

## Comments on Power Modeling Documentation

1. Page 2: Under Energy Generation Calculations: WAPA is listed as Western Area Power **Authority**. Authority should be changed to **Administration**.
2. Page 19: Noticed that analysis included:
  - a. • No Action Alternative 011221
  - b. • Alternative 1A 011221
  - c. • Alternative 1B 011221
  - d. • Alternative 2 011221
  - e. • Alternative 3 020121

Chapter 2 (Alternatives Section) mentioned the No Action Alternative, along with Alternative 1 (1.5 MAF and up to 7% USBR financing), Alternative 2 (1.43 MAF and no USBR financing), and Alternative 3 (1.5 MAF and up to 25% USBR financing). May be helpful to get clarification as the difference between Alternative 1A and 1B and to see if Alternatives 2 and 3 still remain the same.

3. Page 109 and starting with Figure 5-1a: Potential disconnect between the way the report calculates monthly net power revenues for the CVP power system. It is true when CVP power customers “buy” from the CAISO and when WAPA injects Base Resource power into the CAISO they do so at hourly locational marginal prices calculated by the CAISO. From a repayment standpoint, customers are still “on the hook” for the actual cost of the Base Resource. This calculation is based on a projected cost incurred approach which allocates forecasted costs assigned on the basis of Base Resource allocated percentage over a modified 12-month repayment period. Thus WAPA gets its actual estimated cost rates independent of whether the CAISO market price is either higher or lower than that. When DWR used forecasted 2030 prices, was the data from commercially available or internal sources and what was the estimated MW-hour price? Was this an average price over the year, or did they use seasonal and/or monthly average prices when calculating the anticipated net revenues? Using Table 17A, I’ve calculated a rough cost of about \$54.19/MW-Hr. Suggest you check with someone in the merchant section to determine if that value is appropriate (Robert DeLizio or Charles Faust). Since WAPA markets on a net generation basis, gross generation numbers for CVP project-use is not tied to market rates, but actual cost of service estimates.
4. Page 110, Tables 5: See that with the only exception of alternative 2, the studies show net revenue increases for the CVP power function. Could you generally explain how CVP power revenues will be increasing slightly for Alternatives 1a, 1b, and 2, when adding on Sites is expected to increase project use energy requirements? The report says that the downstream alternatives reflect operations downstream with the presumed operational flexibility of Sites. Could

you identify the major changes in water/power operations which would explain these increases?

5. Starting on page 43, Table 2-1a through Table 2-4b and on page 65 Table 3-1a through Table 3-4b: Total gross generation and project use requirements appear not to vary significantly among the five alternatives. On page 307, Table 14-1a through Table 14-4b show monthly simulated data which shows a wide variety in project use energy requirements for a standalone Sites Unit. Using simulated data, each alternative would generate on a standalone basis, a need for additional 37 to 48 gigawatt hours over the no project base case. The report indicates that the water and power modeling were done in simulate overall operating conditions in future years for each alternative. Can the Sites Authority summarize the major water/power operational benefits produced by the standalone unit which would generate the savings for the CVP water and power system resulting in a 3 or 4 gigawatt-hour increase on the CVP power system?
6. Page 263, Table 12-1a: Compared these monthly tables (full simulation period) and compared them with summary table 26 and found that with the exception of Alternative 2, the total generation values were within 1 rounding point. Noticed a 3 point variation for alternative 2 (e.g., Table 12 shows 37 gigawatt-hours, while table 26 shows 34). Don't know if this is due to rounding or a transposing of data. May want to check.
7. Page 307, Table 14-1a: Under the No Action Alternative with no Sites Facilities, an estimated 14-gigawatt hours of energy is consumed under net generation category. Is this because in the absence of the project, users in the Tehama Colusa Service area are going to be independently receiving additional water supplies over their current levels, and thus increasing project-use energy consumption levels?
8. Pag 329 Table 15: Similar to seeing negative values for net generation, see negative values for net generation revenues under the No Action Alternative. Is that because like above, in the absence of the project, users in the Tehama-Colusa Canal Service area are going to be receiving additional water supplies over their current levels, thus increasing project-use energy levels?
9. Page 374, Table 17: Revenues for CVP, SWP, and Sites appear aggregated, giving the appearance of financial integration. I believe Sites (NODOS) was authorized as an operational integration with CVP and SWP, but I'm not so sure that such authorization was given for financial integration. What is the purpose of aggregating financial revenues for all three projects?
10. I understand that the power impact study still remains to be undertaken once a more definitive idea of the preferred alternative or alternatives are identified. May need to keep a place holder to include the results of this study, especially if system reinforcements are needed for either the CVP or the PG&E system in

order to determine This Appendix is probably not the best place for it, but it still needs to be included elsewhere in the report, especially if the system impact study shows an impact on existing transmission users (PG&E or WAPA), as mitigation impacts are going to add to the project's overall cost.

### **Comments on Table 17A Power and Pumping Cost Reporting Metrics**

1. When looking at net generation values for this table, the summary net gain/loss for each alternative over the No Action Alternative appear to vary from the aggregated net revenues (for simulated run) for the CVP shown in Tables 5 on page 110.
2. Noticed that Table 17a for Sites Gross generation for the most part tied in with Table 12 of the Power Modeling Methodology Report. Noticed a variance of 37 gw-hrs for Table 12 versus 34 gigawatt hours for Tables 17a and Table 26 of the report.

### **Comments on Chapter 17 Write Up for Energy Resources**

1. Page 17-2, Table 17-1b. Summary of Operations Impacts and Mitigation Measures for Energy Resources: Without a definitive system impact study completed for either the PG&E or WAPA transmission system (pending definitive identification of the alternatives). It could be potentially premature to conclude that there are either no negative impacts or potential benefits, especially if the system impact study concludes that system reinforcements are required to ensure the continued reliable operation of the regional transmission system. Would recommend keeping this as a placeholder, and update as needed upon completion of the system impact study for either the PG&E or WAPA transmission system.
2. Page 17-3, 17.2.1.1 Electricity Generation: An observation is made about nuclear energy's portion of the California energy portfolio. Note that Diablo Canyon, California's lone currently operating power plant is scheduled to be shuttered by PG&E on or about 2024. Since the project is slated to become

operational in 2030, did the report evaluate the impact if any, of the Diablo Canyon being shuttered?

3. Page 17-22, Impact analysis for Alternatives 1 and 3: What happened to Alternatives 1a and 1b?
4. Page 17-29, Alternatives 1, 2, and 3: What happened to Alternatives 1a and 1b?
5. Page 17-29; California Public Utilities Commission/California Independent System Operator: It is true that either WAPA or PG&E through their respective transmission planning processes will ensure an efficient/effective interconnection. However, until such a study is conducted it may not be possible to definitively conclude that addition of the Sites Project may result in the need for additional transmission infrastructure investments on the part of the project proponents to ensure the reliable operation of the regional transmission system. If there is an impact, probably should be shown under EN-3.
6. Page 17-23, Impact EN-3: Place a substantial demand on regional energy supply or require substantial additional capacity or substantially increase peak and base period electricity demand: For Alternatives 1 and 3, as well as Alternative 2, until a system impact study is undertaken and completed by WAPA or PG&E, it is not possible to definitively conclude that additional transmission infrastructure is not needed by the project proponents of Sites to include it in the regional transmission system.

The existing LT Gen runs are based on monthly energy forecasts. In actuality, the power markets are run on an hourly and in real-time and near real-time increments. Although the long-term simulations show that for all alternatives, the yearly simulated values show very little impact. However, some months the energy consumption requirements for the Sites addition is not insignificant. During those months when existing preference power customers might not have access to the same “net generation” as when compared against the no action alternative, if in the event they are required to purchase those “shortfalls”, and if those shortfalls are priced at rates which would have exceeded their Base Resource allocations, shouldn't those “purchases” be identified and evaluated as to their potential impacts?

7. Page 17-34; Electricity: A point is made that energy requirements to support pumping plant activity at Sites would be purchased from PG&E or WAPA. Recommend considering using the word through WAPA instead from WAPA. From WAPA implies Sites would be receiving a power allocation. That may not necessarily be the case. In the event Sites asks WAPA to be its scheduling coordinator, WAPA would more than likely purchase power in the electricity

markets on Site's behalf and not necessarily assign a new allocation of power from the CVP, The same observation applies to other such descriptions for electricity for Alternatives 1a, 1b, the 3 if such wording similarly exists.

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