

Modesto Irrigation District's Responses to CEC Drought Hydropower Questions

March 19, 2014

(Docket # 14-HYDRO-01)

Question 1: Please provide your POU's current estimate of total electric firm energy requirements in GWh for 2014.

Response: 2,665 GWh

Question 2: Please provide your POU's average annual hydroelectric energy procurement in GWh since 1970. Please differentiate between generated and purchased hydro energy supplies, and specify the timeframe over which these averages were determined if fewer years than from 1970 were used.

Response: Generated average of 193.1 GWh; Purchased average of 405 GWh.

Timeframe reported is 1998-2013. (Note: Purchased average since 2008 is significantly less than reported for 1998-2013 because of contract changes. 2008—2013 purchased average is 98 GWh.)

Question 3: Please provide your POU's lowest hydroelectric energy procurement in GWh during the same period used in Question 2, and identify the year in which this occurred. Please provide figures for both POU-owned/controlled hydroelectric generation and hydroelectric energy supply contracts.

Response: MID interprets this question to mean the lowest amount of total hydro for the period reported in Question 2. Combined low of 193.6 GWh in 2009; Generated low of 123.2 GWh in 2009; Purchased low of 70.4 GWh in 2009.

Question 4: Please provide your POU's most recent estimate of 2014 hydroelectric energy procurement (generation and purchases), both in GWh and as a percentage of this year's firm energy requirement.

Response: Generation of 85 GWh (3.2%); Purchases of 43 GWh (1.6%).

Question 5: Does your POU expect that low hydro conditions (or the drought more generally) will raise any system or local reliability concerns. Please explain.

Response: No reliability concerns are expected in the near-term. MID has adequate gas-fired generation and import capacity to operate reliably despite the current drought conditions.

Question 6: Under what circumstances would the effects of the drought create severe or critical operational concerns?

Response: Heavy curtailments or shortages on the PG&E natural gas system would force MID to depend more heavily on hydro generation for system flexibility and operating reserves. In drought conditions, MID would then have to rely on what is likely to be a constrained market for the services we would no longer be able to self provide.

Question 7: At what value of annual hydro generation this year (in GWh) would the effects of drought result in significant or substantial financial concerns? Please estimate additional costs your POU may incur because of low hydro conditions. Please provide the assumptions used.

Response: MID currently considers a financial impact of \$20 million (5% of estimated gross revenue) as 'significant or substantial'. Given this, hydro generation would have to be at zero (the annual average is 200 GWh) and market prices for replacement energy would need to be at or above \$100/MWh in order to reach a \$20 million impact.

Question 8: Please estimate any additional procurement of GHG allowances, in metric tons, that your POU expects will be necessary because of low hydro conditions. Please provide the assumptions used.

Response: Approximately 35,000 additional GHG allowances will be needed for 2014. The projected loss of hydro energy for 2014 is 133 GWh. About 55 GWh has already been replaced with BPA hydro energy (.0192 GHG factor) and the rest is assumed to be sourced at COB (.428 GHG factor).

Question 9: Does your POU expect that low hydro conditions (or the drought more generally) will have any other local impacts beyond local reliability? If so, are efforts underway to address these impacts?

Response: MID is unclear about the intended scope of 'other local impacts'. As stated previously in this response document, MID doesn't foresee any electric system reliability concerns due to low hydro conditions. However, as an irrigation district and a member of the community, MID expects significant impacts to local farms and businesses because of the drought conditions.