the power systems relative to the rate impact analysis. From the perspective of the rate impact analysis, there is no difference at all between the treatment for the eight large systems directly modeled and other smaller systems. The final report clarifies any ambiguity with respect to this fact.

Comment: Unless there is a specific statutory requirement to estimate the rate impacts for each SLCA/IP member, I recommend a simpler, bracketing approach. For example, the greatest possible rate impact would be for an SLCA/IP for which GCD output supplies 100% of its generation supplies.² Suppose also that generation costs represent a share, $S_{G,n}$, of total retail rates for SLCA member n (of N total members), implying that $(1 - S_{G,n})$ of the retail rate reflects transmission and distribution costs. (I believe it is reasonable to assume the percentage for each member is constant over time. To do otherwise would require an analysis of transmission and distribution costs of each SLCA/IP wholesale customer over time, which I believe is far beyond the scope of the proposed analysis.) Finally, assume that the maximum share for any of the individual members is S_{G_MAX} .

If the increase in annual generation costs in year t associated with the change in GCD operations is ΔG_t , then this worst-case rate impact would equal: $(\Delta G_t / \bar{G}_t) \cdot S_{G,n}$, where \bar{G}_t is the cost of GCD power purchased under the no-action alternative.

In general, if GCD provides a share $S_{n,t}$ ($0 < S_{n,t} \leq 1$) of total generation supplies for SLCA/IP member n , then the average rate impact for each member (across all retail customers) will equal: $(\Delta G_t / \bar{G}_t) \cdot S_{n,t} \cdot S_{G,n}$. Note that, because ANL assumes that new capacity and energy will be

² On page 10 of the ANL Report, Figure 4 shows that the largest SLCA/IP allocation is for Gunnison, CO, at about 55%. Thus, this theoretical maximum will be almost twice as large as the largest actual impact.

procured for SLCA/IP members as a group, rather than on an individual basis,³ the overall increase in costs each year, ΔG_t , will be allocated to all SLCA/IP utilities.

Response: This comment prompted a study of whether a simpler approach based only on the percent of resources procured from SLCA/IP could be used. The use of boundary analysis would not avoid the data collection process for estimating the percent of SLCA/IP that is the central part of the rate analysis. The study of whether boundary conditions can be used using examples of rate drivers. This analysis demonstrates that it is not reasonable or possible to attempt a simple boundary approach.

Comment: The other key issue not specifically addressed in the ANL proposal is the relationship between the estimated cost increases associated with constructing new generating resources to replace lost GCD capacity and energy, and WECC energy market prices.⁴ However, in the ANL description of how it proposes to estimate cost impacts associated with the LTEMP, ANL referenced the its “WECCi-leaks” study to confirm that changing operations at GCD would have no impact on prices in western market hubs.⁵ In that case, the cost (and rate) impact of changing GCD operations on SLCA/IP members should be based on the *lower* of the costs of purchasing replacement capacity in the market and the cost of constructing and operating additional capacity to serve SLCA/IP customer needs.

Response: This comment relates directly to the power systems analysis. In the power systems analysis, production costs include spot prices with outside systems.

Comment: Somewhat confusingly, the ANL Report also states that, “The retail rate impact analysis recognizes that, in the long-run, Western cannot subsidize wholesale power companies nor charge them more than the true costs of operation.”⁶ This statement appears to refer to WAPA’s allocation of federal preference hydropower supplies to WAPA wholesale customers. Of course, to the extent that preference power is sold at (below-market) cost to those customers, one can argue such customers are receiving a subsidy. ANL appears to be relating this issue to the post September 2024 expiration of WAPA’s current preference power contracts, although it is not clear from the write-up whether ANL is suggesting WAPA intends to price all generation from federal hydropower resources at market. If so, then the entire issue of “preference” power is moot. This issue should be clarified by ANL in its analysis as to how, specifically, it intends to treat post September 2024 costs.

Response: The final report clarifies the intent of this statement which was to emphasize that the rate impact process involves allocating increased capacity and energy costs caused by changes in the operation of GCD. This has been clarified in the final report.

Comment: Please clarify what are the implications of the statement, “The retail rate impact analysis recognizes that, in the long-run, Western cannot subsidize wholesale power companies nor charge them more than the true costs of operation.” Will this be reflected in the post-2024

³ See ANL “Proposed Power Systems Analysis Methodology,” pp. 5-6.

⁴ ANL Report, p. 24.

⁵ ANL “Proposed Power Systems Analysis Methodology,” p. 3.

⁶ ANL Report, p. 17.

period only, or is this a more general statement by ANL that will affect its rate (and cost) analysis for the entire study period?

Response: See response above.

Comment: Cost Allocation The allocation of increased generation costs among the different ratepayer groups (residential, commercial, industrial) can be estimated in several ways. The most straightforward approach is to assume that the additional generation costs will be allocated to each customer group based on its overall share of load. The other approach is to allocate the fixed capacity portion of the increase in GCD costs (e.g., capital costs of new generation construction plus fixed O&M costs) based on standard coincident peak cost allocation methods, and allocating all variable costs based on overall load shares.

Response: The allocation to residential and non-residential consumers is based on revenues. As explained in the final report, this allocation is conservative in terms of allocating relatively more costs to residential consumers.

Comment: The ANL document also states it will calculate rate impacts based on levelizing the cost impacts associated with the change in GCD operations and need to acquire additional capacity and energy resources as a result. Specifically, the ANL Report states:

Part of the analysis is computing the levelized cost that accounts for timing of the capacity expansion. If a particular alternative operation affects capacity requirements, but an entity has surplus capacity (or alternatively chooses to buy capacity from the market which has excess capacity), the full effects of LTEMP alternatives will not be realized for an extended period of time. To compute the levelized real cost, year-by-year changes will be averaged using a process that accounts for the time value of money.⁷

Capacity expansion capital costs will be levelized over the expected lifetime of the new capacity resources. But it appears that ANL intends to levelize *all* of the costs, including variable costs. If this is the case, I do not recommend it. The rate impact analysis should reflect, as closely as possible, the *actual* rate impacts experienced by SLCA/IP retail customers throughout the study period. I would ask ANL to clarify their proposal on this point.

Response: Based in part on these comments, it was decided to not use levelized costs in the analysis.

Comment: The ANL Report devotes considerable attention to how the results of its rate impact analysis will be presented.⁸ I suggest a far simpler approach. (I do not know whether there are specific legal requirements governing the presentation of rate impacts analysis.) Specifically, I suggest the following tables/charts in the main body of the report, and presentation of detailed impacts for each customer in an Appendix.

Worst Case Annual Percent Rate Increase for each alternative. [Reflects 100% reliance on GCD power and the largest share of generation as a percentage of total costs.] Increase in total costs

⁷ ANL Report, p. 17.

⁸ ANL Report, pp. 18-23.

(ΔG_t) to be allocated to SLCA/IP wholesale customers in each study year, percent of estimated total cost of GCD power supplied under the no-action alternative ($\Delta G_t / \bar{G}_t$), and the maximum annual rate impact ($\Delta G_t / \bar{G}_t$) • S_{G_MAX} . [Note: presumably, as SLCA/IP member loads increase over time, this maximum rate impact will decrease over time.]

Response: This comment of has been incorporated in Appendix K.4 of the final report. Specifically, maximum and average impacts are presented.

Comment: Weighted Average Annual Percent Rate Increase for each alternative. [Reflects weighted average percentage reliance on GCD power and weighted average share of generation as a percentage of total costs.] Table showing weighted average percent of total resources provided by GCD to the SLCA/IP wholesale customers in each year of the study (S_t), and weighted average increase over time. Thus, the annual weighted average increase for all customers will be: $S_t \cdot (\Delta G_t / \bar{G}_t) \cdot S_{G_AVG}$.

Response: This comment has been incorporated in Appendix K.4 of the final report. Specifically, scatter plots of the percent of resources versus the rate increase are presented.

Comment: Weighted Average Annual Residential Bill Increase for each alternative. Equals (2) times weighted average residential bill in each year. [I would not bother with average commercial or industrial increases, because what constitutes a “commercial” or “industrial” customer can vary greatly.]

Response: Weighted average bill impacts were included in various presentations. The final report only includes average bill increases. Per the comment, non-residential bills have not been presented.

Comment: Page 1, Item 2: As previously discussed, I recommend that ANL not estimate rate impacts based on levelization of all additional capacity costs. Rather, the rate impacts should be based on the estimated annual cost impacts in each study year.

Response: This recommendation has been adopted.

Comment: Page 2. I would recommend the report provide a simple mathematical representation of the rate impact calculations, similar to what I provided in the summary of these comments. (Unless, of course, my math on page 2 is incorrect.)

Response: The final report has been revised as suggested.

Comment: Page 3: Again, I would relegate much of the individual SLCA/IP member rate impacts to an Appendix.

Response: The final report has attempted to summarize rate impact presentations to the maximum extent possible. Detailed rate calculations are available per request in spreadsheet form.

Comment: The ANL Report raises the question as to the capacity/energy basis for how SLCA/IP allocations should be based. First, I would recommend that these indirect allocations

be based on the direct allocations. Second, is it possible for ANL to contact WMPA, UMPA, Platte River, CRC of NV, and Tri-State and simply ask them how they allocate preference power to their members? However, the ANL Report then appears to answer the question, saying the methodology will use the annual energy allocation. If that is that case, why bother with the entire discussion? I would simply present the allocation approach and explain the rationale.

Response: The rationale for the allocation is explained in the final report

Comment: Pages 15-16. The discussion on the carrying charges is confusing. ANL assumes that it will build capacity to satisfy aggregate customer loads, not by individual SLCA/IP member. The carrying costs should reflect those of the developing authority, with the resulting actual annual costs spread to the members. I may be confused about the point ANL is making here. If so, it requires clarification here (and in the power analysis) as to exactly how development of new resources to meet aggregate SLCA/IP load will be financed.

Response: The carrying charge discussion has been re-written in the final report.

Comment: Page 19. Some charts like Figure 6 showing potential rate impacts for all members in different years is useful. I would suggest charts for 3-4 periods be presented to illustrate differences in the impacts over time.

Response: Scatter plots are presented for the maximum impact year.

Comment: Pages 24-26. I am confused by the purpose of the historic market-price analysis and the historic market value of GCD output and its relevance to the rate impact analysis. The ANL Reports states that, “This background analysis evaluates what would have happened to the value of GCD had the dam operated in a different manner in the past and realized market clearing prices.”⁹ I would appreciate if ANL would explain how this is relevant to the rate analysis for the study period, as I do not see the connection.

Response: These charts have been deleted in the final report.

Comment: Page 26. The report states “[p]rice elasticity is not generally incorporated in utility rate increase proceedings whereby a higher rate increase results in lower sales and results in even higher rates.” This statement is simply wrong. I agree that attempting to incorporate price elasticity would be difficult, but I think ANL can justify it based on the technical difficulty and the relatively low percentage rate impacts.

Response: This statement has been excluded from the final report.

Comment: Use flow chart or diagram to relate the five sections of the report.

Response: The final report has been revised as suggested.

Comment: Measurement and Presentation of Retail Rate Impacts (pages 17 - 23). Use flow chart/diagram to show inter-relationships among equations on pages 18 - 19.

⁹ ANL Report, p. 24.

Response: The final report has been revised as suggested.

Comment: Pages 12-17. For the power system analysis summary, please make sure the summary conforms to the analysis as it will be actually performed.

Response: The final report has been revised as suggested..

Comment: Clearly specify the time periods and intervals for quantitative analysis for distribution entity on pages 18 - 19.

Response: The final report has been revised as suggested.

Comment: Figure 4 is very useful. However, I don't think the material that follows, which describes the "distortions" of the rate impacts is accurate. It's not a distortion at all. For some small systems, the rate impacts will clearly be larger than the overall average. Characterizing those larger impacts as "distortions" to the overall average is incorrect.

Response: The final report has been revised as suggested.

Comment: Pages 22-23. The rate impact distribution discussion and charts are confusing and I do not believe they add much to the analysis. Instead, I would report minimum, weighted average, and maximum impacts. Trying to show that most impacts are small will be of no comfort to the most affected SLCA/IP members and their retail customers.

Response: The final report has been revised as suggested.

Comment: Omissions or Redundancies. No omissions or redundancies are apparent, other than those discussed herein.

Response: No response necessary.

Comment: Different sources have apparently been reconciled to try to avoid overlooking ultimate purchasers. There are no obvious errors or shortcomings in this approach.

Response: No response necessary.