Appendix U, Power Technical Appendix

Attachment U.1 Power Model Documentation

This Attachment describes the power model assumptions, methods, and models used for the Re-initiation of Consultation on long-term operations of the Central Valley Project (CVP) and State Water Project (SWP) (ROC on LTO). This Attachment also provides model results processing and interpretation methods used for the impacts analysis and descriptions.

U.1.1 Power Modeling Methodology & Assumptions

Energy generation can be quantified by estimating hydropower generation, at a monthly level, over a sequence of years representing varying hydrologic conditions. This kind of analysis is based on input hydrology and reservoir operations information. Energy generation capability will be based on the reservoir storage and flow through the turbines. Energy consumption will be based on pumping requirements to meet the operating criteria. These inputs are fed into two spreadsheet-based models, Long-Term Generation (LTGen) and SWP Power, which compute energy generation at each CVP and SWP pumping facility through a series of computations.

U.1.1.1 Power Models

LTGen and SWP Power are two commonly used, publicly available models developed by Reclamation and DWR. These models calculate a facility's long-term power generation capacity and pumping energy consumption for CVP and SWP facilities (Bureau of Reclamation 2015). To calculate long-term power generation, the models use reservoir storage and release data from the CalSim II model along with user-specified generation characteristics, such as the number of units and transmission loss, to calculate a monthly average energy generation at all CVP and SWP reservoirs with power plants.

The models compute energy generation requirements using flow and storage data from CalSim II and user- specified characteristics, such as percentage of on-peak and off-peak pumping and transmission losses to calculate the monthly average energy consumption of all CVP and SWP pumping plants under the assumed CalSim II scenarios. Flows and storages from the entire CalSim II simulation period (October 1921 to September 2003) are used as inputs to the models. Climate change and sea level rise are inherently represented through CalSim II outputs.

Metrics for quantifying hydropower generation are displayed in terms of energy units generated (such as megawatts). Calculating energy generation annually, monthly, and by water year type can help in evaluating the overall hydropower performance under a variety of energy demand and hydrologic conditions.

For this analysis, the energy capacity, energy generation, energy use, and net energy generation of CVP and SWP facilities for No Action Alternative and four proposed action alternatives are compared against each other using exceedance tables, exceedance charts, and monthly pattern charts. Using LTGen and SWP Power, the following parameters have been computed for each CVP and SWP facility:

- Facility Capacity (megawatts; MW)
- Energy Generation (gigawatt hours; GWh)
- Energy Use (GWh)
- Net Energy Generation (GWh)

U.1.1.2 Energy Generation Calculations

Energy generation is computed using empirical energy factors provided by the Western Area Power Authority (WAPA) for CVP facilities and by the DWR Operations Control Office (OCO) for SWP facilities. Energy generation can be calculated using Equation 1.

$$\text{Energy\_Generation } (MWh) = Energy\_Factor_G * Q\frac{ft^3}{s} \quad \text{Eq. 1}$$

U.1.1.3 Average Monthly Power Capacity Calculations

Energy generation is limited on a monthly basis by an average power capacity at each facility. Power capacity fluctuates with varying reservoir levels and scheduled water releases. Generally, power production is higher during summer months when reservoir levels are higher and water is released to satisfy delivery requirements.

For CVP facilities, average monthly power capacity is estimated using empirical equations provided by WAPA. For SWP facilities, average monthly power capacity is computed using Equation 2, where the peak capacity is assumed to be a function of total head and average power plant flow.

$$\text{Power\_Capacity } (MW) = 0.7457\frac{kW}{hp} * 62.4\frac{lbs}{ft^3} * \frac{1MW}{1{,}000kW} * \frac{1hp}{550\frac{lb*ft}{s}} * \frac{1}{\eta} * head(ft) * Avg.powerplant\_flot\_rate\left(\frac{ft^3}{s}\right) \quad \text{Eq. 2}$$

U.1.1.4 Energy Use Calculations

Energy use is computed using empirical energy factors provided by WAPA for CVP facilities and by the OCO for SWP facilities. Energy use can be calculated using Equation 3.

$$\text{Energy\_Use } (MWh) = Energy\_Factor_U * Q\frac{ft^3}{s} \quad \text{Eq. 3}$$

In addition, the power models determine whether user-specified off-peak energy use targets can be satisfied under given power and flow capacity limits. Moreover, the tools determine the feasibility of requiring a certain percentage of pumping energy use to occur during off-peak hours for a particular month.

U.1.1.5 Transmission Losses

Transmission losses are estimated to determine energy use and generation at load centers, as percentages of energy use or generation.

U.1.1.6 Assumption Tables

Tables U.1-1 and U.1-2 show the assumptions used to estimate energy use and transmission losses at CVP and SWP pumping facilities. Tables U.1-3 and U.1-4 show the assumptions used to estimate energy generation, power capacity, and transmission losses at CVP and SWP generation facilities.

Table U.1-1. Central Valley Project Pumping Plant Characteristics

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TRACY PUMPING PLANT–OK												
Energy Factor (kWh/af)	237.5	237.5	237.5	237.5	237.5	237.5	237.5	237.5	237.5	237.5	237.5	237.5
# Units	6	6	6	6	6	6	6	6	6	6	6	6
Capacity/Unit (MW)	16	16	16	16	16	16	16	16	16	16	16	16
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%
On Peak Cap Adj Factor	1.05	1.05	1.05	1.50	1.20	2.20	1.60	2.30	1.50	1.05	1.05	1.05
Off Peak Cap Adj Factor	1.05	1.05	1.05	1.50	1.20	2.20	1.60	2.30	1.50	1.05	1.05	1.05
CVP BANKS PUMPING PLANT–OK												
Energy Factor (kWh/af)	297	297	297	297	297	297	297	297	297	297	297	297
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	53.7%	53.7%	53.7%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	53.7%	53.7%	53.7%
On Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Off Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
CONTRA COSTA PUMPING PLANT–OK												
Energy Factor (kWh/af)	164.8	164.8	164.8	164.8	164.8	164.8	164.8	164.8	164.8	164.8	164.8	164.8
# Units	6	6	6	6	6	6	6	6	6	6	6	6
Capacity/Unit (MW)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Transmission Loss (%)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	1.20	1.20	1.20	1.20	2.00	2.00
Off Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	1.20	1.20	1.20	1.20	2.00	2.00

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
O'NEILL PUMPING PLANT–OK												
Energy Factor (kWh/af)	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2	59.2
# Units	6	6	6	6	6	6	6	6	6	6	6	6
Capacity/Unit (MW)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	48.5%	48.5%	48.5%	48.5%	48.5%	48.5%	48.5%	48.5%	48.5%	48.5%	48.5%	48.5%
On Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Off Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
CVP SAN LUIS PUMPING PLANT–OK												
Energy Factor (kWh/af)	function	function	function	function	function	function	function	function	function	function	function	function
# Units	8	8	8	8	8	8	8	8	8	8	8	8
Capacity/Unit (MW)	function	function	function	function	function	function	function	function	function	function	function	function
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%
On Peak Cap Adj Factor	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Off Peak Cap Adj Factor	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
SAN FELIPE PUMPING PLANT (PACHECO) –OK												
Energy Factor (kWh/af)	function	function	function	function	function	function	function	function	function	function	function	function
# Units	12	12	12	12	12	12	12	12	12	12	12	12
Capacity/Unit (MW)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.20	1.20	1.20	1.20	1.20
Off Peak Cap Adj Factor	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.20	1.20	1.20	1.20	1.20

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CVP DOS AMIGOS PUMPING PLANT–OK												
Energy Factor (kWh/af)	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9
# Units	6	6	6	6	6	6	6	6	6	6	6	6
Capacity/Unit (MW)	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	76.6%	76.6%	76.6%	76.6%	76.6%	76.6%	76.6%	76.6%	56.6%	56.6%	56.6%	76.6%
On Peak Cap Adj Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Off Peak Cap Adj Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FOLSOM PUMPING PLANT–OK												
Energy Factor (kWh/af)	function	function	function	function	function	function	function	function	function	function	function	function
# Units	6	6	6	6	6	6	6	6	6	6	6	6
Capacity/Unit (MW)	5	5	5	5	5	5	5	5	5	5	5	5
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Off Peak Cap Adj Factor	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
CORNING PUMPING PLANT–OK												
Energy Factor (kWh/af)	190	190	190	190	190	190	190	190	190	190	190	190
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Loss (%)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	3.00	4.00	4.00	4.00	4.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00
Off Peak Cap Adj Factor	3.00	4.00	4.00	4.00	4.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
RED BLUFF PUMPING PLANT–OK												
Energy Factor (kWh/af)	12	12	12	12	12	12	0	0	0	0	0	12
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Adj Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Off Peak Adj Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SAN LUIS OTHER–OK												
Energy Factor (kWh/af)	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5	93.5
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Loss (%)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.50	2.00
Off Peak Cap Adj Factor	2.00	2.00	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.50	2.00
DMC OTHER–OK												
Energy Factor (kWh/af)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Loss (%)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	3.00	3.00	3.00	3.00	2.50	2.00	2.00	1.50	1.50	1.50	1.50	1.50
Off Peak Cap Adj Factor	3.00	3.00	3.00	3.00	2.50	2.00	2.00	1.50	1.50	1.50	1.50	1.50

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TEHAMA OTHER–OK												
Energy Factor (kWh/af)	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	2.00	3.00	3.00	3.00	3.00	3.00	1.50	1.50	1.50	1.50	1.50	1.50
Off Peak Cap Adj Factor	2.00	3.00	3.00	3.00	3.00	3.00	1.50	1.50	1.50	1.50	1.50	1.50
ALTERNATE MISCELLANEOUS PROJECT USE–OK												
MW	7	5	6	6	9	11	4	5	15	23	33	9
Transmission Loss (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Percentage of Main Pumps	15.8%	9.2%	5.9%	8.0%	12.5%	13.1%	39.9%	81.1%	35.5%	43.2%	38.6%	17.9%
Percent Eng Off Peak (%)	59.1%	61.6%	67.3%	64.3%	62.0%	59.0%	52.2%	52.9%	49.1%	50.3%	49.8%	61.3%
DMC INTERTIE–OK												
Energy Factor (kWh/af)	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3
# Units	8	8	8	8	8	8	8	8	8	8	8	8
Capacity/Unit (MW)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On Peak Cap Adj Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Off Peak Cap Adj Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table U.1-2. State Water Project Pumping Plant Characteristics

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
BANKS PUMPING PLANT												
Energy Factor (kWh/af)	297	297	297	297	297	297	297	297	297	297	297	297
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	53.7%	53.7%	53.7%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	53.7%	53.7%	53.7%
SWP SAN LUIS PUMPING PLANT (GIANELLI PUMPING PLANT)												
Energy Factor (kWh/af)	function	function	function	function	function	function	function	function	function	function	function	function
# Units	8	8	8	8	8	8	8	8	8	8	8	8
Capacity/Unit (MW)	function	function	function	function	function	function	function	function	function	function	function	function
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%	89.7%
DOS AMIGOS PUMPING PLANT												
Energy Factor (kWh/af)	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9	137.9
# Units	6	6	6	6	6	6	6	6	6	6	6	6
Capacity/Unit (MW)	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Percent Eng Off Peak (%)	76.6%	76.6%	76.6%	76.6%	76.6%	76.6%	76.6%	76.6%	56.6%	56.6%	56.6%	76.6%
BUENA VISTA PUMPING PLANT												
Energy Factor (kWh/af)	242	242	242	242	242	242	242	242	242	242	242	242
Plant Power Rating (MW)	107.797	107.797	107.797	107.797	107.797	107.797	107.797	107.797	107.797	107.797	107.797	107.797
Transmission Loss (%)	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TEERINK (WHEELER RIDGE) PUMPING PLANT												
Energy Factor (kWh/af)	295	295	295	295	295	295	295	295	295	295	295	295
Plant Power Rating (MW)	111.9	111.9	111.9	111.9	111.9	111.9	111.9	111.9	111.9	111.9	111.9	111.9
Transmission Loss (%)	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
CHRISMAN (WIND GAP) PUMPING PLANT												
Energy Factor (kWh/af)	639	639	639	639	639	639	639	639	639	639	639	639
Plant Power Rating (MW)	246.18	246.18	246.18	246.18	246.18	246.18	246.18	246.18	246.18	246.18	246.18	246.18
Transmission Loss (%)	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
EDMONSON PUMPING PLANT												
Energy Factor (kWh/af)	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236
Plant Power Rating (MW)	775.84	775.84	775.84	775.84	775.84	775.84	775.84	775.84	775.84	775.84	775.84	775.84
Transmission Loss (%)	1.64%	1.64%	1.64%	1.64%	1.64%	1.64%	1.64%	1.64%	1.64%	1.64%	1.64%	1.64%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PEARBLOSSOM PUMPING PLANT												
Energy Factor (kWh/af)	703	703	703	703	703	703	703	703	703	703	703	703
Plant Power Rating (MW)	151.588	151.588	151.588	151.588	151.588	151.588	151.588	151.588	151.588	151.588	151.588	151.588
Transmission Loss (%)	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OSO PUMPING PLANT												
Energy Factor (kWh/af)	280	280	280	280	280	280	280	280	280	280	280	280
Plant Power Rating (MW)	69.975	69.975	69.975	69.975	69.975	69.975	69.975	69.975	69.975	69.975	69.975	69.975
Transmission Loss (%)	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
SOUTH BAY PUMPING PLANT												
Energy Factor (kWh/af)	797	797	797	797	797	797	797	797	797	797	797	797
Plant Power Rating (MW)	38	38	38	38	38	38	38	38	38	38	38	38
Transmission Loss (%)	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
DEL VALLE PUMPING PLANT												
Energy Factor (kWh/af)	72	72	72	72	72	72	72	72	72	72	72	72
Plant Power Rating (MW)	0.746	0.746	0.746	0.746	0.746	0.746	0.746	0.746	0.746	0.746	0.746	0.746
Transmission Loss (%)	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
LAS PERILLAS PUMPING PLANT												
Energy Factor (kWh/af)	77	77	77	77	77	77	77	77	77	77	77	77
Plant Power Rating (MW)	3.021	3.021	3.021	3.021	3.021	3.021	3.021	3.021	3.021	3.021	3.021	3.021
Transmission Loss (%)	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BADGER HILL PUMPING PLANT												
Energy Factor (kWh/af)	200	200	200	200	200	200	200	200	200	200	200	200
Plant Power Rating (MW)	8.766	8.766	8.766	8.766	8.766	8.766	8.766	8.766	8.766	8.766	8.766	8.766
Transmission Loss (%)	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%	1.32%
Percent Eng Off Peak (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table U.1-3. Central Valley Project Powerplant Characteristics

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
TRINITY POWERPLANT–PEAKING OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	2	2	2	2	2	2	2	2	2	2	2	2
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
LEWISTON POWERPLANT–BASELOAD OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	0	0	0	0	0	0	0	0	0	0	0	0
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
CARR POWERPLANT–PEAKING OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	2	2	2	2	2	2	2	2	2	2	2	2
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
SPRING CREEK POWERPLANT–PEAKING OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	2	2	2	2	2	2	2	2	2	2	2	2
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
SHASTA POWERPLANT–PEAKING OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	5	5	5	5	5	5	5	5	5	5	5	5
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
KESWICK POWERPLANT–BASELOAD OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	3	3	3	3	3	3	3	3	3	3	3	3
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
FOLSOM POWERPLANT–PEAKING OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	3	3	3	3	3	3	3	3	3	3	3	3
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
NIMBUS POWERPLANT–BASELOAD OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	2	2	2	2	2	2	2	2	2	2	2	2
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
NEW MELONES POWERPLANT–PEAKING OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	2	2	2	2	2	2	2	2	2	2	2	2
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
CVP SAN LUIS POWERPLANT–PEAKING OPERATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	8	8	8	8	8	8	8	8	8	8	8	8
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Share of Total Cap (%)	47.1%	47.1%	47.1%	47.1%	47.1%	47.1%	47.1%	47.1%	47.1%	47.1%	47.1%	47.1%

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
O'NEILL POWERPLANT–BASELOAD OPERATION, FLOW COMPUTATION												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	6	6	6	6	6	6	6	6	6	6	6	6
Capacity/Unit (MW)	3	3	3	3	3	3	3	3	3	3	3	3
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%

Table U.1-4. State Water Project Powerplant Characteristics

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
HYATT (LAKE OROVILLE) POWER PLANT												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Maximum Flow Capacity (cfs)	16,950	16,950	16,950	16,950	16,950	16,950	16,950	16,950	16,950	16,950	16,950	16,950
Plant Power Rating (MW)	819	819	819	819	819	819	819	819	819	819	819	819
Plant Efficiency	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
THERMALITO POWER PLANT												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Maximum Flow Capacity (cfs)	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400
Plant Power Rating (MW)	120	120	120	120	120	120	120	120	120	120	120	120
Plant Efficiency	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%
Transmission Loss (%)	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
SWP SAN LUIS (GIANELLI POWER PLANT)												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Capacity/Unit (MW)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
# Units	8	8	8	8	8	8	8	8	8	8	8	8
Share of Total Cap (%)	52.9%	52.9%	52.9%	52.9%	52.9%	52.9%	52.9%	52.9%	52.9%	52.9%	52.9%	52.9%
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
ALAMO POWER PLANT												
Energy Factor (kWh/af)	105	105	105	105	105	105	105	105	105	105	105	105
Maximum Flow Capacity (cfs)	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740
Plant Power Rating (MW)	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
Plant Efficiency	80.1%	80.1%	80.1%	80.1%	80.1%	80.1%	80.1%	80.1%	80.1%	80.1%	80.1%	80.1%
Transmission Loss (%)	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
MOJAVE POWER PLANT												
Energy Factor (kWh/af)	95	95	95	95	95	95	95	95	95	95	95	95
Maximum Flow Capacity (cfs)	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880
Plant Power Rating (MW)	32.90	32.90	32.90	32.90	32.90	32.90	32.90	32.90	32.90	32.90	32.90	32.90
Plant Efficiency	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%
Transmission Loss (%)	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
DEVIL'S CANYON POWER PLANT												
Energy Factor (kWh/af)	1,113	1,113	1,113	1,113	1,113	1,113	1,113	1,113	1,113	1,113	1,113	1,113
Maximum Flow Capacity (cfs)	2,940	2,940	2,940	2,940	2,940	2,940	2,940	2,940	2,940	2,940	2,940	2,940
Plant Power Rating (MW)	357.90	357.90	357.90	357.90	357.90	357.90	357.90	357.90	357.90	357.90	357.90	357.90
Plant Efficiency	82.03%	82.03%	82.03%	82.03%	82.03%	82.03%	82.03%	82.03%	82.03%	82.03%	82.03%	82.03%
Transmission Loss (%)	2.23%	2.23%	2.23%	2.23%	2.23%	2.23%	2.23%	2.23%	2.23%	2.23%	2.23%	2.23%
W. E. WARNE POWER PLANT												
Energy Factor (kWh/af)	573	573	573	573	573	573	573	573	573	573	573	573
Maximum Flow Capacity (cfs)	1,564	1,564	1,564	1,564	1,564	1,564	1,564	1,564	1,564	1,564	1,564	1,564
Plant Power Rating (MW)	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2	78.2
Plant Efficiency	81.4%	81.4%	81.4%	81.4%	81.4%	81.4%	81.4%	81.4%	81.4%	81.4%	81.4%	81.4%
Transmission Loss (%)	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
CASTAIC POWER PLANT												
Energy Factor (kWh/af)	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function	Function
Maximum Flow Capacity (cfs)	17,840	17,840	17,840	17,840	17,840	17,840	17,840	17,840	17,840	17,840	17,840	17,840
Plant Power Rating (MW)	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260
Plant Efficiency	88.4%	88.4%	88.4%	88.4%	88.4%	88.4%	88.4%	88.4%	88.4%	88.4%	88.4%	88.4%
Transmission Loss (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%

U.1.2 Report Formats

- Exceedance tables comparing power modeling results of two scenarios
- Monthly pattern charts including all scenarios
- Monthly exceedance charts including all scenarios

The following results of the LTGen and SWP Power models are included for energy capacity, energy generation, and energy use at key project locations for the following alternatives:

- No Action Alternative 011319
- Alternative 1 011519
- Alternative 2 021719
- Alternative 3 021719
- Alternative 4 043019

Title	Model Parameter	Table Numbers	Figure Numbers
CVP Total Capacity	CVP_TOTAL	U.1-5 to U.1-19	U.1-1 to U.1-18
CVP Total Generation	CVP_TOTAL	U.1-20 to U.1-35	U.1-19 to U.1-37
CVP Total Energy Use	CVP_TOTAL	U.1-36 to U.1-51	U.1-38 to U.1-56
CVP Net Generation	CVP_TOTAL	U.1-52 to U.1-67	U.1-57 to U.1-75
SWP Total Capacity	SWP_TOTAL	U.1-68 to U.1-82	U.1-76 to U.1-93
SWP Total Generation	SWP_TOTAL	U.1-83 to U.1-98	U.1-94 to U.1-112
SWP Total Energy Use	SWP_TOTAL	U.1-99 to U.1-114	U.1-113 to U.1-131
SWP Net Generation	SWP_TOTAL	U.1-115 to U.1-130	U.1-132 to U.1-150
CVP and SWP Net Generation	CVP_SWP_TOTAL	U.1-131 to U.1-146	U.1-150 to U.1-169

Table U.1-5. Central Valley Project Total Capacity, Monthly Capacity, No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1,735	1,731	1,766	1,815	1,851	1,880	1,914	1,935	1,928	1,906	1,817	1,779
20%	1,696	1,696	1,729	1,772	1,815	1,858	1,901	1,921	1,902	1,855	1,766	1,730
30%	1,640	1,659	1,681	1,745	1,789	1,843	1,881	1,896	1,857	1,817	1,712	1,675
40%	1,605	1,612	1,636	1,712	1,761	1,811	1,851	1,861	1,827	1,787	1,687	1,638
50%	1,554	1,542	1,611	1,679	1,730	1,781	1,823	1,831	1,803	1,752	1,647	1,574
60%	1,514	1,514	1,567	1,632	1,693	1,758	1,803	1,794	1,770	1,716	1,611	1,551
70%	1,481	1,478	1,506	1,563	1,651	1,721	1,767	1,764	1,722	1,684	1,589	1,515
80%	1,432	1,428	1,447	1,504	1,592	1,650	1,702	1,708	1,666	1,614	1,502	1,437
90%	1,278	1,277	1,310	1,393	1,449	1,526	1,586	1,596	1,583	1,509	1,402	1,310
Long Term												
Full Simulation Period	1,519	1,517	1,565	1,630	1,690	1,747	1,789	1,798	1,770	1,721	1,622	1,559
Water Year Types												
Wet (32%)	1,560	1,572	1,653	1,736	1,802	1,854	1,897	1,917	1,899	1,860	1,767	1,724
Above Normal (12%)	1,546	1,544	1,571	1,671	1,739	1,807	1,848	1,866	1,836	1,800	1,704	1,656
Below Normal (24%)	1,541	1,535	1,578	1,633	1,694	1,746	1,797	1,803	1,770	1,715	1,618	1,556
Dry (17%)	1,553	1,546	1,557	1,593	1,645	1,718	1,756	1,753	1,720	1,672	1,574	1,502
Critical (15%)	1,333	1,319	1,358	1,407	1,456	1,504	1,533	1,533	1,501	1,426	1,307	1,199

Table U.1-6. Central Valley Project Total Capacity, Monthly Capacity, Alternative 1

	Monthly Capacity (MW)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1,770	1,759	1,802	1,841	1,865	1,900	1,930	1,955	1,952	1,929	1,846	1,794
20%	1,712	1,712	1,761	1,805	1,852	1,885	1,918	1,946	1,933	1,873	1,763	1,732
30%	1,672	1,672	1,711	1,779	1,824	1,870	1,915	1,927	1,905	1,833	1,731	1,683
40%	1,617	1,622	1,658	1,741	1,801	1,855	1,896	1,911	1,876	1,791	1,685	1,622
50%	1,559	1,559	1,629	1,707	1,774	1,827	1,876	1,889	1,847	1,772	1,652	1,582
60%	1,521	1,517	1,584	1,654	1,741	1,796	1,851	1,845	1,811	1,726	1,621	1,556
70%	1,478	1,481	1,519	1,588	1,692	1,756	1,798	1,809	1,767	1,680	1,594	1,508
80%	1,442	1,426	1,468	1,519	1,618	1,711	1,741	1,747	1,705	1,636	1,535	1,456
90%	1,306	1,298	1,313	1,397	1,495	1,589	1,627	1,616	1,610	1,523	1,397	1,303
Long Term												
Full Simulation Period	1,531	1,524	1,581	1,655	1,724	1,781	1,825	1,834	1,804	1,734	1,628	1,557
Water Year Types												
Wet (32%)	1,570	1,581	1,673	1,762	1,829	1,878	1,919	1,943	1,930	1,881	1,784	1,734
Above Normal (12%)	1,566	1,555	1,604	1,700	1,776	1,844	1,891	1,918	1,884	1,819	1,710	1,652
Below Normal (24%)	1,541	1,541	1,589	1,660	1,731	1,786	1,842	1,852	1,810	1,727	1,626	1,557
Dry (17%)	1,566	1,550	1,570	1,617	1,694	1,759	1,801	1,796	1,761	1,683	1,581	1,506
Critical (15%)	1,362	1,321	1,369	1,429	1,485	1,538	1,571	1,552	1,513	1,421	1,287	1,157

Table U.1-7. Central Valley Project Total Capacity, Monthly Capacity, Alternative 1 minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	35	29	36	26	14	20	17	19	24	24	29	15
20%	16	16	32	33	37	27	17	26	32	18	-3	2
30%	32	14	30	34	35	27	34	31	48	16	19	8
40%	12	10	22	30	39	44	45	50	49	4	-2	-16
50%	6	17	18	28	44	46	52	59	44	20	6	7
60%	7	3	16	22	49	39	48	51	41	10	10	5
70%	-3	3	13	25	41	35	31	45	45	-3	6	-7
80%	10	-3	21	15	26	61	39	39	39	22	33	19
90%	28	21	3	4	45	63	41	20	26	14	-5	-7
Long Term												
Full Simulation Period	12	7	17	26	34	34	36	37	34	13	6	-2
Water Year Types												
Wet (32%)	10	9	20	26	27	24	22	26	32	21	16	11
Above Normal (12%)	20	11	33	29	37	38	43	52	49	19	6	-4
Below Normal (24%)	0	6	11	26	37	39	44	49	40	12	8	1
Dry (17%)	13	5	13	24	49	42	44	43	41	11	7	4
Critical (15%)	28	2	11	23	28	34	38	19	12	-5	-19	-42

Table U.1-8. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v1 Without TUCP

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1,751	1,738	1,775	1,825	1,856	1,886	1,924	1,947	1,942	1,920	1,835	1,791
20%	1,704	1,713	1,743	1,771	1,818	1,860	1,913	1,937	1,925	1,878	1,780	1,733
30%	1,649	1,662	1,681	1,753	1,787	1,839	1,886	1,900	1,874	1,818	1,729	1,678
40%	1,612	1,622	1,646	1,716	1,770	1,809	1,856	1,879	1,846	1,791	1,694	1,649
50%	1,568	1,571	1,613	1,676	1,731	1,785	1,832	1,845	1,811	1,760	1,660	1,597
60%	1,534	1,531	1,568	1,617	1,700	1,754	1,797	1,802	1,778	1,719	1,631	1,566
70%	1,497	1,503	1,520	1,564	1,644	1,714	1,769	1,774	1,731	1,687	1,597	1,522
80%	1,439	1,433	1,467	1,523	1,586	1,658	1,716	1,707	1,673	1,632	1,518	1,449
90%	1,300	1,286	1,299	1,394	1,476	1,532	1,570	1,574	1,573	1,518	1,411	1,321
Long Term												
Full Simulation Period	1,536	1,537	1,572	1,634	1,693	1,747	1,792	1,805	1,780	1,728	1,632	1,565
Water Year Types												
Wet (32%)	1,580	1,592	1,661	1,741	1,803	1,857	1,903	1,928	1,914	1,875	1,785	1,732
Above Normal (12%)	1,544	1,541	1,564	1,670	1,739	1,805	1,853	1,881	1,852	1,808	1,711	1,661
Below Normal (24%)	1,540	1,545	1,585	1,636	1,697	1,745	1,798	1,811	1,777	1,720	1,626	1,563
Dry (17%)	1,568	1,556	1,564	1,595	1,644	1,712	1,754	1,754	1,726	1,674	1,587	1,514
Critical (15%)	1,396	1,378	1,373	1,420	1,472	1,512	1,540	1,527	1,499	1,424	1,304	1,195

Table U.1-9. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v1 Without TUCP minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	16	7	9	11	5	6	10	12	14	14	18	12
20%	8	16	15	-1	3	1	12	17	23	23	14	3
30%	10	3	0	8	-2	-4	6	4	17	1	17	3
40%	7	9	9	5	9	-2	5	18	19	5	7	10
50%	14	29	2	-3	1	4	9	14	8	9	13	22
60%	20	17	1	-16	8	-4	-6	7	8	4	20	15
70%	15	25	15	1	-6	-7	2	10	9	3	8	7
80%	7	5	20	19	-6	8	14	-2	8	18	16	12
90%	22	9	-11	1	27	7	-16	-23	-10	9	8	11
Long Term												
Full Simulation Period	18	19	7	4	3	1	3	7	9	7	10	7
Water Year Types												
Wet (32%)	20	20	8	5	1	2	6	12	16	15	17	9
Above Normal (12%)	-2	-3	-7	-1	0	-2	4	15	17	9	8	5
Below Normal (24%)	-1	10	7	2	3	-1	1	8	7	5	8	8
Dry (17%)	15	10	8	2	-1	-6	-3	1	6	2	13	12
Critical (15%)	63	60	15	14	15	8	7	-5	-2	-1	-3	-4

Table U.1-10. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v1 With TUCP

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1,750	1,738	1,776	1,825	1,856	1,886	1,924	1,947	1,942	1,920	1,835	1,790
20%	1,704	1,713	1,743	1,775	1,820	1,860	1,913	1,937	1,925	1,878	1,780	1,733
30%	1,650	1,663	1,683	1,752	1,787	1,841	1,886	1,898	1,875	1,823	1,729	1,678
40%	1,615	1,621	1,646	1,717	1,770	1,809	1,856	1,882	1,845	1,791	1,700	1,652
50%	1,577	1,571	1,613	1,673	1,732	1,785	1,833	1,849	1,817	1,762	1,661	1,602
60%	1,534	1,533	1,584	1,617	1,700	1,761	1,808	1,802	1,781	1,724	1,632	1,567
70%	1,498	1,504	1,520	1,564	1,653	1,719	1,769	1,784	1,735	1,687	1,602	1,528
80%	1,439	1,441	1,474	1,522	1,605	1,658	1,716	1,725	1,688	1,644	1,529	1,463
90%	1,319	1,340	1,354	1,427	1,491	1,569	1,614	1,599	1,583	1,529	1,418	1,342
Long Term												
Full Simulation Period	1,554	1,552	1,587	1,643	1,702	1,755	1,800	1,814	1,789	1,740	1,648	1,583
Water Year Types												
Wet (32%)	1,584	1,595	1,667	1,742	1,803	1,857	1,903	1,928	1,914	1,875	1,784	1,732
Above Normal (12%)	1,561	1,557	1,579	1,682	1,750	1,812	1,857	1,885	1,857	1,812	1,715	1,664
Below Normal (24%)	1,576	1,572	1,597	1,644	1,706	1,753	1,805	1,817	1,783	1,727	1,630	1,569
Dry (17%)	1,575	1,563	1,574	1,598	1,652	1,718	1,759	1,758	1,731	1,678	1,591	1,518
Critical (15%)	1,426	1,412	1,421	1,448	1,501	1,539	1,570	1,569	1,541	1,483	1,394	1,297

Table U.1-11. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v1 With TUCP minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	15	7	10	11	5	6	10	12	14	14	18	12
20%	8	16	14	3	6	1	12	17	23	23	14	3
30%	10	4	2	7	-2	-2	6	2	18	6	17	3
40%	10	8	10	5	9	-2	5	20	18	5	13	14
50%	23	29	2	-6	2	4	10	18	14	10	14	28
60%	20	19	16	-15	8	3	4	8	11	9	21	15
70%	17	26	15	1	2	-1	2	20	13	3	13	13
80%	8	13	27	18	13	9	14	16	22	29	27	26
90%	41	63	44	34	42	43	29	3	0	20	16	32
Long Term												
Full Simulation Period	36	35	23	13	12	8	11	16	18	19	26	24
Water Year Types												
Wet (32%)	24	23	14	5	2	2	6	11	16	15	17	9
Above Normal (12%)	15	13	9	11	10	5	9	20	21	13	11	7
Below Normal (24%)	36	37	19	11	11	7	8	14	13	12	12	13
Dry (17%)	22	17	17	5	7	0	3	5	10	6	17	15
Critical (15%)	93	93	63	42	45	35	37	36	40	58	87	98

Table U.1-12. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v2 Without TUCP

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1,750	1,746	1,783	1,823	1,859	1,882	1,923	1,947	1,942	1,918	1,837	1,791
20%	1,705	1,700	1,744	1,773	1,818	1,863	1,913	1,930	1,921	1,876	1,783	1,729
30%	1,643	1,665	1,683	1,744	1,790	1,841	1,881	1,897	1,865	1,822	1,732	1,676
40%	1,607	1,619	1,643	1,720	1,771	1,807	1,848	1,879	1,837	1,793	1,699	1,640
50%	1,570	1,577	1,609	1,674	1,737	1,789	1,827	1,842	1,815	1,764	1,665	1,600
60%	1,529	1,530	1,569	1,624	1,699	1,747	1,796	1,794	1,775	1,726	1,628	1,563
70%	1,499	1,509	1,531	1,571	1,638	1,713	1,762	1,763	1,726	1,694	1,601	1,535
80%	1,457	1,438	1,478	1,525	1,597	1,671	1,711	1,701	1,682	1,631	1,536	1,481
90%	1,312	1,291	1,303	1,403	1,493	1,527	1,594	1,573	1,572	1,515	1,407	1,321
Long Term												
Full Simulation Period	1,540	1,540	1,575	1,636	1,695	1,750	1,791	1,803	1,779	1,730	1,634	1,568
Water Year Types												
Wet (32%)	1,583	1,595	1,667	1,744	1,807	1,858	1,903	1,927	1,913	1,876	1,785	1,731
Above Normal (12%)	1,546	1,542	1,564	1,669	1,741	1,805	1,848	1,874	1,849	1,804	1,711	1,658
Below Normal (24%)	1,542	1,549	1,586	1,638	1,699	1,746	1,794	1,810	1,776	1,723	1,633	1,567
Dry (17%)	1,572	1,561	1,568	1,599	1,644	1,714	1,752	1,750	1,725	1,678	1,587	1,521
Critical (15%)	1,401	1,383	1,378	1,418	1,472	1,523	1,546	1,533	1,501	1,431	1,308	1,204

Table U.1-13. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v2 Without TUCP minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	15	15	17	9	8	2	10	12	14	12	20	12
20%	9	3	16	1	4	5	12	10	19	21	17	-1
30%	4	7	2	0	1	-2	0	0	8	5	20	1
40%	2	7	7	8	10	-4	-3	18	10	6	12	2
50%	16	35	-2	-5	7	8	4	12	12	12	18	25
60%	15	17	2	-8	7	-11	-8	0	5	10	17	12
70%	17	31	25	8	-13	-8	-5	-1	4	10	12	20
80%	26	10	31	21	5	21	8	-7	17	17	34	44
90%	34	14	-7	10	44	2	8	-23	-11	5	4	12
Long Term												
Full Simulation Period	21	23	11	6	5	3	2	5	8	9	13	9
Water Year Types												
Wet (32%)	23	23	14	7	5	4	6	10	14	16	18	7
Above Normal (12%)	0	-2	-6	-2	1	-1	0	9	13	4	7	1
Below Normal (24%)	2	14	8	4	5	-1	-3	7	6	8	15	11
Dry (17%)	19	15	11	5	-1	-3	-4	-3	5	6	13	18
Critical (15%)	68	64	20	11	16	19	13	0	0	6	1	5

Table U.1-14. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v3 Without TUCP

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1,750	1,742	1,785	1,824	1,858	1,882	1,924	1,947	1,942	1,918	1,838	1,794
20%	1,706	1,700	1,744	1,778	1,822	1,868	1,913	1,933	1,917	1,873	1,780	1,730
30%	1,648	1,669	1,685	1,753	1,788	1,842	1,880	1,898	1,864	1,821	1,733	1,675
40%	1,612	1,619	1,645	1,724	1,770	1,807	1,850	1,874	1,834	1,785	1,696	1,644
50%	1,576	1,580	1,614	1,674	1,739	1,791	1,831	1,839	1,815	1,762	1,671	1,597
60%	1,533	1,539	1,580	1,620	1,706	1,751	1,799	1,799	1,770	1,728	1,630	1,575
70%	1,502	1,508	1,540	1,577	1,650	1,717	1,770	1,767	1,729	1,699	1,607	1,541
80%	1,469	1,448	1,481	1,528	1,602	1,653	1,711	1,703	1,679	1,634	1,540	1,484
90%	1,316	1,298	1,313	1,415	1,480	1,527	1,585	1,577	1,566	1,489	1,408	1,327
Long Term												
Full Simulation Period	1,543	1,543	1,578	1,636	1,696	1,750	1,793	1,803	1,777	1,730	1,636	1,571
Water Year Types												
Wet (32%)	1,588	1,599	1,670	1,744	1,806	1,858	1,903	1,927	1,912	1,875	1,785	1,731
Above Normal (12%)	1,545	1,542	1,564	1,668	1,739	1,804	1,852	1,870	1,840	1,801	1,708	1,661
Below Normal (24%)	1,546	1,552	1,589	1,638	1,700	1,746	1,796	1,808	1,772	1,722	1,634	1,569
Dry (17%)	1,578	1,567	1,574	1,598	1,650	1,720	1,758	1,754	1,731	1,684	1,599	1,534
Critical (15%)	1,401	1,384	1,378	1,419	1,470	1,518	1,544	1,531	1,497	1,427	1,305	1,201

Table U.1-15. Central Valley Project Total Capacity, Monthly Capacity, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	16	11	19	10	7	3	10	12	14	13	21	15
20%	10	4	16	6	7	9	12	13	16	18	14	0
30%	8	11	4	8	-1	-1	-1	2	7	4	21	0
40%	7	6	9	12	8	-3	-1	13	7	-2	9	6
50%	22	38	4	-6	9	10	7	8	12	10	24	22
60%	19	25	13	-12	14	-6	-5	5	0	13	18	23
70%	20	30	35	14	0	-4	3	3	7	15	18	26
80%	37	20	34	24	10	3	8	-5	14	20	38	47
90%	38	21	3	22	31	1	-1	-19	-17	-21	6	17
Long Term												
Full Simulation Period	24	26	13	6	6	3	4	5	6	9	14	12
Water Year Types												
Wet (32%)	28	27	16	8	5	4	6	10	14	15	18	7
Above Normal (12%)	-1	-2	-7	-3	0	-3	4	5	5	2	4	4
Below Normal (24%)	5	17	11	5	6	-1	-1	5	1	7	16	14
Dry (17%)	25	21	17	5	5	3	2	1	10	12	25	32
Critical (15%)	68	65	20	13	14	15	11	-2	-4	2	-2	2

Table U.1-16. Central Valley Project Total Capacity, Monthly Capacity, Alternative 3

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1,739	1,724	1,778	1,818	1,855	1,879	1,913	1,938	1,901	1,898	1,803	1,758
20%	1,667	1,685	1,708	1,771	1,809	1,852	1,893	1,917	1,866	1,829	1,751	1,684
30%	1,612	1,642	1,672	1,719	1,781	1,822	1,879	1,891	1,837	1,799	1,699	1,625
40%	1,594	1,591	1,638	1,695	1,724	1,799	1,834	1,857	1,816	1,774	1,673	1,587
50%	1,542	1,559	1,591	1,650	1,701	1,762	1,804	1,810	1,780	1,749	1,642	1,552
60%	1,501	1,519	1,569	1,604	1,676	1,731	1,769	1,776	1,759	1,698	1,593	1,519
70%	1,480	1,495	1,516	1,559	1,640	1,706	1,739	1,748	1,714	1,649	1,560	1,496
80%	1,444	1,438	1,466	1,507	1,583	1,652	1,707	1,699	1,674	1,614	1,519	1,451
90%	1,356	1,353	1,345	1,451	1,512	1,555	1,593	1,616	1,583	1,510	1,431	1,367
Long Term												
Full Simulation Period	1,537	1,544	1,579	1,633	1,689	1,742	1,782	1,794	1,762	1,717	1,624	1,552
Water Year Types												
Wet (32%)	1,576	1,599	1,670	1,745	1,801	1,855	1,895	1,914	1,873	1,848	1,758	1,689
Above Normal (12%)	1,540	1,543	1,574	1,648	1,714	1,787	1,827	1,852	1,818	1,784	1,684	1,613
Below Normal (24%)	1,549	1,555	1,579	1,622	1,683	1,735	1,784	1,796	1,763	1,716	1,620	1,550
Dry (17%)	1,547	1,544	1,554	1,578	1,639	1,694	1,729	1,731	1,716	1,648	1,550	1,475
Critical (15%)	1,423	1,412	1,417	1,462	1,497	1,532	1,558	1,559	1,530	1,463	1,377	1,299

Table U.1-17. Central Valley Project Total Capacity, Monthly Capacity, Alternative 3 minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	5	-7	12	3	3	-1	-1	2	-27	-8	-14	-21
20%	-29	-11	-21	-1	-6	-6	-8	-4	-35	-26	-15	-46
30%	-28	-16	-9	-26	-8	-21	-2	-5	-20	-18	-13	-50
40%	-11	-21	2	-16	-37	-12	-17	-4	-11	-13	-14	-51
50%	-12	17	-20	-29	-29	-19	-19	-21	-23	-3	-5	-23
60%	-13	5	1	-28	-17	-26	-34	-19	-11	-18	-18	-32
70%	-1	17	11	-4	-11	-15	-28	-16	-8	-35	-28	-20
80%	12	10	19	3	-9	2	4	-9	9	0	17	15
90%	77	76	35	58	63	30	7	19	0	0	29	57
Long Term												
Full Simulation Period	19	27	14	3	-1	-4	-7	-4	-8	-4	2	-7
Water Year Types												
Wet (32%)	17	27	17	8	-1	1	-2	-3	-26	-12	-9	-34
Above Normal (12%)	-6	-1	3	-23	-25	-19	-21	-14	-17	-16	-20	-44
Below Normal (24%)	8	20	1	-11	-11	-11	-13	-7	-8	1	2	-6
Dry (17%)	-6	-2	-3	-16	-6	-24	-27	-22	-4	-23	-24	-27
Critical (15%)	89	94	59	56	41	28	25	27	29	38	70	100

Table U.1-18. Central Valley Project Total Capacity, Monthly Capacity, Alternative 4

	Monthly Capacity (MW)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1,759	1,758	1,783	1,826	1,853	1,884	1,923	1,946	1,941	1,917	1,836	1,794
20%	1,712	1,719	1,750	1,787	1,818	1,859	1,910	1,932	1,920	1,874	1,778	1,738
30%	1,669	1,679	1,709	1,750	1,793	1,845	1,884	1,903	1,871	1,823	1,727	1,683
40%	1,629	1,633	1,665	1,722	1,772	1,819	1,866	1,883	1,848	1,791	1,696	1,642
50%	1,586	1,586	1,624	1,691	1,738	1,792	1,838	1,854	1,805	1,758	1,653	1,592
60%	1,531	1,542	1,579	1,626	1,707	1,772	1,815	1,811	1,781	1,727	1,638	1,572
70%	1,516	1,504	1,527	1,580	1,658	1,733	1,778	1,788	1,754	1,696	1,612	1,540
80%	1,443	1,437	1,462	1,516	1,606	1,675	1,719	1,722	1,710	1,634	1,531	1,464
90%	1,311	1,331	1,325	1,420	1,481	1,552	1,615	1,603	1,596	1,522	1,416	1,322
Long Term												
Full Simulation Period	1,557	1,557	1,590	1,644	1,704	1,759	1,803	1,815	1,790	1,738	1,643	1,581
Water Year Types												
Wet (32%)	1,586	1,600	1,671	1,740	1,801	1,857	1,903	1,928	1,914	1,874	1,784	1,732
Above Normal (12%)	1,564	1,560	1,585	1,678	1,747	1,816	1,860	1,883	1,852	1,808	1,712	1,664
Below Normal (24%)	1,584	1,583	1,606	1,651	1,713	1,759	1,810	1,818	1,784	1,724	1,630	1,569
Dry (17%)	1,583	1,579	1,579	1,609	1,668	1,736	1,775	1,771	1,745	1,683	1,596	1,525
Critical (15%)	1,414	1,399	1,407	1,441	1,487	1,531	1,564	1,564	1,540	1,475	1,364	1,274

Table U.1-19. Central Valley Project Total Capacity, Monthly Capacity, Alternative 4 minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	25	27	17	12	2	4	9	10	13	11	19	15
20%	16	23	21	16	4	1	9	12	18	19	12	8
30%	30	20	28	5	5	2	3	7	14	6	15	8
40%	24	21	29	11	11	8	15	22	21	5	9	4
50%	32	44	14	11	7	11	14	23	2	6	6	18
60%	18	28	11	-6	14	14	11	17	11	11	26	21
70%	34	26	21	16	7	12	11	24	32	12	23	25
80%	12	9	15	12	14	26	17	13	45	20	29	27
90%	32	55	15	27	31	27	29	6	12	13	14	12
Long Term												
Full Simulation Period	38	40	25	14	14	12	14	17	20	17	22	22
Water Year Types												
Wet (32%)	26	27	18	4	0	2	6	11	15	14	17	8
Above Normal (12%)	18	16	15	7	8	10	12	17	17	8	8	7
Below Normal (24%)	44	48	28	18	18	13	13	15	14	9	12	13
Dry (17%)	30	33	22	16	23	18	19	18	25	11	22	23
Critical (15%)	80	80	48	34	30	27	31	31	39	50	58	75

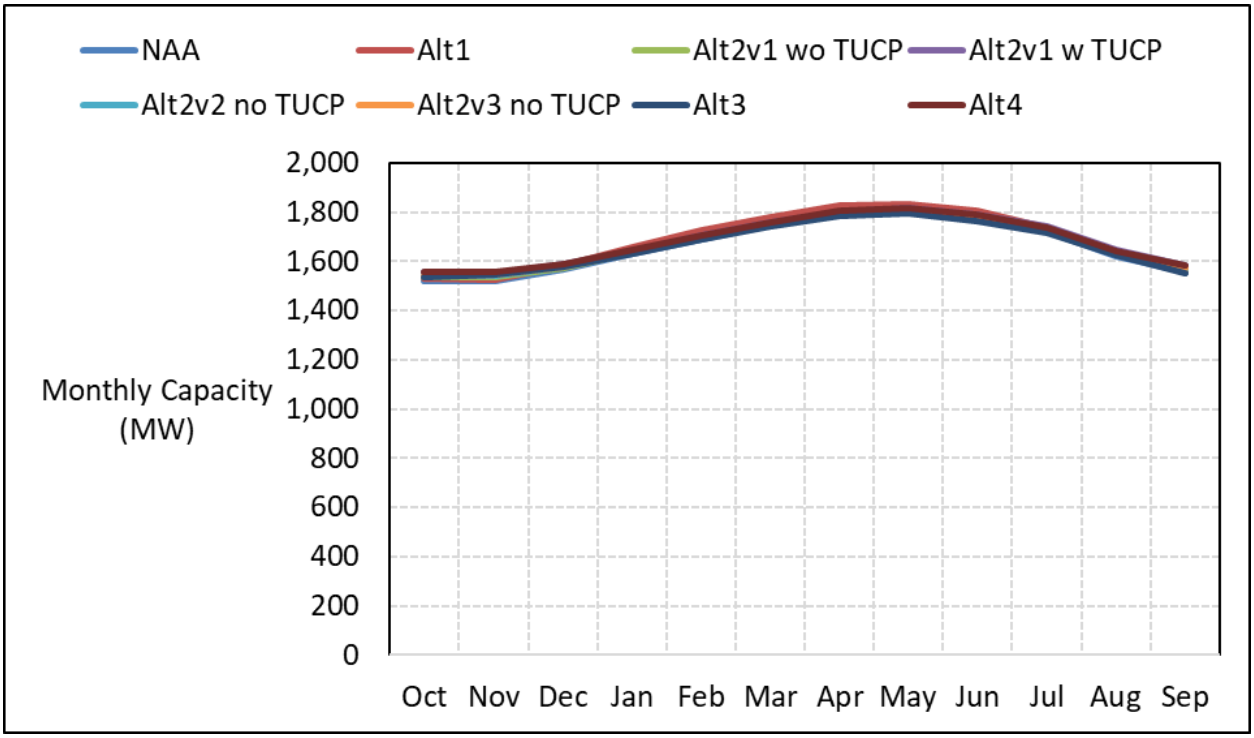

Figure U.1-1. Central Valley Project Total Capacity, Long-Term Average Capacity

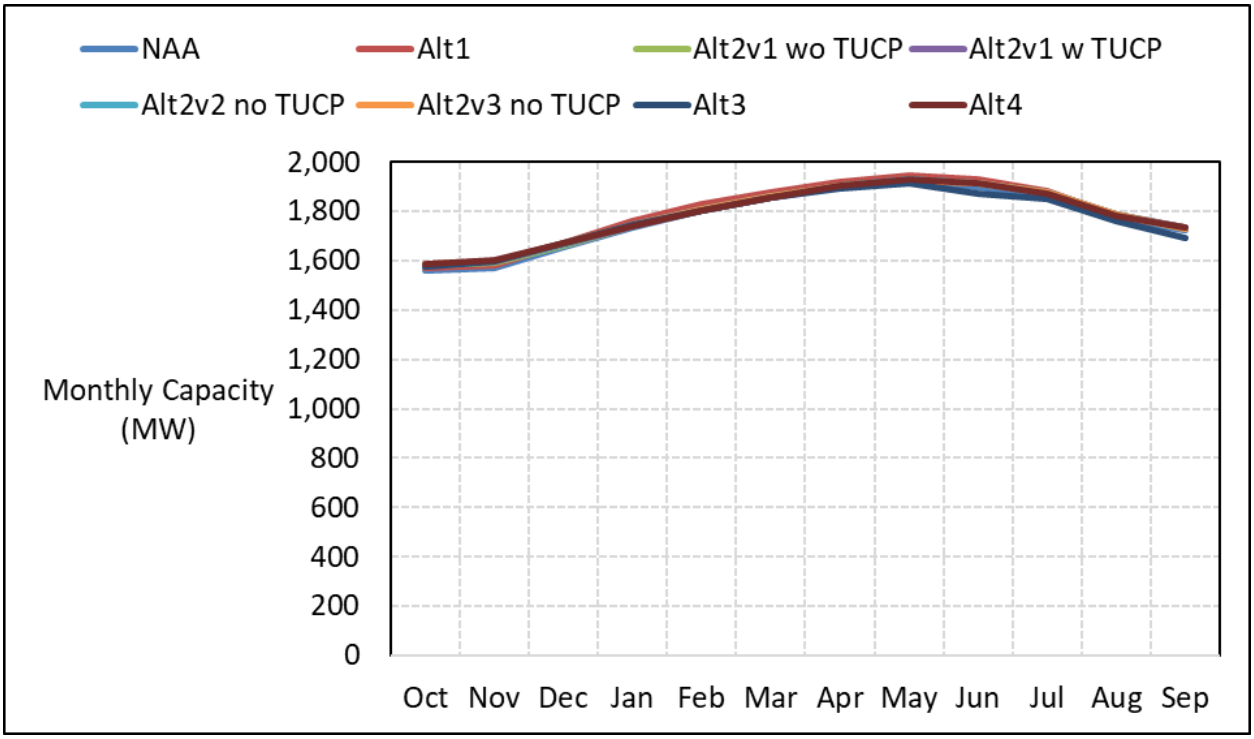

Figure U.1-2. Central Valley Project Total Capacity, Wet Year Average Capacity

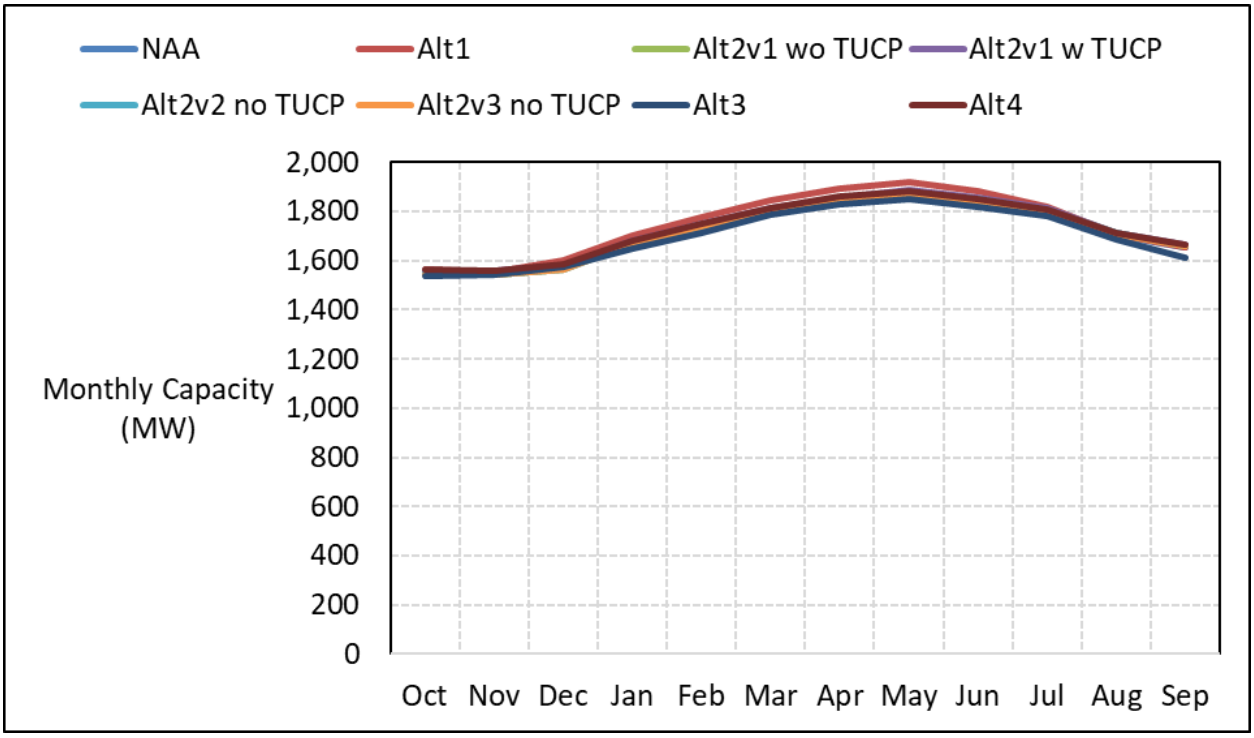

Figure U.1-3. Central Valley Project Total Capacity, Above Normal Year Average Capacity

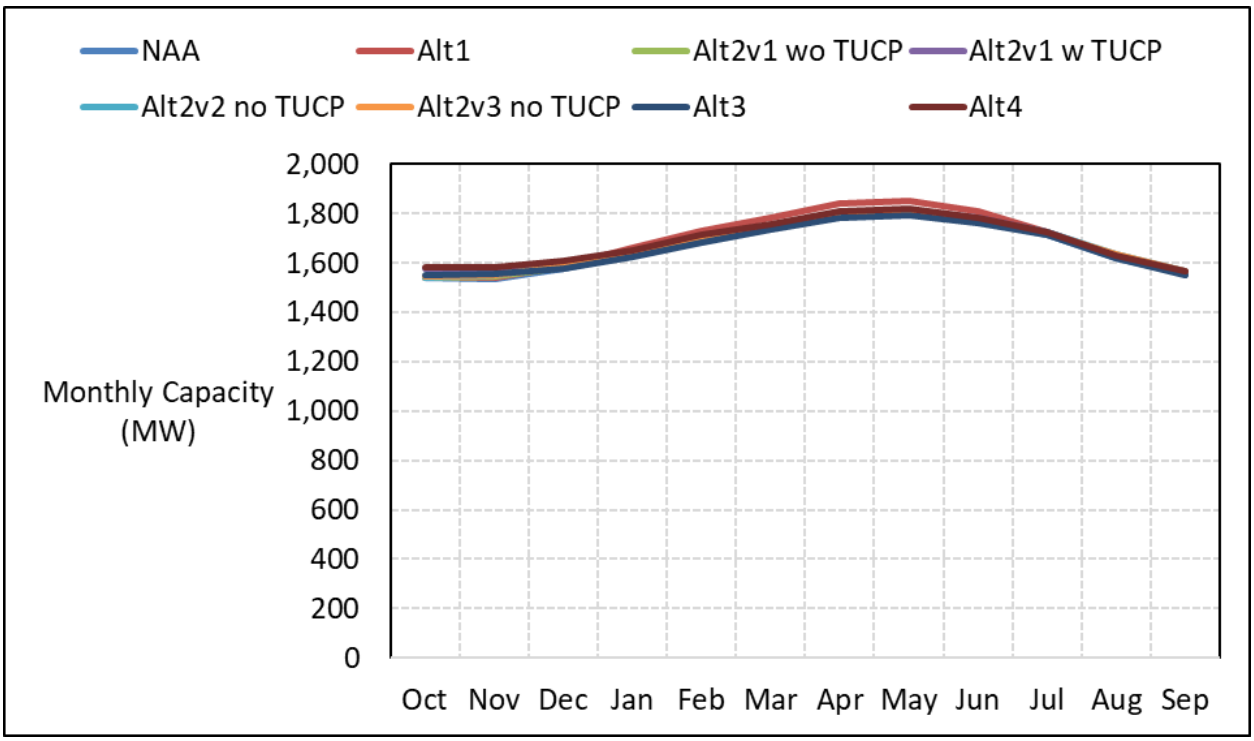

Figure U.1-4. Central Valley Project Total Capacity, Below Normal Year Average Capacity

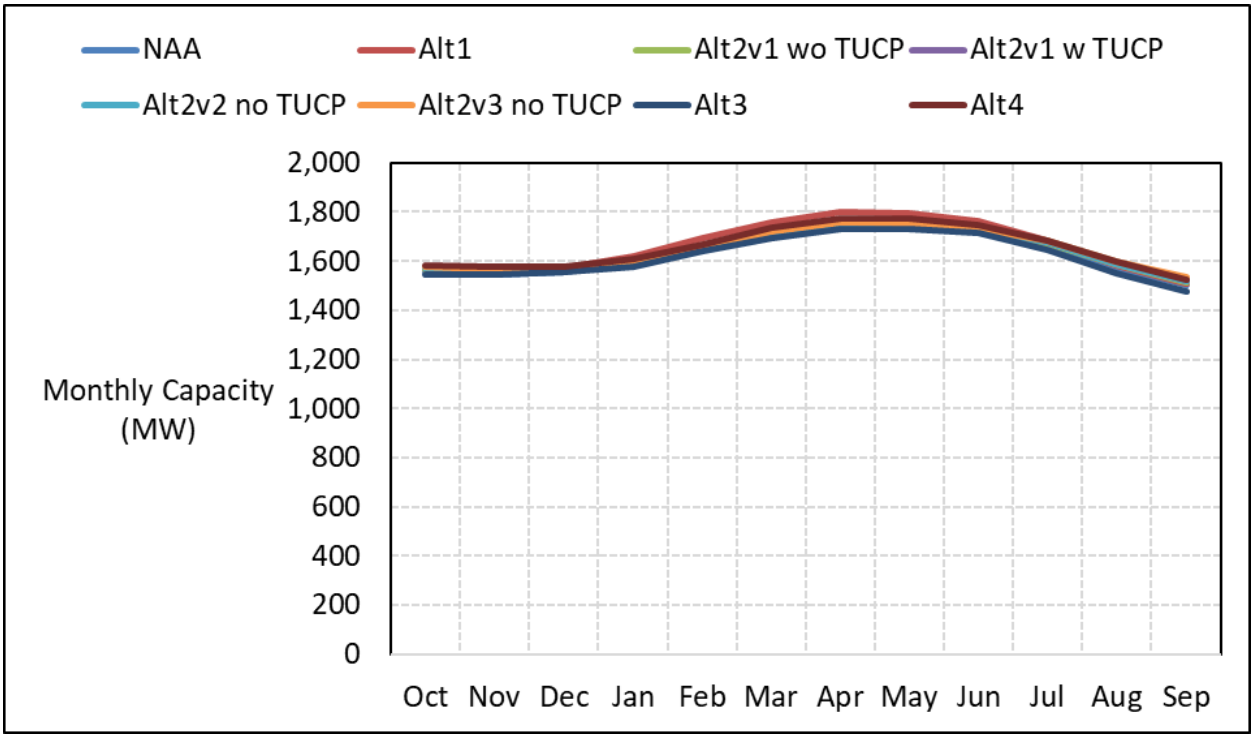

Figure U.1-5. Central Valley Project Total Capacity, Dry Year Average Capacity

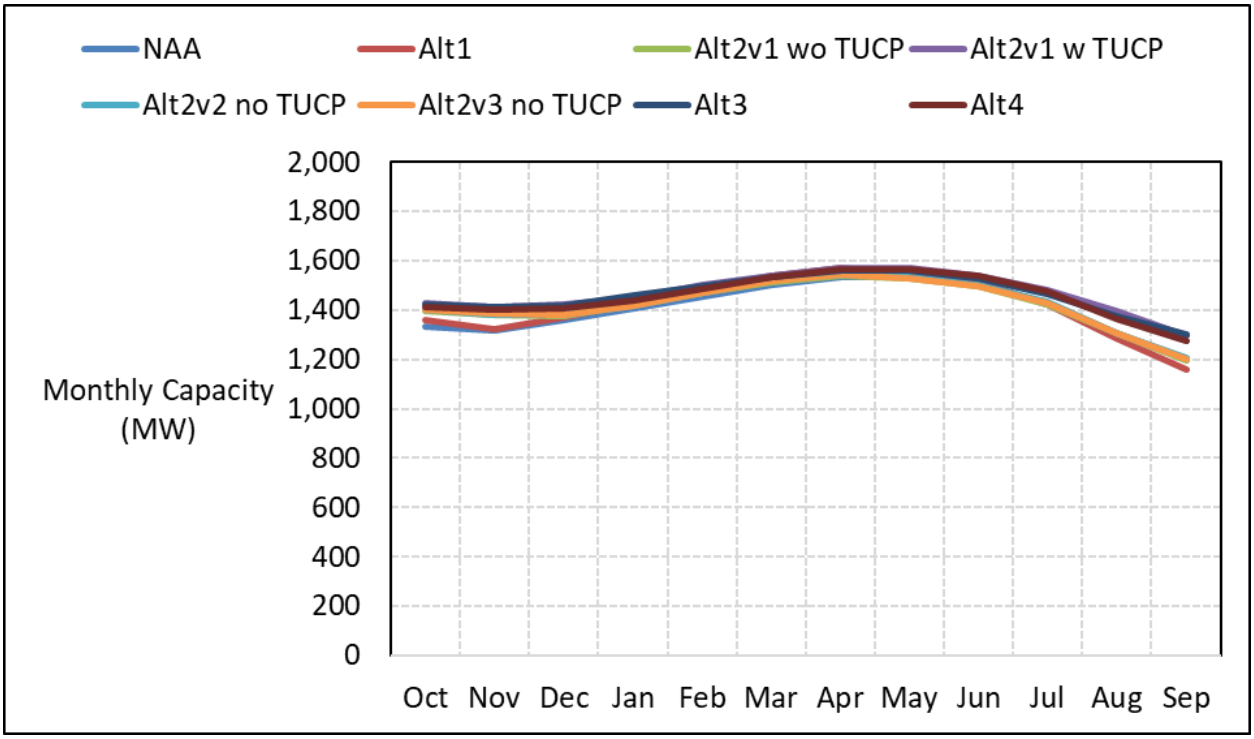

Figure U.1-6. Central Valley Project Total Capacity, Critical Year Average Capacity

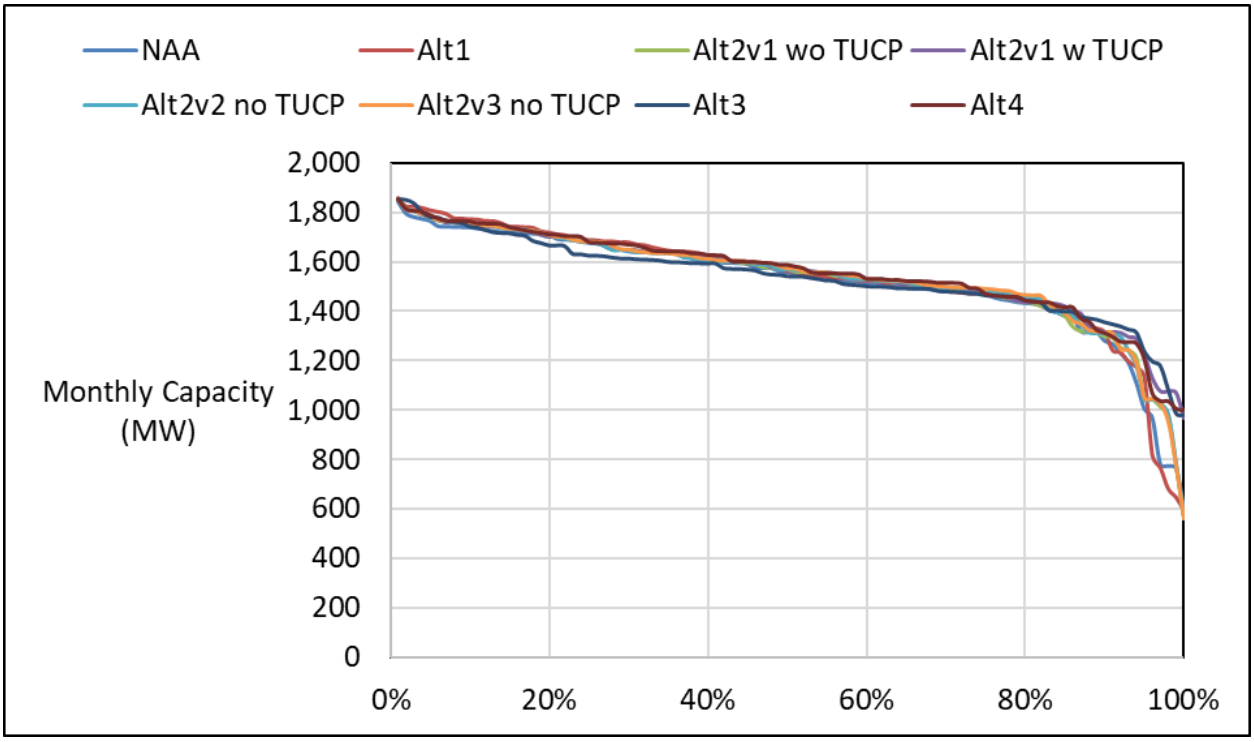

Figure U.1-7. Central Valley Project Total Capacity, October

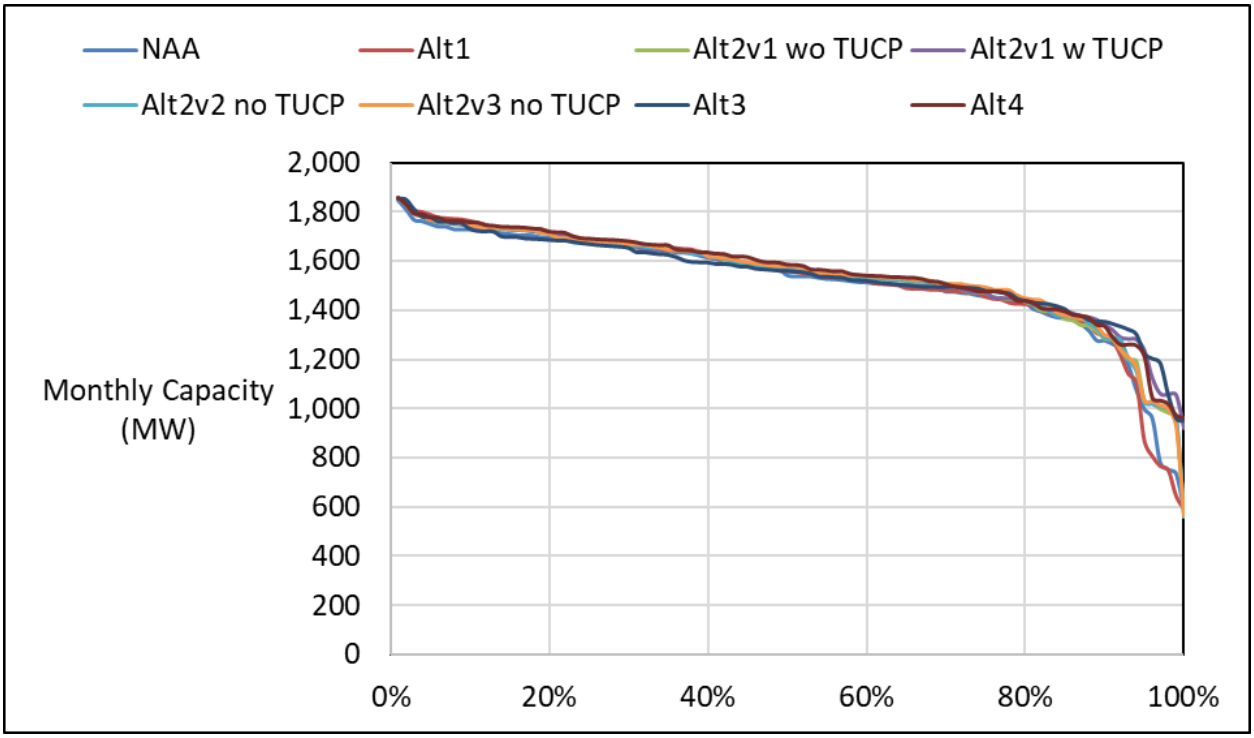

Figure U.1-8. Central Valley Project Total Capacity, November

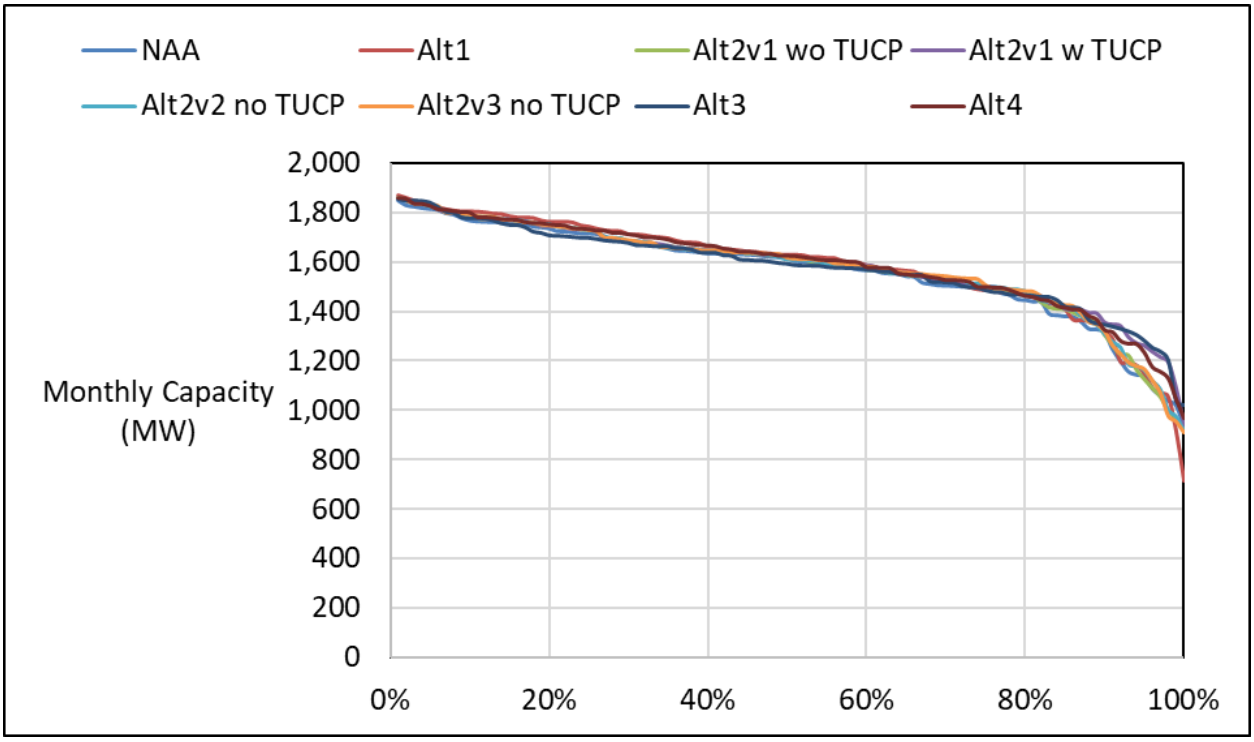

Figure U.1-9. Central Valley Project Total Capacity, December

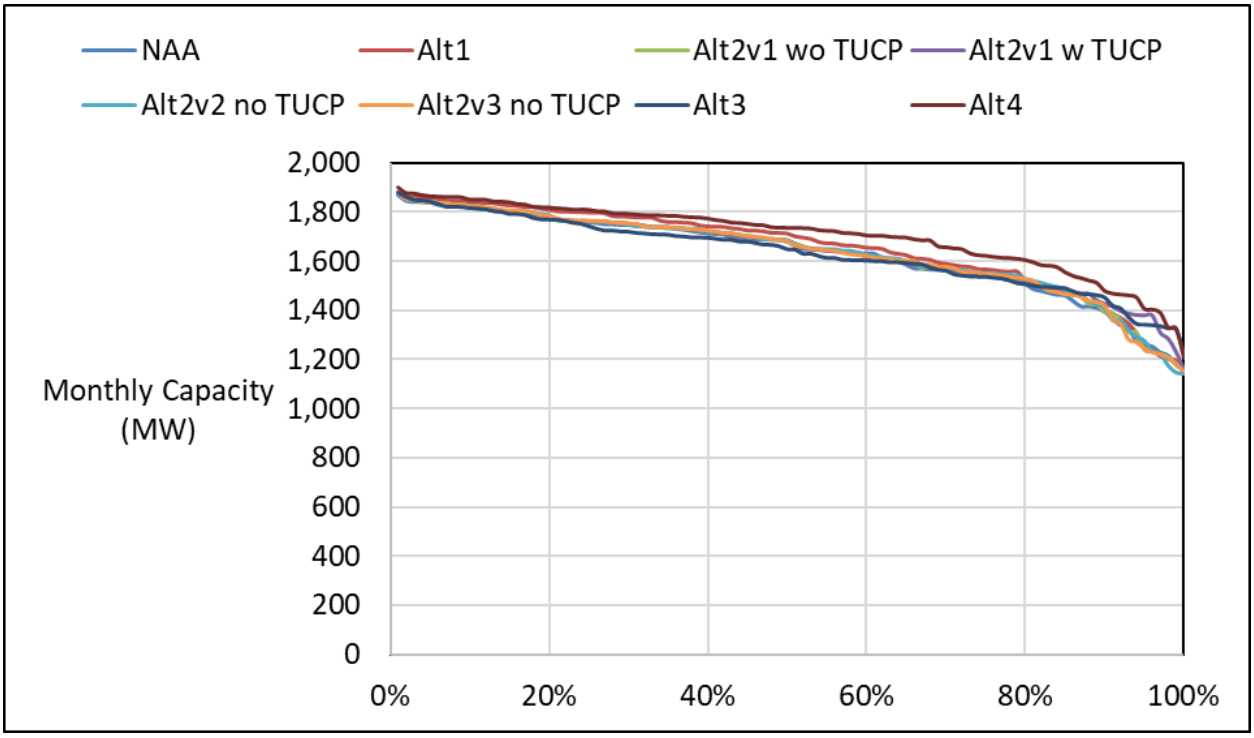

Figure U.1-10. Central Valley Project Total Capacity, January

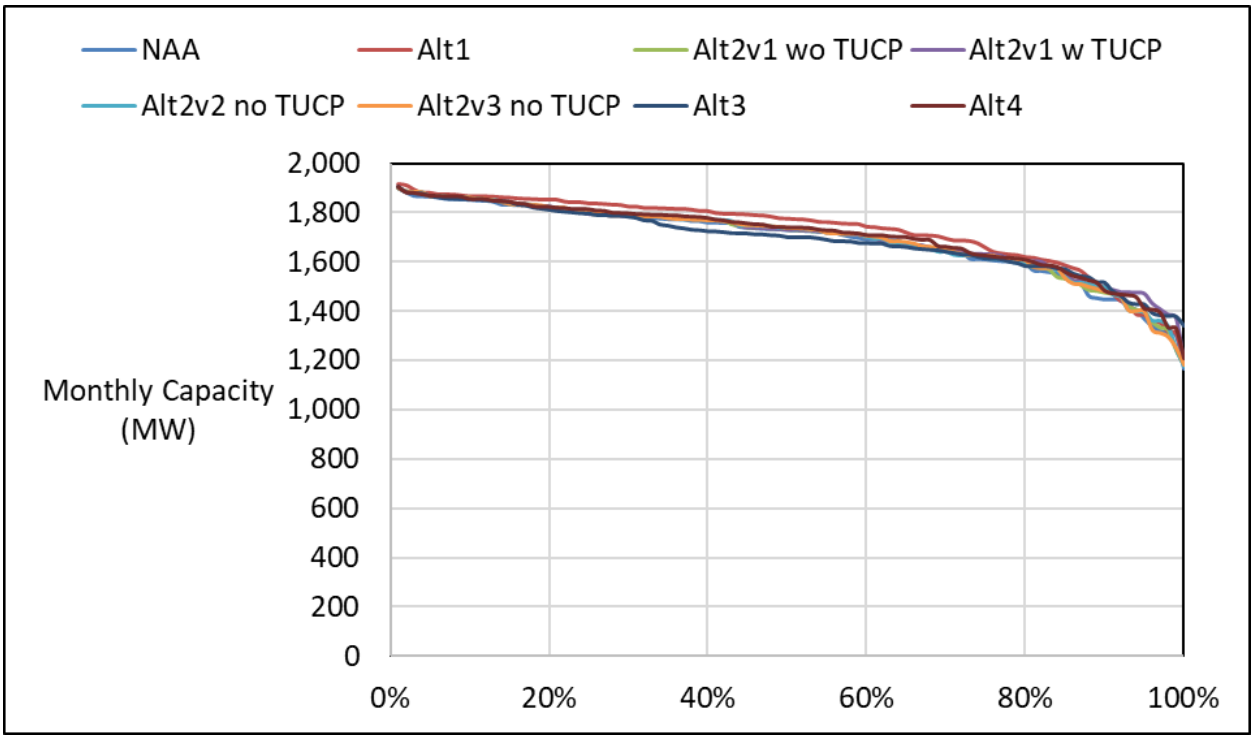

Figure U.1-11. Central Valley Project Total Capacity, February

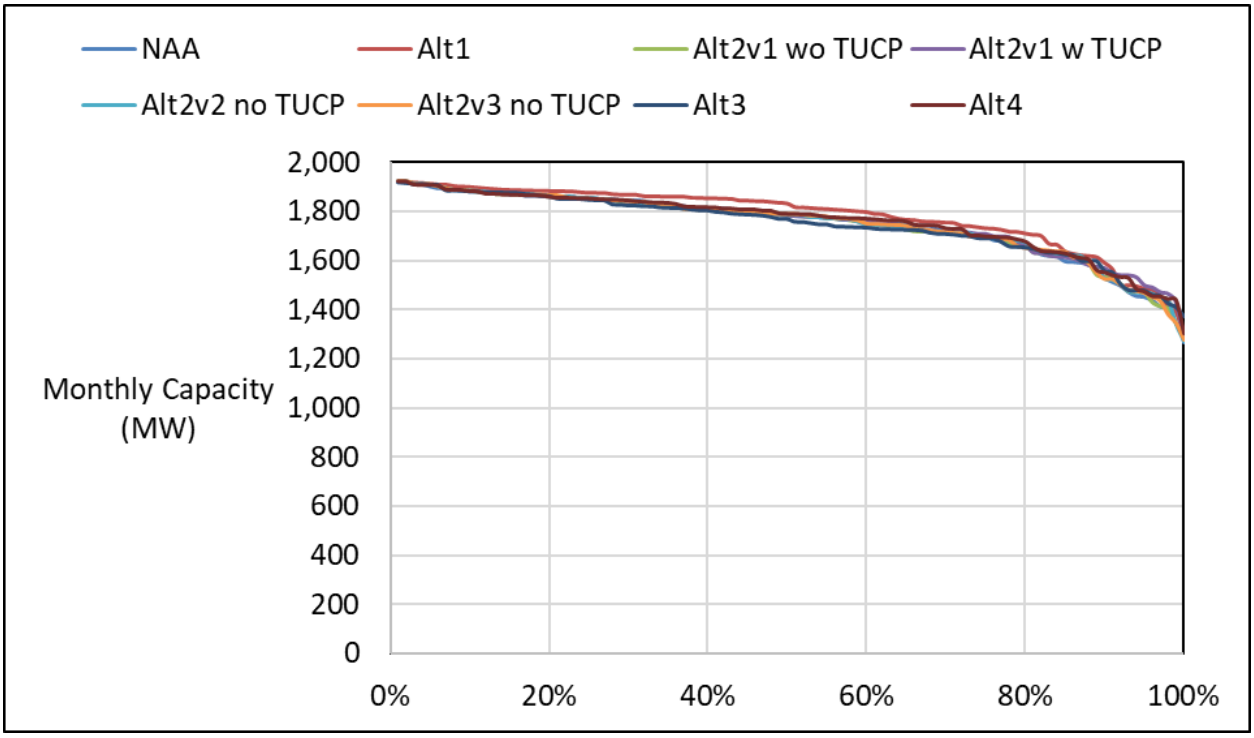

Figure U.1-12. Central Valley Project Total Capacity, March

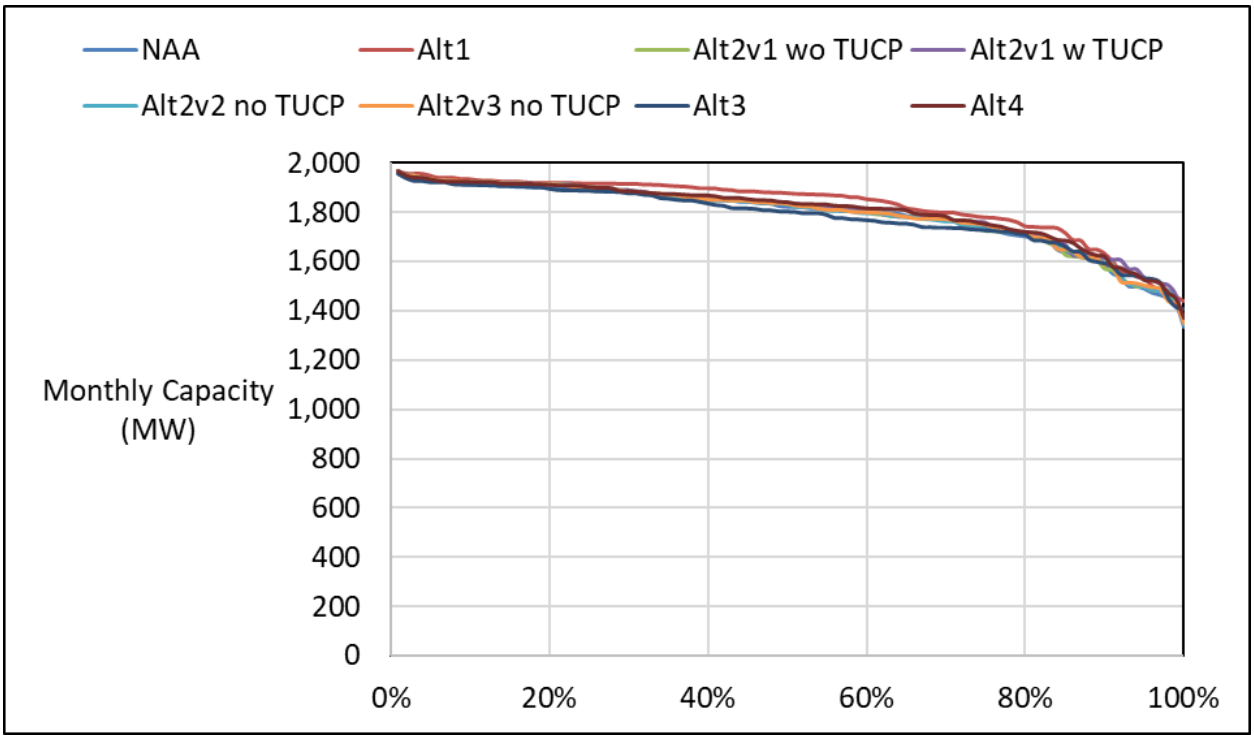

Figure U.1-13. Central Valley Project Total Capacity, April

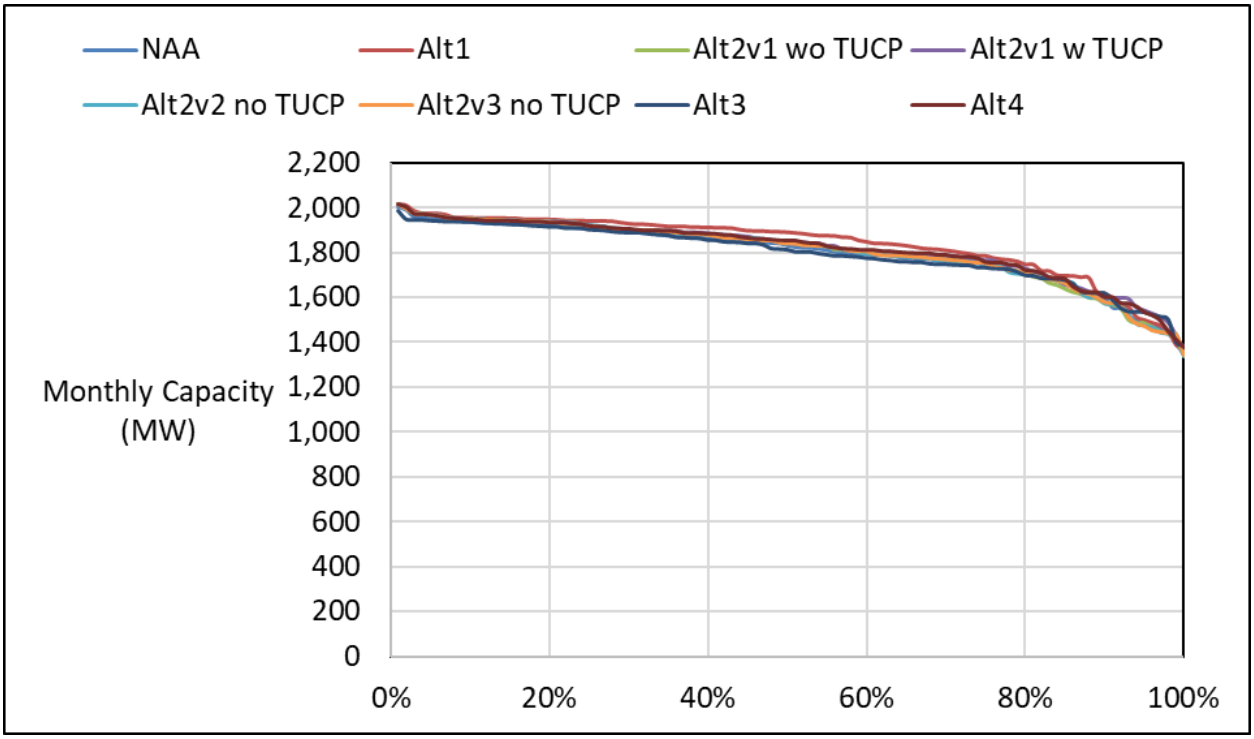

Figure U.1-14. Central Valley Project Total Capacity, May

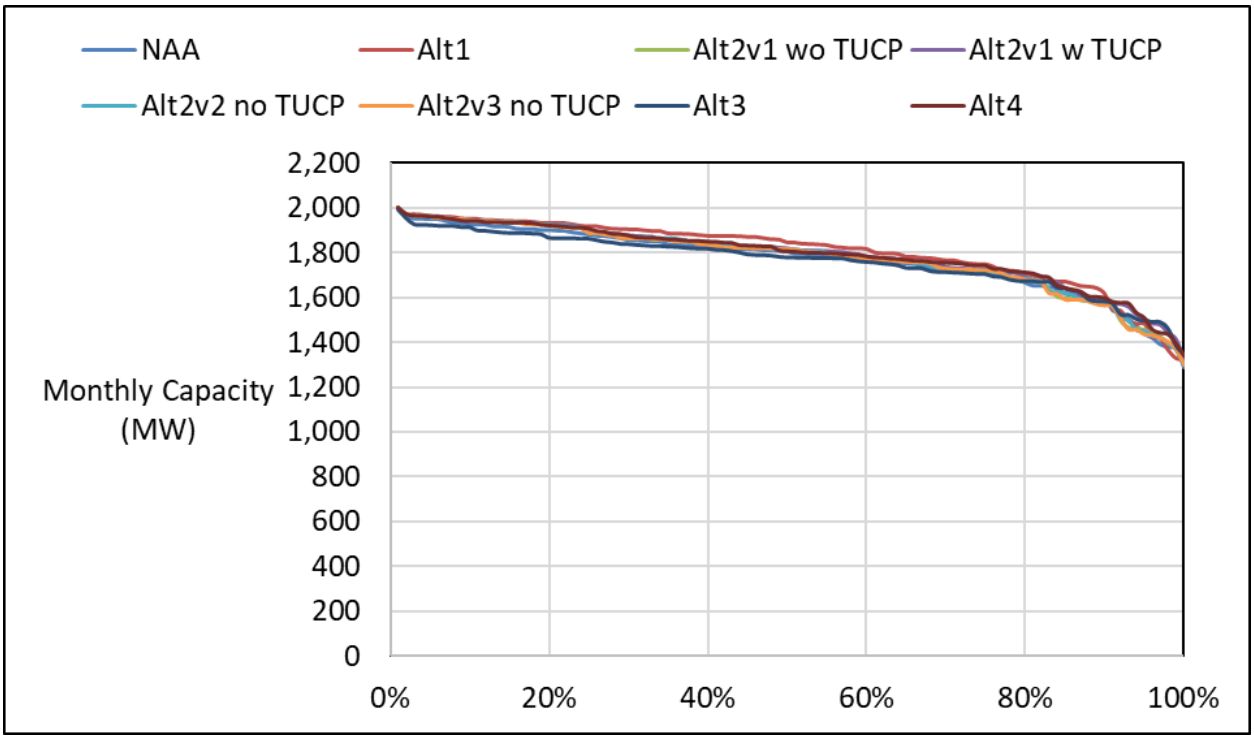

Figure U.1-15. Central Valley Project Total Capacity, June

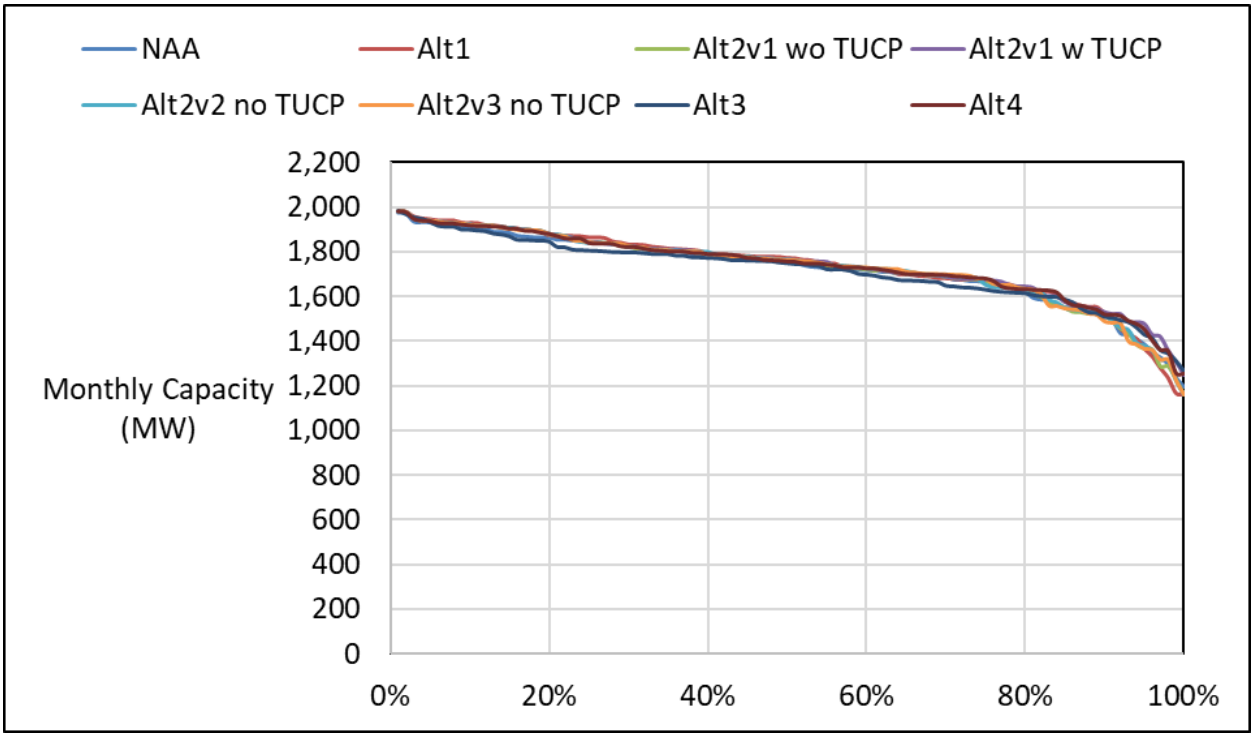

Figure U.1-16. Central Valley Project Total Capacity, July

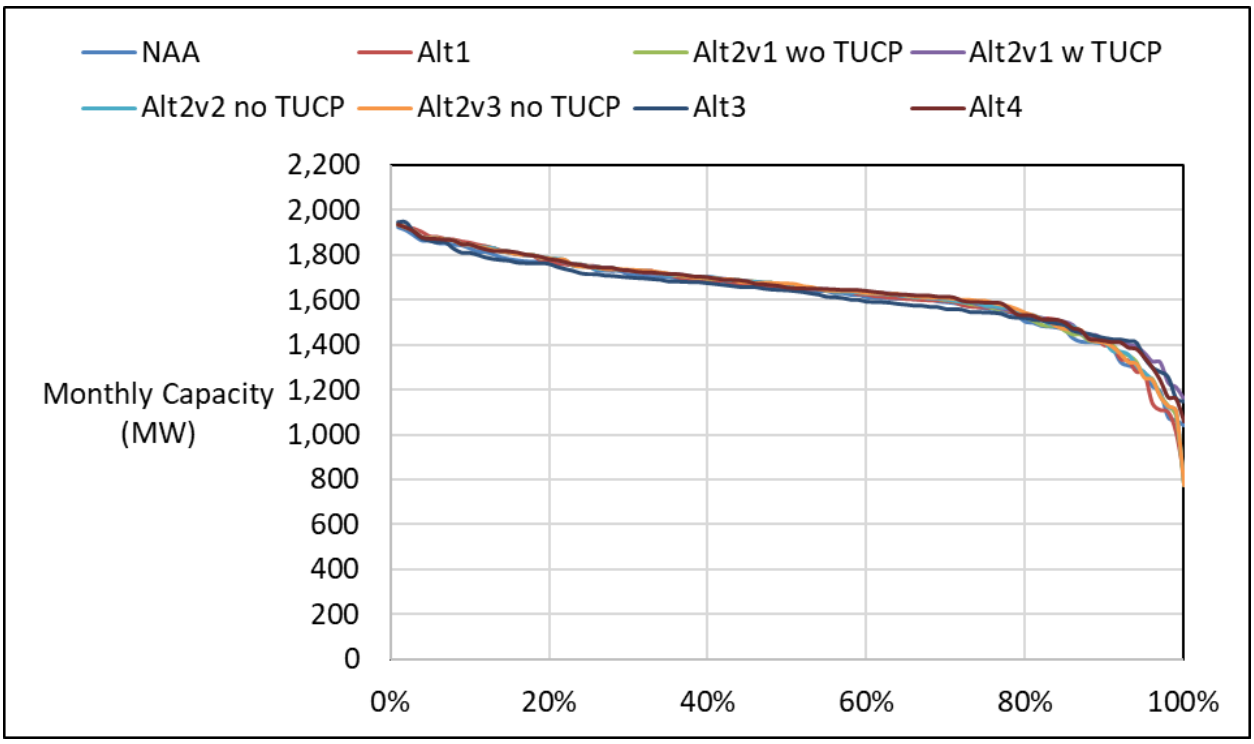

Figure U.1-17. Central Valley Project Total Capacity, August

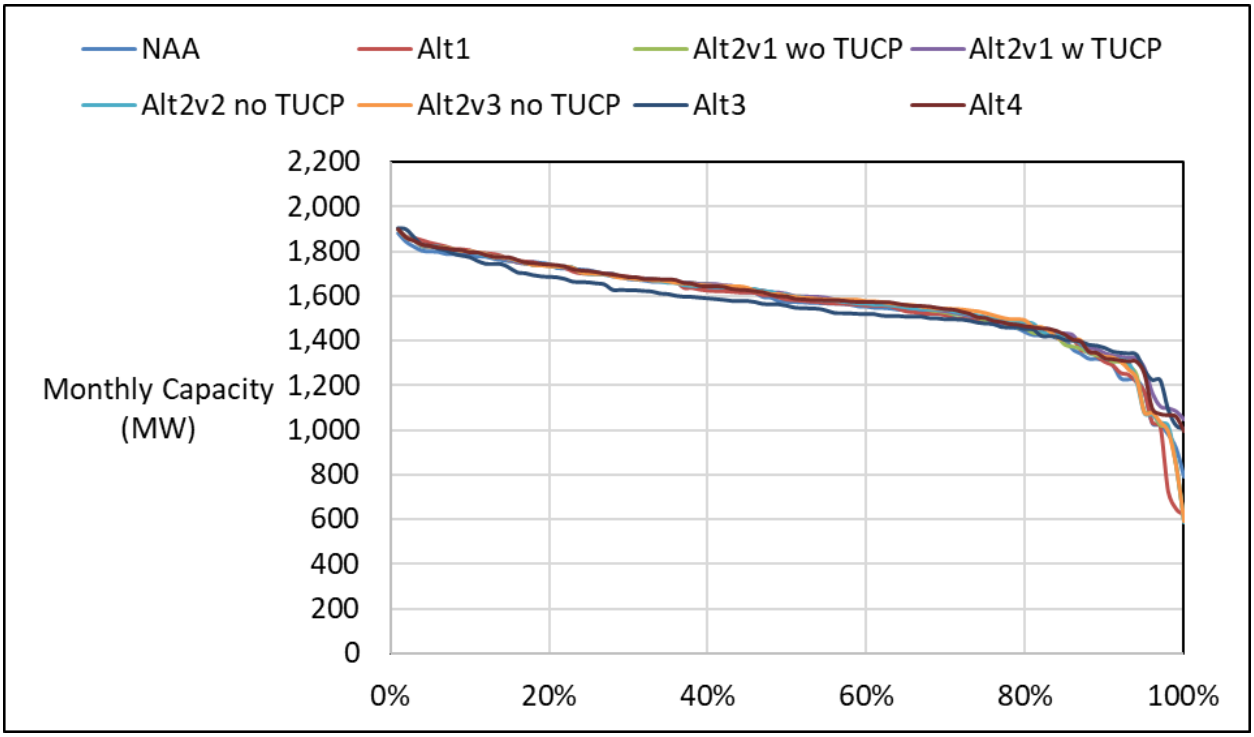

Figure U.1-18. Central Valley Project Total Capacity, September

Table U.1-20. Central Valley Project Total Generation, Monthly Generation, No Action Alternative

Statistic	Monthly Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	412	351	692	752	726	727	500	569	583	788	621	479
20%	349	280	353	546	663	551	366	513	560	738	575	436
30%	312	263	253	359	419	363	340	496	536	709	553	406
40%	283	214	209	227	266	278	309	483	506	679	527	376
50%	254	188	168	196	210	230	288	469	483	664	507	319
60%	231	168	143	166	181	180	262	446	465	618	481	285
70%	209	154	139	149	157	166	245	429	445	579	437	264
80%	189	131	124	131	136	154	220	388	420	543	404	238
90%	160	106	108	111	115	132	197	332	373	367	313	185
Long Term												
Full Simulation Period	265	215	268	322	338	333	319	465	485	626	491	335
Water Year Types												
Wet (32%)	282	255	458	565	582	568	427	538	503	683	560	453
Above Normal (12%)	281	213	201	388	371	351	306	530	498	699	535	413
Below Normal (24%)	279	200	216	195	240	226	278	468	501	668	518	292
Dry (17%)	268	213	161	157	153	200	287	418	533	634	458	267
Critical (15%)	190	160	121	144	154	139	201	304	355	370	302	168

Table U.1-21. Central Valley Project Total Generation, Monthly Generation, Alternative 1

Statistic	Monthly Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	432	362	693	758	736	732	502	596	666	775	597	454
20%	361	292	414	558	653	574	376	543	620	739	560	385
30%	302	242	293	410	428	367	338	519	579	706	543	362
40%	274	225	216	240	274	282	309	499	544	679	521	337
50%	241	180	170	207	220	227	294	485	512	653	500	315
60%	222	144	155	181	198	189	277	456	501	611	465	290
70%	202	137	143	158	176	163	257	437	473	587	448	265
80%	184	121	124	135	139	149	235	394	441	548	400	241
90%	156	105	107	113	123	127	213	343	380	480	319	184
Long Term												
Full Simulation Period	261	210	282	334	349	335	328	481	522	634	482	319
Water Year Types												
Wet (32%)	282	250	489	575	595	568	418	552	544	683	545	419
Above Normal (12%)	282	206	229	408	384	346	312	554	545	696	505	346
Below Normal (24%)	269	204	217	213	263	234	293	482	550	663	507	303
Dry (17%)	256	201	157	159	166	196	302	432	561	636	473	265
Critical (15%)	192	150	129	150	141	150	236	322	370	430	298	167

Table U.1-22. Central Valley Project Total Generation, Monthly Generation, Alternative 1 minus No Action Alternative

Statistic	Monthly Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	20	10	1	6	10	5	2	27	83	-13	-24	-24
20%	13	12	61	12	-10	23	10	29	59	2	-15	-50
30%	-10	-21	40	51	8	4	-2	24	42	-2	-9	-44
40%	-9	11	7	13	8	4	0	16	37	-1	-6	-39
50%	-13	-8	2	11	10	-3	6	16	29	-11	-6	-4
60%	-8	-24	12	15	17	9	14	10	35	-8	-17	5
70%	-7	-17	4	9	19	-2	11	8	28	9	10	0
80%	-6	-10	0	4	3	-5	15	6	21	6	-4	3
90%	-4	-1	-1	2	8	-5	17	12	7	113	6	-1
Long Term												
Full Simulation Period	-4	-5	14	11	11	2	10	16	38	8	-9	-17
Water Year Types												
Wet (32%)	0	-5	31	11	12	-1	-9	14	41	0	-15	-34
Above Normal (12%)	0	-7	28	20	14	-6	6	24	47	-3	-30	-67
Below Normal (24%)	-10	4	1	18	23	8	15	14	49	-5	-11	11
Dry (17%)	-12	-12	-4	3	13	-4	15	14	28	3	14	-2
Critical (15%)	2	-10	8	6	-12	11	36	18	16	60	-4	-1

Table U.1-23. Central Valley Project Total Generation, Monthly Generation, Alternative 2v1 Without TUCP

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	413	352	702	716	730	724	485	599	596	772	637	462
20%	364	294	362	545	645	538	359	535	559	728	584	439
30%	316	259	255	359	424	363	336	502	532	703	555	405
40%	279	226	204	233	270	280	303	478	511	675	531	380
50%	255	191	170	200	210	229	287	468	491	650	514	317
60%	235	171	154	171	194	182	263	443	475	606	488	285
70%	200	153	141	151	155	174	250	423	444	569	446	269
80%	185	136	123	135	133	160	231	384	426	538	406	240
90%	158	113	111	112	114	143	215	308	364	368	292	179
Long Term												
Full Simulation Period	269	221	272	323	340	334	320	463	486	622	493	333
Water Year Types												
Wet (32%)	285	261	467	571	583	563	422	541	510	685	567	451
Above Normal (12%)	281	221	198	368	373	342	301	532	509	698	544	413
Below Normal (24%)	278	206	218	198	249	227	272	474	503	659	527	293
Dry (17%)	275	209	166	158	150	197	285	414	530	619	459	268
Critical (15%)	201	174	124	146	157	163	237	278	341	373	275	155

Table U.1-24. Central Valley Project Total Generation, Monthly Generation, Alternative 2v1 Without TUCP minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1	0	10	-36	4	-2	-16	30	13	-16	16	-16
20%	15	13	9	-1	-18	-13	-7	21	-1	-10	9	4
30%	4	-4	1	0	5	0	-4	7	-4	-5	2	-1
40%	-4	12	-6	6	4	1	-6	-6	5	-4	4	4
50%	0	2	1	4	0	-1	-1	-1	7	-14	7	-2
60%	4	3	10	6	12	3	0	-2	9	-12	6	-1
70%	-8	-1	2	2	-2	9	5	-7	-2	-10	9	4
80%	-4	5	-2	4	-4	6	11	-5	6	-5	2	2
90%	-2	8	3	1	-1	10	19	-24	-9	1	-21	-6
Long Term												
Full Simulation Period	4	6	4	1	3	1	2	-2	1	-4	1	-2
Water Year Types												
Wet (32%)	3	7	9	6	1	-5	-4	2	7	2	6	-2
Above Normal (12%)	0	8	-3	-20	2	-9	-4	1	11	-2	9	-1
Below Normal (24%)	-1	7	1	3	8	1	-6	6	2	-8	9	1
Dry (17%)	7	-5	4	2	-2	-3	-1	-4	-3	-15	1	1
Critical (15%)	11	13	3	2	3	24	36	-27	-14	3	-27	-13

Table U.1-25. Central Valley Project Total Generation, Monthly Generation, Alternative 2v1 With TUCP

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	413	351	702	717	730	724	486	598	595	773	637	462
20%	363	294	360	545	661	538	356	539	559	728	583	439
30%	316	263	255	374	424	362	333	502	532	703	555	405
40%	279	226	208	252	273	280	299	478	513	681	532	380
50%	260	191	176	197	213	228	285	470	491	651	514	320
60%	238	172	154	166	196	181	261	443	476	613	492	294
70%	205	154	142	150	156	164	245	422	444	588	462	270
80%	186	137	132	134	133	152	219	384	429	539	405	240
90%	160	115	114	116	114	132	192	309	363	363	287	187
Long Term												
Full Simulation Period	272	223	275	326	342	332	313	464	486	623	495	338
Water Year Types												
Wet (32%)	286	263	467	577	584	565	422	541	510	685	567	452
Above Normal (12%)	285	220	202	371	374	349	302	534	511	700	551	418
Below Normal (24%)	287	211	219	200	250	227	272	476	506	666	529	295
Dry (17%)	275	209	167	159	155	197	286	415	531	620	461	269
Critical (15%)	205	178	136	143	157	144	189	280	336	363	280	175

Table U.1-26. Central Valley Project Total Generation, Monthly Generation, Alternative 2v1 With TUCP minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1	-1	10	-36	4	-2	-14	29	13	-16	16	-16
20%	14	14	6	-1	-2	-12	-10	25	-2	-10	9	4
30%	4	0	1	15	5	-1	-8	7	-4	-5	2	-1
40%	-4	12	-1	26	7	1	-10	-6	7	2	5	4
50%	5	3	8	1	3	-2	-3	0	8	-13	8	1
60%	7	4	11	0	15	2	-2	-2	10	-5	11	8
70%	-4	0	3	1	-1	-1	0	-7	-1	9	25	6
80%	-3	6	7	2	-4	-2	-2	-4	9	-3	0	2
90%	0	9	6	5	-1	0	-5	-22	-10	-4	-26	2
Long Term												
Full Simulation Period	7	8	7	3	4	-1	-5	-1	2	-3	4	2
Water Year Types												
Wet (32%)	4	8	9	12	2	-3	-4	2	7	2	7	-1
Above Normal (12%)	4	7	1	-16	4	-2	-4	3	13	1	16	4
Below Normal (24%)	8	11	3	5	10	1	-6	8	4	-2	11	3
Dry (17%)	7	-4	5	2	3	-3	-1	-3	-2	-14	3	2
Critical (15%)	15	17	15	-1	3	5	-12	-24	-19	-7	-22	7

Table U.1-27. Central Valley Project Total Generation, Monthly Generation, Alternative 2v2 Without TUCP

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	413	346	699	718	730	724	485	600	593	787	633	461
20%	363	301	358	542	644	537	362	527	557	731	593	429
30%	318	264	256	355	387	350	337	502	527	705	562	403
40%	280	221	197	235	270	280	302	480	508	680	534	383
50%	261	195	172	195	210	233	284	465	492	651	514	317
60%	235	175	152	165	186	186	264	445	470	609	487	287
70%	204	154	140	147	156	175	246	421	444	583	451	267
80%	184	137	124	126	137	163	233	381	426	532	407	245
90%	160	110	109	113	114	145	214	308	363	368	300	181
Long Term												
Full Simulation Period	270	222	271	320	337	336	319	462	485	625	495	334
Water Year Types												
Wet (32%)	287	260	464	567	584	564	423	540	508	684	567	453
Above Normal (12%)	281	219	196	365	371	344	302	529	502	699	551	411
Below Normal (24%)	278	209	218	195	249	230	269	474	501	662	532	294
Dry (17%)	277	215	163	158	153	197	277	410	529	624	459	266
Critical (15%)	203	170	126	140	134	170	241	279	347	381	281	158

Table U.1-28. Central Valley Project Total Generation, Monthly Generation, Alternative 2v2 Without TUCP minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1	-6	7	-34	4	-2	-15	31	10	-1	12	-18
20%	14	21	5	-4	-19	-14	-4	14	-4	-7	18	-7
30%	6	1	3	-4	-33	-14	-4	6	-9	-3	10	-4
40%	-3	8	-12	8	4	2	-7	-3	1	1	7	7
50%	7	7	4	-1	0	3	-4	-5	9	-13	8	-2
60%	4	7	9	-1	5	6	1	-1	5	-10	6	2
70%	-5	0	1	-2	-1	9	0	-8	-2	4	14	3
80%	-6	7	-1	-6	1	9	13	-8	6	-10	3	7
90%	0	4	1	2	0	13	17	-23	-10	1	-13	-5
Long Term												
Full Simulation Period	5	6	3	-2	0	3	1	-3	0	-1	4	-2
Water Year Types												
Wet (32%)	5	5	6	2	1	-5	-3	1	5	1	7	-1
Above Normal (12%)	-1	6	-5	-23	0	-7	-4	-1	5	0	16	-3
Below Normal (24%)	-1	9	2	0	9	4	-9	6	0	-5	13	1
Dry (17%)	9	1	2	1	0	-3	-9	-8	-4	-9	1	-1
Critical (15%)	13	9	5	-4	-20	31	40	-25	-8	11	-21	-10

Table U.1-29. Central Valley Project Total Generation, Monthly Generation, Alternative 2v3 Without TUCP

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	413	347	705	721	730	724	490	602	574	768	642	463
20%	357	299	375	544	663	524	377	529	540	723	591	430
30%	326	266	255	359	424	357	337	502	514	700	555	404
40%	284	231	198	237	278	280	322	480	500	667	533	375
50%	257	194	174	199	213	231	301	467	481	649	513	324
60%	234	172	149	167	192	184	268	448	464	599	484	285
70%	201	152	139	149	157	177	258	421	438	569	452	263
80%	184	135	124	128	137	165	249	383	414	540	405	236
90%	156	110	111	111	115	147	212	314	363	369	297	167
Long Term												
Full Simulation Period	269	223	271	323	342	336	328	464	475	618	493	333
Water Year Types												
Wet (32%)	287	264	465	570	585	566	427	541	505	683	566	452
Above Normal (12%)	276	220	197	371	372	335	325	538	489	693	538	409
Below Normal (24%)	278	210	222	196	251	232	285	480	484	654	529	294
Dry (17%)	276	211	162	156	153	201	279	402	514	607	451	266
Critical (15%)	201	169	123	148	158	164	245	286	340	375	289	153

Table U.1-30. Central Valley Project Total Generation, Monthly Generation, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1	-5	13	-32	4	-2	-10	33	-9	-21	21	-15
20%	8	19	22	-2	0	-27	11	15	-20	-15	17	-5
30%	14	4	1	0	5	-6	-3	6	-22	-9	3	-3
40%	1	18	-11	10	11	1	13	-4	-6	-12	6	-1
50%	3	5	5	2	3	1	13	-3	-3	-14	6	5
60%	3	4	6	1	11	4	6	2	-1	-20	2	0
70%	-8	-2	0	0	-1	12	13	-9	-8	-10	15	-2
80%	-5	4	-1	-3	1	11	28	-6	-6	-3	1	-2
90%	-4	4	3	0	0	15	16	-17	-10	3	-17	-18
Long Term												
Full Simulation Period	4	7	3	0	4	2	10	-1	-10	-8	2	-3
Water Year Types												
Wet (32%)	5	10	6	6	2	-3	1	3	2	0	6	-1
Above Normal (12%)	-5	8	-4	-16	1	-16	20	7	-9	-7	3	-4
Below Normal (24%)	-1	10	5	1	11	6	8	12	-17	-13	10	2
Dry (17%)	7	-2	0	-1	0	0	-8	-16	-19	-26	-7	-1
Critical (15%)	11	8	2	4	4	25	44	-19	-15	5	-13	-14

Table U.1-31. Central Valley Project Total Generation, Monthly Generation, Alternative 3

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	413	345	695	744	750	744	538	714	511	707	621	491
20%	354	274	454	568	670	578	420	628	490	677	606	412
30%	318	229	296	370	407	410	343	550	477	657	564	381
40%	269	201	208	272	280	300	318	514	460	634	541	351
50%	255	177	180	200	232	233	300	456	440	609	513	319
60%	235	162	151	182	206	198	269	432	422	580	485	284
70%	203	149	141	148	169	177	261	402	410	535	464	254
80%	192	142	133	135	139	167	248	379	374	488	431	232
90%	176	117	126	122	121	145	203	300	344	399	323	186
Long Term												
Full Simulation Period	272	214	286	333	351	346	337	496	435	583	500	330
Water Year Types												
Wet (32%)	296	259	485	582	599	585	472	650	456	641	539	438
Above Normal (12%)	288	208	237	387	387	375	351	582	424	614	531	400
Below Normal (24%)	280	200	224	207	252	238	288	449	434	598	543	288
Dry (17%)	259	196	165	153	167	202	269	400	484	611	523	269
Critical (15%)	207	169	137	164	157	148	198	280	345	377	298	180

Table U.1-32. Central Valley Project Total Generation, Monthly Generation, Alternative 3 minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	1	-6	3	-9	24	17	38	145	-72	-81	-1	12
20%	5	-6	101	22	7	27	54	115	-71	-61	32	-23
30%	6	-34	43	11	-12	47	3	55	-59	-52	12	-25
40%	-14	-12	-2	45	14	22	9	30	-47	-45	14	-25
50%	1	-11	12	4	22	3	12	-13	-43	-55	7	1
60%	4	-6	8	16	24	18	7	-13	-44	-38	4	-1
70%	-5	-5	2	-1	12	11	16	-27	-36	-44	27	-10
80%	3	11	9	3	3	13	27	-10	-46	-54	27	-6
90%	16	11	18	11	7	13	6	-31	-29	32	9	1
Long Term												
Full Simulation Period	7	-1	18	10	13	13	19	31	-50	-43	9	-5
Water Year Types												
Wet (32%)	14	4	27	17	16	16	45	111	-47	-42	-21	-16
Above Normal (12%)	7	-5	36	-1	16	23	45	52	-74	-86	-4	-14
Below Normal (24%)	1	0	8	12	12	12	11	-19	-67	-70	25	-4
Dry (17%)	-9	-18	4	-4	15	2	-18	-18	-48	-23	65	2
Critical (15%)	17	9	17	20	4	10	-3	-24	-10	7	-3	12

Table U.1-33. Central Valley Project Total Generation, Monthly Generation, Alternative 4

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	403	359	705	736	729	724	492	597	600	778	608	427
20%	334	318	385	546	663	553	370	516	561	742	564	381
30%	292	268	292	376	449	362	338	494	540	703	541	370
40%	266	226	221	238	295	278	301	477	508	675	525	351
50%	246	188	191	204	212	229	283	468	493	650	503	315
60%	228	172	153	172	187	181	265	445	474	611	479	295
70%	210	162	140	154	164	170	255	423	447	579	445	266
80%	191	140	124	130	135	155	228	381	431	542	407	234
90%	162	113	115	113	119	132	189	306	364	385	296	183
Long Term												
Full Simulation Period	263	229	282	327	345	335	318	462	491	625	484	321
Water Year Types												
Wet (32%)	280	265	480	574	586	569	425	540	511	686	548	417
Above Normal (12%)	273	225	232	375	376	358	308	535	509	706	521	362
Below Normal (24%)	274	218	222	201	256	228	279	462	510	667	526	297
Dry (17%)	261	222	160	162	150	200	289	414	536	618	459	271
Critical (15%)	206	180	133	152	169	141	190	290	348	371	281	177

Table U.1-34. Central Valley Project Total Generation, Monthly Generation, Alternative 4 minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-10	7	13	-17	3	-2	-8	28	17	-10	-13	-52
20%	-15	38	31	0	0	2	4	2	1	4	-11	-55
30%	-20	5	39	17	30	-1	-2	-2	4	-6	-12	-36
40%	-17	12	11	11	29	-1	-8	-7	2	-4	-2	-25
50%	-8	-1	22	8	2	-1	-5	-1	9	-14	-4	-4
60%	-3	4	10	6	6	1	3	-1	9	-7	-3	10
70%	1	8	1	6	7	4	10	-6	1	0	8	2
80%	1	9	-1	-1	-2	0	8	-8	11	-1	3	-4
90%	2	7	6	2	4	-1	-8	-26	-9	18	-18	-2
Long Term												
Full Simulation Period	-2	14	14	5	7	2	-1	-3	6	-1	-7	-14
Water Year Types												
Wet (32%)	-2	10	22	9	3	0	-2	2	8	3	-13	-36
Above Normal (12%)	-9	12	31	-13	6	7	3	4	11	7	-14	-51
Below Normal (24%)	-5	19	6	5	16	2	2	-5	9	-1	7	5
Dry (17%)	-7	9	-1	5	-3	-1	2	-3	4	-16	1	5
Critical (15%)	17	20	12	8	15	3	-11	-15	-6	1	-21	10

Table U.1-35. Annual Central Valley Project Total Generation

Statistic	Generation (GWh)														
	NAA	Alt1	Alt1 minus NAA	Alt2v1 wo TUCP	Alt2v1 wo TUCP minus NAA	Alt2v1 w TUCP	Alt2v1 w TUCP minus NAA	Alt2v2 no TUCP	Alt2v2 no TUCP minus NAA	Alt2v3 no TUCP	Alt2v3 no TUCP minus NAA	Alt3	Alt3 minus NAA	Alt4	Alt4 minus NAA
PROBABILITY OF EXCEEDANCE															
10%	6,211	6,247	35	6,290	78	6,292	81	6,254	43	6,297	86	6,262	51	6,158	-54
20%	5,498	5,714	216	5,500	2	5,500	2	5,502	4	5,503	5	5,631	133	5,617	119
30%	5,194	5,224	30	5,199	5	5,224	30	5,203	9	5,212	18	5,268	74	5,134	-60
40%	4,852	4,958	105	4,878	26	4,878	26	4,879	27	4,879	27	4,791	-62	4,858	6
50%	4,349	4,469	120	4,421	72	4,436	87	4,406	57	4,381	33	4,300	-49	4,412	63
60%	4,005	4,061	56	4,028	23	4,034	29	4,006	1	3,951	-54	3,917	-88	4,018	13
70%	3,759	3,697	-63	3,669	-91	3,709	-50	3,670	-90	3,687	-72	3,653	-106	3,704	-55
80%	3,316	3,416	100	3,314	-3	3,398	82	3,282	-35	3,305	-12	3,292	-24	3,444	128
90%	2,663	2,769	106	2,712	49	2,628	-35	2,735	73	2,729	66	2,657	-6	2,601	-62
LONG TERM															
Full Simulation Period	4,462	4,537	74	4,476	14	4,489	27	4,476	13	4,474	11	4,482	20	4,481	19
WATER YEAR TYPES															
Wet (32%)	5,875	5,920	45	5,906	31	5,919	44	5,901	26	5,912	36	6,001	125	5,880	5
Above Normal (12%)	4,786	4,813	26	4,780	-6	4,817	30	4,771	-16	4,765	-22	4,783	-3	4,779	-7
Below Normal (24%)	4,081	4,197	116	4,105	24	4,139	58	4,111	30	4,114	33	4,000	-81	4,141	60
Dry (17%)	3,748	3,804	56	3,730	-18	3,743	-5	3,728	-20	3,676	-72	3,697	-51	3,742	-6
Critical (15%)	2,608	2,736	129	2,622	15	2,584	-23	2,630	22	2,651	44	2,662	54	2,639	32

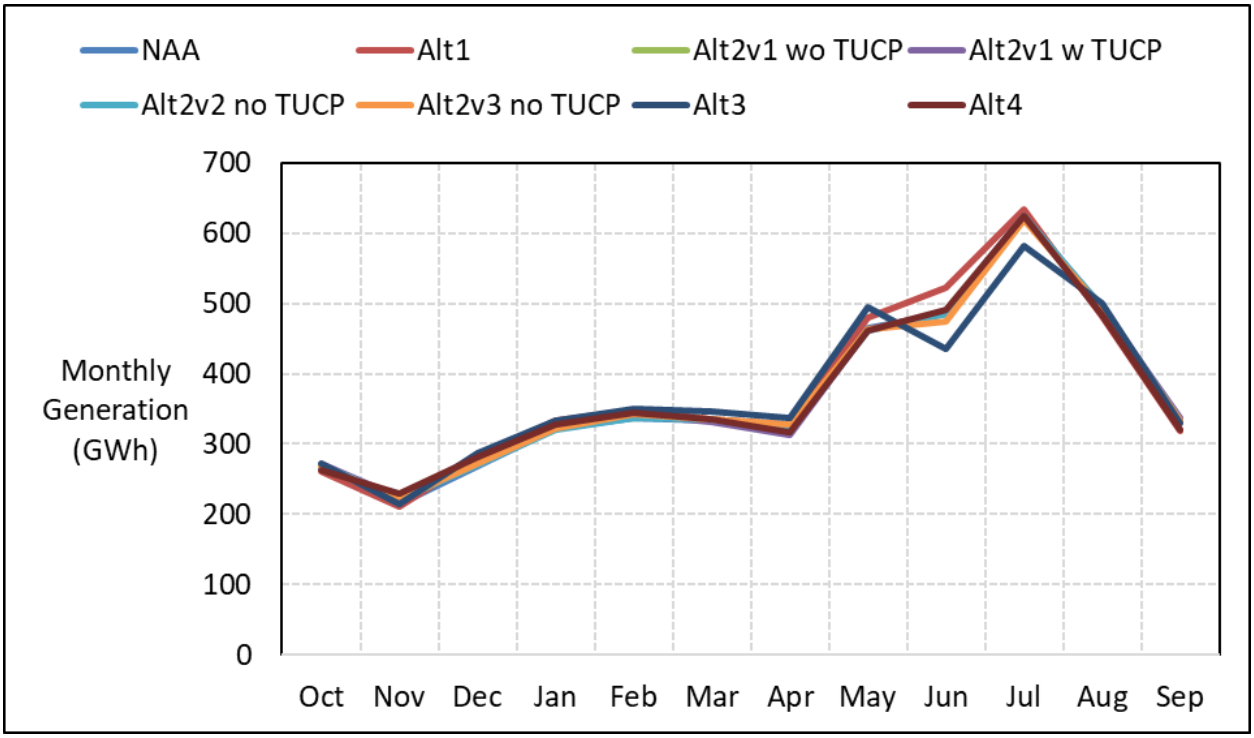

Figure U.1-19. Central Valley Project Total Generation, Long-Term Average Generation

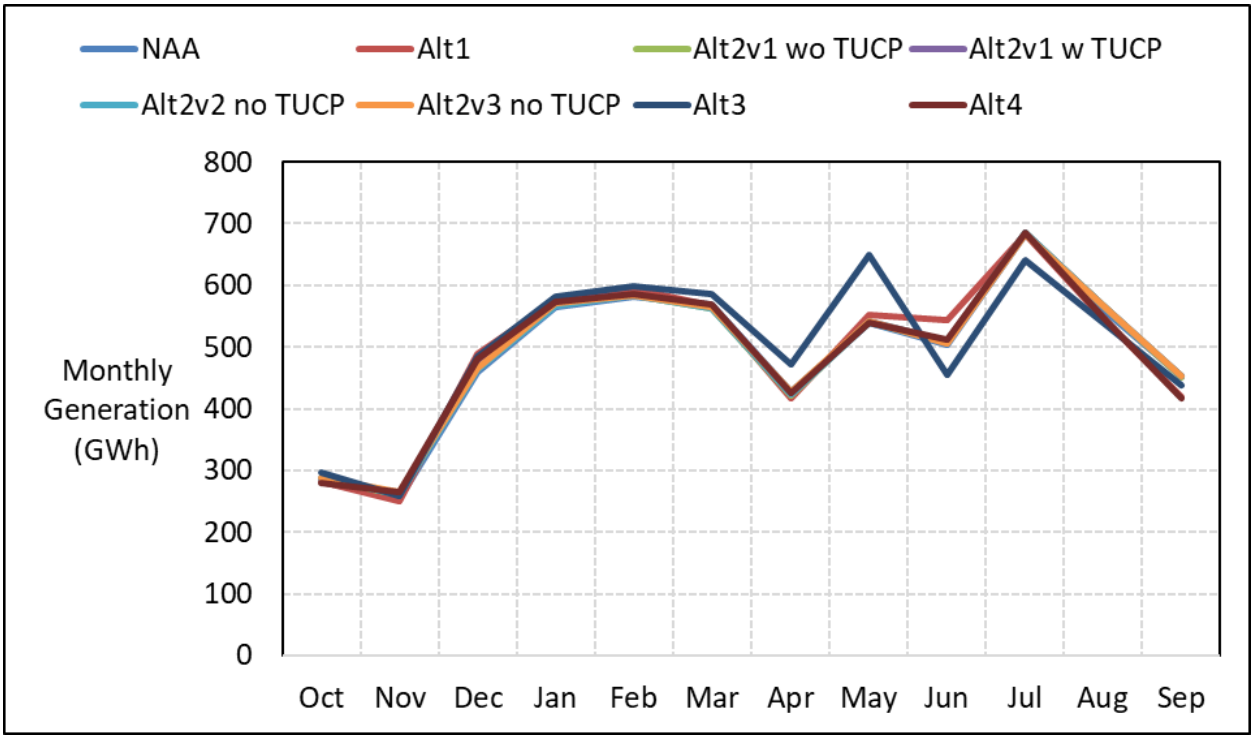

Figure U.1-20. Central Valley Project Total Generation, Wet Year Average Generation

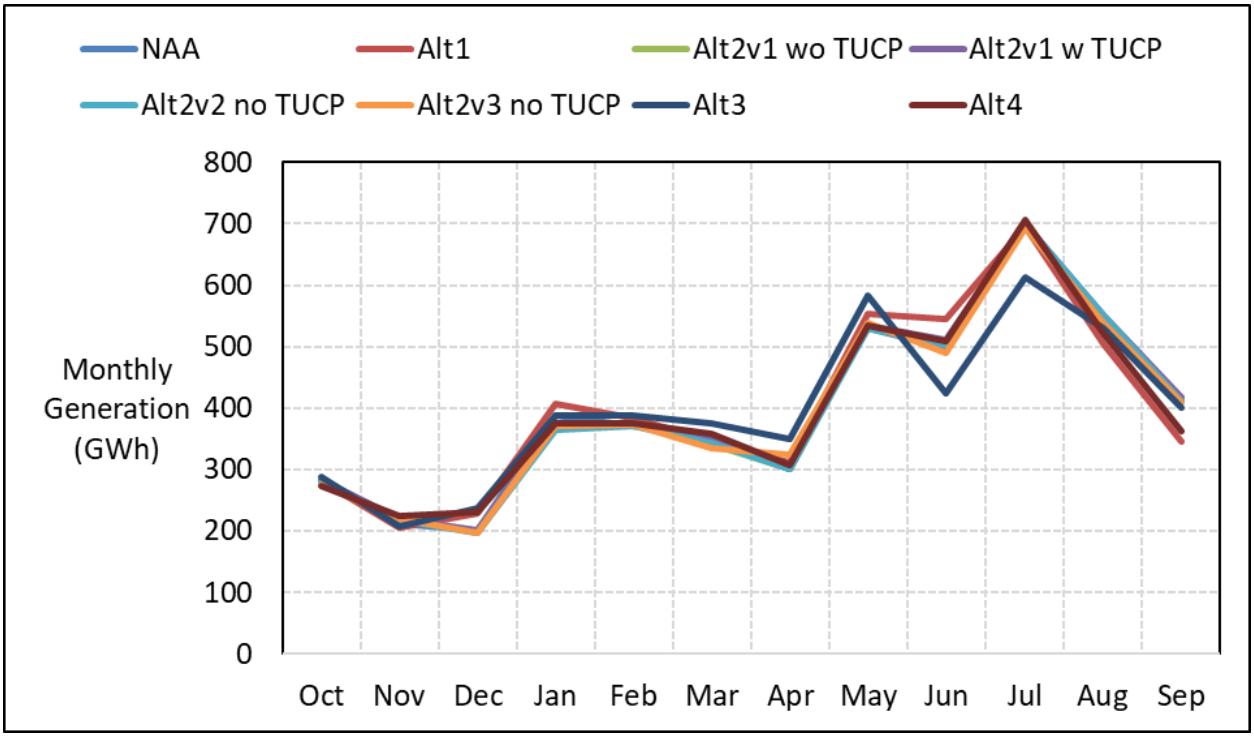

Figure U.1-21. Central Valley Project Total Generation, Above Normal Year Average Generation

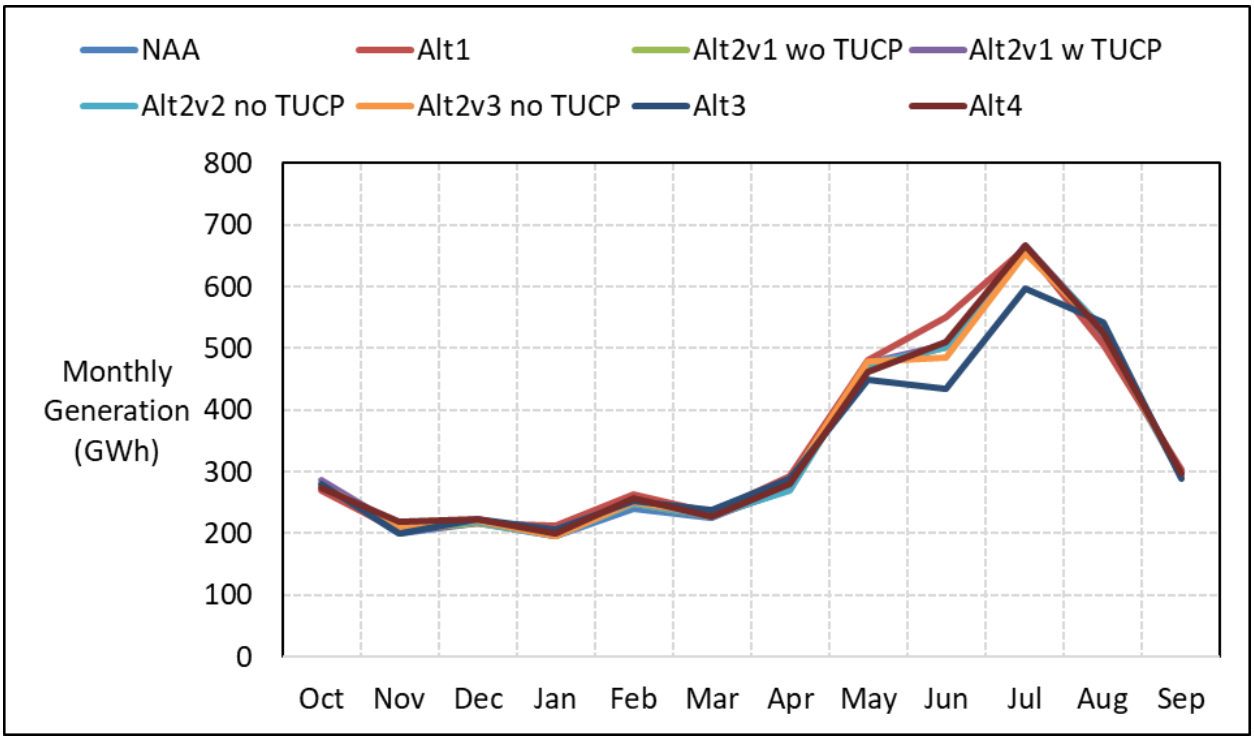

Figure U.1-22. Central Valley Project Total Generation, Below Normal Year Average Generation

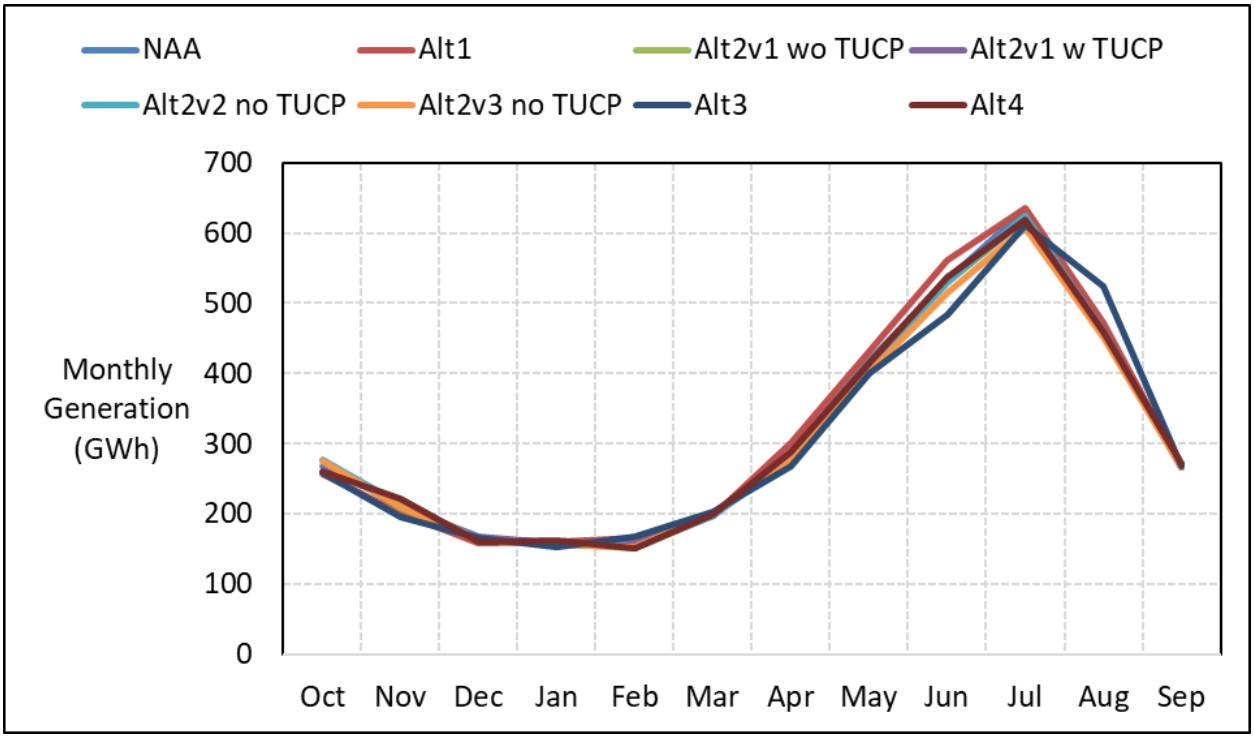

Figure U.1-23. Central Valley Project Total Generation, Dry Year Average Generation

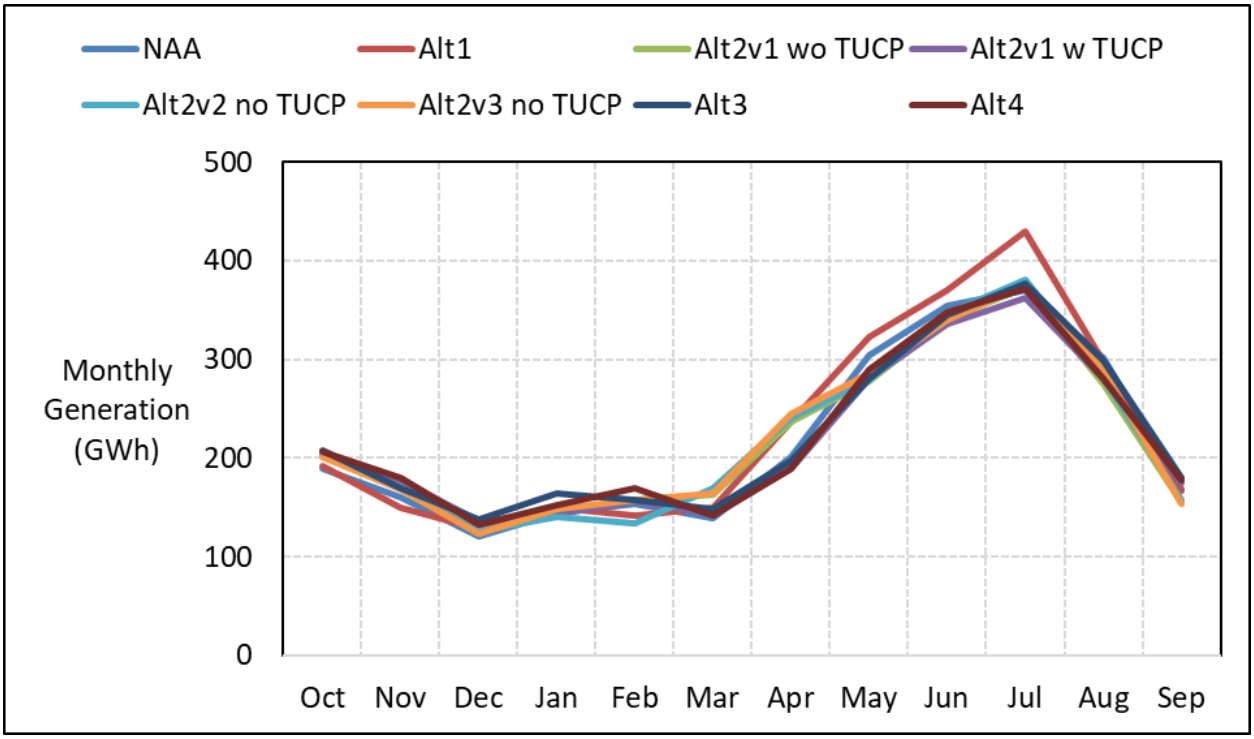

Figure U.1-24. Central Valley Project Total Generation, Critical Year Average Generation

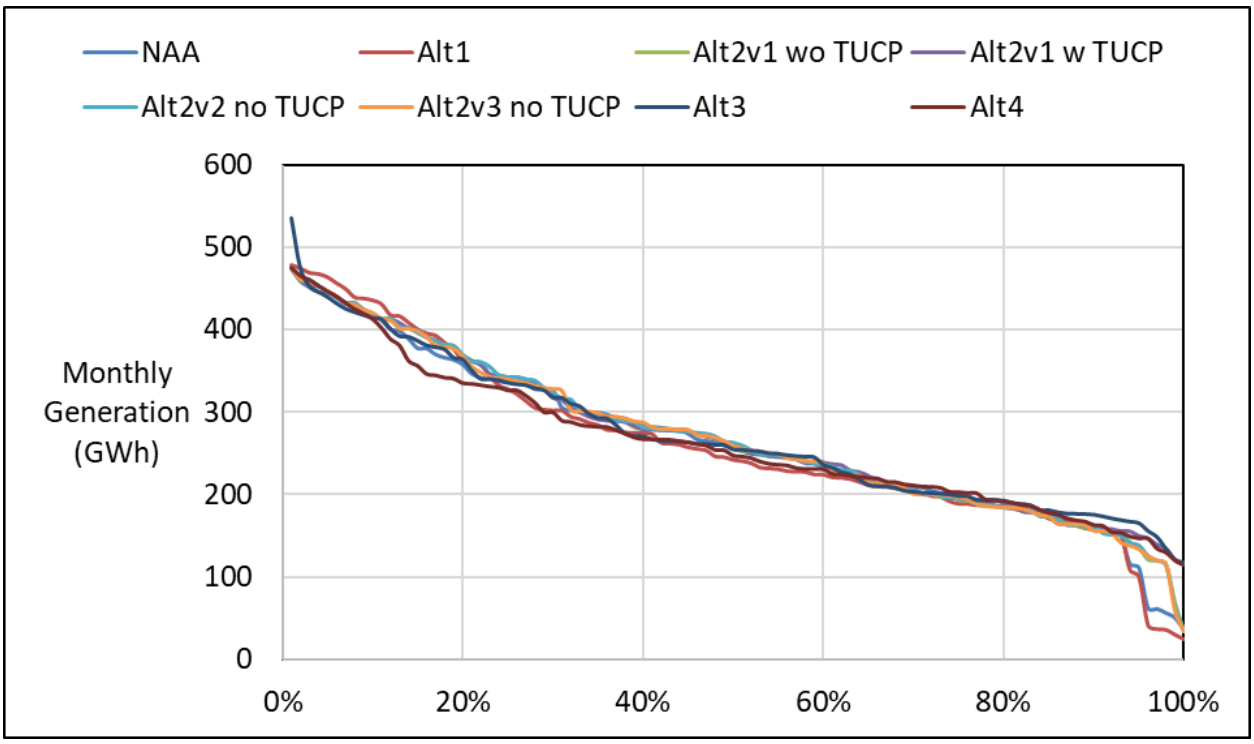

Figure U.1-25. Central Valley Project Total Generation, October

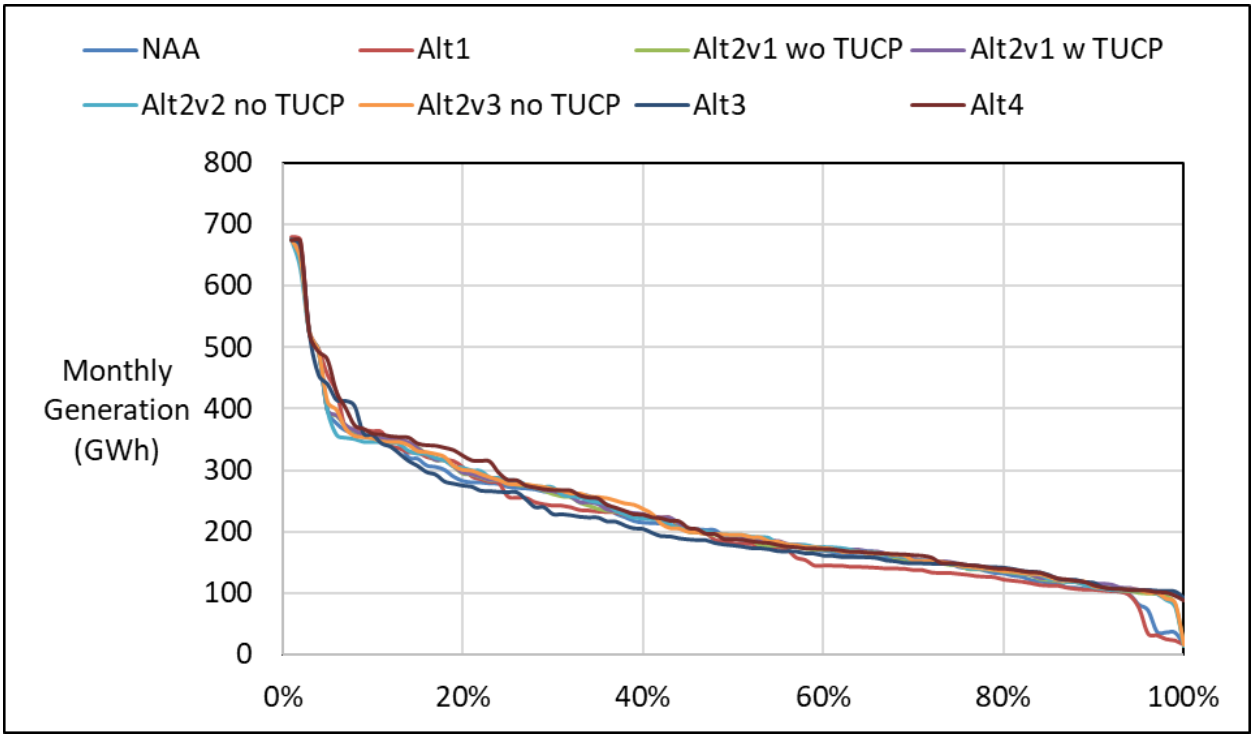

Figure U.1-26. Central Valley Project Total Generation, November

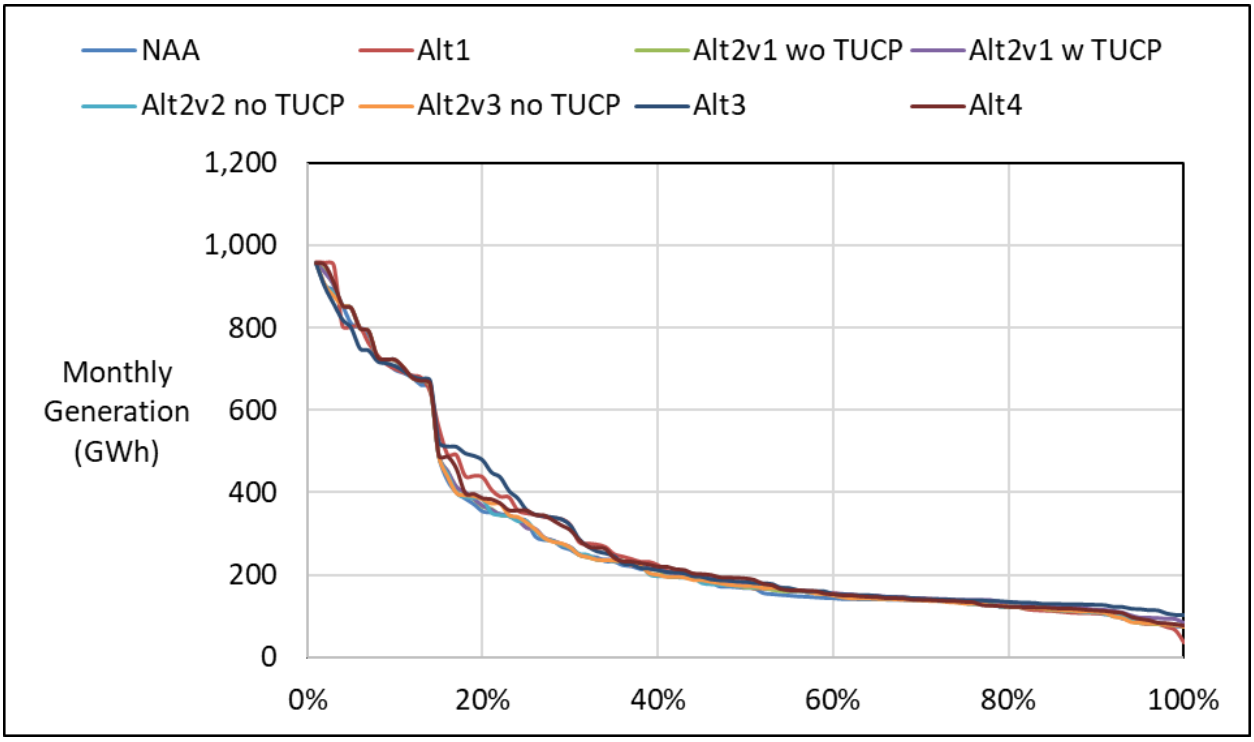

Figure U.1-27. Central Valley Project Total Generation, December

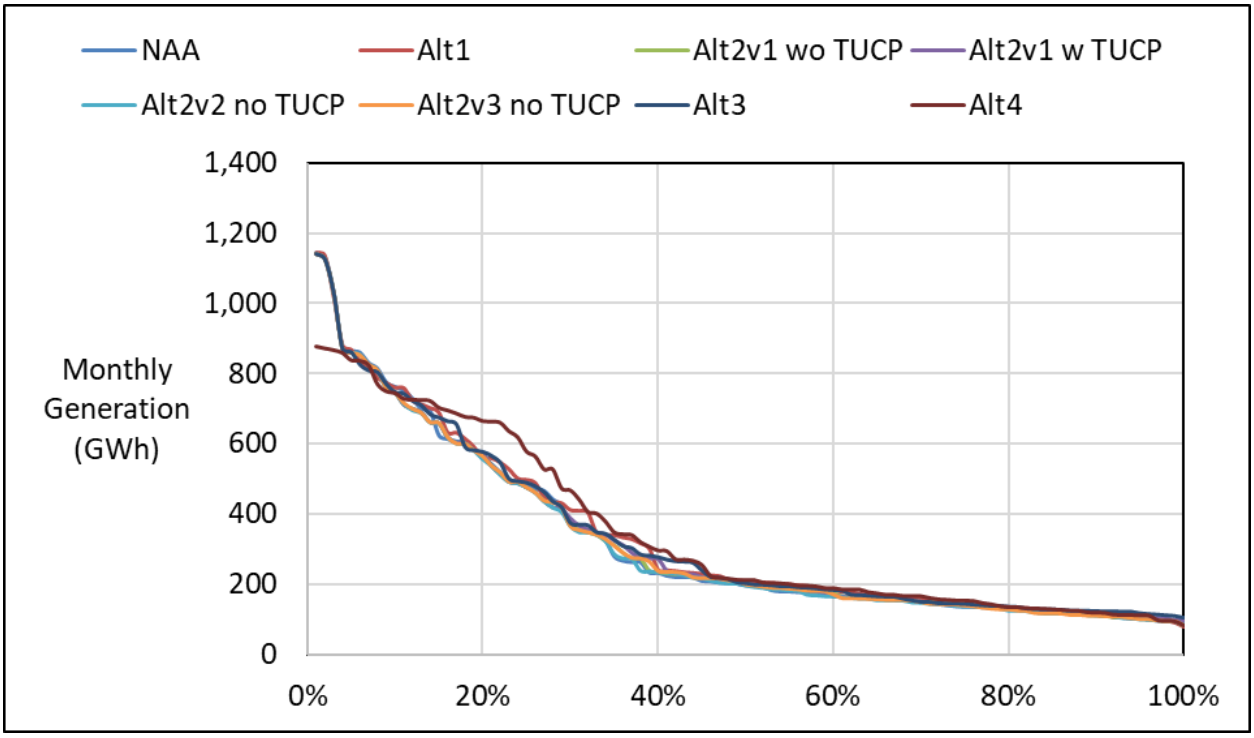

Figure U.1-28. Central Valley Project Total Generation, January

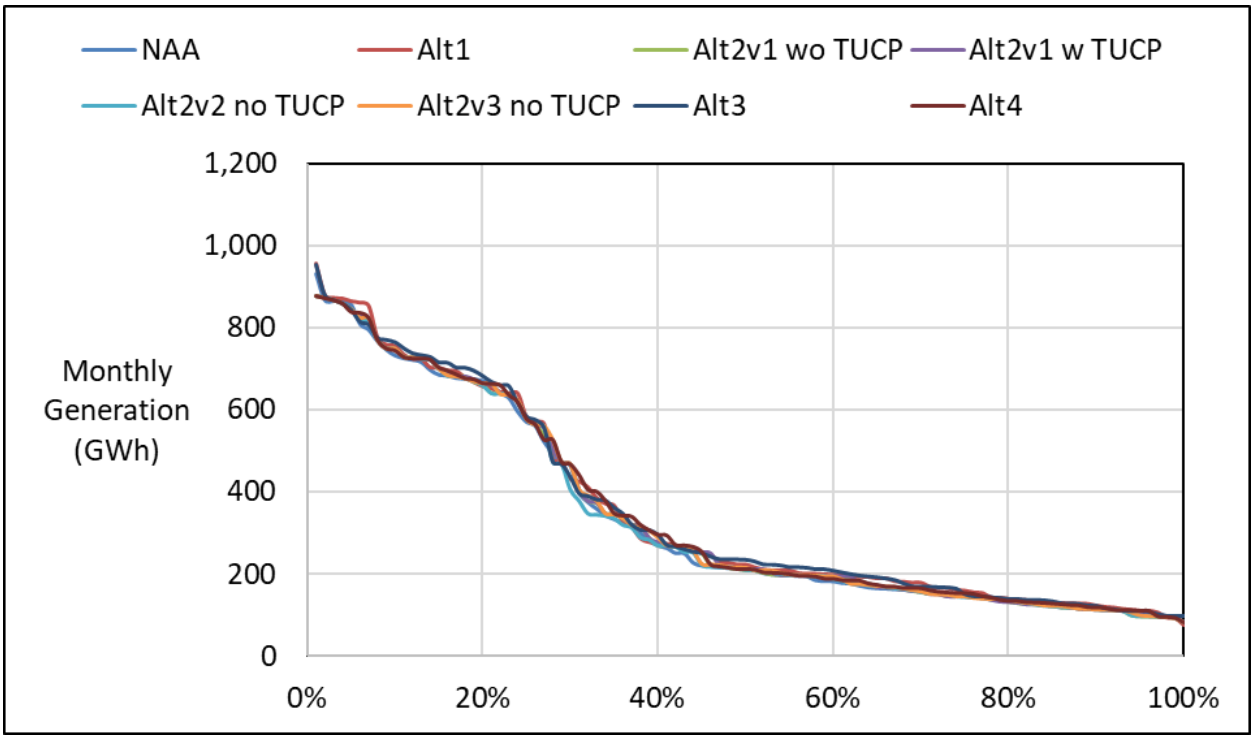

Figure U.1-29. Central Valley Project Total Generation, February

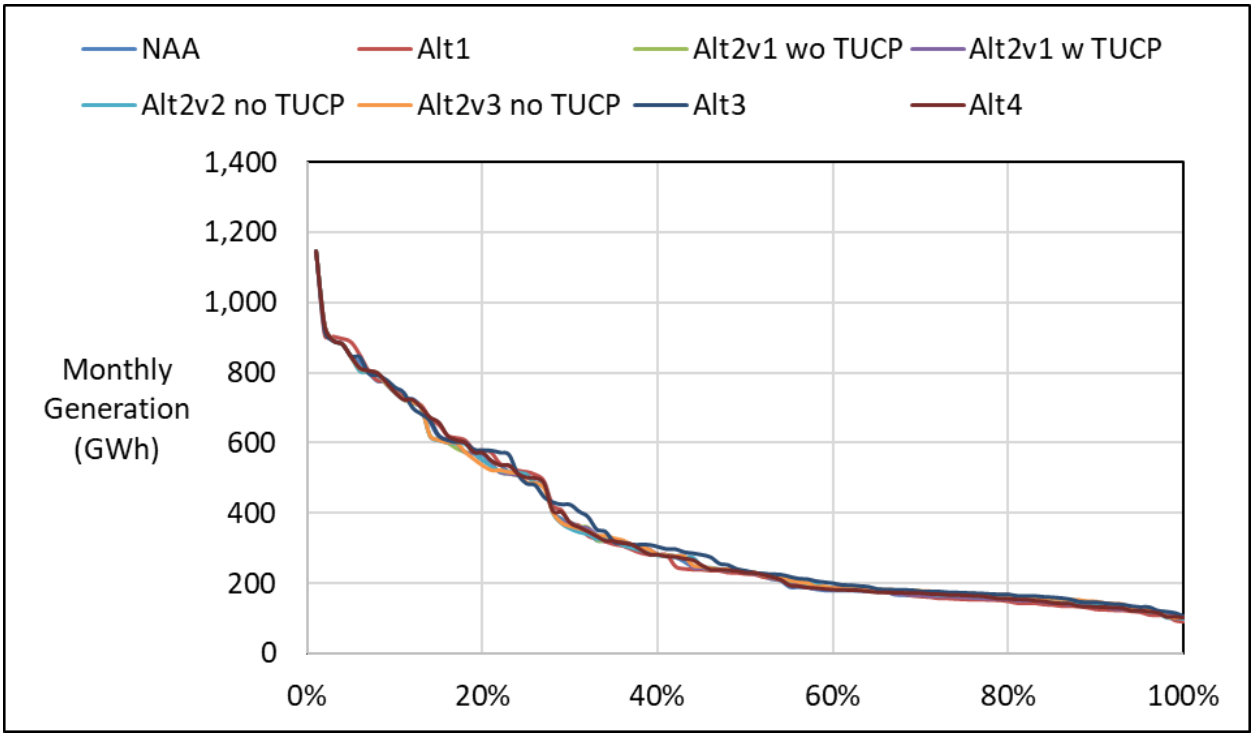

Figure U.1-30. Central Valley Project Total Generation, March

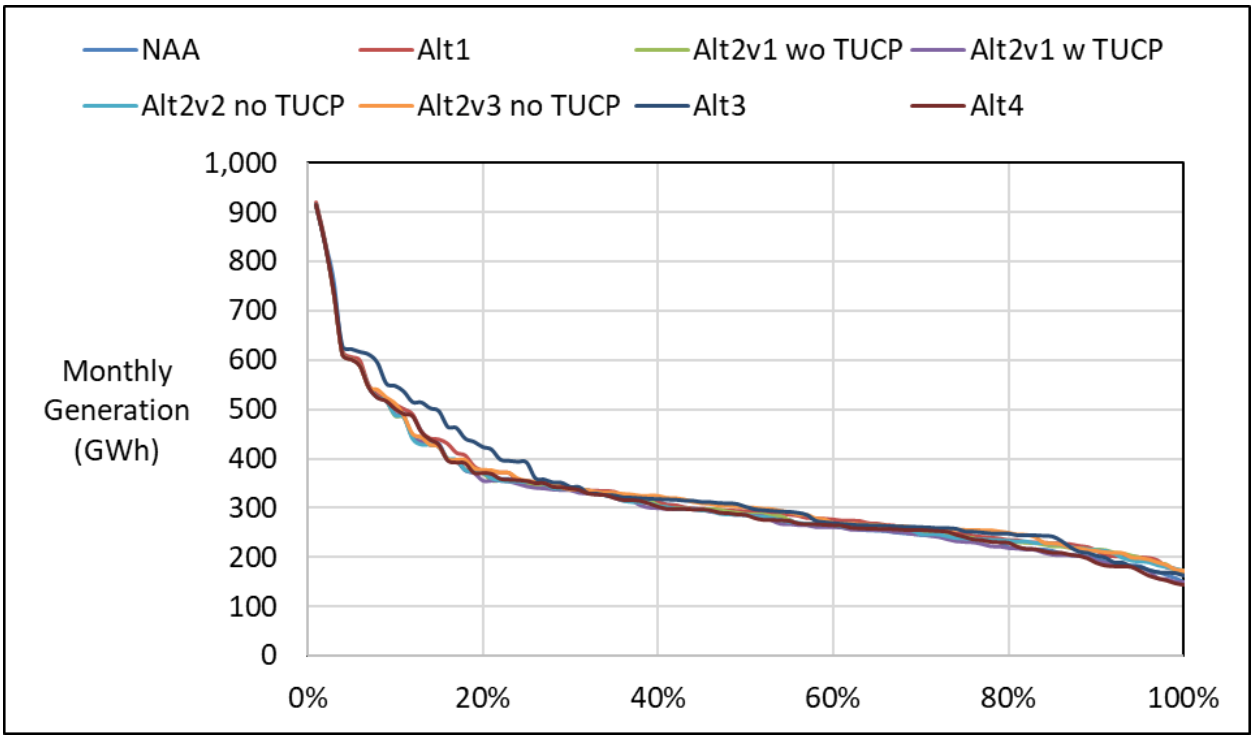

Figure U.1-31. Central Valley Project Total Generation, April

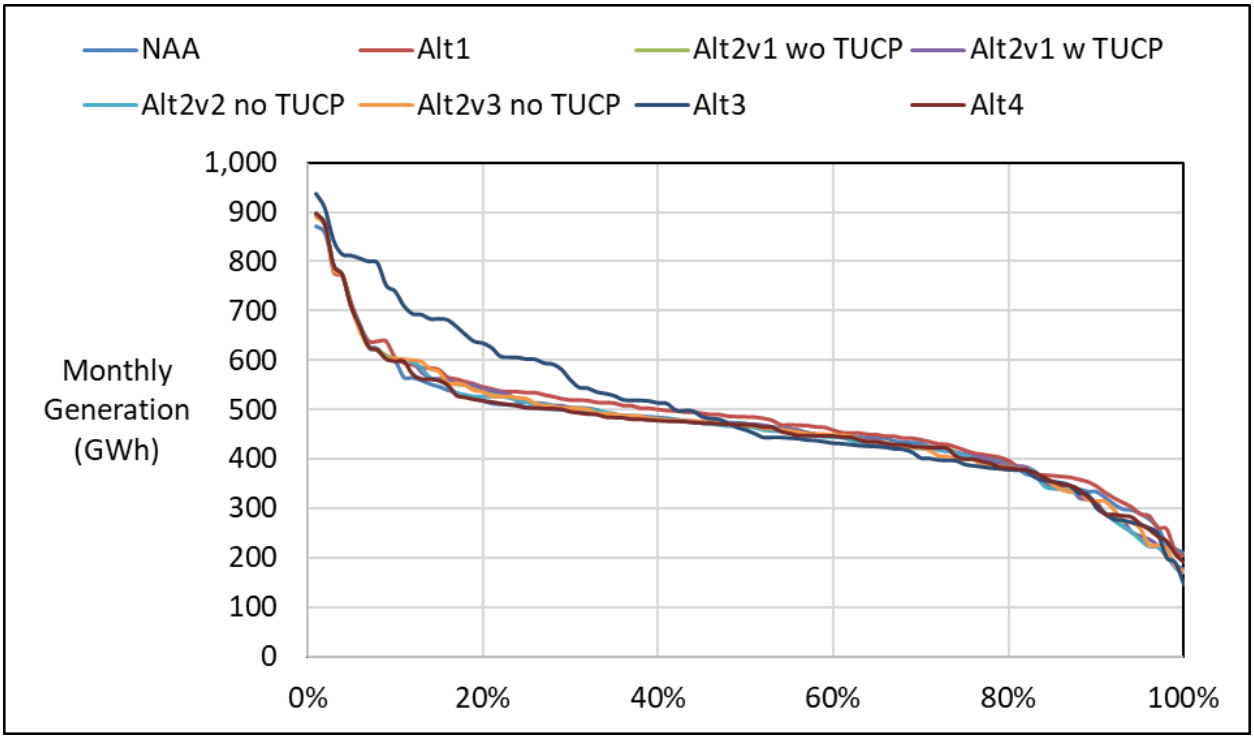

Figure U.1-32. Central Valley Project Total Generation, May

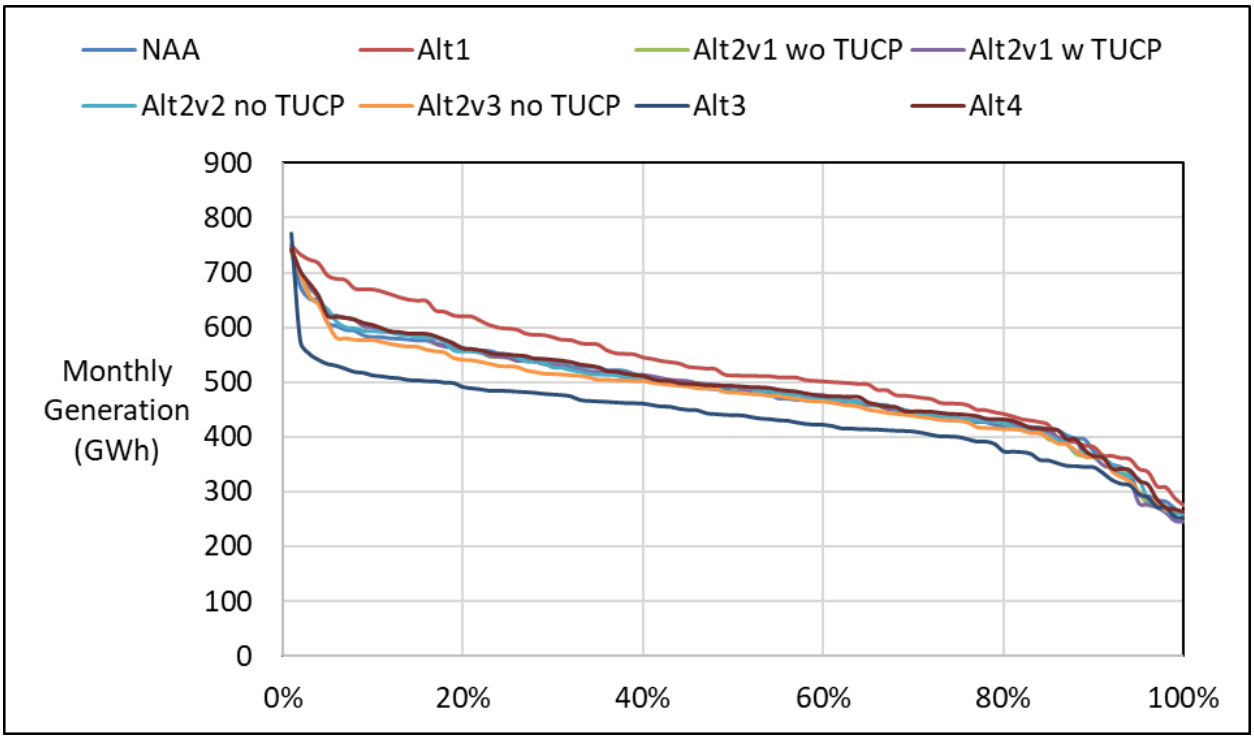

Figure U.1-33. Central Valley Project Total Generation, June

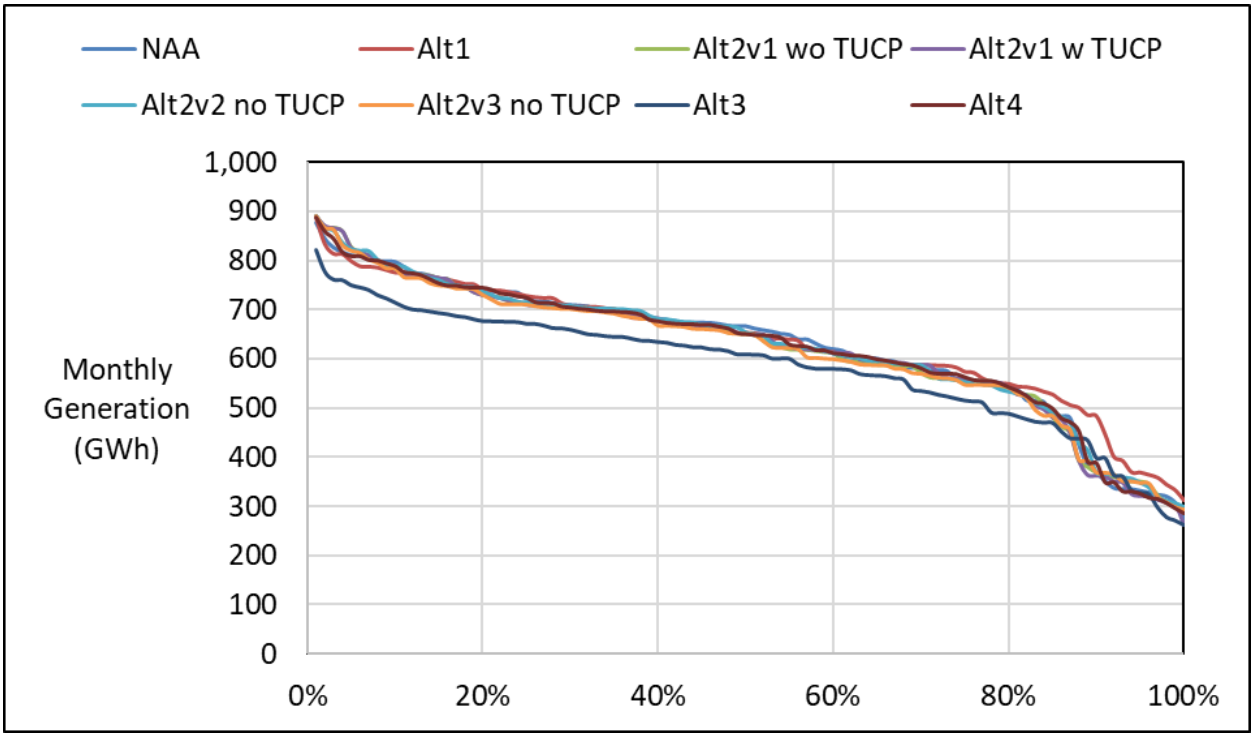

Figure U.1-34. Central Valley Project Total Generation, July

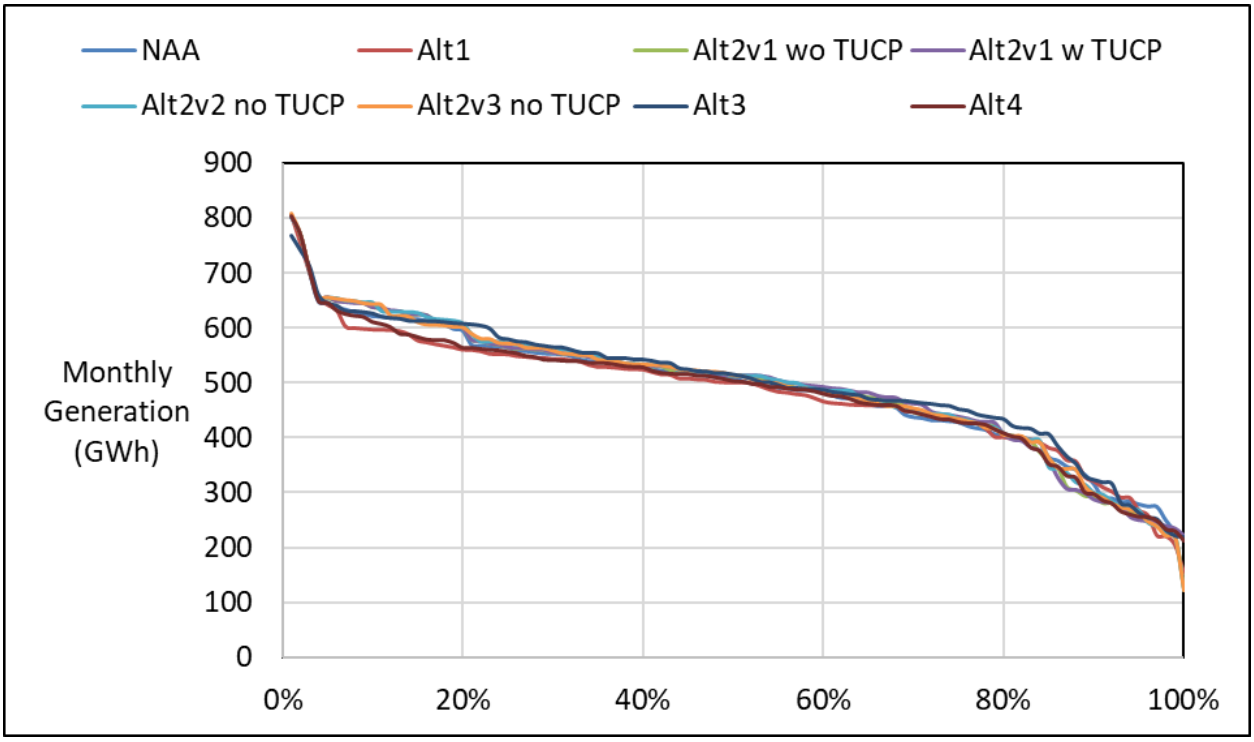

Figure U.1-35. Central Valley Project Total Generation, August

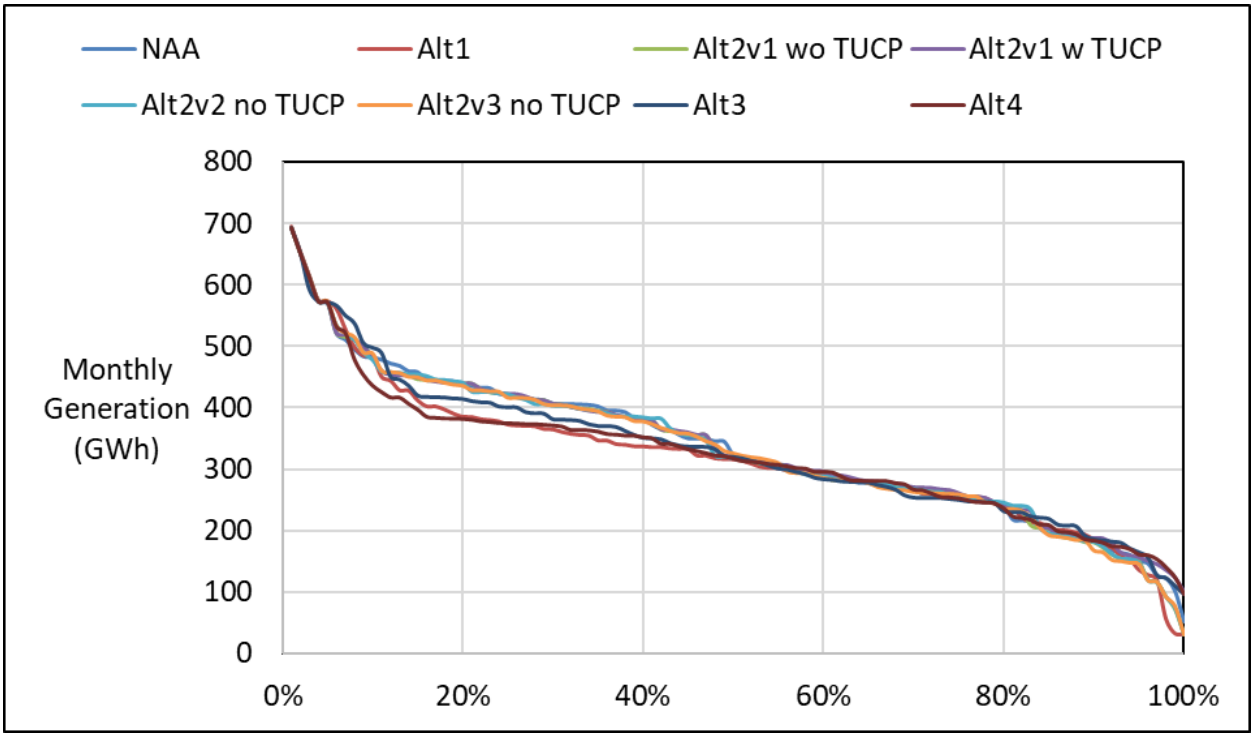

Figure U.1-36. Central Valley Project Total Generation, September

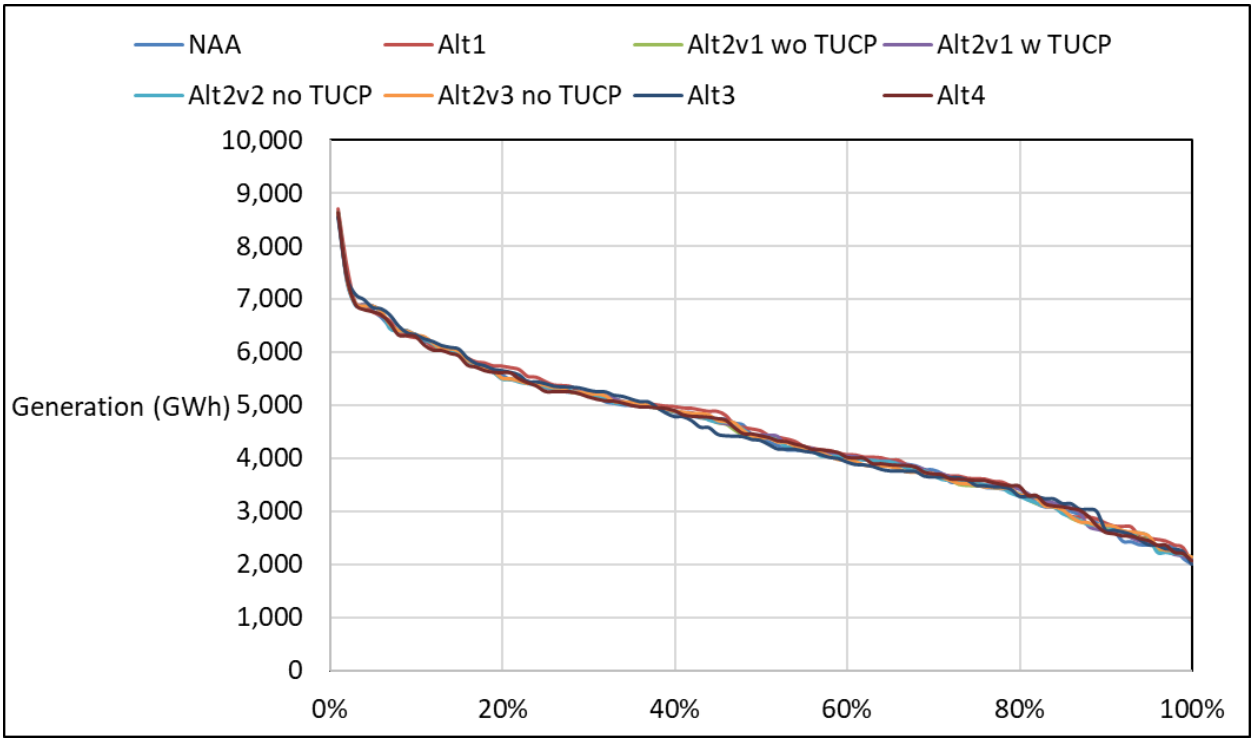

Figure U.1-37. October–September Central Valley Project Total Generation

Table U.1-36. Central Valley Project Total Energy Use, Monthly Energy Use, No Action Alternative

Statistic	Monthly Energy Use (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	169	214	190	175	177	178	159	218	230	194	210	179
20%	154	196	183	162	168	164	146	172	169	184	201	155
30%	127	183	169	152	158	146	129	135	156	175	187	147
40%	109	159	159	138	151	132	112	122	141	167	173	141
50%	97	150	152	124	145	125	88	99	122	159	161	131
60%	86	129	143	117	136	114	75	87	116	149	145	121
70%	67	92	90	114	123	107	64	77	101	142	121	113
80%	49	60	55	102	111	101	57	66	91	125	99	104
90%	41	42	38	63	92	83	35	44	51	52	66	66
Long Term												
Full Simulation Period	101	135	130	127	137	129	97	116	131	149	150	128
Water Year Types												
Wet (32%)	111	145	155	164	158	159	148	181	191	186	193	158
Above Normal (12%)	98	164	146	138	153	136	116	132	148	160	171	132
Below Normal (24%)	110	142	131	117	135	122	84	100	120	160	168	140
Dry (17%)	99	140	116	110	123	118	62	68	96	138	108	110
Critical (15%)	70	77	75	78	98	82	36	45	48	54	62	60

Table U.1-37. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 1

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	224	187	196	221	216	225	169	235	230	210	211	221
20%	180	172	187	187	193	199	156	186	182	198	199	197
30%	168	165	182	174	183	179	140	148	174	189	188	183
40%	160	153	175	166	172	167	116	134	167	185	181	178
50%	132	128	166	159	167	158	98	122	152	175	166	164
60%	108	107	151	151	156	141	85	105	127	167	145	145
70%	85	83	116	145	147	124	76	88	118	155	128	107
80%	64	62	93	118	135	103	67	74	97	132	114	95
90%	49	40	64	79	116	61	44	48	56	78	74	70
Long Term												
Full Simulation Period	130	123	146	155	162	151	108	128	146	164	156	150
Water Year Types												
Wet (32%)	137	134	173	190	187	182	154	191	199	193	201	191
Above Normal (12%)	168	132	168	181	176	177	133	154	176	182	193	194
Below Normal (24%)	135	138	138	155	159	155	98	113	141	178	157	159
Dry (17%)	131	116	129	122	149	135	75	81	109	155	121	100
Critical (15%)	77	77	101	98	119	73	43	51	57	75	70	70

Table U.1-38. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 1 minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	56	-27	6	46	39	47	9	17	0	16	1	42
20%	26	-24	4	25	25	35	10	14	12	14	-1	42
30%	42	-18	13	23	25	33	11	12	18	14	2	36
40%	51	-7	16	29	21	35	4	13	26	18	8	37
50%	35	-22	14	35	22	32	11	23	29	16	5	33
60%	22	-22	9	33	21	28	10	17	11	18	1	24
70%	18	-9	27	31	24	17	12	11	17	13	7	-6
80%	15	2	37	16	24	2	9	8	6	7	15	-8
90%	8	-2	26	16	24	-23	9	3	5	26	7	4
Long Term												
Full Simulation Period	29	-12	16	28	25	22	10	12	15	16	6	22
Water Year Types												
Wet (32%)	26	-11	18	26	29	22	6	11	9	8	8	33
Above Normal (12%)	70	-32	23	44	23	40	17	22	28	22	22	62
Below Normal (24%)	25	-4	7	37	23	34	14	13	20	18	-11	20
Dry (17%)	32	-24	14	13	26	17	13	13	13	17	13	-10
Critical (15%)	7	0	26	20	20	-9	7	6	9	21	8	9

Table U.1-39. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v1 Without TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	170	226	194	179	181	190	180	226	233	200	210	181
20%	146	195	184	164	170	175	160	177	166	187	196	158
30%	123	183	167	151	157	155	131	138	154	180	186	151
40%	110	162	160	137	151	133	110	121	135	168	180	144
50%	98	155	153	121	142	124	85	104	121	158	167	139
60%	82	133	141	113	130	116	74	86	110	148	152	124
70%	65	92	94	109	117	107	66	72	94	140	115	113
80%	57	57	59	98	103	100	57	60	76	108	86	103
90%	45	41	44	67	86	80	43	43	50	67	67	72
Long Term												
Full Simulation Period	101	138	133	127	135	133	103	118	127	149	150	131
Water Year Types												
Wet (32%)	113	149	158	166	166	173	159	187	189	188	192	160
Above Normal (12%)	91	166	155	137	154	148	122	138	145	167	176	137
Below Normal (24%)	109	149	135	116	128	124	86	98	115	161	169	143
Dry (17%)	102	136	117	105	112	115	60	63	84	124	102	107
Critical (15%)	69	80	79	81	93	67	41	46	49	63	63	69

Table U.1-40. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v1 Without TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	2	11	4	4	4	11	21	8	4	6	0	2
20%	-8	0	1	2	1	11	13	4	-3	3	-5	4
30%	-4	-1	-2	0	-2	9	2	3	-2	5	0	4
40%	1	3	1	-1	0	1	-3	-1	-6	2	7	2
50%	2	4	1	-3	-3	-1	-2	4	-2	-1	7	8
60%	-3	4	-1	-4	-6	2	-1	-1	-6	-2	7	3
70%	-2	0	4	-5	-6	0	2	-5	-7	-2	-5	0
80%	8	-3	3	-4	-8	-1	-1	-6	-15	-17	-13	-1
90%	4	-1	5	4	-6	-3	8	-1	-1	15	1	6
Long Term												
Full Simulation Period	0	3	4	0	-2	4	5	2	-4	1	0	3
Water Year Types												
Wet (32%)	2	4	3	3	9	14	11	6	-2	2	-1	2
Above Normal (12%)	-7	2	9	-1	1	11	7	6	-3	6	5	5
Below Normal (24%)	-1	8	4	-2	-7	2	2	-1	-5	1	2	3
Dry (17%)	3	-4	1	-5	-12	-2	-2	-5	-12	-15	-6	-3
Critical (15%)	-1	2	4	3	-6	-15	5	1	1	9	1	9

Table U.1-41. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v1 With TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	171	227	194	179	181	190	174	226	233	200	210	181
20%	149	195	184	164	170	175	160	178	166	188	197	159
30%	124	183	167	153	157	159	131	139	156	181	187	152
40%	111	162	159	135	151	134	113	126	135	172	180	144
50%	101	154	153	121	144	126	89	106	121	158	168	140
60%	85	133	141	113	130	116	75	87	112	149	156	122
70%	64	87	94	109	116	109	66	72	97	141	121	112
80%	59	59	65	96	103	100	57	61	76	110	91	102
90%	44	42	39	65	83	81	38	42	48	49	63	68
Long Term												
Full Simulation Period	102	139	134	127	135	134	102	119	127	148	151	130
Water Year Types												
Wet (32%)	114	149	158	166	167	175	158	187	189	188	193	161
Above Normal (12%)	98	164	156	137	155	150	123	141	147	168	182	137
Below Normal (24%)	108	149	135	116	128	121	85	101	117	163	171	144
Dry (17%)	102	136	120	105	112	115	61	64	85	124	104	107
Critical (15%)	72	85	78	74	87	75	37	46	46	52	59	60

Table U.1-42. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v1 With TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	2	13	4	4	4	11	15	9	4	6	0	2
20%	-5	-1	1	2	1	11	13	5	-3	4	-4	4
30%	-3	-1	-2	2	-2	13	2	4	0	6	0	5
40%	2	3	0	-2	0	2	0	5	-6	5	7	3
50%	5	4	0	-3	-1	0	1	6	-1	-1	7	9
60%	0	4	-2	-4	-6	2	0	0	-3	0	11	2
70%	-3	-4	4	-5	-7	1	2	-5	-4	-2	1	-1
80%	10	-1	10	-6	-8	-1	0	-5	-15	-15	-8	-1
90%	3	0	1	2	-9	-2	3	-3	-2	-3	-3	2
Long Term												
Full Simulation Period	1	3	4	-1	-2	5	4	3	-4	0	1	2
Water Year Types												
Wet (32%)	3	4	2	3	9	16	10	6	-2	2	-1	3
Above Normal (12%)	0	0	10	0	2	13	7	9	-1	8	11	5
Below Normal (24%)	-2	8	4	-1	-7	-1	1	1	-4	3	3	4
Dry (17%)	3	-4	4	-5	-12	-2	-2	-4	-11	-14	-5	-3
Critical (15%)	2	8	3	-4	-11	-7	1	1	-2	-2	-3	-1

Table U.1-43. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v2 Without TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	171	213	197	178	181	186	159	226	232	199	212	181
20%	146	195	185	165	169	147	125	172	166	182	198	158
30%	120	184	169	155	157	123	101	139	153	176	187	148
40%	109	160	160	142	151	104	76	122	136	164	182	143
50%	99	152	151	122	144	94	64	95	119	156	167	136
60%	86	137	140	113	131	86	55	78	106	147	158	121
70%	68	89	97	106	116	57	48	67	95	136	114	113
80%	59	59	72	97	105	51	43	56	80	103	92	102
90%	44	42	48	68	84	45	39	42	51	67	66	73
Long Term												
Full Simulation Period	102	135	136	128	136	106	83	115	127	148	152	130
Water Year Types												
Wet (32%)	114	147	160	167	167	161	124	188	189	186	192	160
Above Normal (12%)	94	167	152	136	156	92	89	129	145	162	178	134
Below Normal (24%)	107	141	140	117	129	74	71	92	113	157	175	142
Dry (17%)	103	135	115	107	113	86	53	59	86	126	105	107
Critical (15%)	70	76	85	82	91	71	41	47	50	65	64	68

Table U.1-44. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v2 Without TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	2	-1	7	3	4	8	-1	9	2	5	2	1
20%	-8	-1	2	2	1	-17	-22	0	-3	-2	-2	3
30%	-7	1	0	4	-1	-23	-29	4	-3	1	0	1
40%	0	1	1	4	0	-28	-36	0	-5	-2	9	1
50%	2	2	-1	-1	-1	-32	-23	-5	-3	-3	6	5
60%	0	9	-3	-4	-5	-28	-20	-9	-10	-3	14	1
70%	2	-2	7	-8	-7	-50	-17	-11	-6	-6	-7	0
80%	10	-1	17	-5	-6	-49	-15	-10	-11	-22	-7	-2
90%	3	0	10	5	-8	-39	4	-3	0	15	0	7
Long Term												
Full Simulation Period	1	0	6	1	-1	-23	-15	-1	-4	-1	2	2
Water Year Types												
Wet (32%)	3	2	5	4	9	2	-25	7	-2	1	-1	2
Above Normal (12%)	-4	3	6	-1	3	-45	-27	-3	-3	2	8	2
Below Normal (24%)	-3	-1	9	-1	-6	-48	-13	-8	-7	-3	7	2
Dry (17%)	4	-5	0	-2	-10	-31	-10	-9	-10	-13	-4	-2
Critical (15%)	0	-2	10	4	-7	-11	5	2	3	10	2	8

Table U.1-45. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v3 Without TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	171	215	196	177	181	186	159	226	233	199	212	179
20%	147	195	186	165	170	147	126	172	166	182	196	158
30%	123	186	170	154	158	123	101	139	155	177	188	150
40%	110	160	159	142	152	104	76	125	136	165	181	144
50%	100	152	151	127	144	92	64	101	119	154	167	139
60%	85	138	129	113	132	84	55	79	107	147	159	123
70%	68	93	98	107	118	57	48	69	94	139	112	112
80%	58	60	73	97	106	51	42	55	81	108	95	103
90%	45	41	57	67	85	45	39	42	49	65	64	74
Long Term												
Full Simulation Period	102	136	135	128	136	105	83	116	127	148	152	130
Water Year Types												
Wet (32%)	113	148	159	167	167	160	124	188	189	186	192	160
Above Normal (12%)	95	167	154	137	154	92	89	131	146	164	173	138
Below Normal (24%)	109	143	140	116	129	75	71	94	114	158	176	142
Dry (17%)	104	134	118	108	113	86	53	59	86	125	105	106
Critical (15%)	72	77	83	82	94	66	41	47	49	64	63	68

Table U.1-46 Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	2	1	6	2	4	8	0	9	3	5	2	0
20%	-7	0	3	3	1	-17	-20	-1	-3	-1	-5	4
30%	-3	3	0	3	-1	-23	-29	4	-1	2	2	3
40%	0	0	1	4	1	-28	-36	3	-5	-2	8	2
50%	3	1	-2	3	-1	-33	-23	2	-4	-5	6	7
60%	-1	9	-14	-4	-4	-30	-20	-9	-9	-3	14	2
70%	1	2	8	-7	-5	-50	-16	-8	-7	-4	-8	-1
80%	9	0	18	-5	-5	-49	-15	-11	-10	-17	-4	-1
90%	4	-1	18	4	-7	-38	3	-2	-1	13	-2	8
Long Term												
Full Simulation Period	1	0	6	1	-1	-24	-15	0	-4	-1	2	3
Water Year Types												
Wet (32%)	2	2	3	3	9	1	-25	7	-2	1	-1	2
Above Normal (12%)	-4	3	8	-1	2	-45	-26	-2	-1	4	3	6
Below Normal (24%)	-2	1	9	-2	-6	-47	-12	-5	-7	-2	8	3
Dry (17%)	5	-5	2	-1	-10	-31	-9	-9	-10	-13	-3	-3
Critical (15%)	1	-1	8	4	-4	-16	5	2	2	10	1	8

Table U.1-47. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 3

Statistic	Monthly Energy Use (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	130	138	151	150	146	157	58	60	192	109	163	141
20%	109	133	118	134	131	137	51	55	119	99	127	116
30%	88	121	94	118	122	120	44	48	90	95	109	102
40%	80	101	76	107	107	82	38	42	75	91	102	92
50%	72	75	57	92	97	55	33	36	58	86	95	85
60%	62	53	38	79	78	44	28	32	51	81	87	74
70%	50	46	29	54	52	36	26	30	44	78	80	69
80%	41	38	24	35	35	33	22	25	38	68	76	65
90%	36	26	21	28	26	29	20	21	32	46	66	54
Long Term												
Full Simulation Period	76	82	71	90	89	81	38	41	83	89	102	89
Water Year Types												
Wet (32%)	88	102	88	114	102	91	53	55	142	117	129	109
Above Normal (12%)	72	86	69	95	110	84	44	54	92	86	108	82
Below Normal (24%)	81	83	73	75	72	83	35	36	59	81	95	96
Dry (17%)	67	63	65	76	87	78	26	30	42	85	90	78
Critical (15%)	58	53	43	73	73	57	20	22	34	47	62	53

Table U.1-48. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 3 minus No Action Alternative

Statistic	Monthly Energy Use (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-39	-76	-39	-26	-31	-22	-101	-158	-38	-84	-48	-38
20%	-45	-63	-65	-28	-37	-27	-95	-117	-50	-85	-73	-38
30%	-38	-62	-75	-34	-37	-26	-85	-87	-66	-80	-78	-44
40%	-29	-59	-83	-30	-44	-51	-74	-79	-66	-76	-71	-49
50%	-25	-75	-95	-32	-48	-71	-54	-63	-64	-73	-66	-47
60%	-24	-75	-105	-38	-58	-70	-47	-56	-65	-69	-58	-47
70%	-16	-46	-60	-60	-71	-71	-38	-48	-57	-65	-40	-44
80%	-8	-21	-31	-67	-76	-67	-35	-41	-53	-57	-23	-39
90%	-5	-15	-18	-35	-66	-54	-16	-23	-19	-6	0	-12
Long Term												
Full Simulation Period	-25	-54	-58	-38	-48	-48	-59	-75	-48	-60	-49	-39
Water Year Types												
Wet (32%)	-23	-43	-68	-50	-56	-69	-96	-125	-49	-68	-64	-49
Above Normal (12%)	-27	-78	-77	-43	-43	-53	-71	-78	-56	-74	-63	-50
Below Normal (24%)	-29	-59	-58	-43	-63	-39	-49	-64	-61	-79	-73	-43
Dry (17%)	-32	-76	-50	-33	-36	-40	-36	-37	-54	-53	-18	-32
Critical (15%)	-12	-24	-32	-5	-25	-25	-16	-23	-13	-7	-1	-7

Table U.1-49. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 4

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	172	223	188	177	183	192	187	227	232	199	214	183
20%	161	198	178	161	172	181	163	182	166	187	207	170
30%	141	184	157	152	160	165	137	141	156	183	197	157
40%	122	167	147	140	156	146	116	128	142	170	188	148
50%	106	155	137	128	150	132	88	105	124	161	171	142
60%	91	136	126	115	144	120	76	88	112	153	150	128
70%	68	87	92	112	134	111	68	75	101	147	126	117
80%	54	59	55	103	116	101	58	63	86	111	96	103
90%	44	40	45	67	80	87	37	44	51	55	62	73
Long Term												
Full Simulation Period	107	140	123	129	141	138	105	120	130	151	155	134
Water Year Types												
Wet (32%)	118	149	155	165	167	179	162	187	190	189	204	167
Above Normal (12%)	113	166	139	134	160	158	125	145	150	172	191	146
Below Normal (24%)	112	148	120	123	136	124	89	103	120	166	167	144
Dry (17%)	108	138	98	113	125	119	64	68	91	131	107	111
Critical (15%)	71	88	75	76	96	80	37	45	46	55	60	63

Table U.1-50. Central Valley Project Total Energy Use, Monthly Energy Use, Alternative 4 minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	3	8	-2	2	6	14	27	9	2	5	4	3
20%	7	3	-5	-1	3	17	17	10	-4	3	6	16
30%	14	1	-12	1	1	18	8	6	1	8	11	10
40%	13	8	-12	2	5	14	3	6	0	3	14	6
50%	9	5	-15	4	5	7	0	6	1	3	10	11
60%	6	7	-17	-2	8	6	1	1	-4	4	5	7
70%	1	-5	2	-1	11	4	3	-3	0	4	6	4
80%	5	-1	0	1	5	0	0	-2	-5	-14	-3	-1
90%	3	-1	7	4	-12	3	2	-1	0	3	-4	7
Long Term												
Full Simulation Period	6	4	-7	1	4	9	7	4	-1	3	5	6
Water Year Types												
Wet (32%)	6	4	0	1	9	19	14	6	0	3	10	9
Above Normal (12%)	15	2	-7	-4	7	21	10	13	2	12	20	14
Below Normal (24%)	2	7	-11	5	1	2	5	4	0	6	-1	4
Dry (17%)	9	-1	-18	3	2	1	2	0	-5	-7	-1	1
Critical (15%)	1	10	0	-2	-3	-2	2	0	-1	0	-2	3

Table U.1-51. Annual Central Valley Project Total Energy Use

Statistic	Energy Use (GWh)														
	NAA	Alt1	Alt1 minus NAA	Alt2v1 wo TUCP	Alt2v1 wo TUCP minus NAA	Alt2v1 w TUCP	Alt2v1 w TUCP minus NAA	Alt2v2 no TUCP	Alt2v2 no TUCP minus NAA	Alt2v3 no TUCP	Alt2v3 no TUCP minus NAA	Alt3	Alt3 minus NAA	Alt4	Alt4 minus NAA
PROBABILITY OF EXCEEDANCE															
10%	2,095	2,228	133	2,145	50	2,141	46	2,101	6	2,103	8	1,282	-813	2,151	56
20%	1,957	2,166	209	2,012	55	2,023	66	1,943	-15	1,933	-24	1,178	-779	2,026	69
30%	1,830	2,090	260	1,858	28	1,858	29	1,783	-46	1,779	-50	1,062	-768	1,921	91
40%	1,720	2,017	297	1,751	31	1,750	30	1,651	-69	1,663	-57	974	-746	1,779	58
50%	1,608	1,834	226	1,607	-1	1,629	21	1,505	-103	1,520	-89	884	-725	1,657	49
60%	1,440	1,676	237	1,451	11	1,459	20	1,363	-77	1,366	-74	824	-616	1,513	74
70%	1,310	1,444	134	1,271	-39	1,272	-39	1,226	-84	1,235	-76	750	-561	1,292	-18
80%	1,104	1,262	158	1,095	-10	1,096	-8	1,086	-18	1,092	-12	714	-391	1,116	11
90%	863	1,013	149	856	-7	803	-60	876	12	834	-30	607	-256	800	-63
LONG TERM															
Full Simulation Period	1,531	1,719	189	1,546	15	1,547	16	1,496	-34	1,498	-32	931	-600	1,574	43
WATER YEAR TYPES															
Wet (32%)	1,950	2,133	183	2,002	53	2,004	55	1,955	5	1,952	2	1,189	-760	2,031	82
Above Normal (12%)	1,694	2,034	340	1,736	42	1,758	64	1,635	-59	1,641	-53	982	-712	1,799	105
Below Normal (24%)	1,529	1,726	197	1,534	5	1,538	9	1,457	-71	1,468	-61	870	-659	1,553	25
Dry (17%)	1,287	1,424	137	1,226	-61	1,233	-54	1,195	-92	1,199	-88	789	-498	1,274	-13
Critical (15%)	786	911	125	801	15	772	-14	811	25	806	21	595	-191	792	6

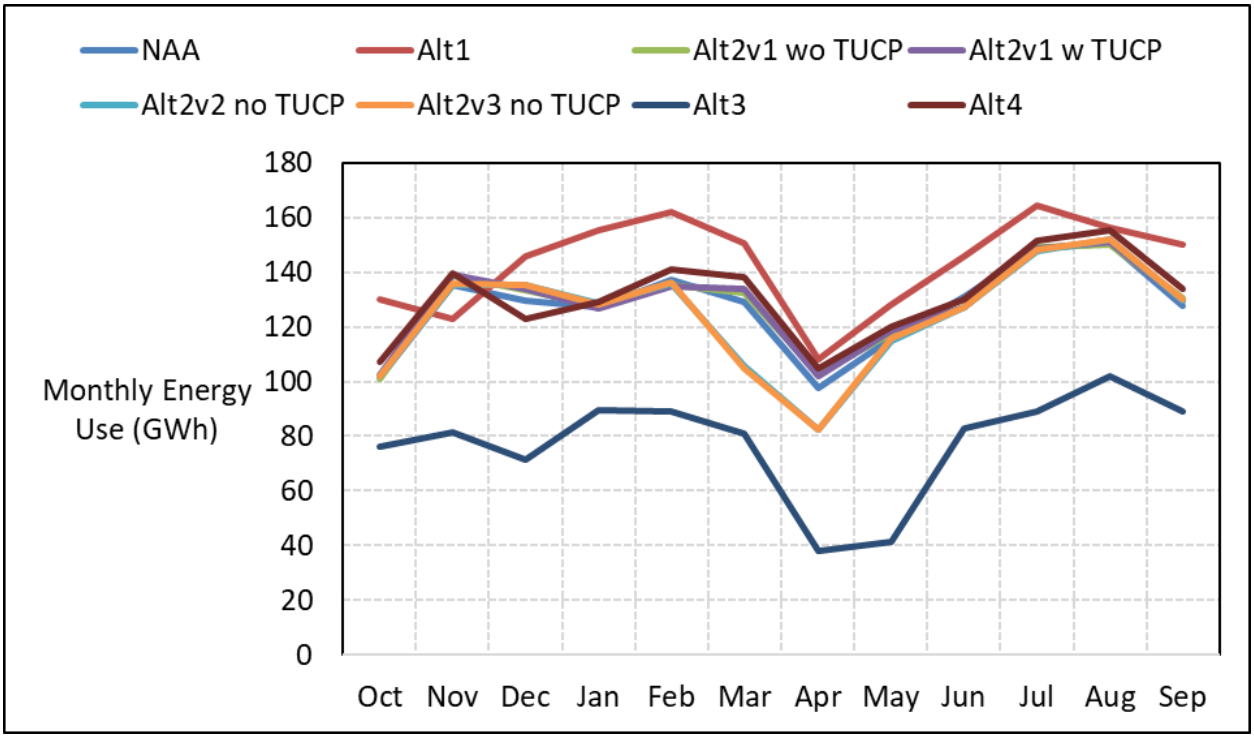

Figure U.1-38. Central Valley Project Total Energy Use, Long-Term Average Energy Use

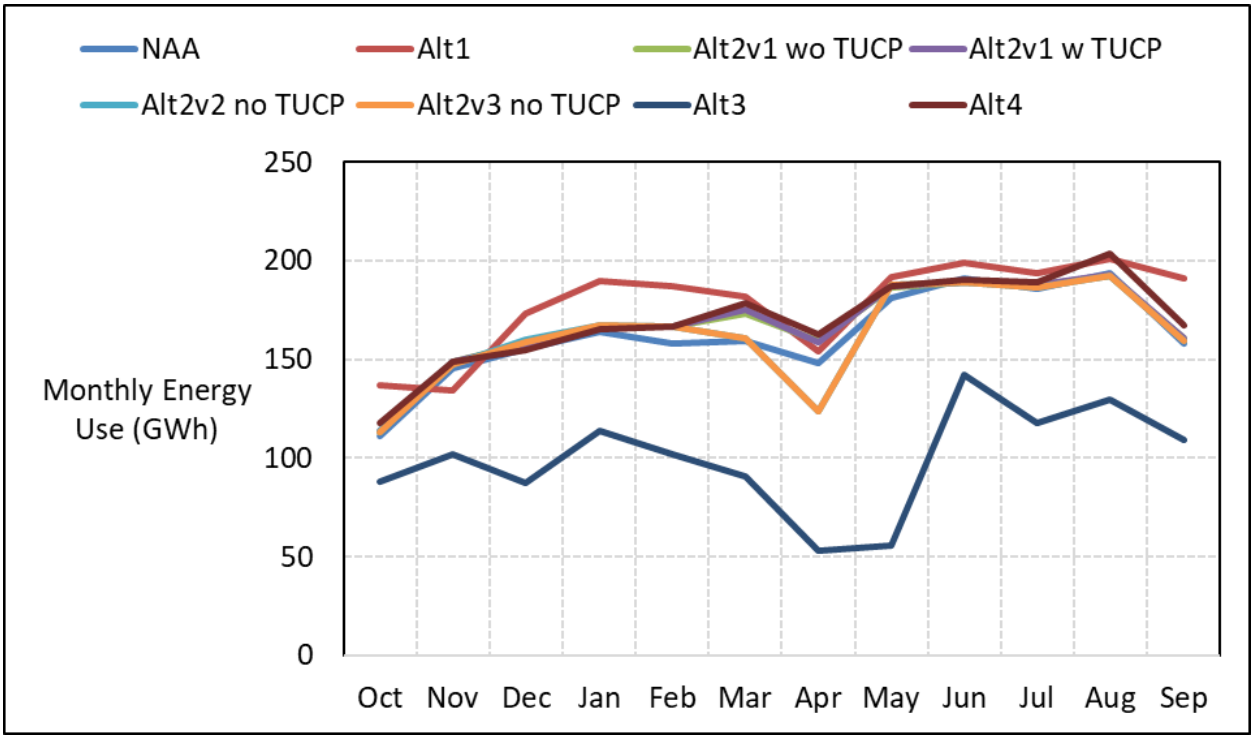

Figure U.1-39. Central Valley Project Total Energy Use, Wet Year Average Energy Use

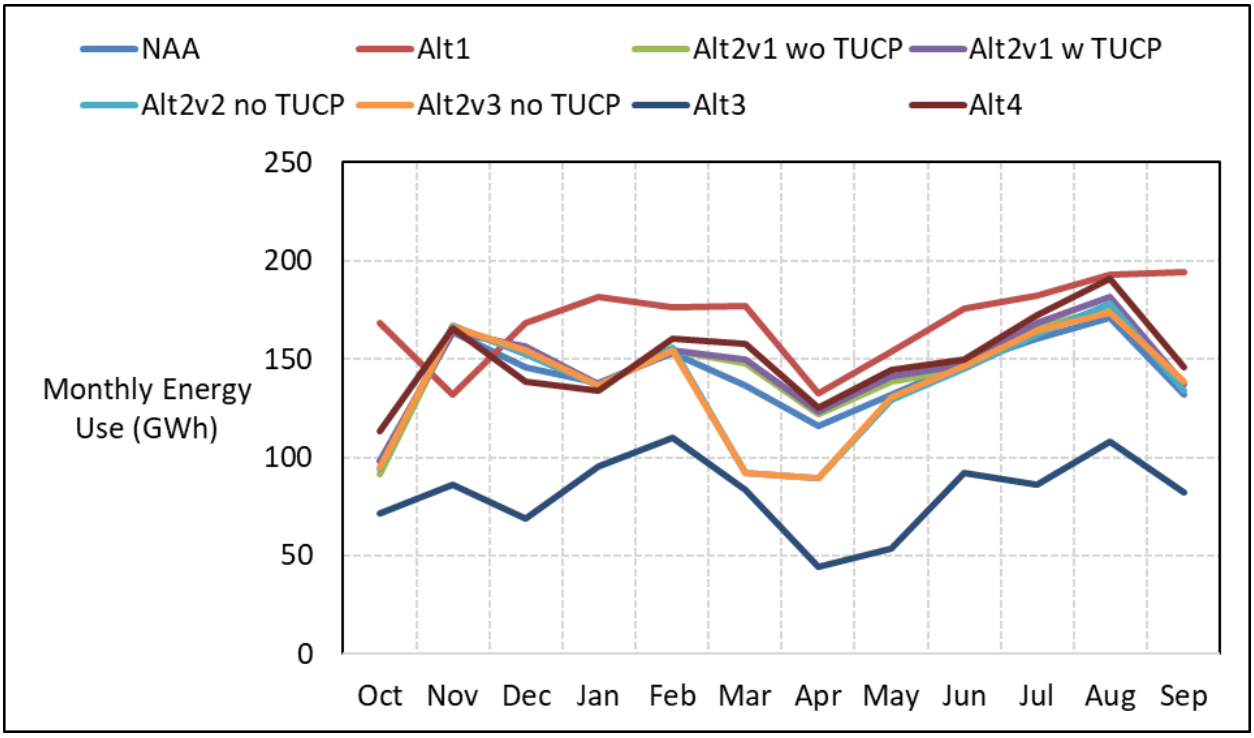

Figure U.1-40. Central Valley Project Total Energy Use, Above Normal Year Average Energy Use

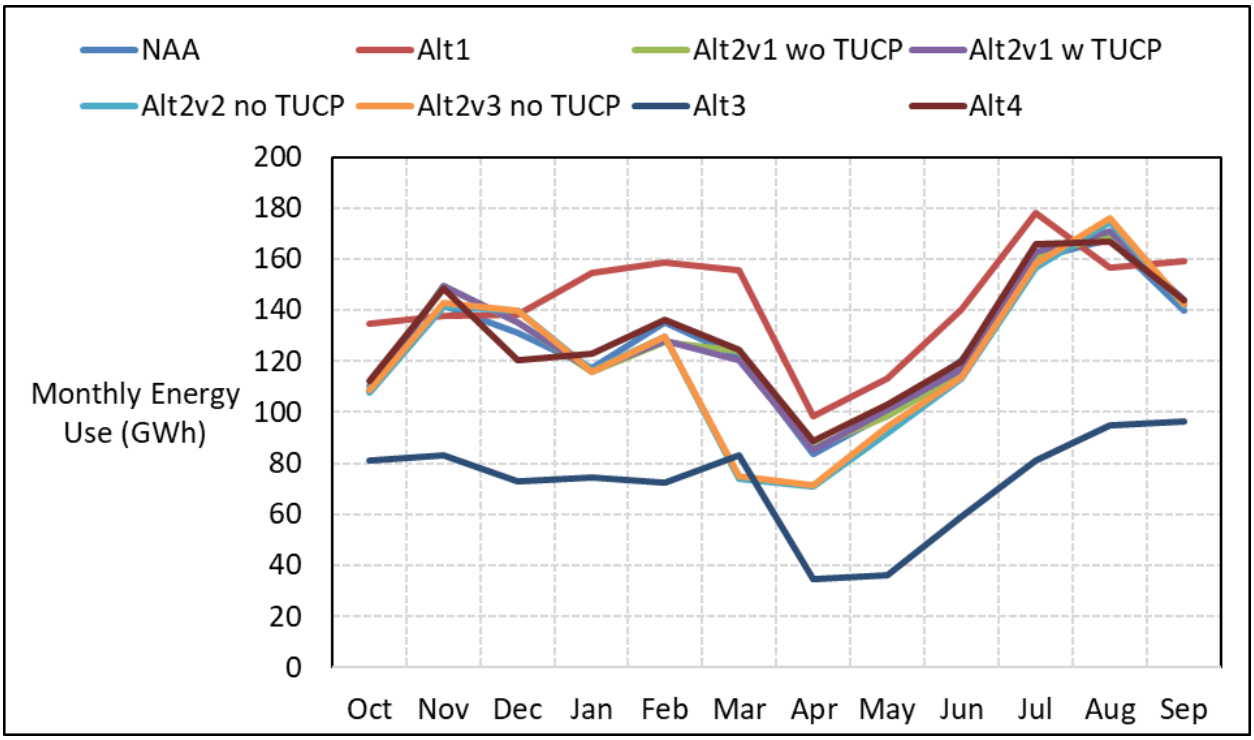

Figure U.1-41. Central Valley Project Total Energy Use, Below Normal Year Average Energy Use

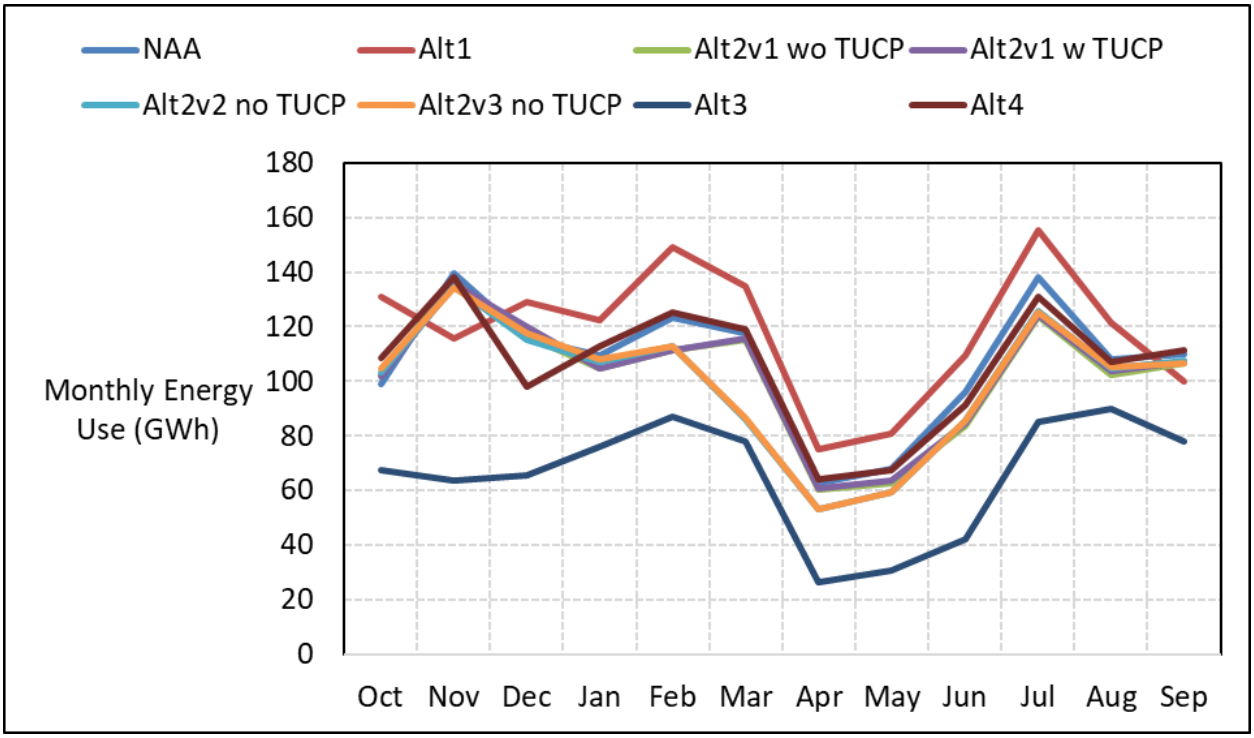

Figure U.1-42. Central Valley Project Total Energy Use, Dry Year Average Energy Use

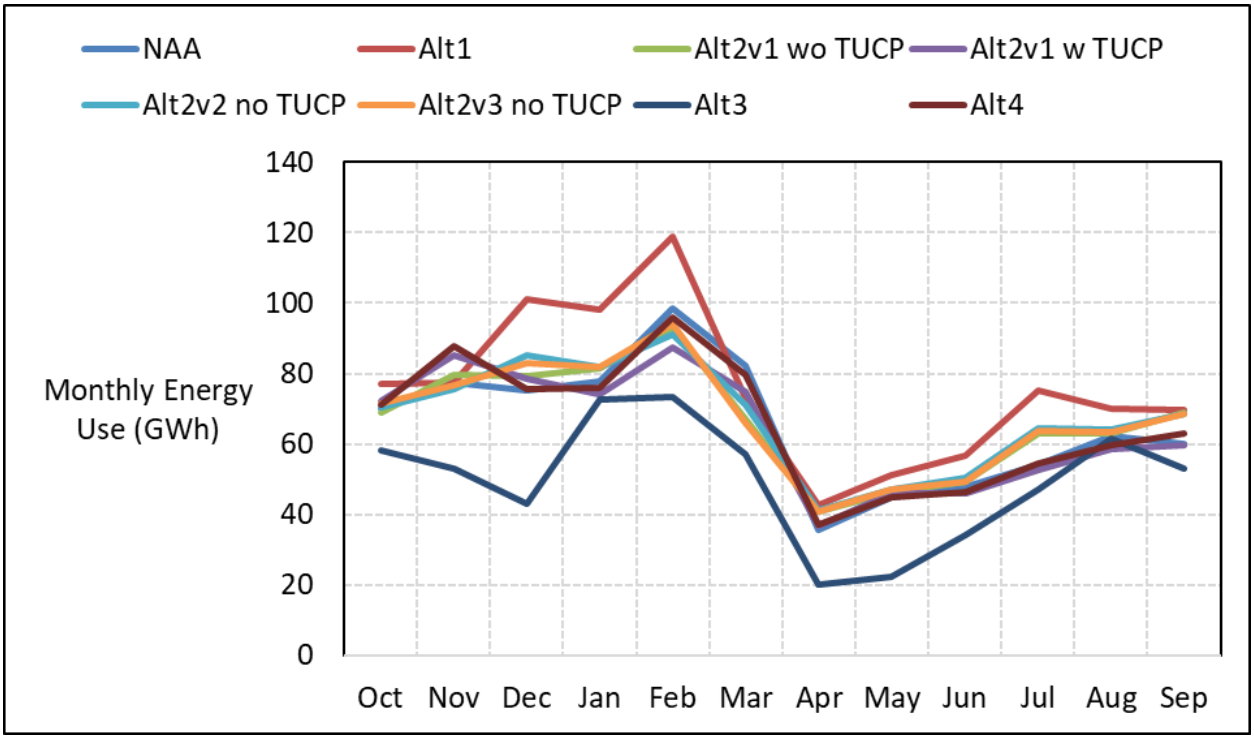

Figure U.1-43. Central Valley Project Total Energy Use, Critical Year Average Energy Use

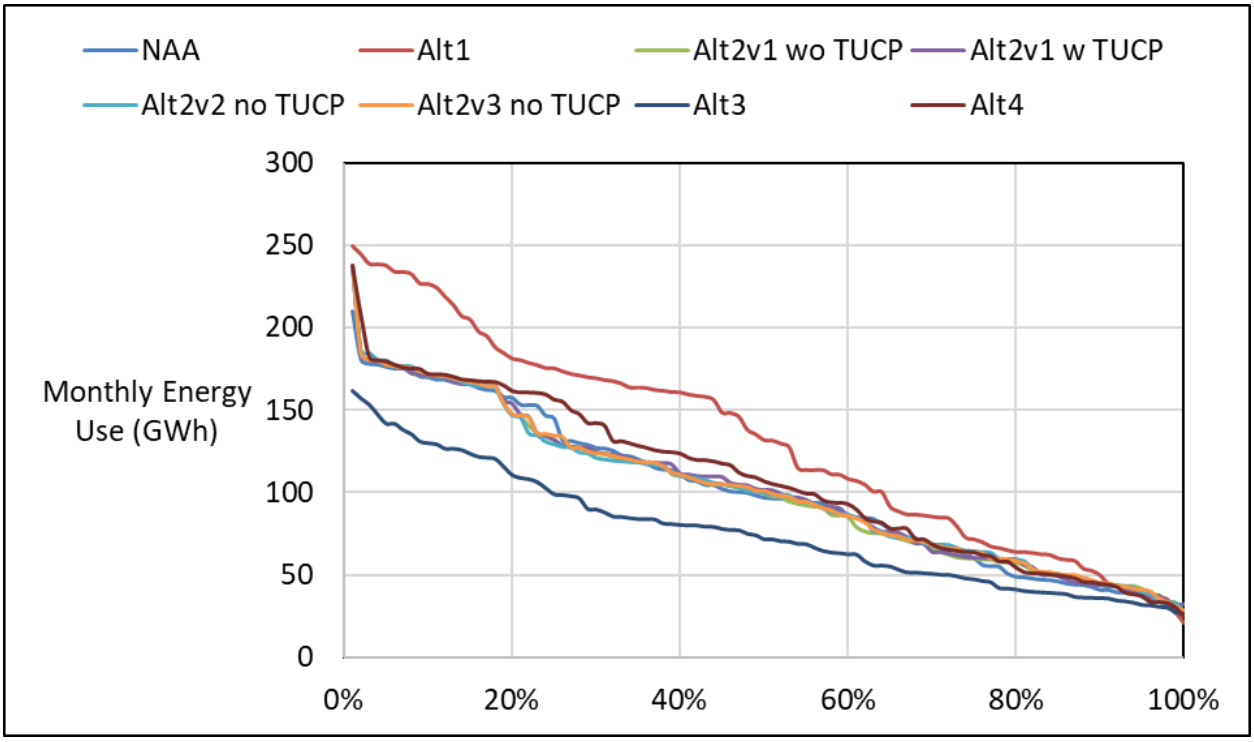

Figure U.1-44. Central Valley Project Total Energy Use, October

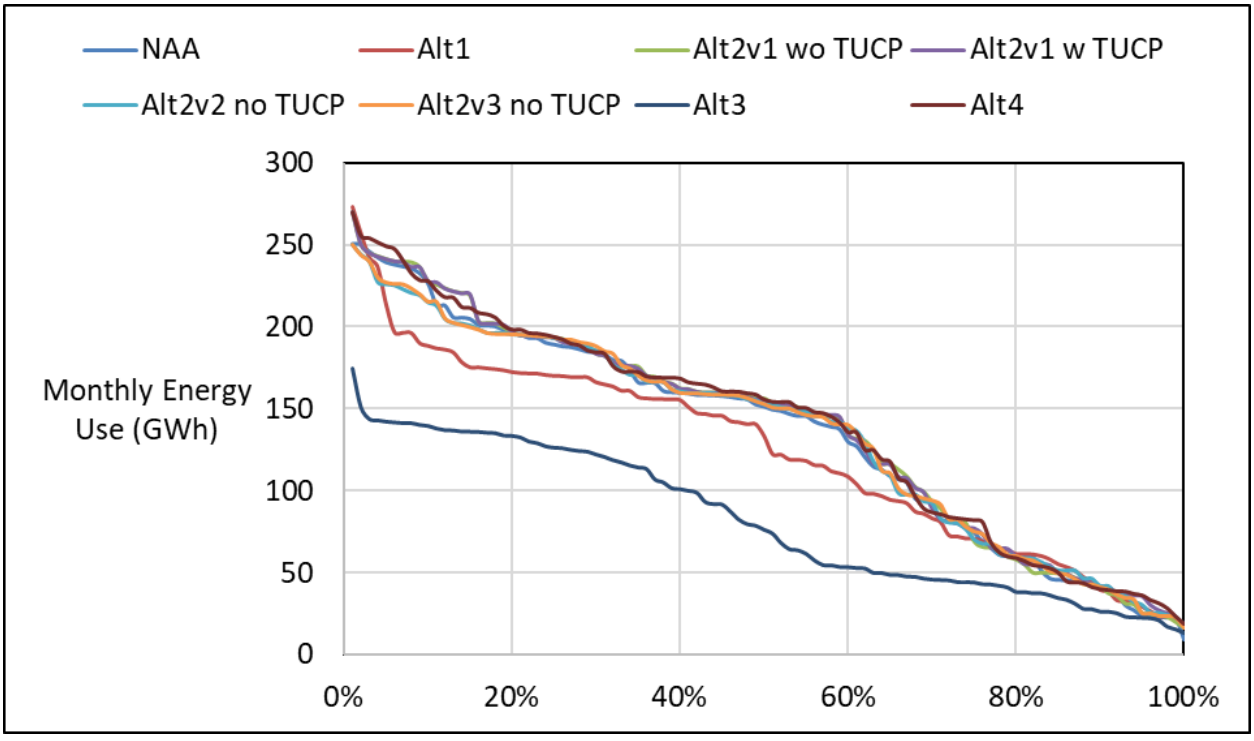

Figure U.1-45. Central Valley Project Total Energy Use, November

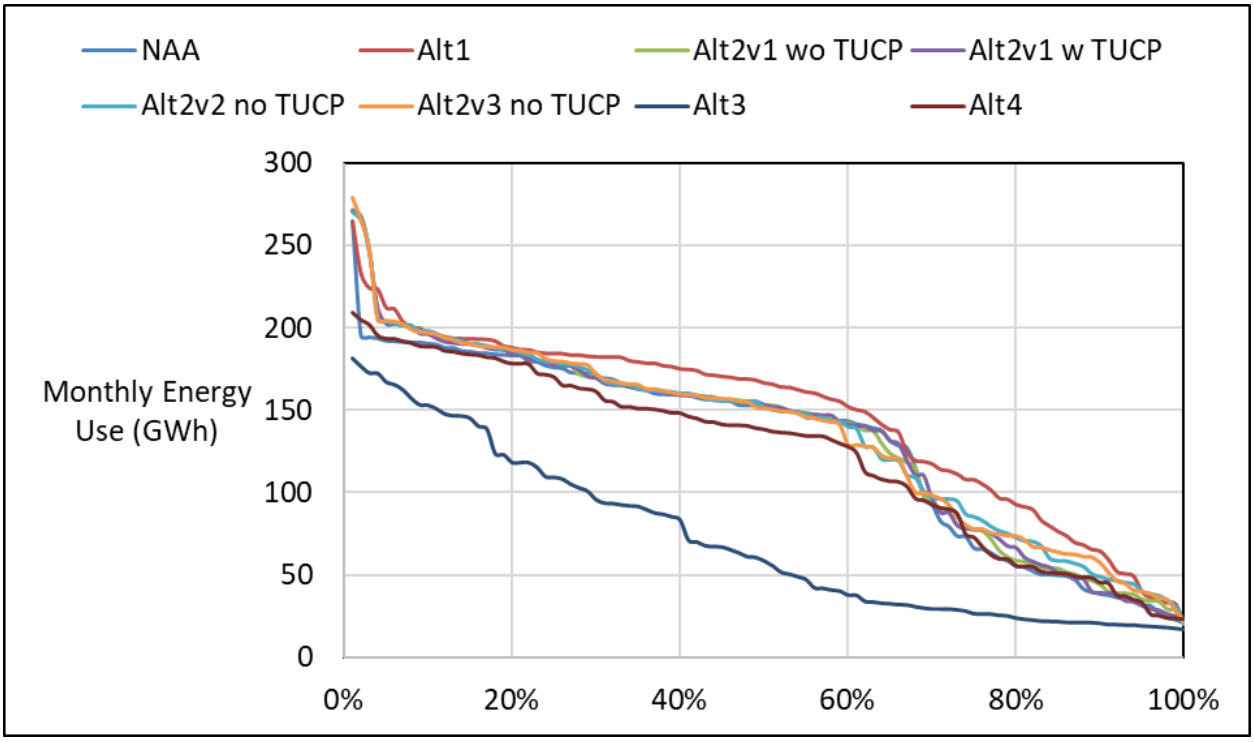

Figure U.1-46. Central Valley Project Total Energy Use, December

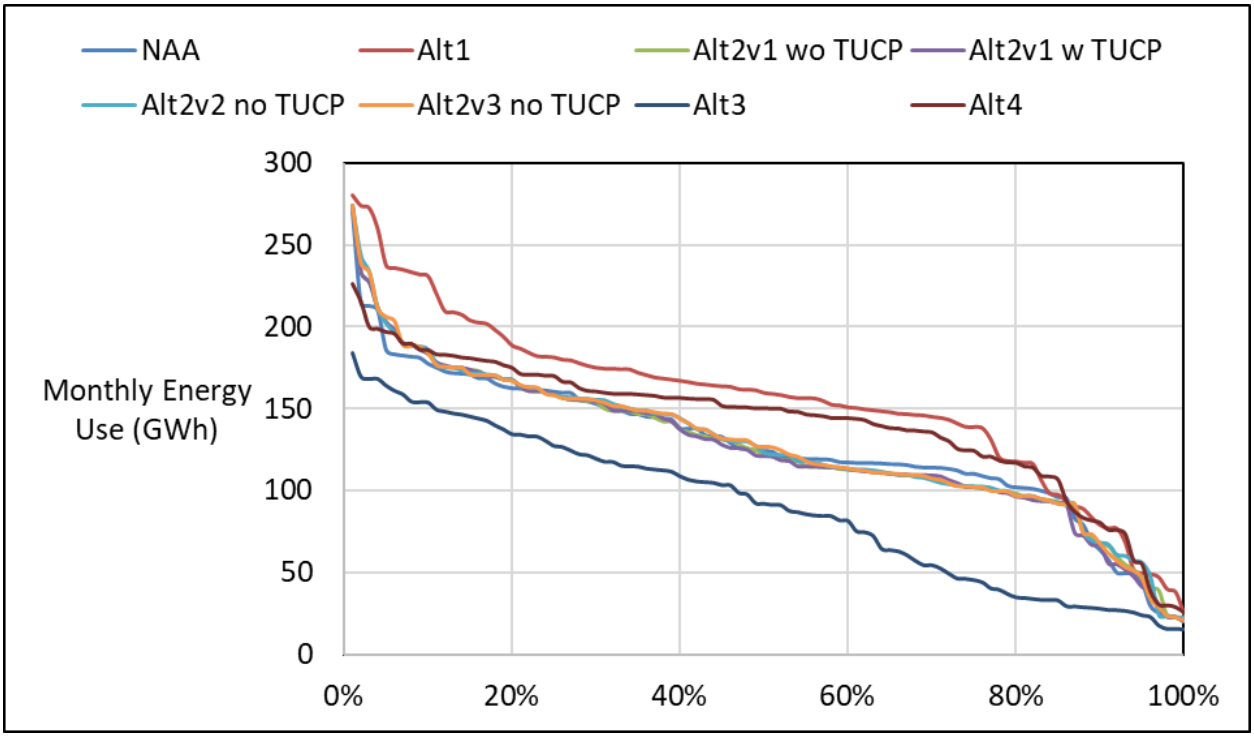

Figure U.1-47. Central Valley Project Total Energy Use, January

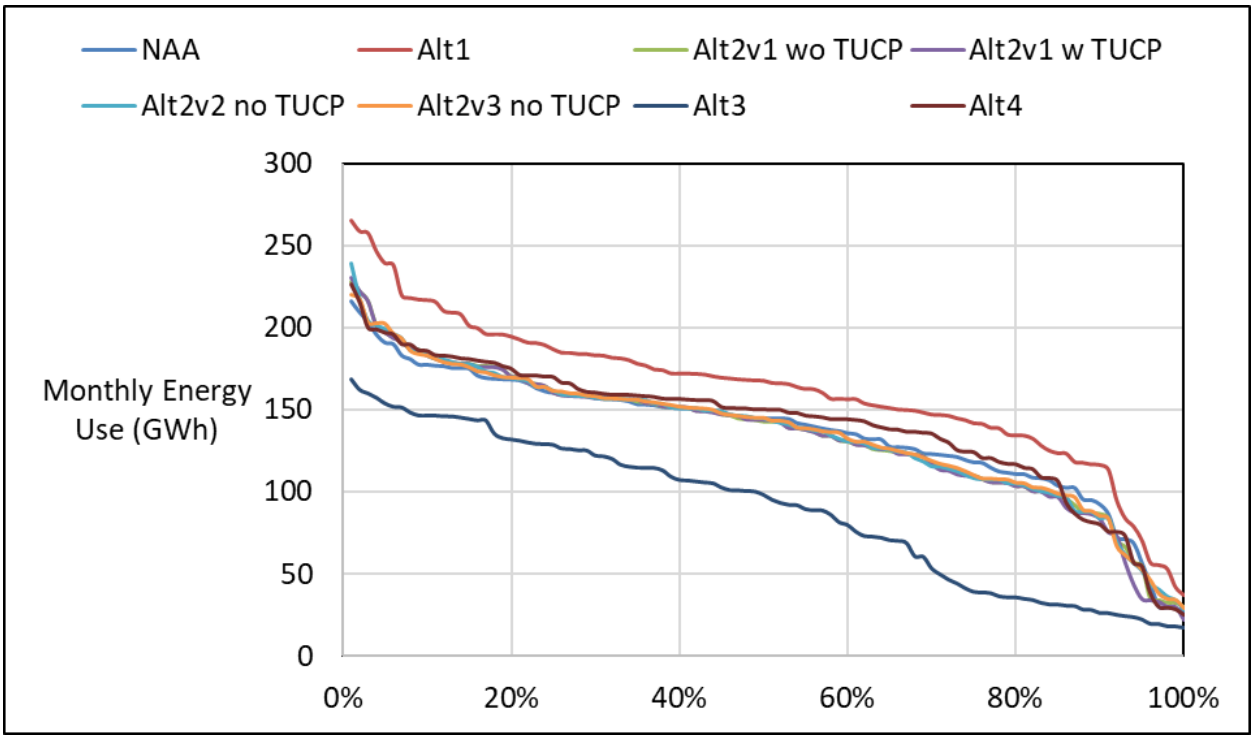

Figure U.1-48. Central Valley Project Total Energy Use, February

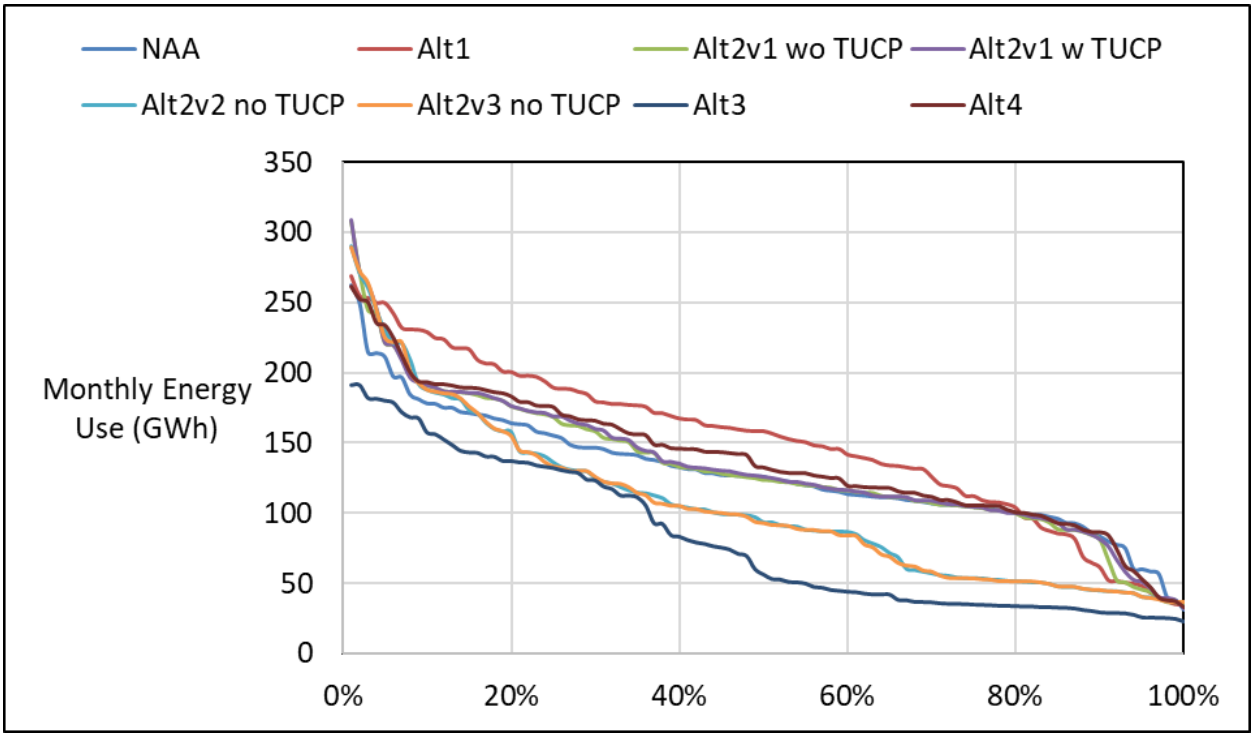

Figure U.1-49. Central Valley Project Total Energy Use, March

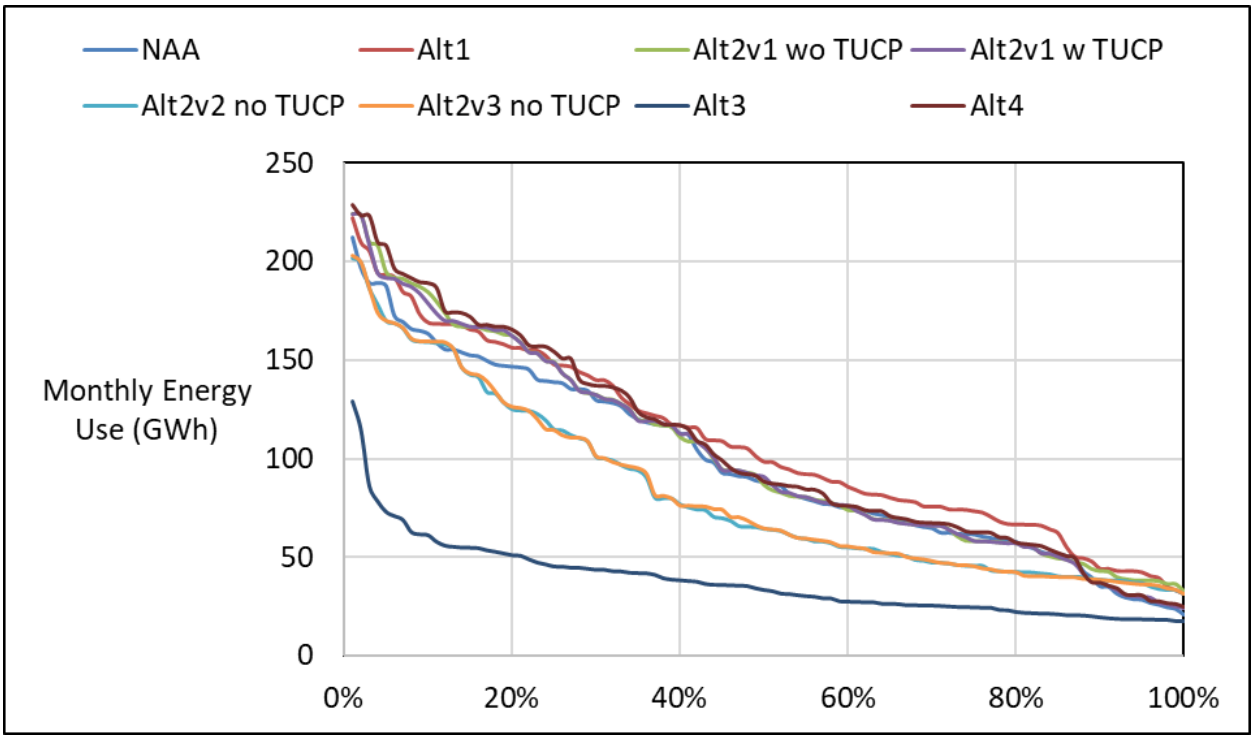

Figure U.1-50. Central Valley Project Total Energy Use, April

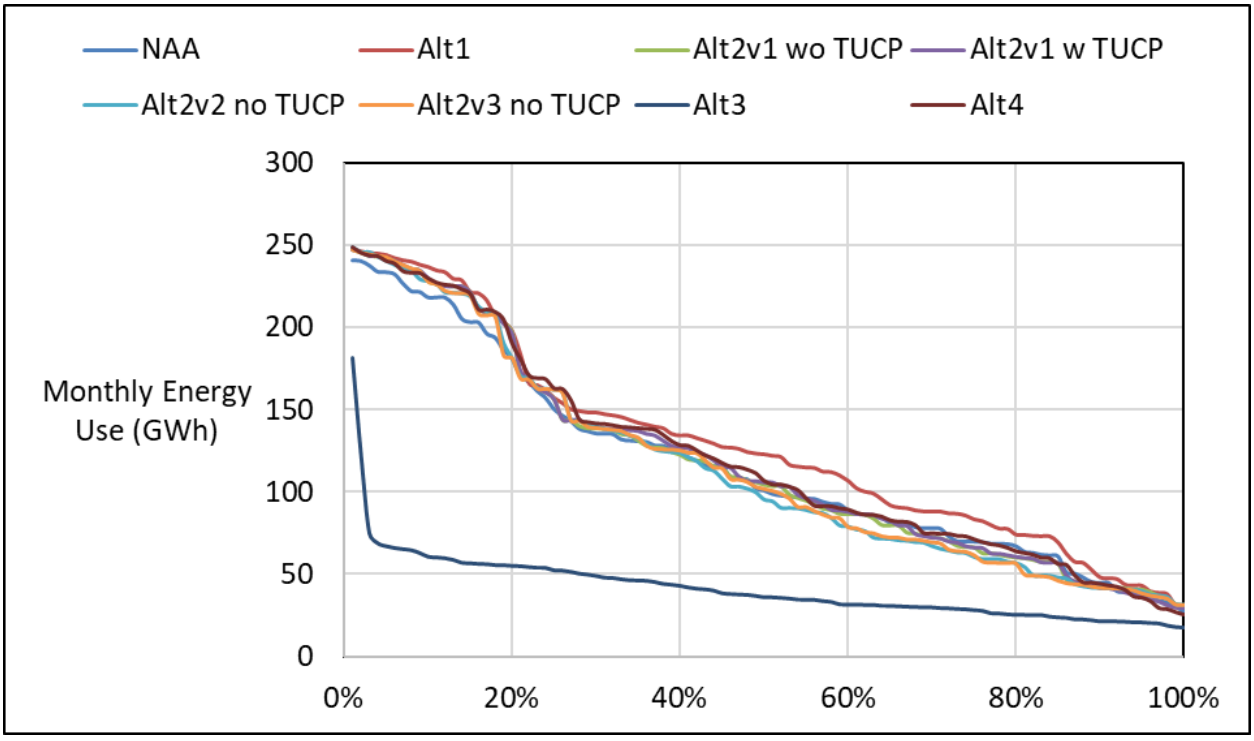

Figure U.1-51. Central Valley Project Total Energy Use, May

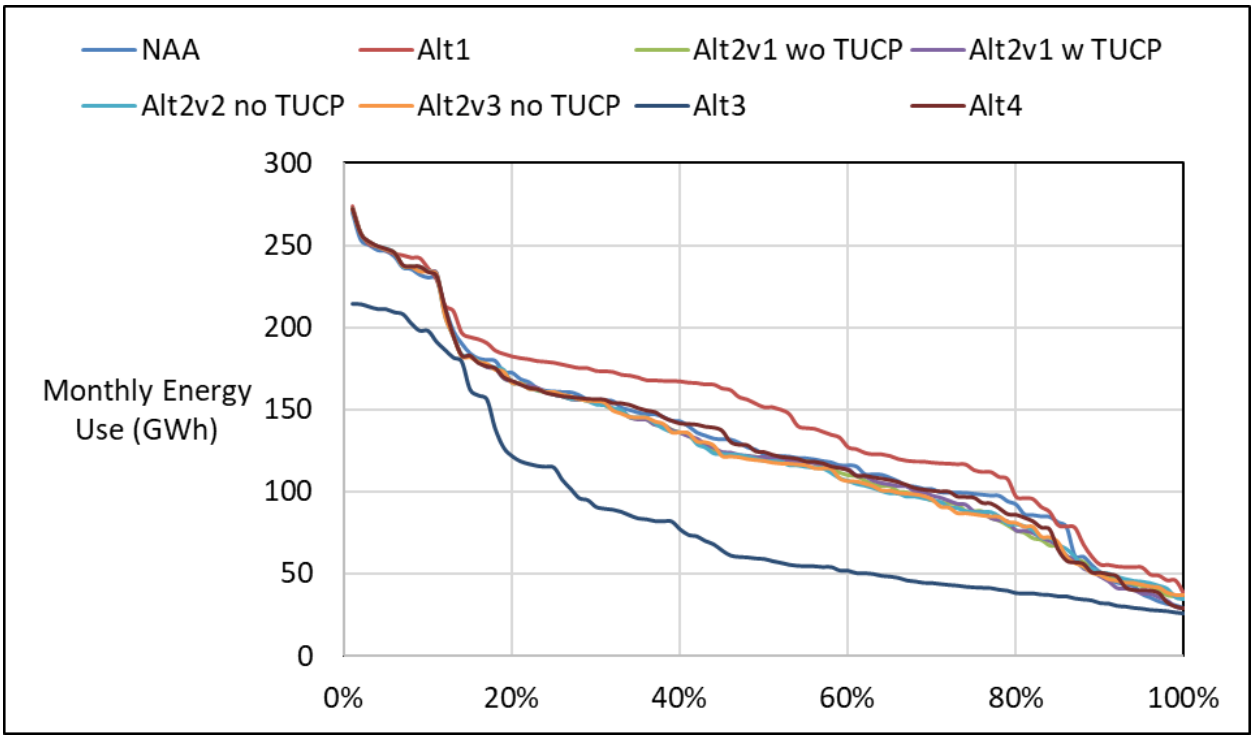

Figure U.1-52. Central Valley Project Total Energy Use, June

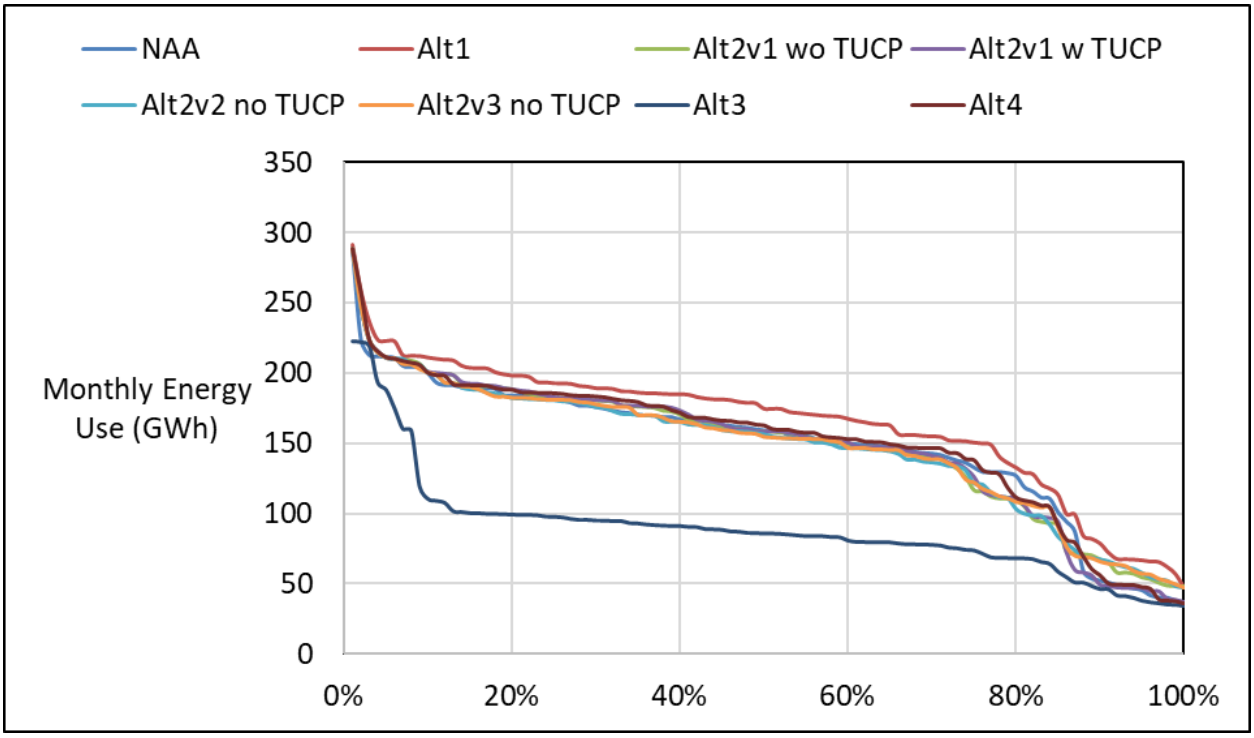

Figure U.1-53. Central Valley Project Total Energy Use, July

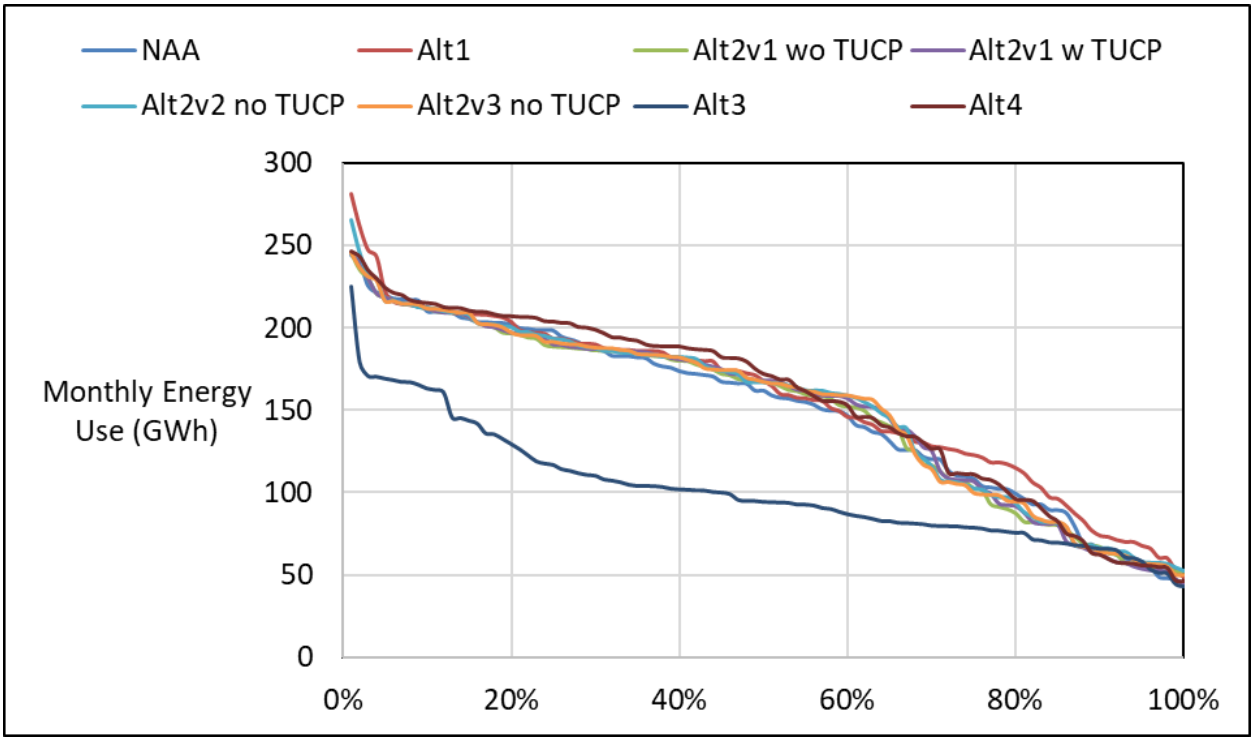

Figure U.1-54. Central Valley Project Total Energy Use, August

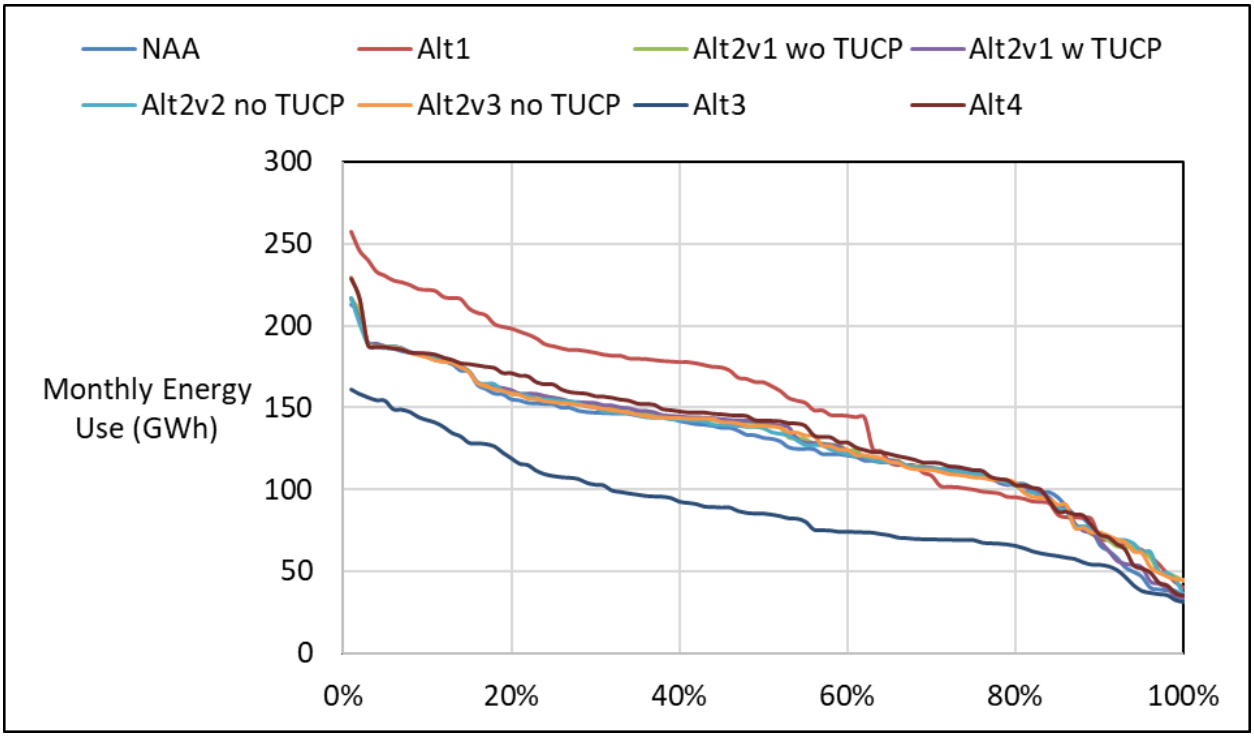

Figure U.1-55. Central Valley Project Total Energy Use, September

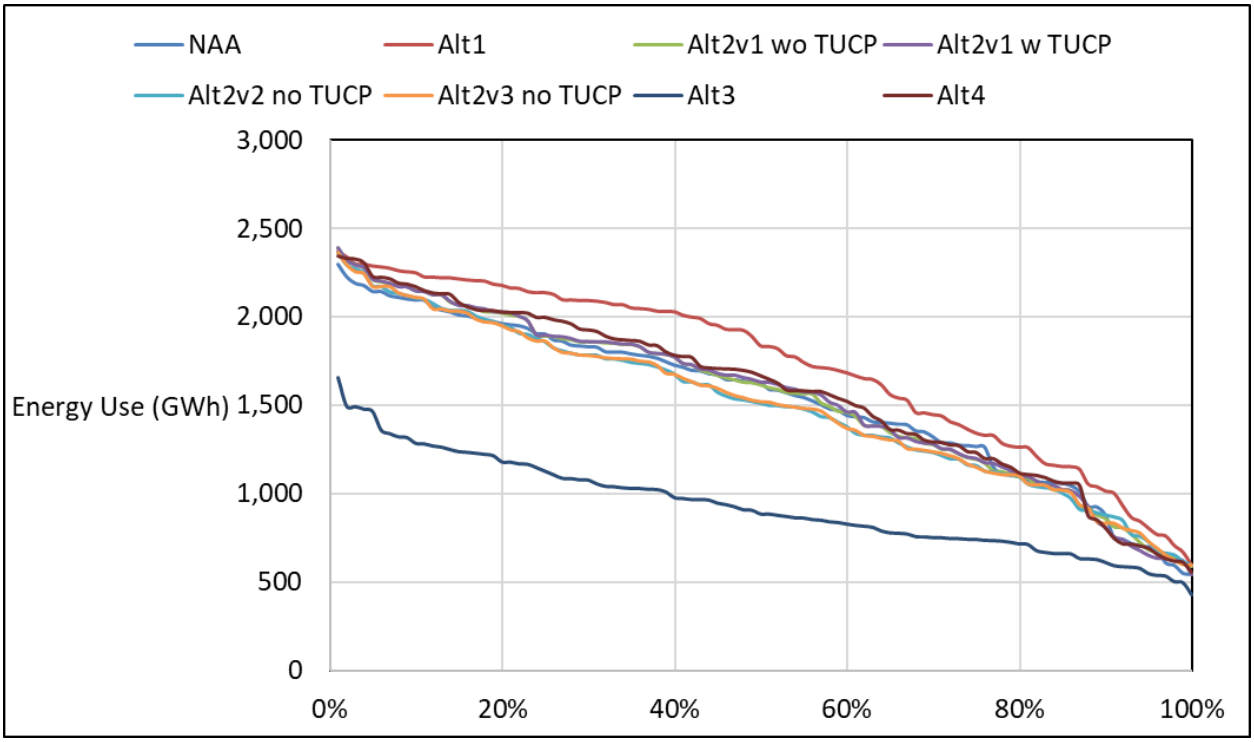

Figure U.1-56. October–September Central Valley Project Total Energy Use

Table U.1-52. Central Valley Project Net Generation, Monthly Generation, No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	264	158	526	578	570	534	356	434	465	625	437	324
20%	223	117	187	404	493	398	284	403	448	567	413	297
30%	202	102	105	229	257	218	238	383	417	535	379	272
40%	176	79	92	122	139	136	214	369	382	517	368	222
50%	162	65	71	79	84	92	190	350	346	494	350	189
60%	146	50	53	51	61	78	175	332	322	451	320	167
70%	128	33	31	42	40	62	159	294	302	416	302	149
80%	103	11	12	29	12	50	135	279	273	388	261	120
90%	75	-10	-19	8	-10	24	117	245	239	301	226	90
Long Term												
Full Simulation Period	164	80	139	195	200	204	221	349	354	477	341	208
Water Year Types												
Wet (32%)	171	109	303	401	424	409	278	358	312	497	367	296
Above Normal (12%)	183	49	55	250	218	215	190	398	350	539	364	281
Below Normal (24%)	169	58	85	78	105	104	194	368	381	508	351	152
Dry (17%)	169	74	46	47	29	83	224	350	437	495	350	157
Critical (15%)	120	83	46	67	55	57	165	260	307	316	240	108

Table U.1-53. Central Valley Project Net Generation, Monthly Generation, Alternative 1

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	232	152	506	554	543	524	334	443	496	583	434	256
20%	175	126	234	383	451	360	289	416	471	550	382	210
30%	157	107	122	244	244	209	245	395	455	522	362	190
40%	144	90	79	123	130	133	222	374	426	499	342	172
50%	124	76	61	68	80	101	197	358	375	484	331	159
60%	116	64	40	39	44	80	177	337	342	450	312	142
70%	97	49	8	21	25	31	150	298	321	426	291	127
80%	82	21	-1	4	-1	4	132	270	280	394	254	109
90%	47	-6	-26	-19	-28	-27	111	242	246	335	230	81
Long Term												
Full Simulation Period	131	87	136	179	187	185	220	352	377	470	326	169
Water Year Types												
Wet (32%)	145	116	316	386	408	386	264	361	345	490	344	228
Above Normal (12%)	114	74	60	226	208	169	179	401	369	514	313	152
Below Normal (24%)	134	66	79	58	105	79	194	368	410	485	350	144
Dry (17%)	125	86	28	37	16	62	227	351	451	481	351	165
Critical (15%)	115	73	28	52	23	77	194	271	314	355	227	97

Table U.1-54. Central Valley Project Net Generation, Monthly Generation, Alternative 1 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-32	-5	-20	-24	-27	-10	-22	9	31	-42	-3	-68
20%	-47	8	47	-20	-42	-38	4	13	24	-16	-31	-87
30%	-45	5	17	14	-13	-9	7	12	38	-13	-17	-82
40%	-32	11	-13	1	-9	-3	8	5	44	-18	-26	-51
50%	-38	11	-9	-11	-4	9	7	8	29	-11	-19	-30
60%	-30	15	-13	-13	-17	2	2	5	21	-1	-9	-26
70%	-31	16	-23	-21	-15	-31	-9	4	19	10	-11	-22
80%	-20	10	-13	-25	-13	-45	-3	-9	7	6	-8	-11
90%	-28	4	-7	-27	-18	-51	-6	-3	7	34	4	-9
Long Term												
Full Simulation Period	-33	7	-2	-16	-14	-20	-1	3	23	-8	-15	-39
Water Year Types												
Wet (32%)	-26	6	13	-15	-16	-23	-14	3	32	-8	-23	-67
Above Normal (12%)	-69	25	5	-24	-10	-46	-11	2	19	-25	-52	-129
Below Normal (24%)	-34	8	-6	-20	-1	-25	1	0	29	-23	0	-8
Dry (17%)	-44	12	-18	-10	-13	-21	3	1	15	-15	1	8
Critical (15%)	-5	-10	-17	-14	-32	20	28	11	7	39	-12	-10

Table U.1-55. Central Valley Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	270	155	525	559	571	524	341	458	478	617	454	328
20%	230	124	199	407	484	386	272	398	455	565	419	301
30%	200	106	117	218	258	219	236	380	428	529	392	263
40%	172	87	91	144	134	153	217	365	384	507	374	219
50%	156	73	69	90	92	111	194	351	354	490	350	187
60%	149	56	52	55	65	77	180	334	328	446	321	168
70%	128	41	28	43	43	62	157	292	311	411	301	144
80%	110	19	6	26	20	47	136	267	275	378	256	118
90%	87	-19	-20	3	2	19	115	219	232	309	217	83
Long Term												
Full Simulation Period	168	83	139	196	205	201	218	345	359	473	342	203
Water Year Types												
Wet (32%)	172	112	308	404	416	390	263	354	321	497	375	291
Above Normal (12%)	190	55	43	231	219	194	179	394	364	531	368	276
Below Normal (24%)	169	57	83	82	121	103	186	376	388	498	358	151
Dry (17%)	173	73	49	54	39	82	225	351	446	495	357	162
Critical (15%)	132	94	45	65	64	96	196	231	292	309	212	86

Table U.1-56. Central Valley Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	6	-3	-1	-19	1	-10	-16	25	13	-8	17	4
20%	7	6	12	3	-9	-12	-12	-6	8	-1	6	4
30%	-2	4	12	-12	1	0	-2	-3	11	-7	12	-9
40%	-4	8	-1	23	-5	17	3	-4	3	-11	6	-3
50%	-6	9	-2	11	7	19	4	1	8	-5	0	-2
60%	3	6	-1	3	3	-1	5	2	7	-5	1	1
70%	0	7	-3	1	4	0	-1	-2	9	-5	-2	-5
80%	8	8	-6	-3	9	-3	1	-12	2	-10	-5	-2
90%	12	-9	-1	-5	11	-5	-2	-26	-6	8	-9	-7
Long Term												
Full Simulation Period	4	3	0	1	4	-3	-4	-4	5	-4	2	-5
Water Year Types												
Wet (32%)	1	3	6	3	-8	-19	-15	-4	9	0	8	-5
Above Normal (12%)	7	6	-12	-19	1	-20	-11	-5	14	-8	4	-6
Below Normal (24%)	0	-1	-3	4	16	-1	-8	7	7	-10	8	-2
Dry (17%)	3	-1	3	7	9	-1	1	1	9	0	7	4
Critical (15%)	12	11	-1	-2	9	39	30	-28	-15	-6	-28	-22

Table U.1-57. Central Valley Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	270	155	526	559	571	524	352	458	478	617	452	328
20%	230	124	197	407	487	386	270	398	455	566	419	302
30%	200	109	119	225	258	214	230	380	428	531	391	263
40%	172	83	93	145	148	129	205	365	387	507	375	219
50%	156	73	71	97	90	95	189	349	353	493	351	187
60%	150	60	53	61	68	75	174	330	331	454	327	167
70%	131	45	31	44	53	60	147	287	311	413	301	147
80%	112	22	6	30	25	46	125	271	286	379	250	126
90%	90	-17	-16	11	1	25	109	224	232	308	229	102
Long Term												
Full Simulation Period	170	84	141	199	207	198	212	345	359	474	344	208
Water Year Types												
Wet (32%)	172	114	310	411	418	390	264	354	321	497	375	291
Above Normal (12%)	187	56	46	234	220	200	179	392	364	532	370	281
Below Normal (24%)	179	62	84	83	123	106	187	375	389	503	359	151
Dry (17%)	173	74	47	54	44	81	225	351	446	496	357	162
Critical (15%)	133	92	58	69	69	69	152	234	290	310	221	115

Table U.1-58. Central Valley Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	6	-3	0	-19	1	-10	-4	24	13	-8	16	3
20%	7	7	10	3	-6	-12	-14	-6	8	-1	6	4
30%	-1	7	13	-4	1	-5	-8	-3	11	-4	12	-9
40%	-4	4	1	23	9	-7	-9	-4	5	-10	7	-3
50%	-6	8	1	18	6	3	-1	-1	7	-2	1	-3
60%	3	10	1	10	6	-3	-1	-3	9	3	7	0
70%	3	11	0	2	14	-3	-12	-7	8	-3	-1	-2
80%	9	11	-6	1	14	-3	-10	-9	13	-8	-11	6
90%	15	-7	3	3	10	1	-8	-21	-6	7	3	12
Long Term												
Full Simulation Period	6	5	3	4	7	-6	-9	-4	5	-3	4	0
Water Year Types												
Wet (32%)	1	4	7	9	-7	-19	-14	-4	9	-1	8	-4
Above Normal (12%)	4	7	-9	-16	2	-15	-11	-6	14	-7	5	0
Below Normal (24%)	10	4	-1	6	17	2	-7	7	8	-5	8	-1
Dry (17%)	4	0	1	7	14	-1	1	1	10	0	7	5
Critical (15%)	13	9	12	3	14	12	-13	-25	-17	-5	-19	8

Table U.1-59. Central Valley Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	271	156	528	560	571	542	360	449	477	624	454	333
20%	233	127	193	399	482	429	295	408	454	572	426	300
30%	204	115	114	218	227	267	256	388	425	529	392	263
40%	172	98	91	131	130	170	229	373	391	515	369	217
50%	157	75	68	84	86	138	215	350	354	491	349	185
60%	147	62	40	52	67	127	192	332	326	451	323	170
70%	134	46	19	41	39	108	178	292	310	423	299	145
80%	111	21	4	29	20	73	161	266	281	398	256	114
90%	85	-7	-21	2	1	45	128	222	234	305	221	81
Long Term												
Full Simulation Period	168	86	136	192	201	230	237	347	358	478	343	204
Water Year Types												
Wet (32%)	173	113	303	400	417	403	300	352	319	498	375	293
Above Normal (12%)	187	52	44	229	215	253	213	400	357	537	372	277
Below Normal (24%)	171	68	78	79	120	156	198	382	388	506	357	152
Dry (17%)	173	80	48	50	40	111	224	351	443	499	355	159
Critical (15%)	132	94	41	59	43	99	200	232	296	316	217	89

Table U.1-60. Central Valley Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	6	-1	1	-18	1	8	4	15	12	-1	18	8
20%	10	9	6	-4	-11	31	11	4	6	6	13	3
30%	2	13	9	-11	-30	49	18	6	7	-6	12	-9
40%	-4	19	-1	10	-10	34	15	4	9	-2	1	-5
50%	-5	11	-3	5	2	46	25	0	8	-4	-1	-5
60%	1	13	-12	1	6	49	17	0	5	0	3	3
70%	6	12	-11	-1	-1	45	20	-2	7	6	-3	-4
80%	9	10	-8	0	9	24	26	-13	9	10	-6	-6
90%	10	3	-2	-5	11	21	11	-23	-5	4	-5	-9
Long Term												
Full Simulation Period	4	7	-3	-3	1	26	16	-2	4	0	3	-4
Water Year Types												
Wet (32%)	2	3	1	-1	-7	-6	21	-6	7	1	8	-2
Above Normal (12%)	4	3	-11	-21	-3	38	22	2	7	-2	8	-5
Below Normal (24%)	2	10	-7	1	14	52	4	14	7	-2	6	0
Dry (17%)	4	6	2	3	11	28	0	1	6	3	4	2
Critical (15%)	12	11	-5	-8	-12	42	34	-28	-11	1	-22	-18

Table U.1-61. Central Valley Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	267	155	528	560	573	520	377	458	460	610	452	319
20%	223	127	212	407	486	415	295	402	429	561	423	301
30%	201	115	118	228	257	272	263	388	405	528	390	261
40%	172	101	88	150	144	172	241	366	376	509	368	222
50%	156	80	64	80	95	141	228	353	339	482	351	187
60%	146	56	38	55	66	127	206	325	322	440	319	169
70%	136	42	24	43	39	109	189	303	299	414	296	146
80%	113	16	7	30	18	74	164	266	273	386	264	115
90%	82	-16	-20	1	1	37	135	234	234	301	215	82
Long Term												
Full Simulation Period	167	87	136	195	206	231	246	348	348	470	341	202
Water Year Types												
Wet (32%)	174	117	306	403	418	405	304	353	316	496	374	293
Above Normal (12%)	182	54	43	235	218	243	236	407	343	529	365	271
Below Normal (24%)	169	67	82	80	122	157	214	385	370	496	353	151
Dry (17%)	171	77	44	48	40	114	226	343	428	482	346	159
Critical (15%)	130	92	40	66	64	98	204	239	291	311	226	85

Table U.1-62. Central Valley Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	3	-3	2	-18	3	-14	20	25	-5	-15	15	-5
20%	1	9	25	3	-7	17	10	-1	-19	-5	10	4
30%	-1	13	13	-1	0	53	25	6	-12	-7	11	-10
40%	-3	22	-4	28	4	36	27	-3	-6	-9	-1	-1
50%	-6	16	-6	1	10	49	38	3	-7	-12	1	-2
60%	0	7	-15	4	5	50	31	-7	1	-10	-1	2
70%	8	9	-7	1	-1	47	30	8	-3	-2	-7	-2
80%	10	5	-5	2	6	25	29	-13	0	-2	3	-5
90%	7	-6	-1	-7	11	12	18	-11	-4	0	-12	-8
Long Term												
Full Simulation Period	3	7	-2	0	5	26	25	-1	-6	-7	0	-5
Water Year Types												
Wet (32%)	4	8	3	2	-6	-4	25	-5	4	-1	7	-3
Above Normal (12%)	-1	5	-12	-15	0	28	46	9	-7	-10	1	-11
Below Normal (24%)	0	9	-3	2	17	53	20	17	-11	-12	2	-1
Dry (17%)	2	3	-2	1	10	31	2	-7	-8	-14	-4	2
Critical (15%)	10	9	-6	0	8	42	39	-21	-16	-5	-14	-23

Table U.1-63. Central Valley Project Net Generation, Monthly Generation, Alternative 3

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	298	231	560	599	655	608	481	667	457	613	516	358
20%	260	184	339	435	530	445	373	574	438	583	495	326
30%	225	152	231	309	346	303	307	499	418	566	455	301
40%	204	135	144	188	199	222	283	463	384	539	438	264
50%	188	124	126	137	167	185	261	418	349	514	415	220
60%	171	102	108	108	126	150	243	399	320	491	388	205
70%	151	85	95	84	97	136	225	370	296	438	356	180
80%	131	59	82	53	66	84	215	349	272	407	307	148
90%	109	31	57	31	27	36	182	280	246	324	267	133
Long Term												
Full Simulation Period	195	133	215	243	262	265	299	454	352	494	399	241
Water Year Types												
Wet (32%)	208	157	398	468	497	494	419	594	314	523	410	329
Above Normal (12%)	216	122	168	292	277	291	306	528	332	527	423	318
Below Normal (24%)	199	116	151	132	180	155	253	413	375	517	448	191
Dry (17%)	191	132	100	76	80	125	242	369	442	526	433	191
Critical (15%)	149	116	94	91	84	92	178	258	311	330	237	127

Table U.1-64. Central Valley Project Net Generation, Monthly Generation, Alternative 3 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	33	73	34	22	85	74	125	233	-8	-11	80	33
20%	37	66	152	32	37	47	89	171	-9	17	82	29
30%	23	50	126	80	89	85	69	117	1	30	76	29
40%	28	56	52	67	59	86	69	94	2	22	70	42
50%	27	59	55	58	83	93	71	68	3	20	65	31
60%	25	53	56	56	65	72	68	67	-2	40	67	38
70%	23	51	64	42	58	73	66	76	-6	22	54	31
80%	28	48	70	24	54	34	80	70	-1	20	46	28
90%	34	41	76	23	37	12	65	35	7	23	41	43
Long Term												
Full Simulation Period	32	53	76	48	61	61	78	105	-2	16	58	33
Water Year Types												
Wet (32%)	37	48	95	67	72	85	141	237	2	26	43	33
Above Normal (12%)	34	73	113	42	60	76	116	130	-18	-12	59	36
Below Normal (24%)	30	58	66	55	75	51	60	45	-6	9	97	39
Dry (17%)	22	58	54	29	51	42	18	19	5	31	83	34
Critical (15%)	29	33	49	25	29	35	12	-2	4	14	-3	20

Table U.1-65. Central Valley Project Net Generation, Monthly Generation, Alternative 4

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	245	156	539	582	566	535	333	422	476	609	432	266
20%	209	127	222	418	482	397	277	394	450	562	391	231
30%	180	111	143	257	277	218	233	378	431	533	363	211
40%	162	88	103	148	149	119	217	364	391	514	345	199
50%	152	78	88	90	83	84	193	345	355	490	333	180
60%	130	61	64	58	66	72	172	319	329	452	313	164
70%	120	47	50	44	37	61	144	284	311	418	284	143
80%	99	21	29	22	22	46	120	268	280	386	263	122
90%	85	-3	-1	1	-12	21	105	228	236	302	215	94
Long Term												
Full Simulation Period	156	89	159	198	204	197	213	342	360	474	329	187
Water Year Types												
Wet (32%)	162	116	325	409	419	390	263	353	321	497	344	250
Above Normal (12%)	159	59	93	241	216	200	183	390	359	534	330	216
Below Normal (24%)	162	70	102	78	120	104	190	359	390	501	359	153
Dry (17%)	152	84	62	49	25	81	224	347	445	487	352	160
Critical (15%)	135	92	58	76	73	62	152	245	302	317	221	115

Table U.1-66. Central Valley Project Net Generation, Monthly Generation, Alternative 4 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-20	-1	13	5	-4	1	-24	-12	11	-16	-5	-59
20%	-13	9	35	14	-11	0	-7	-9	3	-5	-23	-67
30%	-22	9	38	28	20	0	-5	-4	14	-3	-16	-60
40%	-13	9	11	27	10	-17	4	-5	9	-3	-23	-24
50%	-9	14	17	11	-1	-8	3	-5	9	-5	-16	-9
60%	-16	11	11	7	5	-6	-3	-13	8	1	-7	-3
70%	-8	13	19	2	-3	-1	-15	-10	8	2	-18	-6
80%	-3	10	17	-6	10	-4	-15	-12	7	-2	1	1
90%	11	7	18	-6	-2	-4	-12	-17	-3	1	-12	4
Long Term												
Full Simulation Period	-8	9	20	3	4	-7	-8	-7	7	-4	-12	-21
Water Year Types												
Wet (32%)	-9	7	22	8	-6	-19	-16	-5	9	-1	-23	-46
Above Normal (12%)	-24	10	37	-9	-2	-14	-7	-8	9	-5	-34	-65
Below Normal (24%)	-7	12	17	0	15	0	-3	-9	9	-7	8	0
Dry (17%)	-17	10	16	2	-5	-2	0	-3	9	-8	2	3
Critical (15%)	15	9	12	10	18	5	-13	-15	-5	1	-19	7

Table U.1-67. Annual Central Valley Project Net Generation

Statistic	Net Generation (GWh)														
	NAA	Alt1	Alt1 minus NAA	Alt2v1 wo TUCP	Alt2v1 wo TUCP minus NAA	Alt2v1 w TUCP	Alt2v1 w TUCP minus NAA	Alt2v2 no TUCP	Alt2v2 no TUCP minus NAA	Alt2v3 no TUCP	Alt2v3 no TUCP minus NAA	Alt3	Alt3 minus NAA	Alt4	Alt4 minus NAA
PROBABILITY OF EXCEEDANCE															
10%	4,253	4,000	-253	4,270	17	4,268	15	4,284	31	4,292	39	5,119	866	4,105	-148
20%	3,611	3,523	-88	3,624	13	3,624	13	3,654	43	3,666	55	4,496	885	3,514	-97
30%	3,354	3,214	-139	3,336	-17	3,330	-24	3,406	52	3,391	37	4,193	839	3,299	-55
40%	3,148	2,957	-190	3,094	-54	3,095	-53	3,228	81	3,207	59	3,820	672	3,096	-52
50%	2,827	2,817	-10	2,823	-4	2,848	21	2,884	57	2,901	75	3,376	549	2,863	37
60%	2,578	2,435	-143	2,621	43	2,622	43	2,700	121	2,657	79	3,096	517	2,545	-34
70%	2,366	2,211	-155	2,333	-33	2,333	-34	2,413	46	2,332	-35	2,808	442	2,312	-55
80%	2,000	1,942	-57	2,066	66	2,078	79	2,119	120	2,097	97	2,601	601	2,020	21
90%	1,821	1,785	-36	1,804	-17	1,863	42	1,859	38	1,839	18	2,086	265	1,828	7
LONG TERM															
Full Simulation Period	2,931	2,817	-114	2,930	-1	2,943	11	2,979	48	2,975	44	3,552	620	2,907	-25
WATER YEAR TYPES															
Wet (32%)	3,926	3,787	-138	3,904	-22	3,915	-10	3,946	20	3,960	34	4,811	885	3,849	-77
Above Normal (12%)	3,093	2,779	-313	3,044	-48	3,059	-34	3,135	43	3,124	31	3,801	709	2,981	-112
Below Normal (24%)	2,552	2,472	-81	2,571	18	2,601	49	2,654	102	2,647	94	3,131	578	2,588	35
Dry (17%)	2,461	2,380	-81	2,504	43	2,511	50	2,533	72	2,477	16	2,908	447	2,468	7
Critical (15%)	1,822	1,826	4	1,822	0	1,813	-9	1,819	-3	1,845	23	2,067	245	1,848	26

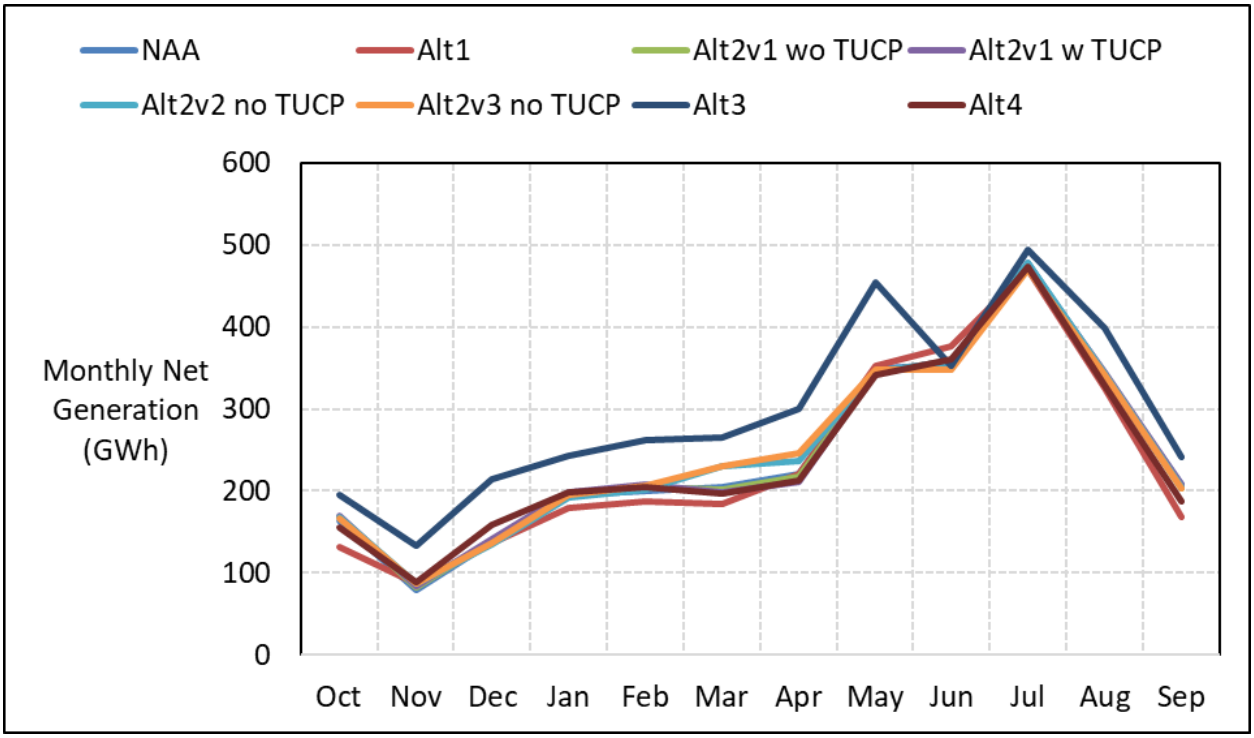

Figure U.1-57. Central Valley Project Net Generation, Long-Term Average Generation

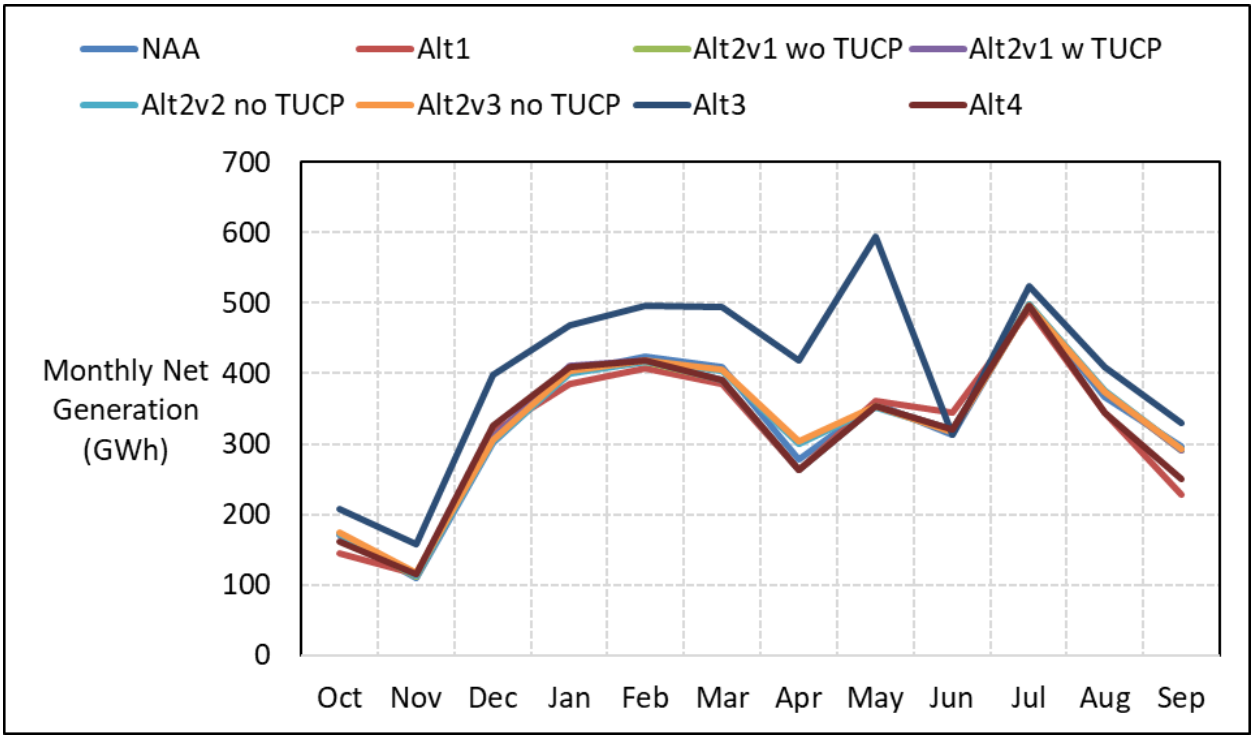

Figure U.1-58. Central Valley Project Net Generation, Wet Year Average Generation

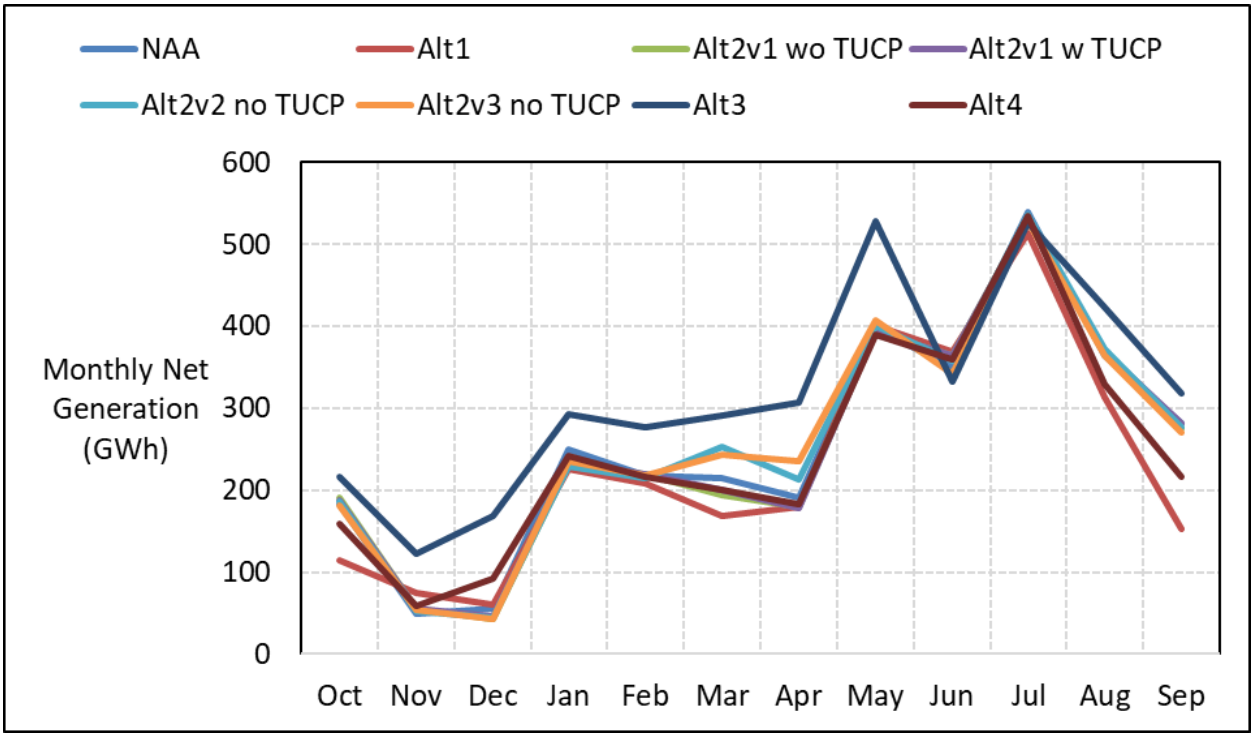

Figure U.1-59. Central Valley Project Net Generation, Above Normal Year Average Generation

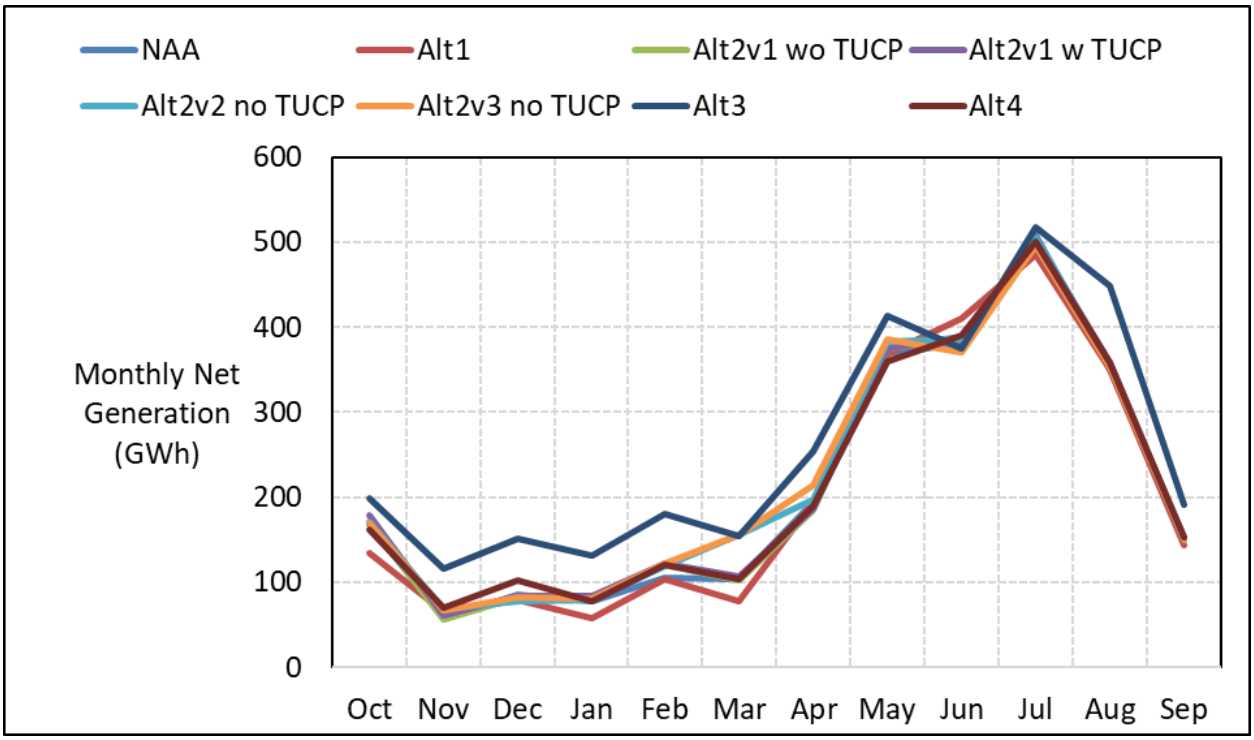

Figure U.1-60. Central Valley Project Net Generation, Below Normal Year Average Generation

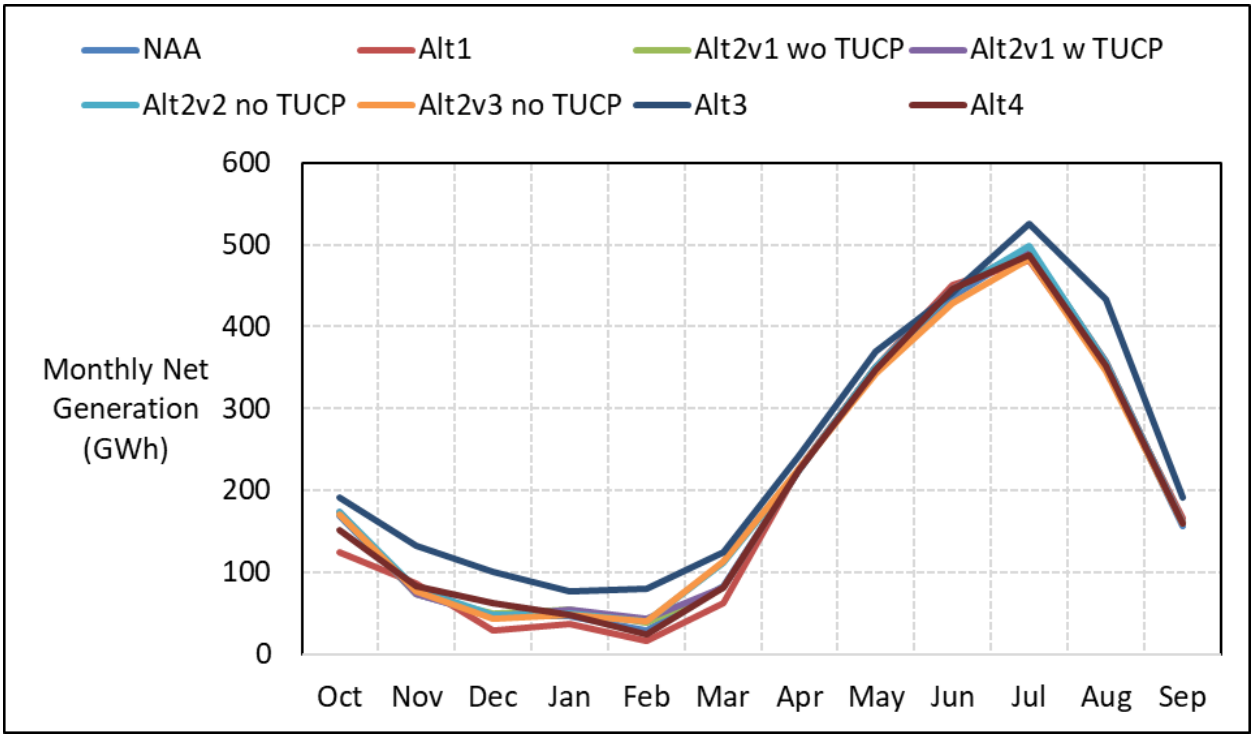

Figure U.1-61. Central Valley Project Net Generation, Dry Year Average Generation

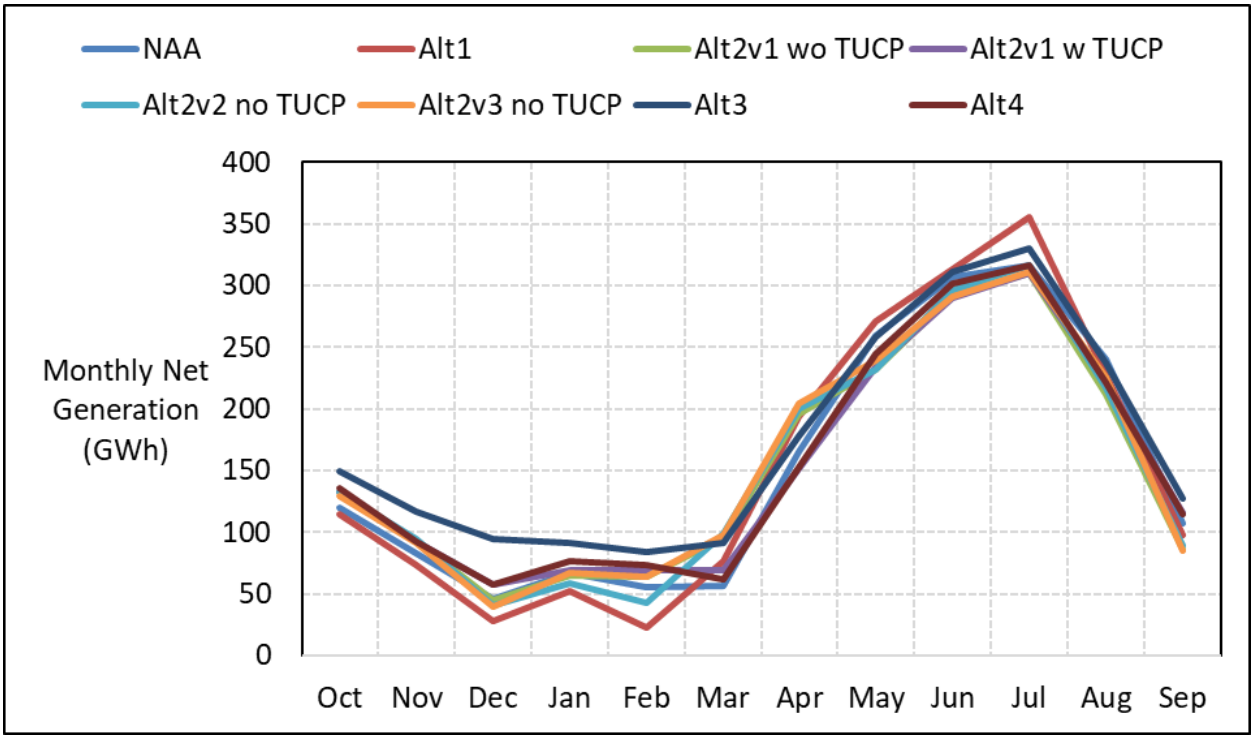

Figure U.1-62. Central Valley Project Net Generation, Critical Year Average Generation

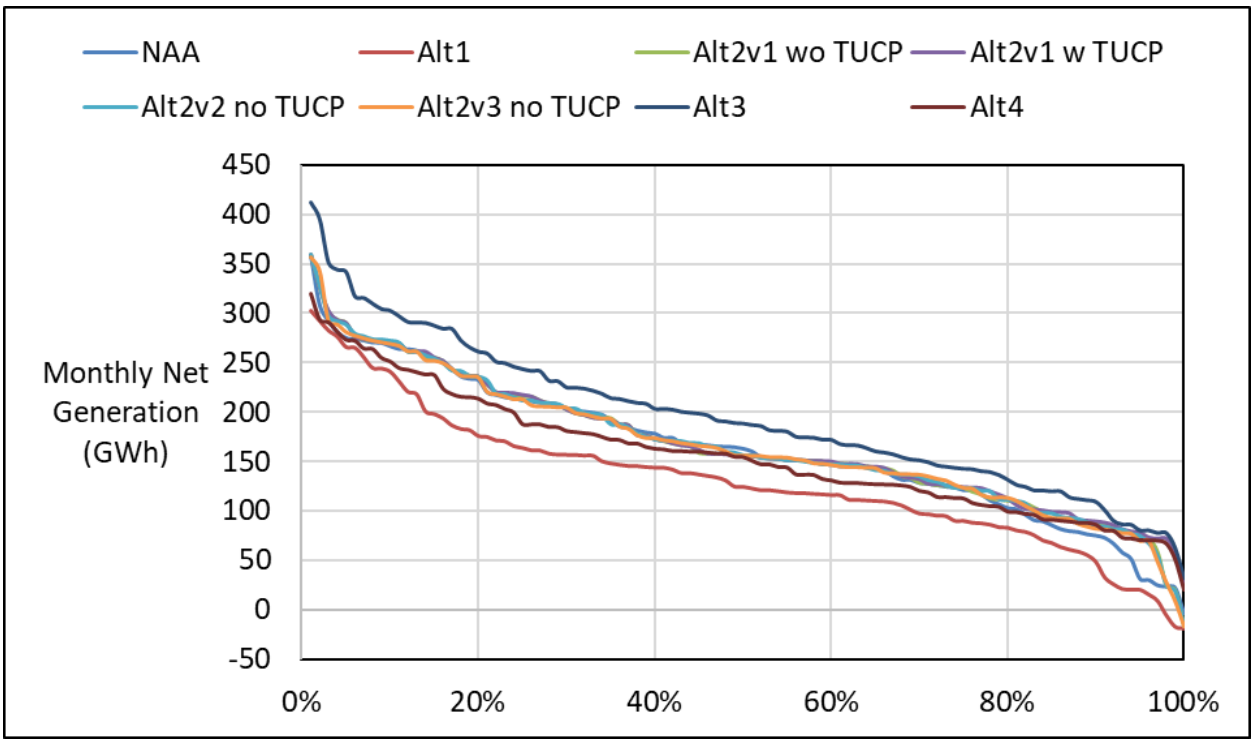

Figure U.1-63. Central Valley Project Net Generation, October

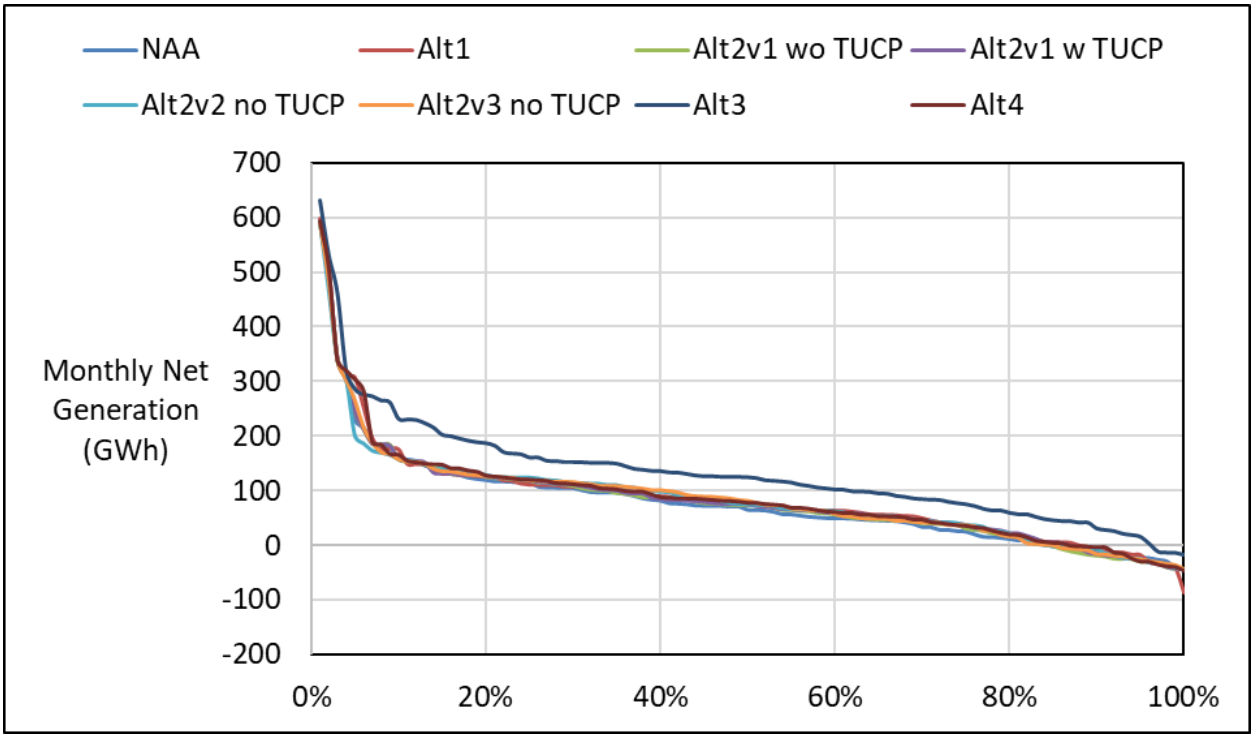

Figure U.1-64. Central Valley Project Net Generation, November

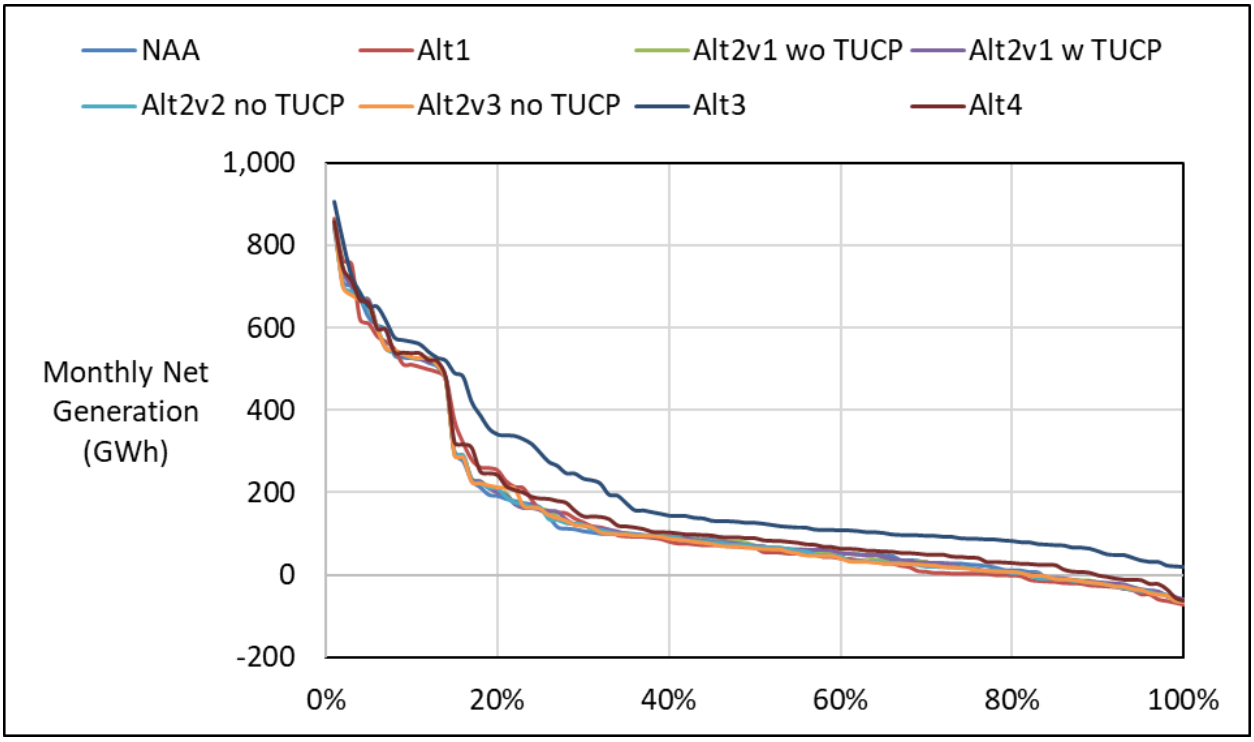

Figure U.1-65. Central Valley Project Net Generation, December

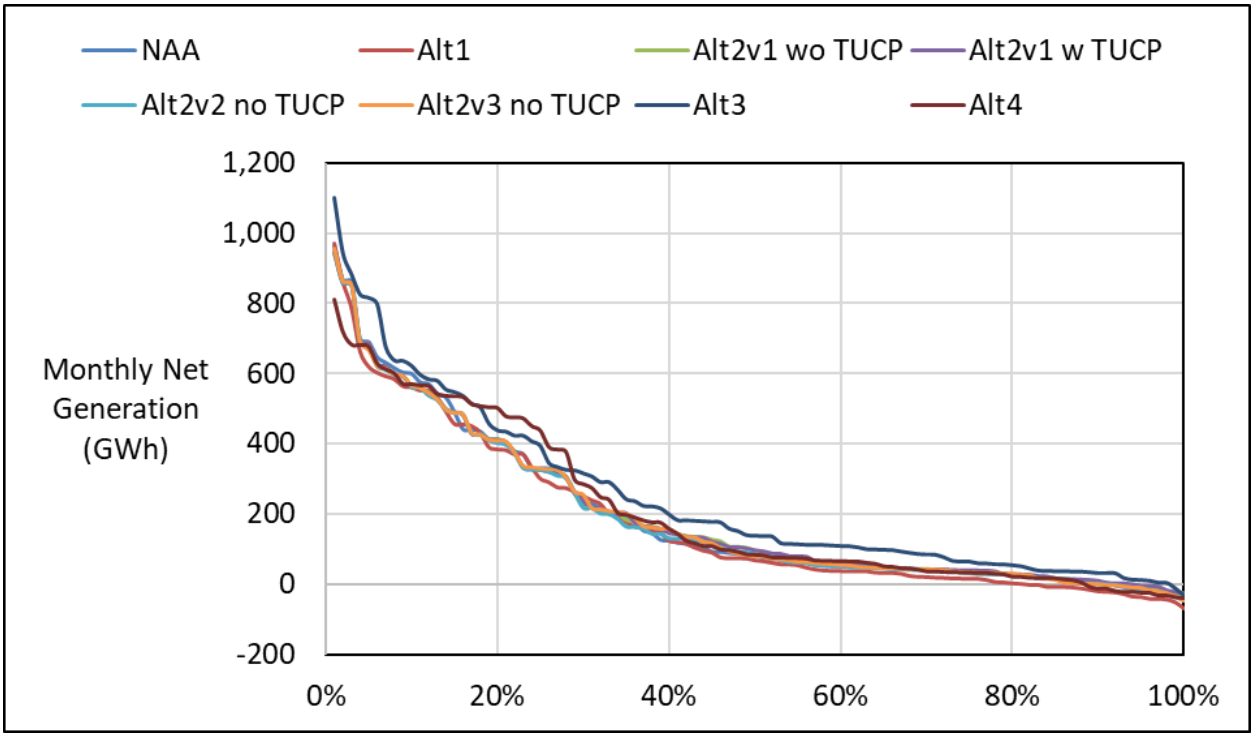

Figure U.1-66. Central Valley Project Net Generation, January

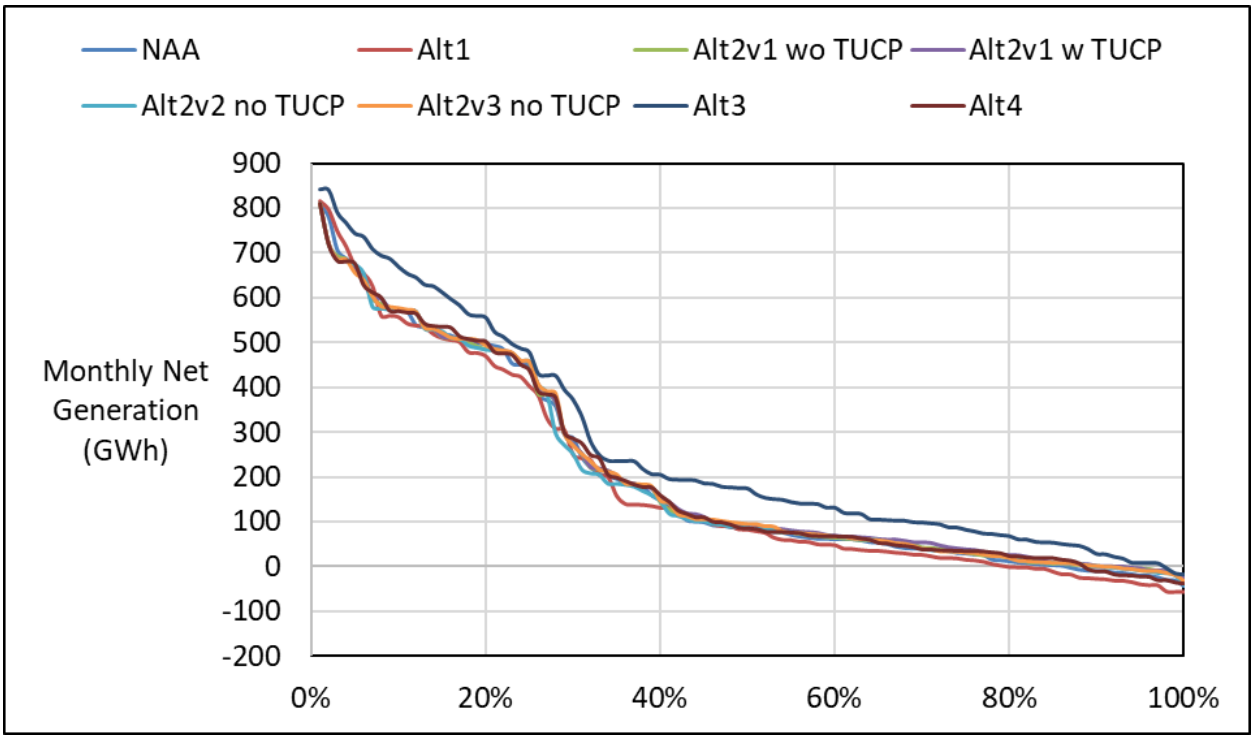

Figure U.1-67. Central Valley Project Net Generation, February

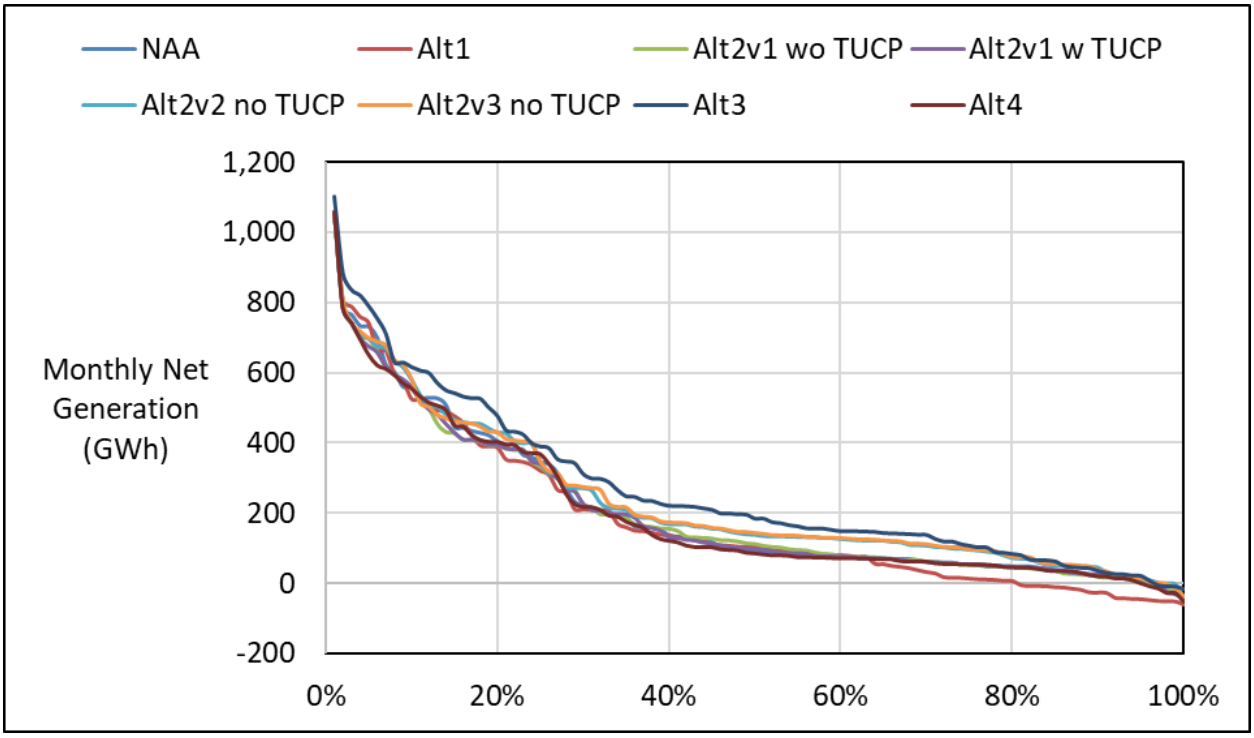

Figure U.1-68. Central Valley Project Net Generation, March

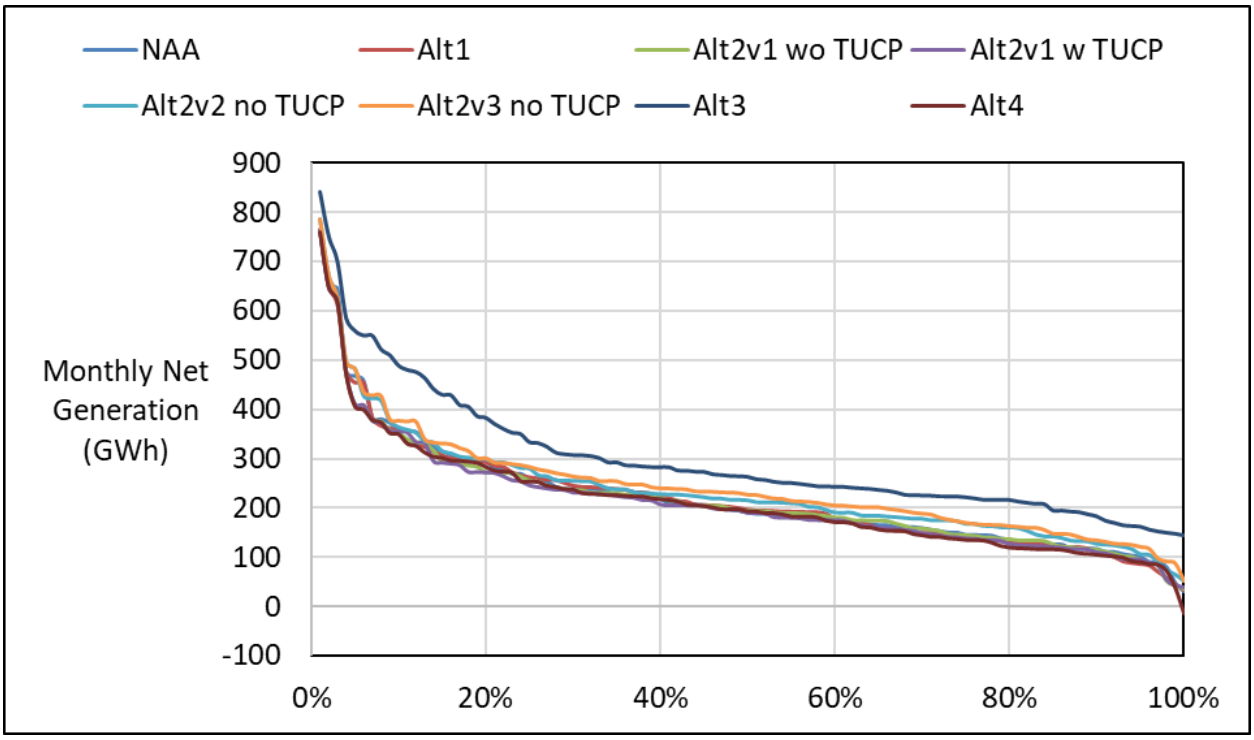

Figure U.1-69. Central Valley Project Net Generation, April

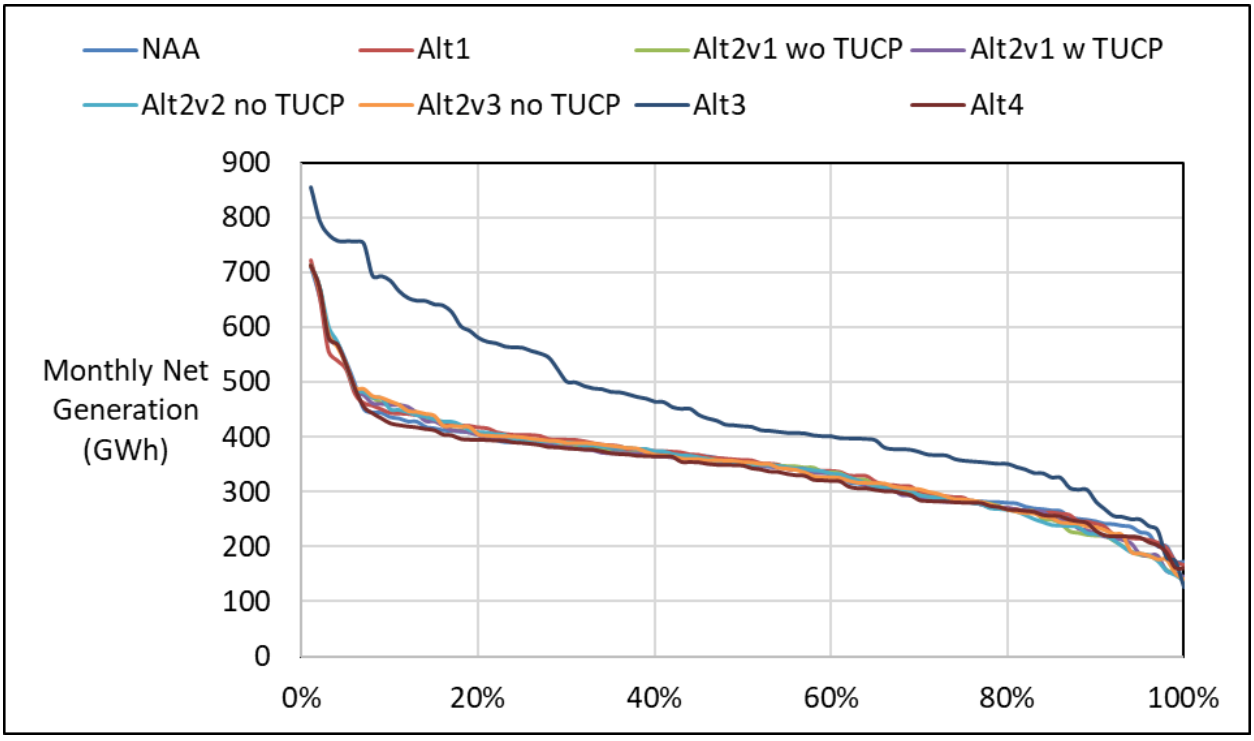

Figure U.1-70. Central Valley Project Net Generation, May

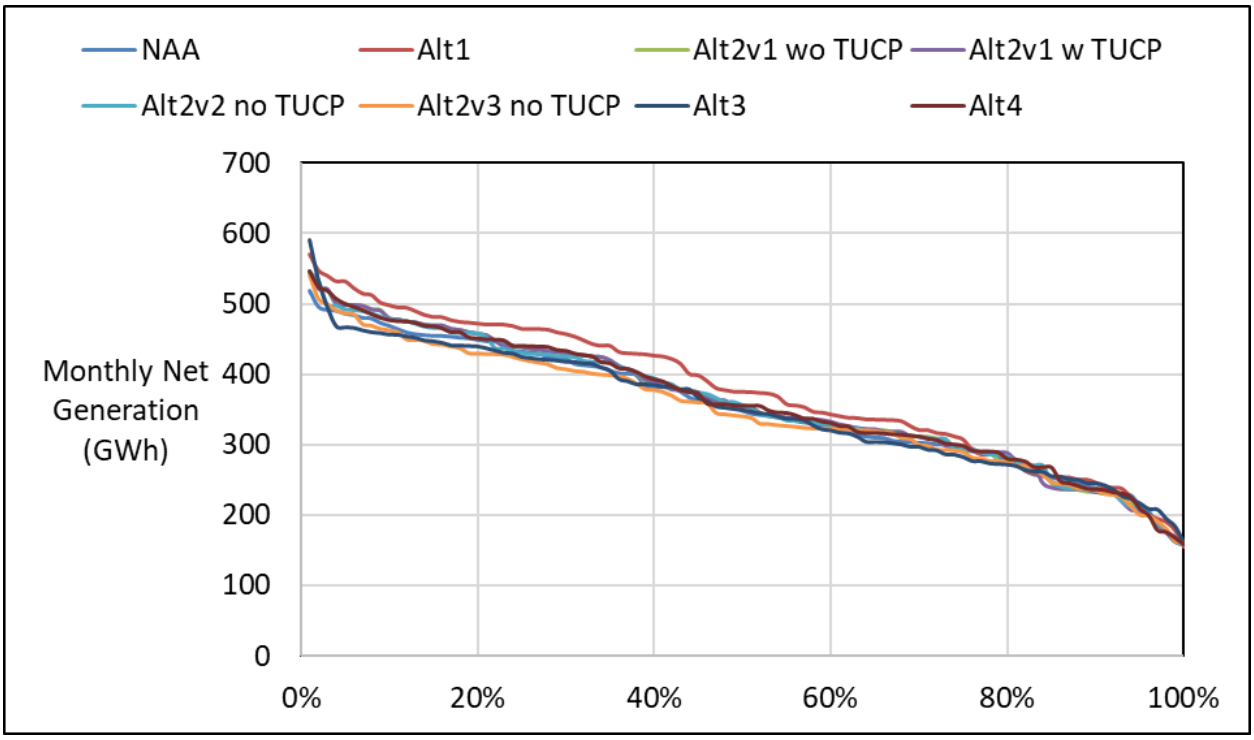

Figure U.1-71. Central Valley Project Net Generation, June

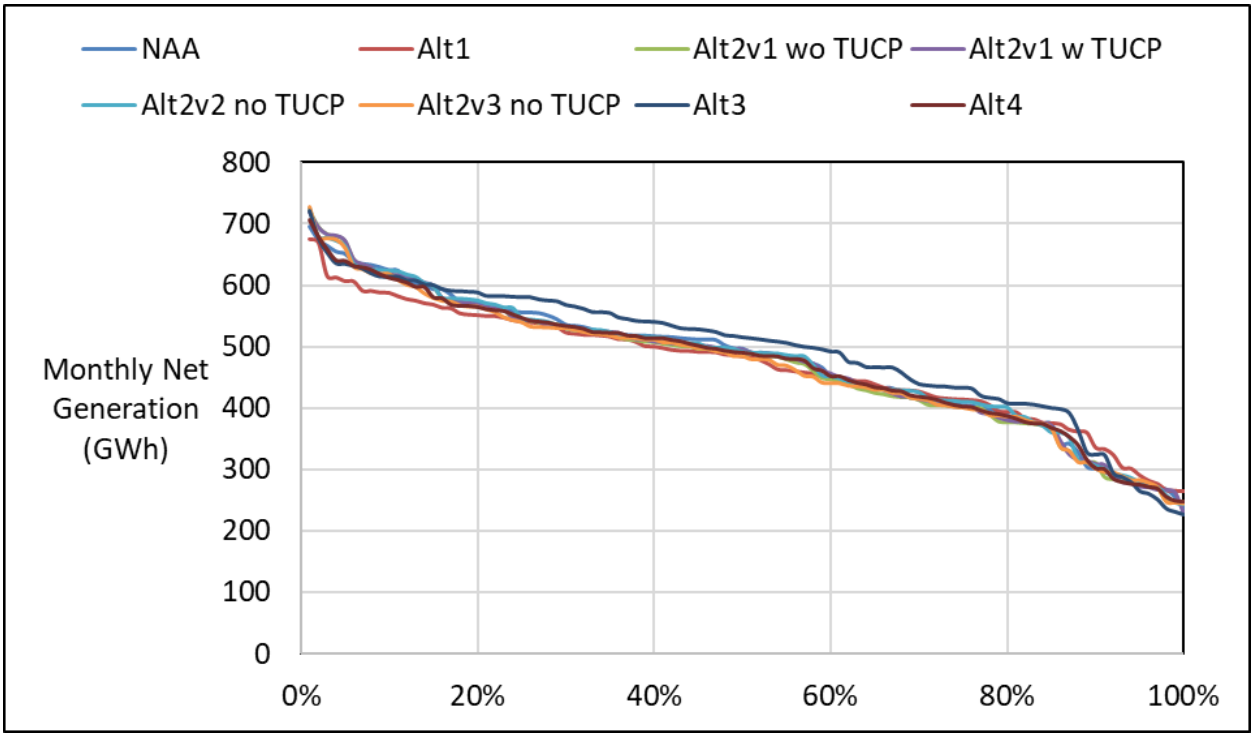

Figure U.1-72. Central Valley Project Net Generation, July

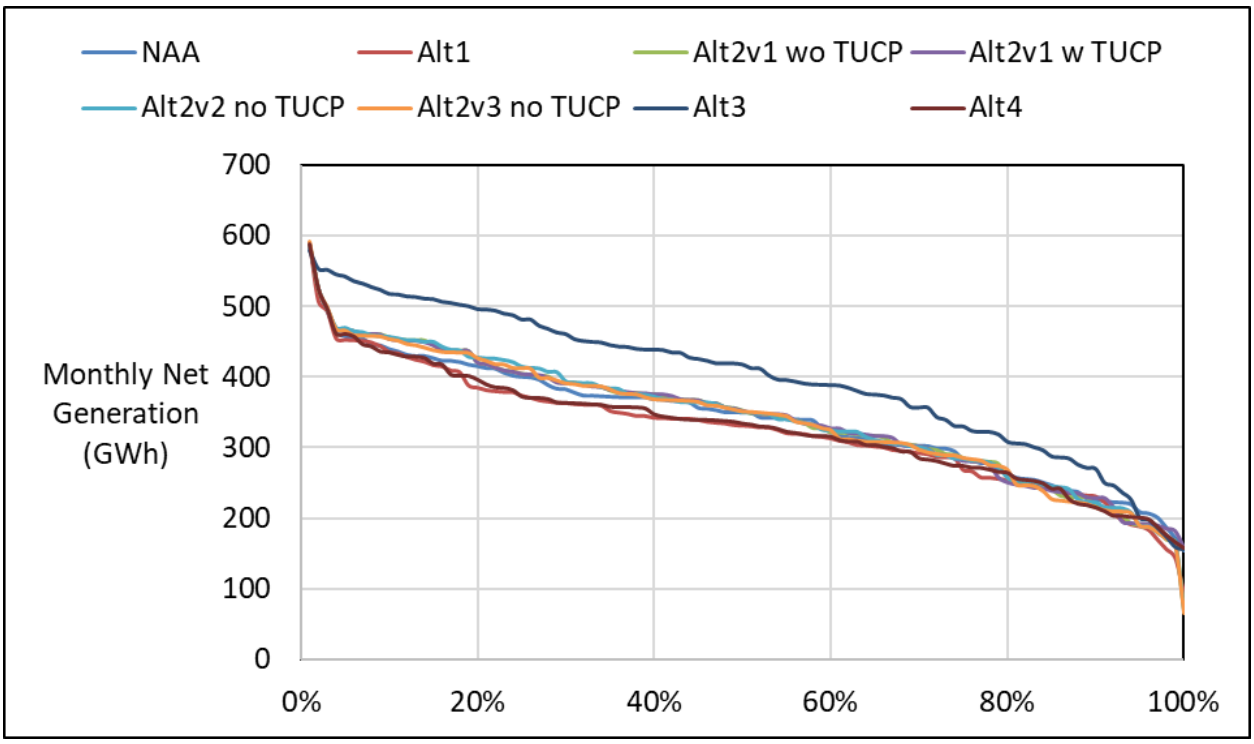

Figure U.1-73. Central Valley Project Net Generation, August

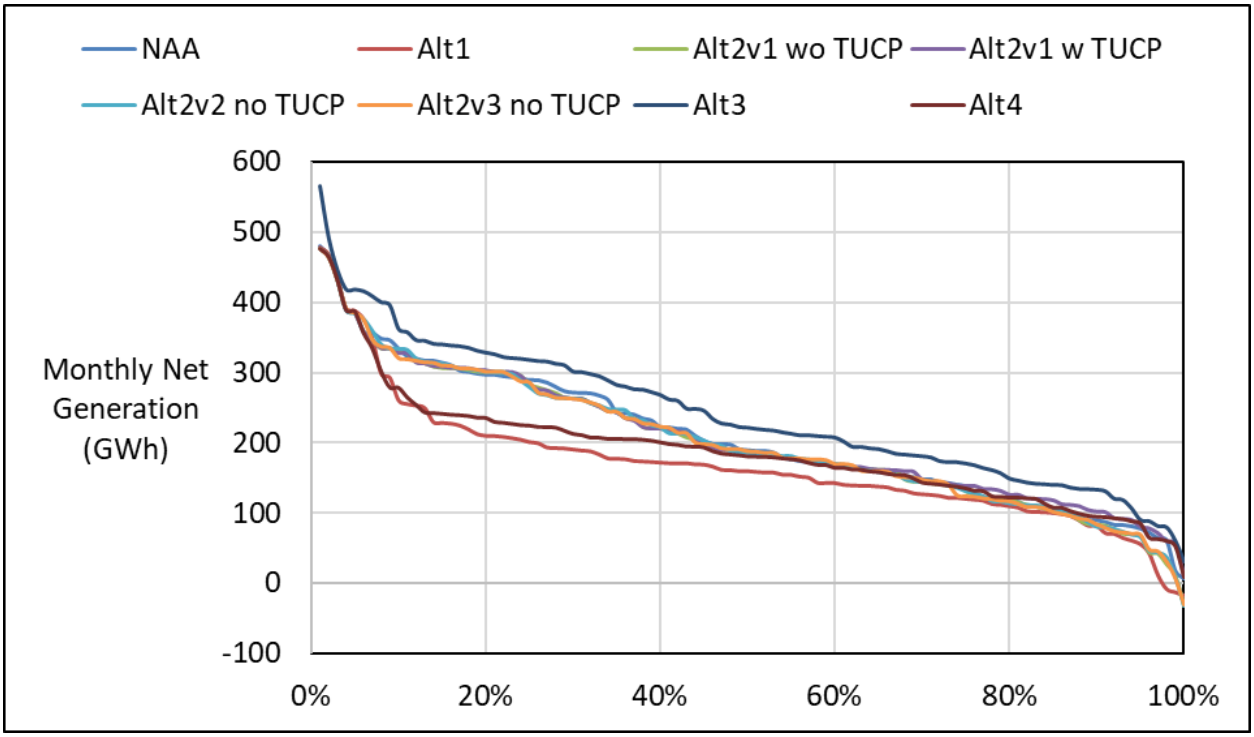

Figure U.1-74. Central Valley Project Net Generation, September

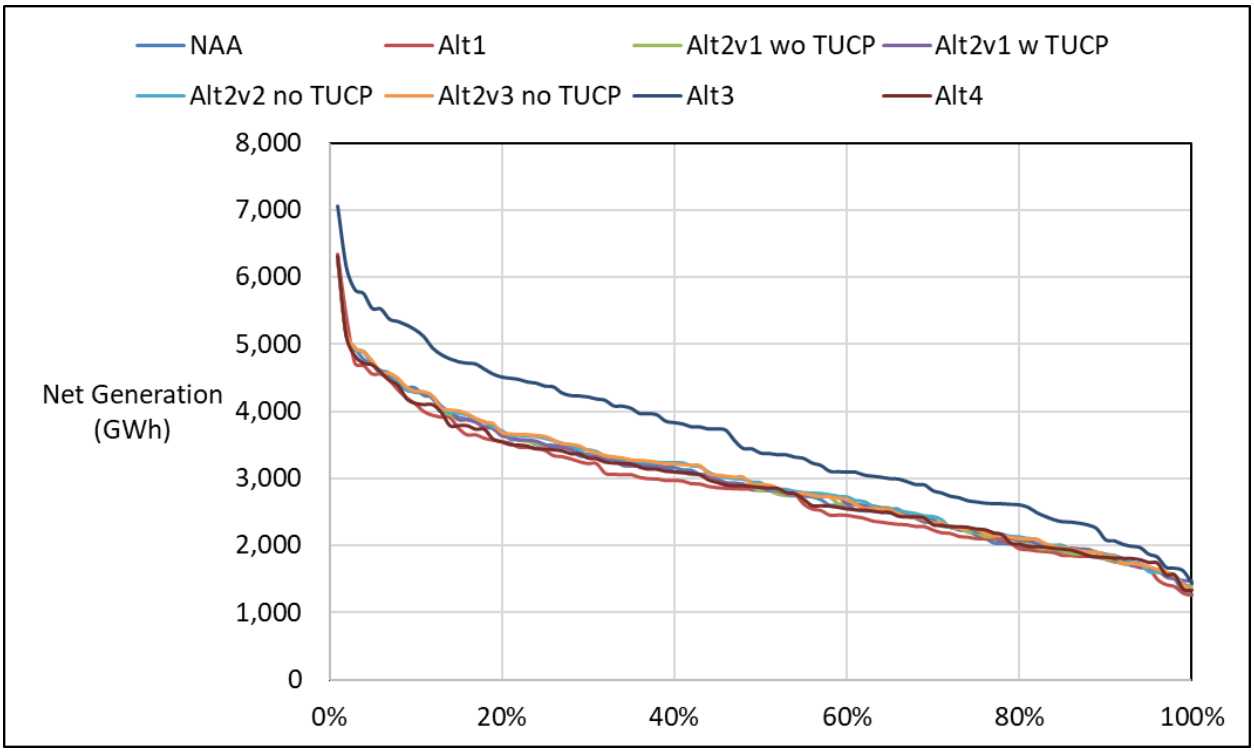

Figure U.1-75. October–September Central Valley Project Net Generation

Table U.1-68. State Water Project Total Capacity, Monthly Capacity, No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	613	523	589	1,117	1,284	1,266	958	776	819	1,040	886	738
20%	587	483	450	593	1,070	1,047	698	687	755	984	844	656
30%	548	468	414	489	621	754	602	637	731	966	815	499
40%	494	427	401	391	484	549	499	611	713	929	771	466
50%	459	393	384	312	366	401	482	587	694	896	691	438
60%	409	365	354	264	280	345	462	540	658	828	545	343
70%	333	318	303	207	230	285	422	493	627	599	404	296
80%	261	238	250	171	174	241	332	441	560	505	374	244
90%	196	175	169	136	151	199	260	346	440	398	306	181
Long Term												
Full Simulation Period	431	387	405	444	546	595	558	578	664	782	620	433
Water Year Types												
Wet (32%)	468	453	560	757	1,032	1,072	846	732	767	982	829	628
Above Normal (12%)	478	401	375	403	559	723	572	644	718	960	828	587
Below Normal (24%)	447	374	352	338	346	357	466	588	701	830	594	367
Dry (17%)	422	371	334	269	225	274	394	449	612	567	405	259
Critical (15%)	297	274	263	174	179	222	264	325	400	381	292	195

Table U.1-69. State Water Project Total Capacity, Monthly Capacity, Alternative 1

	Monthly Capacity (MW)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	636	566	691	1,197	1,453	1,514	1,024	859	917	1,077	909	705
20%	608	521	510	783	1,206	1,212	760	795	875	1,047	872	577
30%	576	505	469	639	882	955	683	723	853	1,018	847	547
40%	529	468	436	541	622	748	584	679	816	989	810	493
50%	475	434	408	441	528	594	548	655	789	950	719	448
60%	420	371	386	315	397	445	519	640	772	854	640	416
70%	342	307	350	237	304	386	486	603	724	717	475	338
80%	276	274	289	187	217	321	459	527	625	518	413	282
90%	179	170	196	152	178	250	358	432	517	437	361	227
Long Term												
Full Simulation Period	449	412	446	531	653	721	633	659	760	833	660	448
Water Year Types												
Wet (32%)	460	477	630	854	1,141	1,233	917	806	855	1,023	830	571
Above Normal (12%)	504	425	449	559	689	826	638	757	868	1,018	865	614
Below Normal (24%)	482	412	381	426	495	520	529	655	797	887	674	432
Dry (17%)	433	374	349	330	314	369	499	569	717	633	472	321
Critical (15%)	347	304	265	214	221	262	339	374	464	418	328	223

Table U.1-70. State Water Project Total Capacity, Monthly Capacity, Alternative 1 minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	23	43	102	80	169	247	66	83	97	37	24	-33
20%	21	38	60	189	136	164	62	108	120	62	28	-79
30%	28	37	54	150	262	201	81	86	122	52	32	48
40%	35	42	34	150	138	199	86	68	103	60	39	27
50%	16	41	25	130	163	193	67	68	95	55	28	10
60%	11	6	32	52	118	99	57	100	114	25	95	73
70%	8	-10	47	30	74	100	64	110	98	119	70	42
80%	16	35	40	17	43	80	127	86	65	13	39	38
90%	-17	-5	27	16	26	51	99	86	77	39	56	46
Long Term												
Full Simulation Period	18	25	41	87	108	125	75	81	96	50	41	15
Water Year Types												
Wet (32%)	-8	24	70	96	109	161	71	74	88	41	1	-58
Above Normal (12%)	26	24	73	156	130	103	66	113	149	57	37	27
Below Normal (24%)	35	39	29	87	149	163	63	67	96	56	80	65
Dry (17%)	11	3	14	62	89	96	105	120	105	66	67	62
Critical (15%)	50	31	2	39	42	40	74	49	63	38	36	28

Table U.1-71. State Water Project Total Capacity, Monthly Capacity, Alternative 2v1 Without TUCP

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	637	530	613	1,099	1,308	1,288	962	829	842	1,046	899	745
20%	583	482	453	625	1,045	1,065	714	702	778	1,004	863	658
30%	545	465	428	524	616	746	616	653	755	973	824	532
40%	508	435	403	417	524	595	523	631	727	937	790	480
50%	467	419	375	334	368	419	491	584	698	896	714	439
60%	411	374	333	289	274	336	465	534	671	819	548	347
70%	323	312	303	203	219	292	428	506	629	625	398	292
80%	250	238	236	166	180	237	332	426	557	487	362	250
90%	179	167	173	135	155	190	271	306	429	390	306	187
Long Term												
Full Simulation Period	434	392	406	462	555	598	568	585	677	785	628	442
Water Year Types												
Wet (32%)	474	462	569	784	1,048	1,096	866	755	794	994	844	640
Above Normal (12%)	452	403	382	434	553	672	574	656	735	973	840	616
Below Normal (24%)	455	384	351	346	361	367	471	594	715	835	608	371
Dry (17%)	446	375	335	280	235	266	381	439	604	540	392	265
Critical (15%)	287	264	245	188	180	223	297	318	405	385	296	195

Table U.1-72. State Water Project Total Capacity, Monthly Capacity, Alternative 2v1 Without TUCP minus No Action Alternative

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	24	6	24	-18	24	21	4	53	22	6	14	7
20%	-4	-1	3	31	-25	18	15	15	23	20	19	2
30%	-4	-3	14	35	-5	-8	13	16	24	7	9	33
40%	14	8	2	26	41	46	24	20	14	8	19	13
50%	8	27	-9	22	3	18	9	-3	4	1	23	2
60%	2	9	-21	25	-6	-9	3	-6	12	-9	4	5
70%	-10	-5	0	-4	-11	7	6	13	2	27	-7	-4
80%	-11	-1	-14	-4	7	-4	0	-15	-3	-18	-12	6
90%	-18	-8	4	-1	4	-8	12	-40	-12	-8	0	6
Long Term												
Full Simulation Period	3	5	1	18	10	3	10	7	14	3	8	9
Water Year Types												
Wet (32%)	6	9	10	27	16	25	20	23	27	12	14	11
Above Normal (12%)	-26	3	6	31	-6	-51	2	11	16	12	12	29
Below Normal (24%)	8	10	-1	8	15	10	5	6	15	5	15	4
Dry (17%)	24	4	1	11	10	-8	-13	-9	-8	-27	-13	6
Critical (15%)	-10	-10	-18	13	1	1	33	-7	5	4	4	0

Table U.1-73. State Water Project Total Capacity, Monthly Capacity, Alternative 2v1 With TUCP

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	637	529	610	1,083	1,308	1,288	962	836	843	1,045	901	745
20%	581	480	458	629	1,044	1,065	716	714	780	1,005	863	658
30%	546	465	430	524	616	765	625	656	756	975	825	541
40%	513	445	409	422	524	596	531	631	728	941	791	480
50%	475	423	383	333	376	404	492	584	703	901	734	441
60%	432	385	335	282	274	341	474	547	676	832	572	353
70%	327	313	308	209	224	285	428	511	632	638	403	302
80%	260	250	249	167	193	249	349	440	557	503	381	253
90%	193	183	176	135	161	199	266	336	452	385	314	189
Long Term												
Full Simulation Period	440	397	412	462	559	602	570	589	679	790	635	445
Water Year Types												
Wet (32%)	477	461	571	781	1,048	1,097	865	756	794	993	843	640
Above Normal (12%)	475	418	386	432	561	689	577	659	737	974	838	621
Below Normal (24%)	455	390	351	349	365	373	483	598	720	853	630	376
Dry (17%)	447	378	335	279	240	269	385	441	607	547	394	266
Critical (15%)	303	273	277	192	188	221	285	334	407	385	308	198

Table U.1-74. State Water Project Total Capacity, Monthly Capacity, Alternative 2v1 With TUCP minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	24	6	21	-33	24	22	4	60	23	5	15	7
20%	-6	-3	8	36	-26	18	18	27	26	21	19	2
30%	-3	-3	15	35	-5	11	23	19	25	9	10	42
40%	19	18	8	31	41	47	32	20	15	12	20	13
50%	16	30	-1	21	11	2	11	-3	9	5	43	4
60%	23	20	-19	19	-6	-4	12	8	17	3	27	10
70%	-6	-5	5	2	-6	0	6	18	6	39	-1	5
80%	0	11	0	-3	19	8	17	-2	-3	-2	7	9
90%	-4	8	7	-1	10	0	6	-10	12	-13	8	8
Long Term												
Full Simulation Period	10	10	7	18	14	7	12	12	15	8	15	12
Water Year Types												
Wet (32%)	9	8	11	24	16	25	19	24	27	11	14	12
Above Normal (12%)	-3	17	11	29	2	-34	5	15	19	14	10	34
Below Normal (24%)	8	17	-1	11	19	16	17	10	19	23	36	8
Dry (17%)	25	8	1	10	15	-5	-9	-8	-5	-20	-10	7
Critical (15%)	6	-1	13	18	9	-1	21	9	7	4	16	3

Table U.1-75. State Water Project Total Capacity, Monthly Capacity, Alternative 2v2 Without TUCP

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	641	545	610	1,125	1,335	1,283	963	838	844	1,053	898	757
20%	589	491	452	657	1,051	1,000	697	716	775	1,014	848	660
30%	548	463	424	528	628	744	578	649	743	967	829	548
40%	497	438	395	413	527	538	506	622	728	939	780	485
50%	463	413	375	333	378	408	492	570	700	892	682	412
60%	416	375	342	278	276	335	450	531	663	832	593	352
70%	350	319	313	205	214	282	388	485	624	578	446	299
80%	248	228	242	165	176	242	330	414	549	513	391	254
90%	192	180	168	143	154	211	296	337	449	412	322	206
Long Term												
Full Simulation Period	442	395	404	458	558	600	560	582	673	791	638	449
Water Year Types												
Wet (32%)	485	459	567	772	1,061	1,097	857	760	796	998	844	649
Above Normal (12%)	477	411	375	423	545	656	559	651	737	965	828	624
Below Normal (24%)	456	386	349	355	362	365	455	576	699	833	636	372
Dry (17%)	445	379	333	289	236	276	381	432	593	560	421	273
Critical (15%)	295	280	248	172	178	235	297	325	406	408	297	208

Table U.1-76. State Water Project Total Capacity, Monthly Capacity, Alternative 2v2 Without TUCP minus No Action Alternative

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	28	21	21	8	51	17	4	63	25	13	12	18
20%	2	8	2	63	-19	-47	-1	29	20	30	4	4
30%	-1	-4	10	39	7	-10	-25	13	12	1	13	49
40%	3	11	-6	22	43	-10	8	10	15	10	9	19
50%	4	20	-8	21	13	6	10	-17	6	-3	-10	-25
60%	7	9	-12	14	-3	-11	-12	-8	5	4	48	10
70%	17	2	10	-2	-15	-3	-34	-8	-2	-20	42	2
80%	-12	-10	-8	-5	3	1	-2	-28	-11	8	17	10
90%	-5	6	0	7	3	12	36	-9	9	14	16	25
Long Term												
Full Simulation Period	11	8	-1	14	13	4	2	4	9	9	18	16
Water Year Types												
Wet (32%)	16	6	8	14	29	25	11	28	29	16	15	20
Above Normal (12%)	-1	11	-1	20	-14	-67	-13	7	19	4	0	38
Below Normal (24%)	9	12	-3	17	16	8	-11	-12	-2	3	42	5
Dry (17%)	23	8	-1	20	11	2	-13	-17	-19	-7	16	14
Critical (15%)	-2	6	-16	-2	-2	13	33	0	6	28	5	13

Table U.1-77. State Water Project Total Capacity, Monthly Capacity, Alternative 2v3 Without TUCP

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	642	542	589	1,115	1,326	1,281	963	839	836	1,046	900	754
20%	589	488	445	638	1,052	990	723	727	756	992	861	657
30%	552	462	414	530	630	737	584	662	730	963	823	528
40%	501	432	402	412	519	555	529	623	713	936	777	489
50%	462	410	376	325	375	410	508	582	681	883	690	413
60%	415	371	339	266	280	336	478	539	657	831	578	350
70%	348	318	312	209	223	278	418	499	620	579	440	298
80%	261	232	228	155	186	242	342	414	526	500	395	259
90%	209	181	168	139	151	209	297	334	436	418	323	203
Long Term												
Full Simulation Period	441	394	403	456	560	596	573	587	662	784	636	447
Water Year Types												
Wet (32%)	484	459	566	770	1,059	1,089	860	759	790	996	844	642
Above Normal (12%)	475	412	375	430	546	648	580	668	712	959	833	619
Below Normal (24%)	458	385	346	352	365	364	479	583	680	820	633	376
Dry (17%)	443	375	334	280	239	277	406	444	588	544	411	272
Critical (15%)	294	277	246	176	184	234	294	322	402	405	296	205

Table U.1-78. State Water Project Total Capacity, Monthly Capacity, Alternative 2v3 Without TUCP minus No Action Alternative

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	29	19	0	-2	42	14	4	63	16	6	14	16
20%	2	5	-5	45	-18	-58	25	40	1	7	17	1
30%	3	-5	-1	41	10	-17	-18	25	-1	-3	8	29
40%	7	6	1	21	35	7	31	12	0	7	6	23
50%	3	17	-8	13	10	9	27	-4	-13	-12	-2	-25
60%	6	5	-15	2	1	-9	16	-1	-2	2	34	7
70%	15	1	9	2	-7	-7	-3	6	-6	-20	36	2
80%	1	-7	-22	-15	12	1	10	-27	-33	-5	21	16
90%	13	7	-1	4	-1	11	38	-12	-5	20	17	21
Long Term												
Full Simulation Period	11	7	-2	13	15	0	15	9	-2	2	17	14
Water Year Types												
Wet (32%)	16	6	7	12	27	17	14	26	23	14	15	14
Above Normal (12%)	-2	11	0	27	-13	-75	9	24	-6	-1	5	33
Below Normal (24%)	11	11	-6	14	19	7	14	-6	-20	-10	39	8
Dry (17%)	21	4	0	12	14	3	11	-5	-24	-22	6	12
Critical (15%)	-3	4	-17	1	4	12	30	-3	1	25	4	11

Table U.1-79. State Water Project Total Capacity, Monthly Capacity, Alternative 3

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	525	458	934	1,029	1,163	1,207	916	887	611	580	510	449
20%	468	386	579	700	914	906	705	771	589	555	469	402
30%	407	333	442	446	612	726	627	691	561	526	439	376
40%	347	304	375	326	428	526	569	612	534	494	422	357
50%	267	278	321	246	302	425	461	499	496	450	367	302
60%	234	238	270	205	253	352	395	421	465	408	319	238
70%	193	215	235	184	201	295	340	376	424	378	287	199
80%	155	181	197	163	179	243	313	349	385	348	269	140
90%	115	148	165	140	143	189	262	284	331	308	236	104
Long Term												
Full Simulation Period	314	308	418	410	488	553	529	549	487	461	369	291
Water Year Types												
Wet (32%)	370	393	670	744	904	931	819	808	583	589	472	430
Above Normal (12%)	334	287	340	385	525	667	578	646	492	463	386	362
Below Normal (24%)	320	300	345	270	313	400	432	462	458	418	342	252
Dry (17%)	297	271	289	190	207	270	340	379	480	404	312	180
Critical (15%)	191	195	201	191	166	218	244	251	330	317	246	129

Table U.1-80. State Water Project Total Capacity, Monthly Capacity, Alternative 3 minus No Action Alternative

Statistic	Monthly Capacity (MW)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-88	-65	345	-88	-120	-60	-42	112	-208	-460	-376	-289
20%	-119	-96	129	106	-156	-141	6	84	-166	-429	-374	-254
30%	-141	-135	27	-43	-9	-28	25	55	-170	-440	-376	-123
40%	-147	-122	-26	-65	-56	-23	70	1	-179	-435	-349	-110
50%	-192	-114	-62	-66	-64	24	-20	-88	-198	-445	-324	-135
60%	-175	-127	-84	-59	-26	7	-67	-119	-194	-421	-226	-105
70%	-140	-103	-68	-23	-29	10	-82	-117	-203	-221	-117	-97
80%	-105	-58	-53	-7	5	2	-19	-93	-174	-157	-104	-104
90%	-81	-27	-4	4	-8	-10	2	-62	-109	-90	-70	-77
Long Term												
Full Simulation Period	-116	-79	13	-34	-58	-43	-28	-29	-177	-321	-250	-142
Water Year Types												
Wet (32%)	-98	-60	111	-13	-128	-141	-27	75	-184	-393	-358	-199
Above Normal (12%)	-144	-114	-35	-18	-33	-56	6	2	-226	-497	-442	-225
Below Normal (24%)	-127	-74	-7	-69	-33	43	-34	-126	-243	-412	-252	-116
Dry (17%)	-125	-100	-45	-78	-18	-4	-54	-70	-132	-162	-93	-79
Critical (15%)	-106	-78	-62	16	-14	-4	-20	-74	-70	-64	-45	-66

Table U.1-81. State Water Project Total Capacity, Monthly Capacity, Alternative 4

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	651	546	670	1,134	1,285	1,238	962	835	832	1,049	875	676
20%	581	509	497	637	1,086	1,067	708	709	778	1,016	836	560
30%	542	468	438	543	687	770	611	652	749	966	816	496
40%	512	446	416	437	539	634	536	620	731	942	777	464
50%	483	424	397	328	395	420	500	593	705	909	720	436
60%	426	390	357	277	284	356	468	553	688	858	617	367
70%	341	336	316	231	231	299	441	524	655	702	429	316
80%	265	275	243	166	193	267	358	472	575	521	391	272
90%	183	175	175	138	154	198	291	356	442	400	330	186
Long Term												
Full Simulation Period	444	406	426	474	573	618	575	594	685	804	633	424
Water Year Types												
Wet (32%)	489	476	605	798	1,051	1,099	861	755	793	994	810	560
Above Normal (12%)	466	424	388	438	579	709	578	666	731	976	826	610
Below Normal (24%)	451	397	360	365	404	408	488	592	721	872	652	387
Dry (17%)	444	392	343	284	248	285	409	466	633	587	422	284
Critical (15%)	318	273	277	203	189	229	292	340	420	397	313	199

Table U.1-82. State Water Project Total Capacity, Monthly Capacity, Alternative 4 minus No Action Alternative

	Monthly Capacity (MW)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	38	22	81	17	1	-28	4	60	12	9	-11	-62
20%	-6	26	48	43	16	19	10	22	23	31	-8	-96
30%	-6	0	24	55	66	16	9	15	18	0	1	-3
40%	18	19	15	46	55	85	37	8	19	13	6	-2
50%	24	31	13	16	30	18	18	6	11	13	29	-1
60%	17	24	3	14	5	11	6	13	30	29	72	25
70%	8	19	13	24	1	14	20	31	28	104	25	20
80%	5	37	-7	-4	19	26	26	31	15	16	17	28
90%	-13	0	7	2	3	-1	31	10	2	2	24	5
Long Term												
Full Simulation Period	13	19	21	31	28	22	18	16	21	22	14	-9
Water Year Types												
Wet (32%)	21	23	45	40	18	28	15	23	26	12	-19	-68
Above Normal (12%)	-11	24	13	35	20	-14	6	21	13	16	-2	23
Below Normal (24%)	4	23	8	27	58	50	22	4	20	42	58	19
Dry (17%)	22	21	9	16	23	12	15	17	21	20	17	25
Critical (15%)	22	-1	13	29	10	7	27	15	20	16	21	5

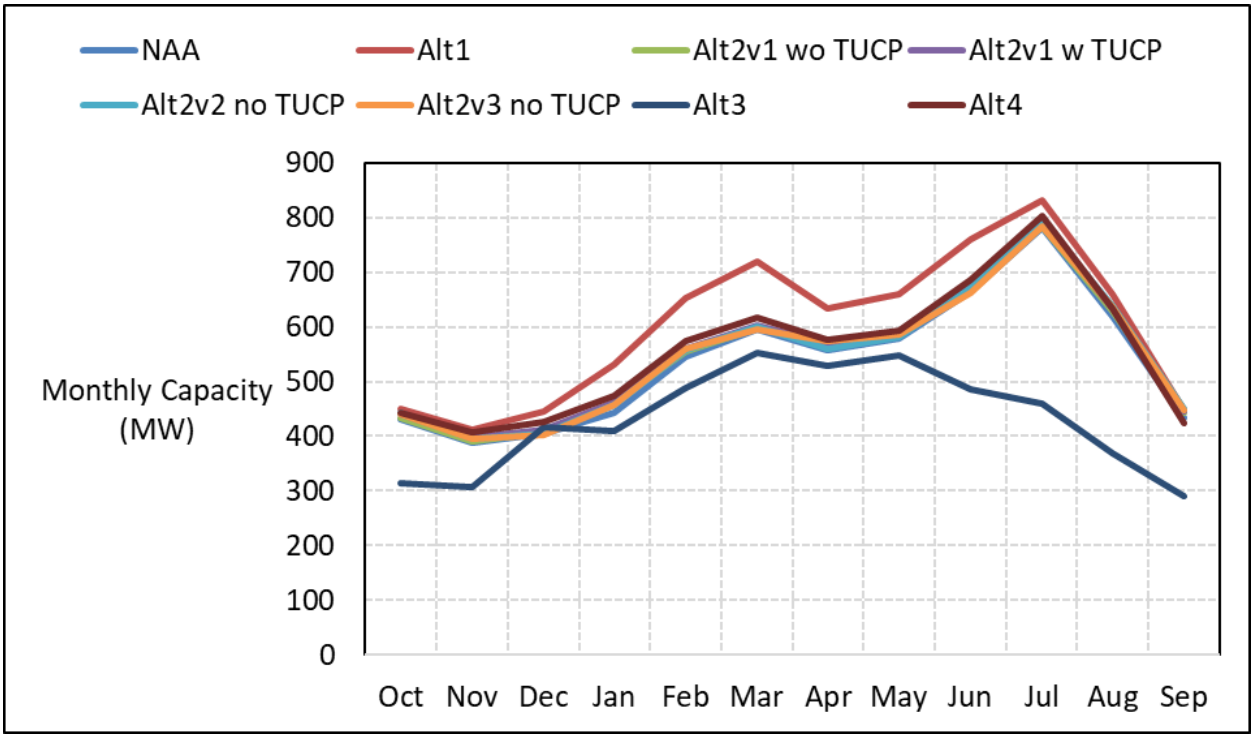

Figure U.1-76. State Water Project Total Capacity, Long-Term Average Capacity

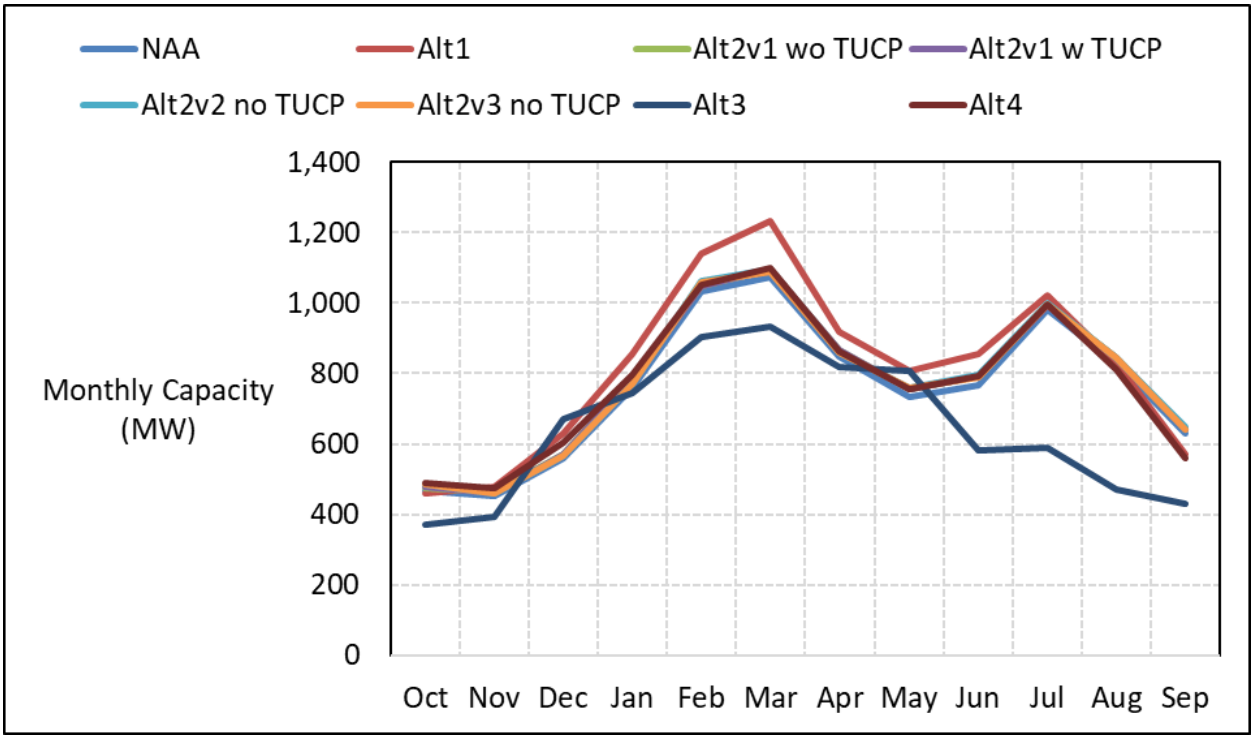

Figure U.1-77. State Water Project Total Capacity, Wet Year Average Capacity

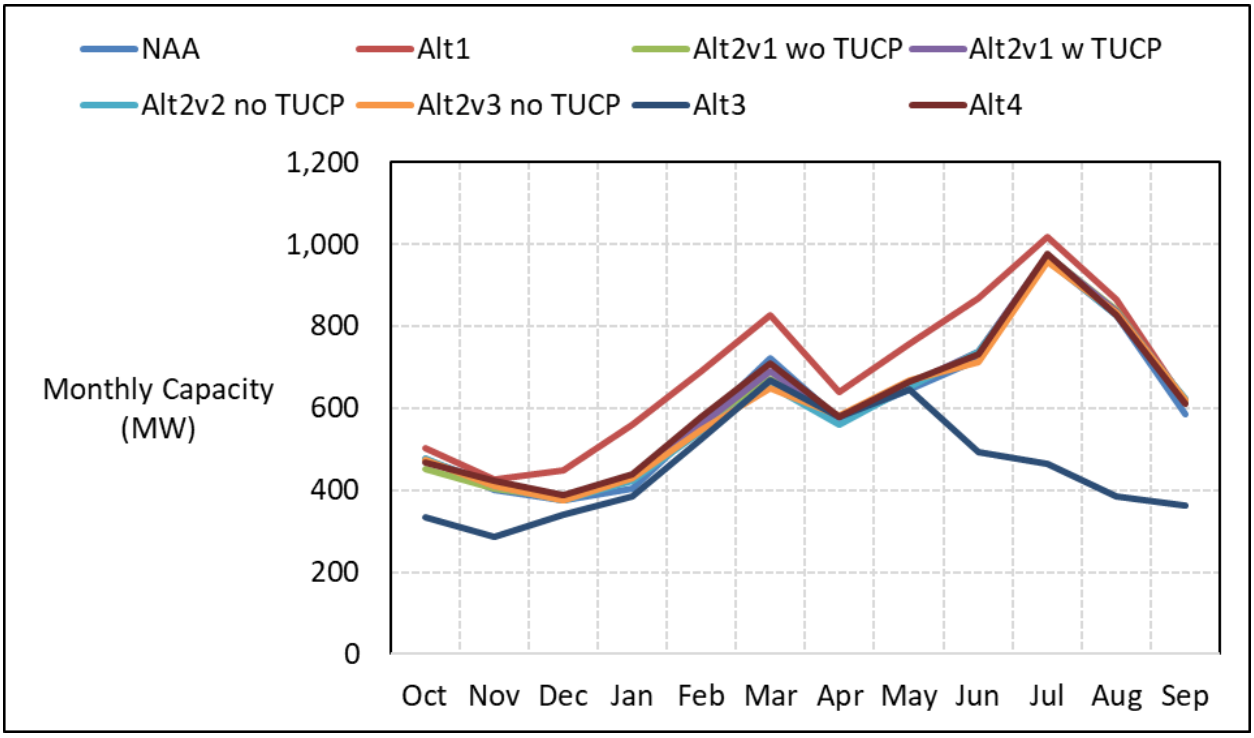

Figure U.1-78. State Water Project Total Capacity, Above Normal Year Average Capacity

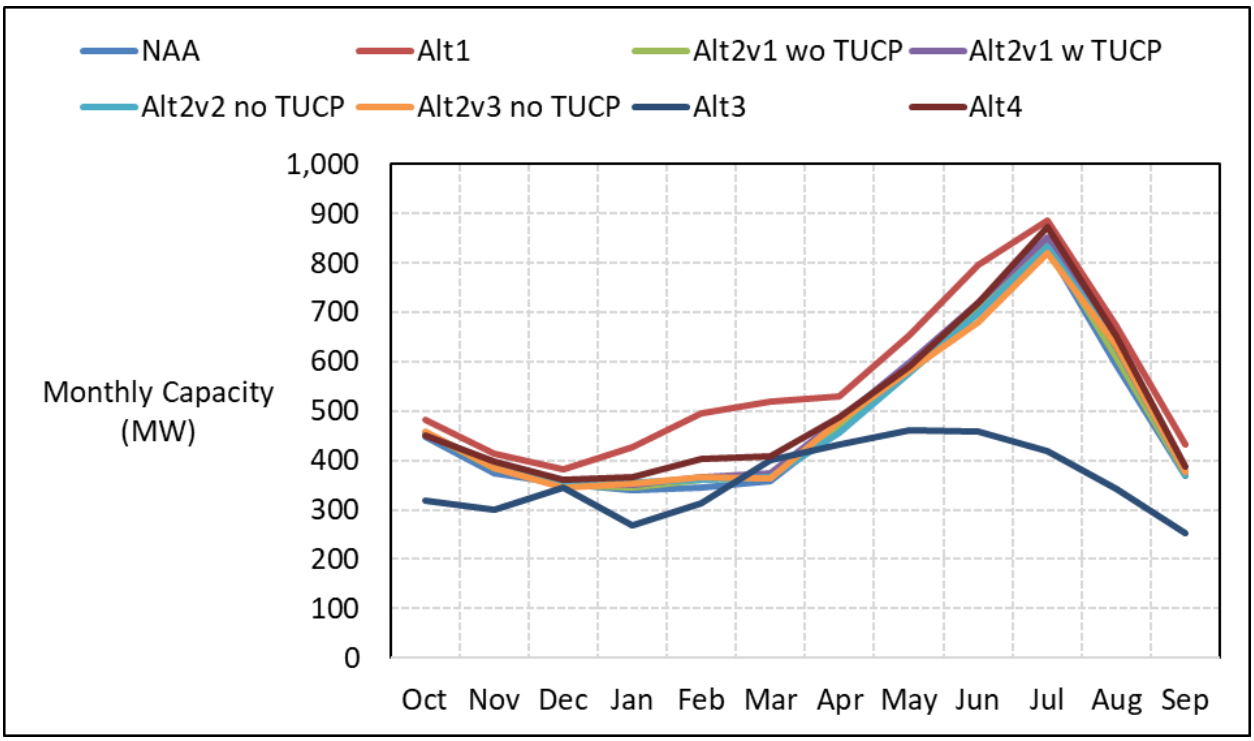

Figure U.1-79. State Water Project Total Capacity, Below Normal Year Average Capacity

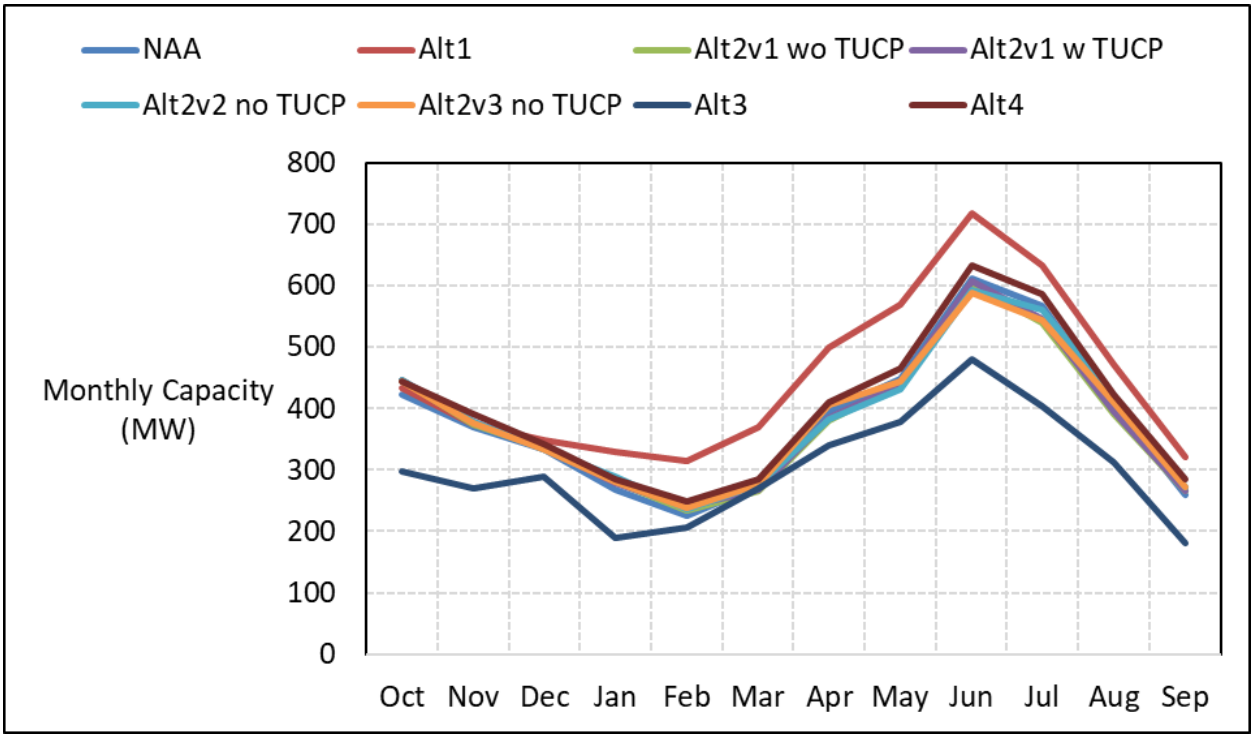

Figure U.1-80. State Water Project Total Capacity, Dry Year Average Capacity

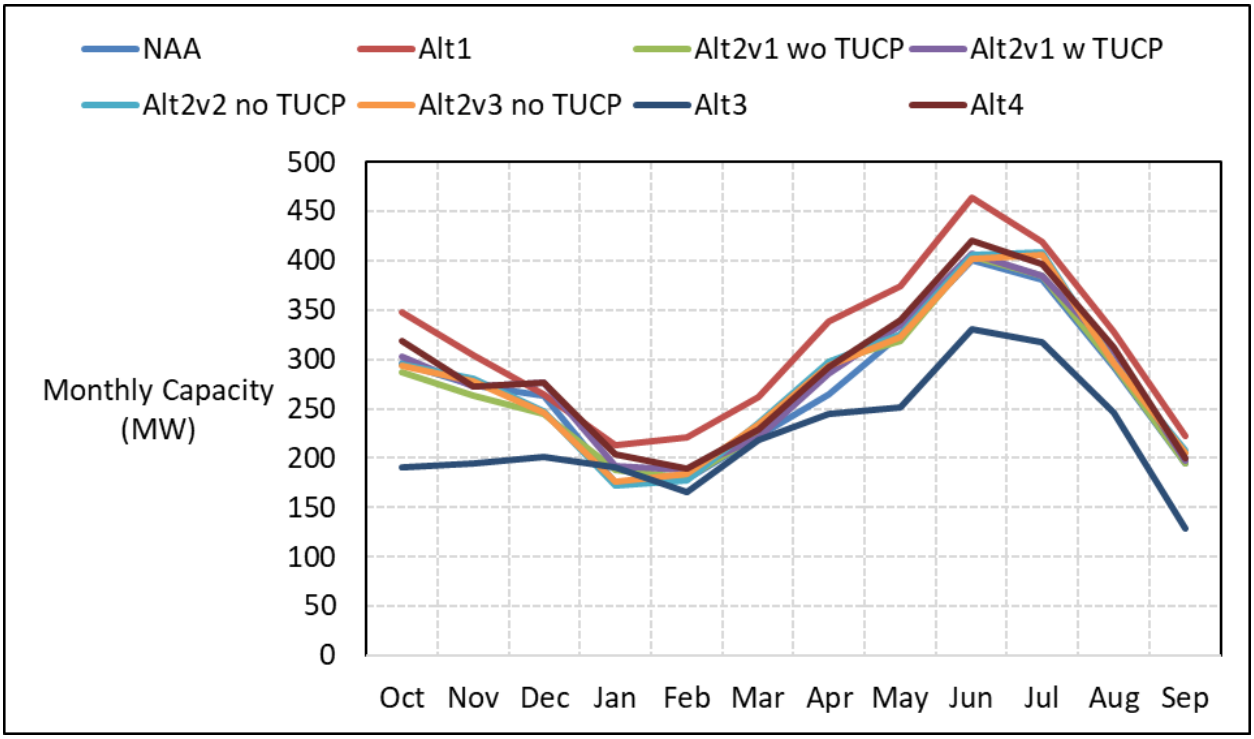

Figure U.1-81. State Water Project Total Capacity, Critical Year Average Capacity

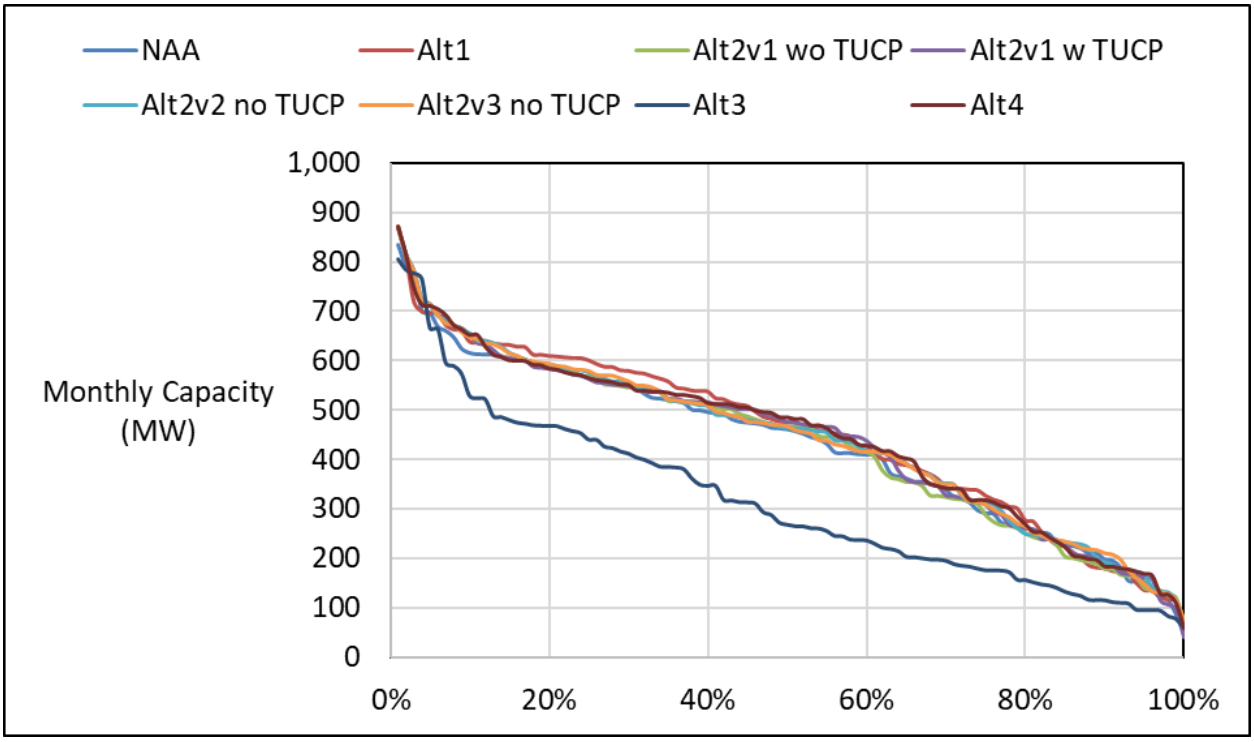

Figure U.1-82. State Water Project Total Capacity, October

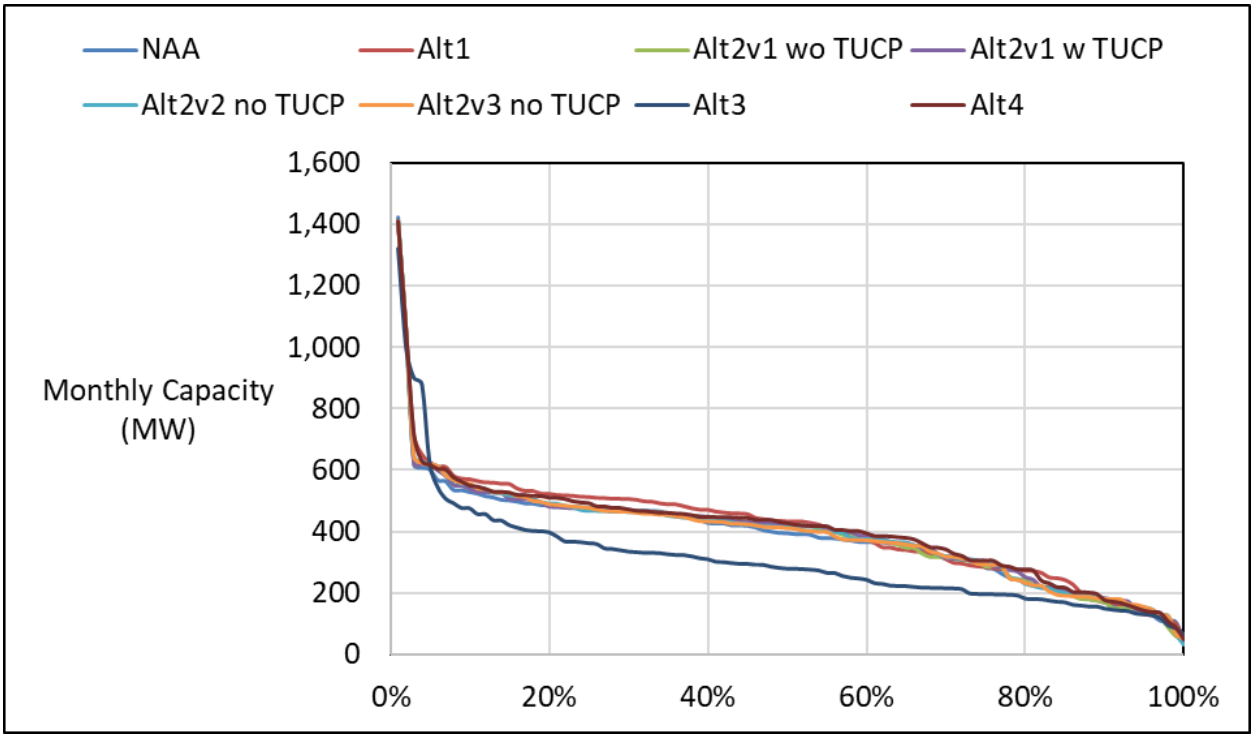

Figure U.1-83. State Water Project Total Capacity, November

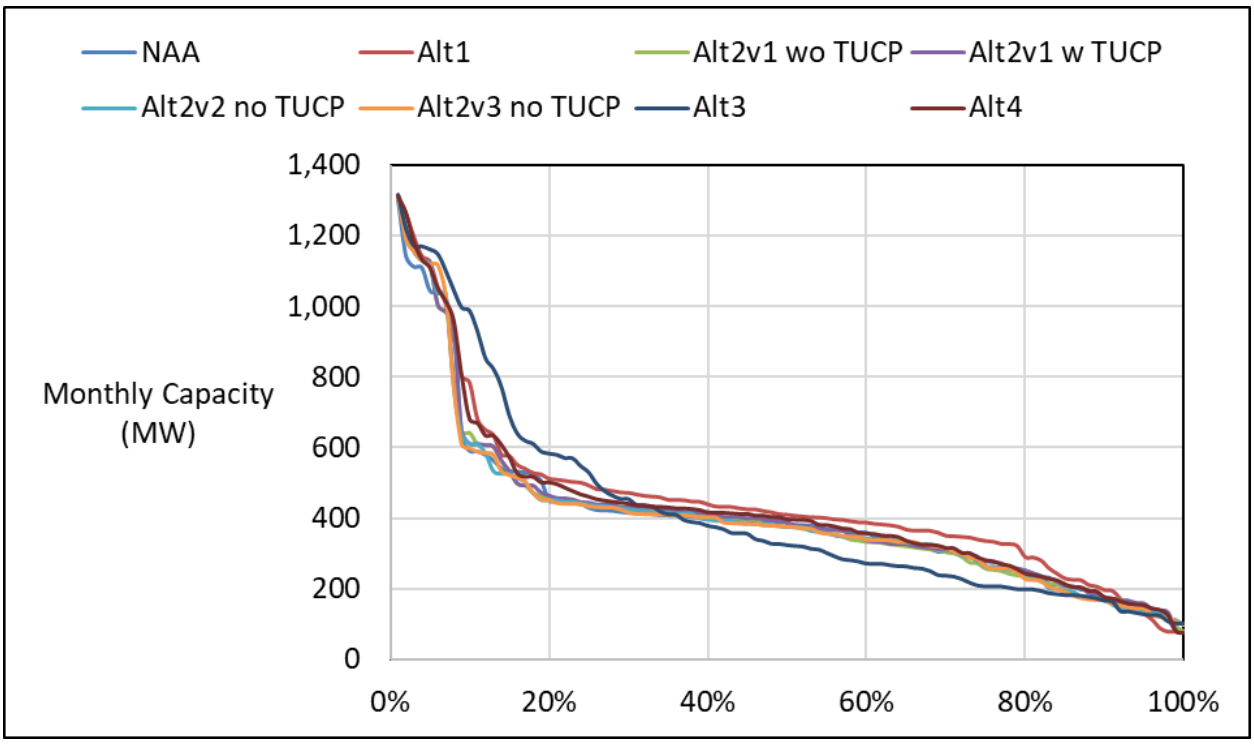

Figure U.1-84. State Water Project Total Capacity, December

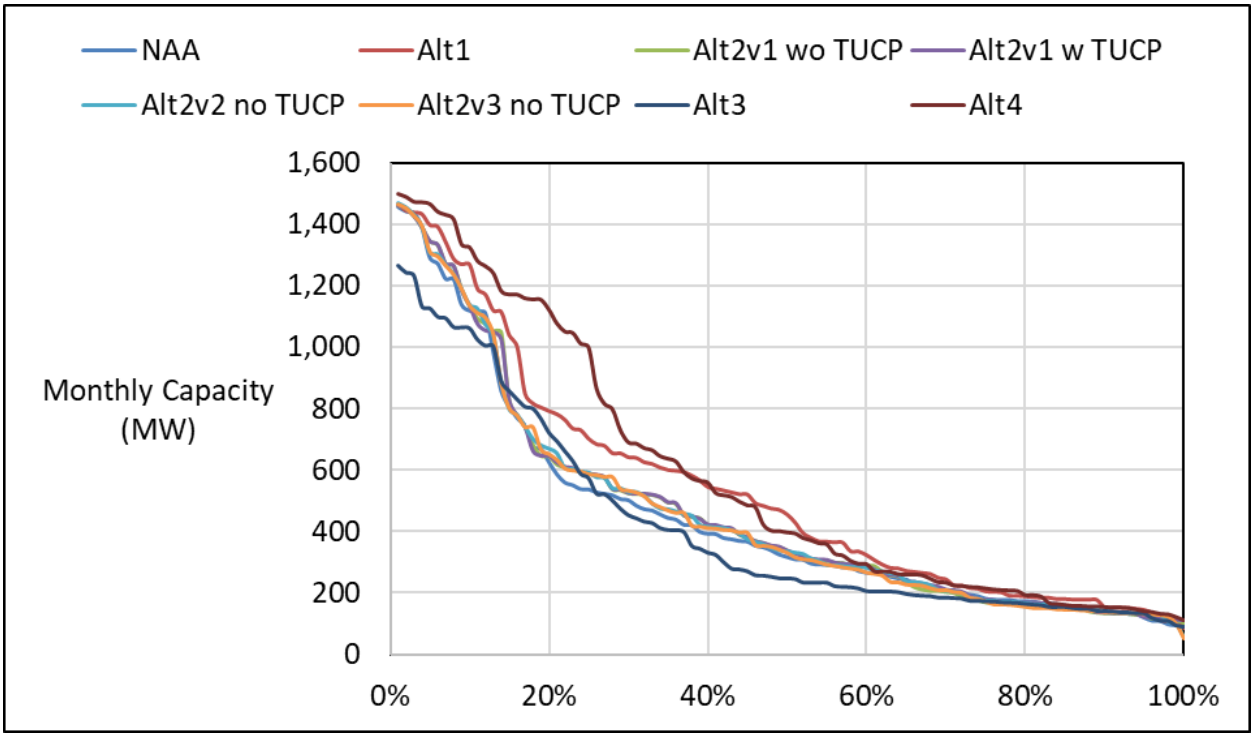

Figure U.1-85. State Water Project Total Capacity, January

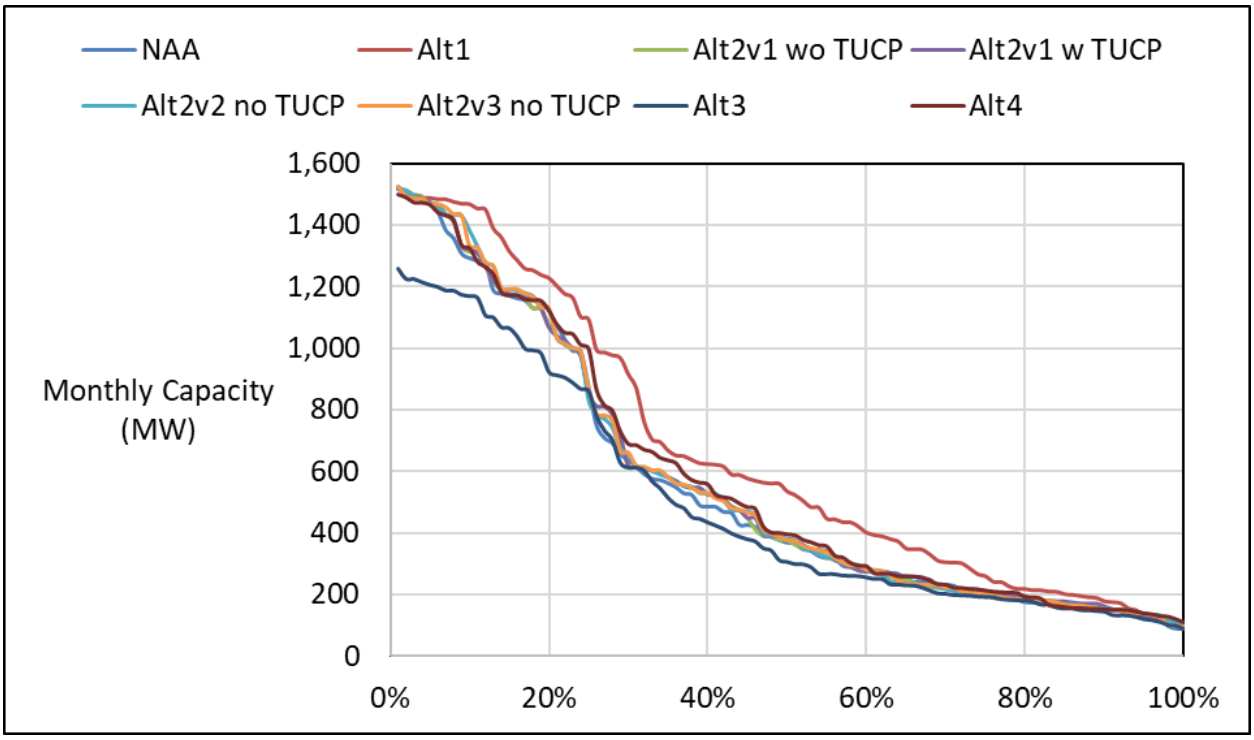

Figure U.1-86. State Water Project Total Capacity, February

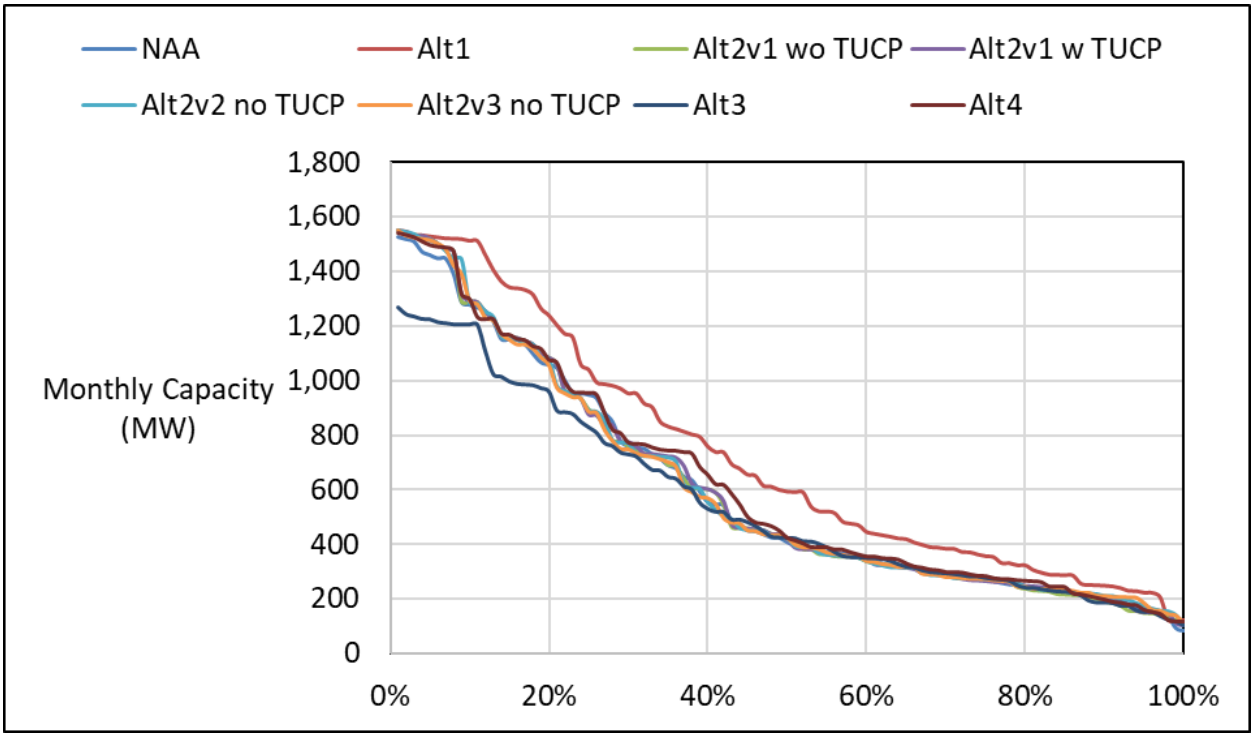

Figure U.1-87. State Water Project Total Capacity, March

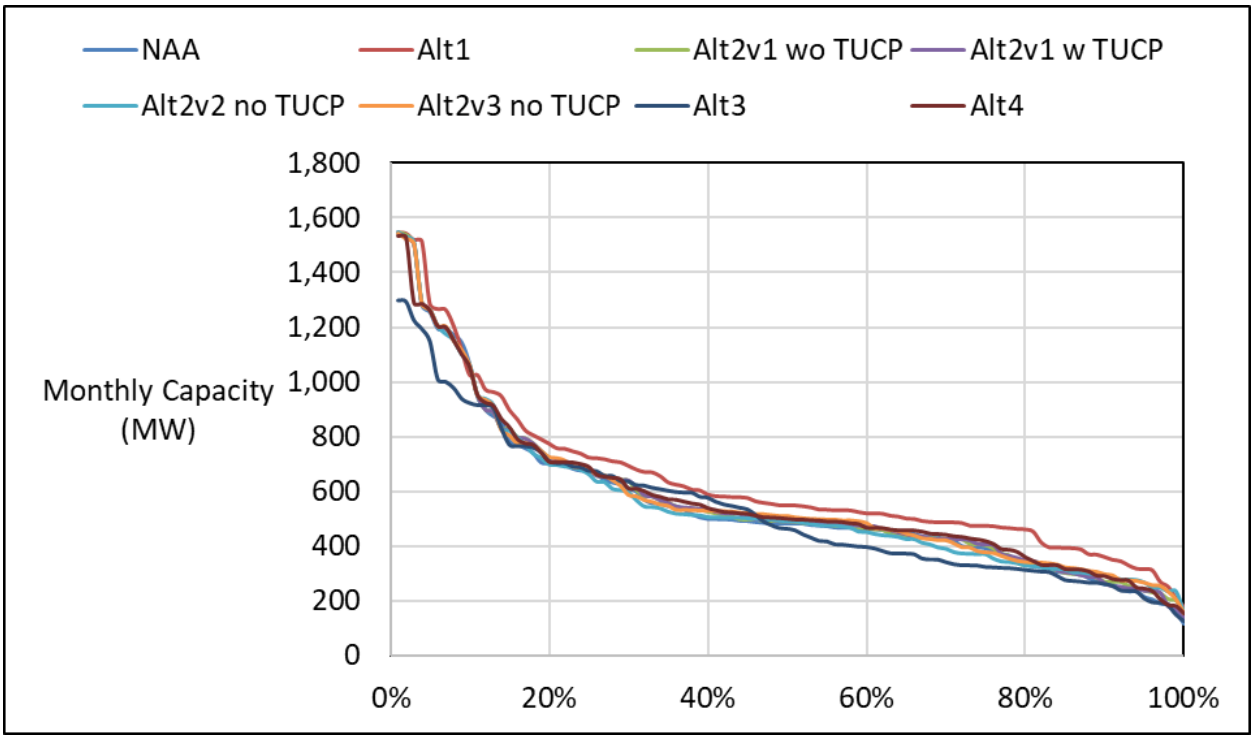

Figure U.1-88. State Water Project Total Capacity, April

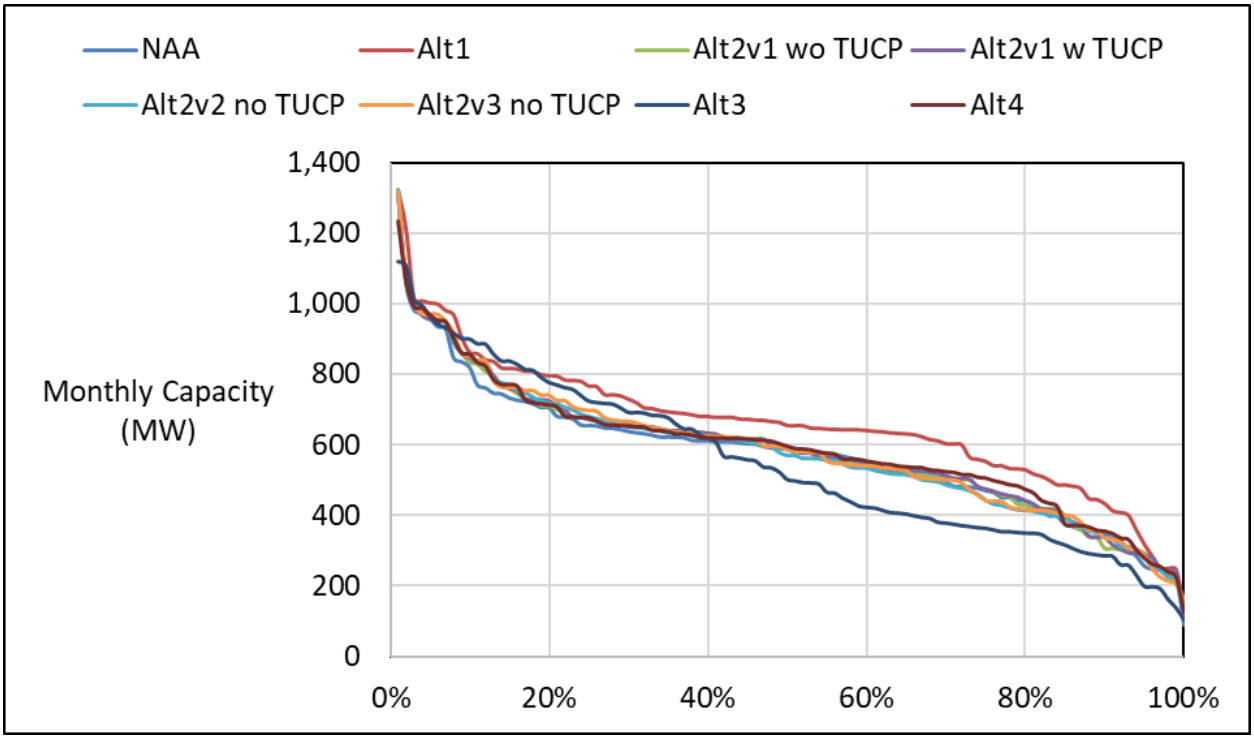

Figure U.1-89. State Water Project Total Capacity, May

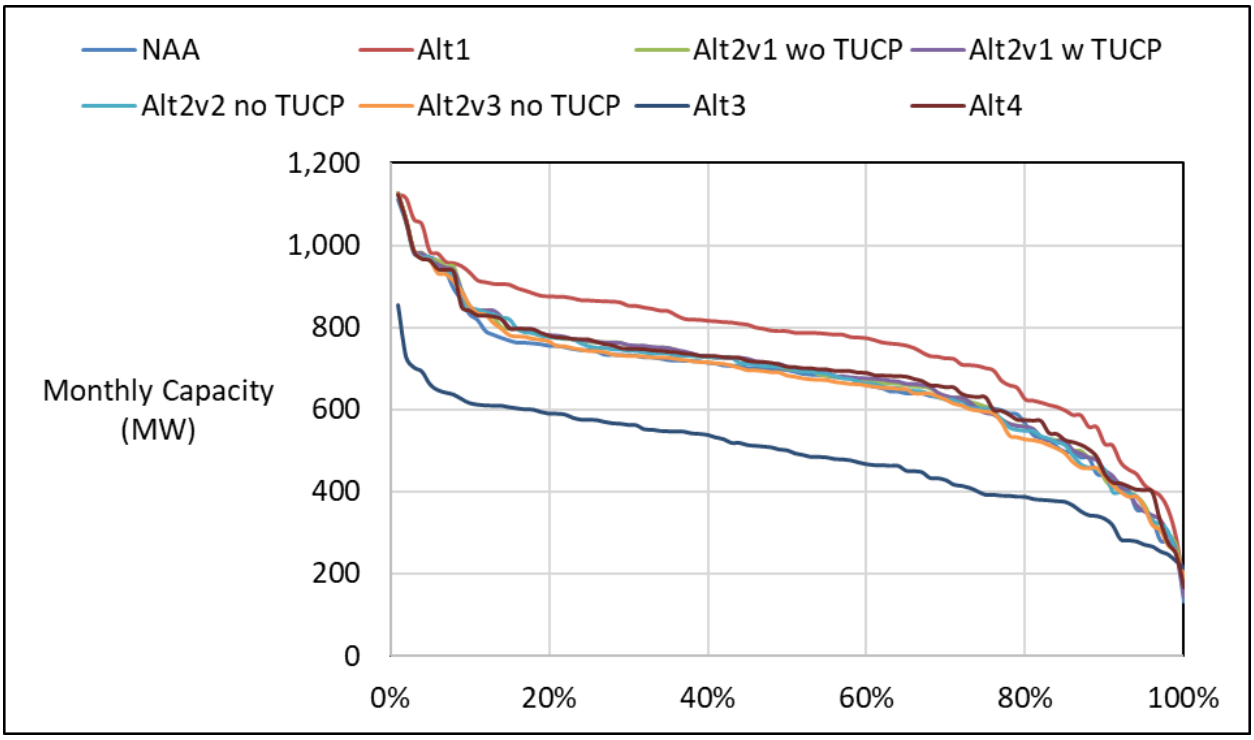

Figure U.1-90. State Water Project Total Capacity, June

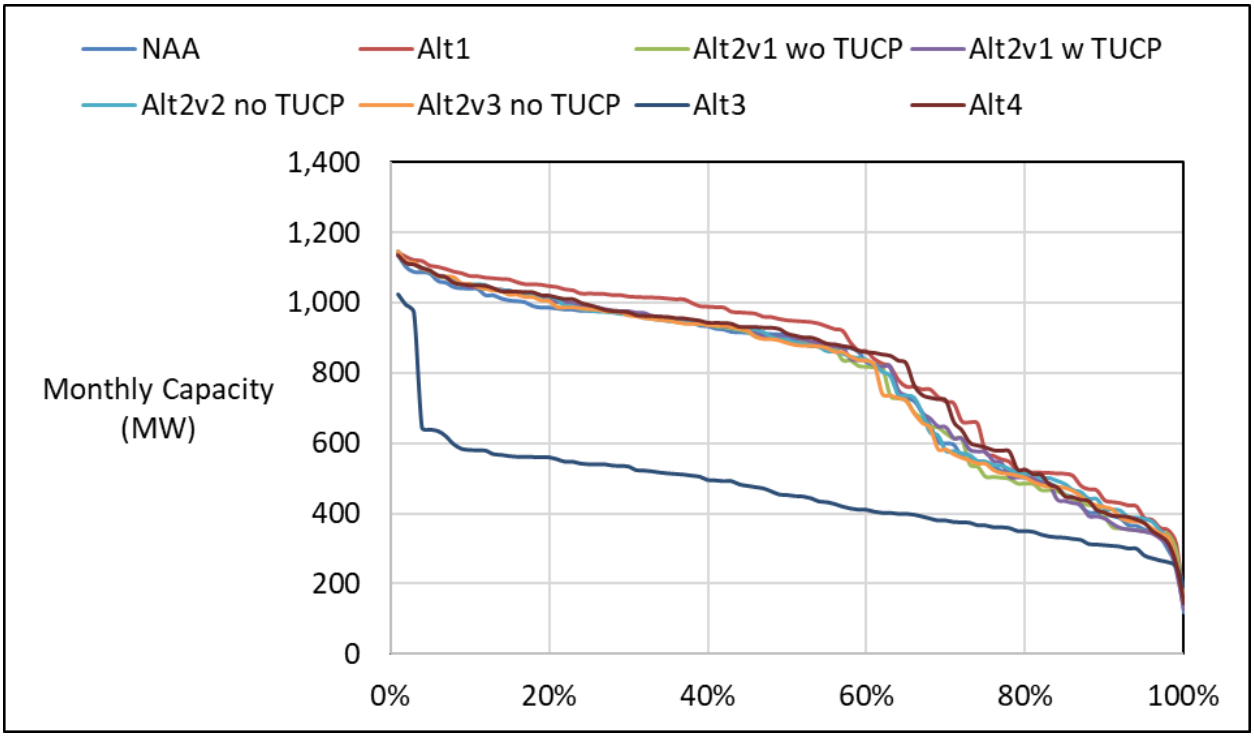

Figure U.1-91. State Water Project Total Capacity, July

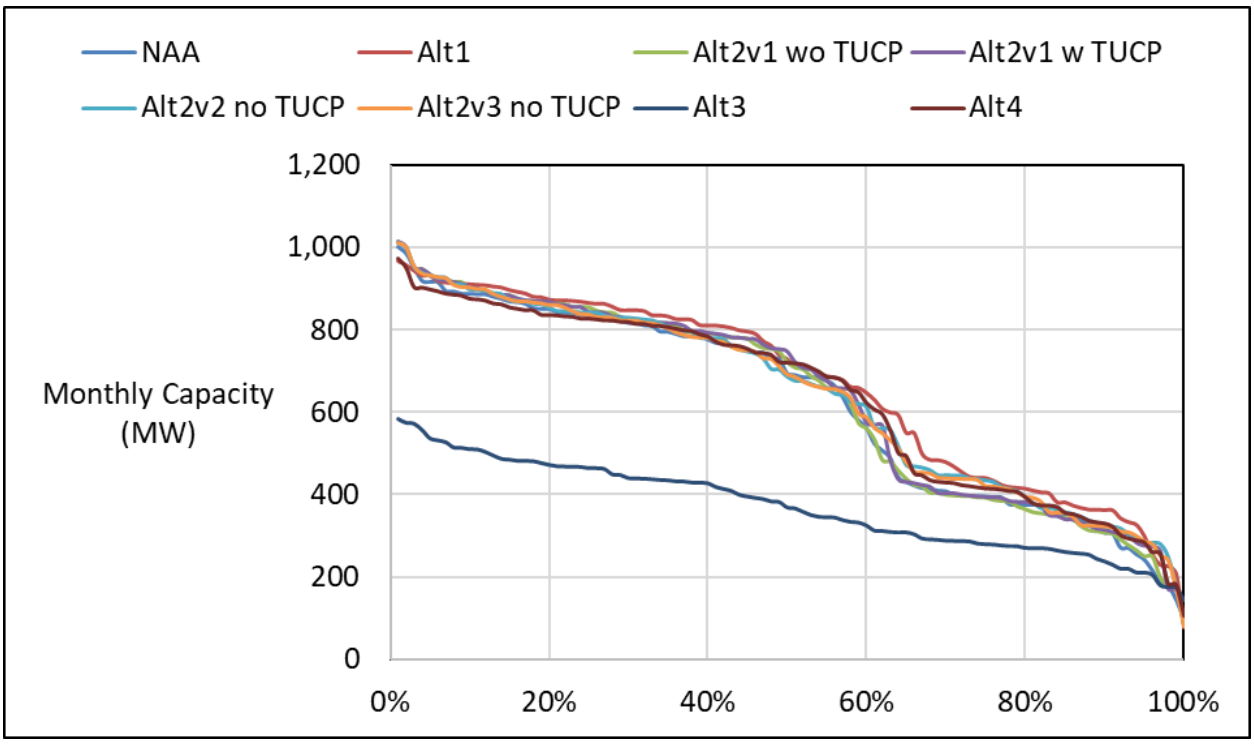

Figure U.1-92. State Water Project Total Capacity, August

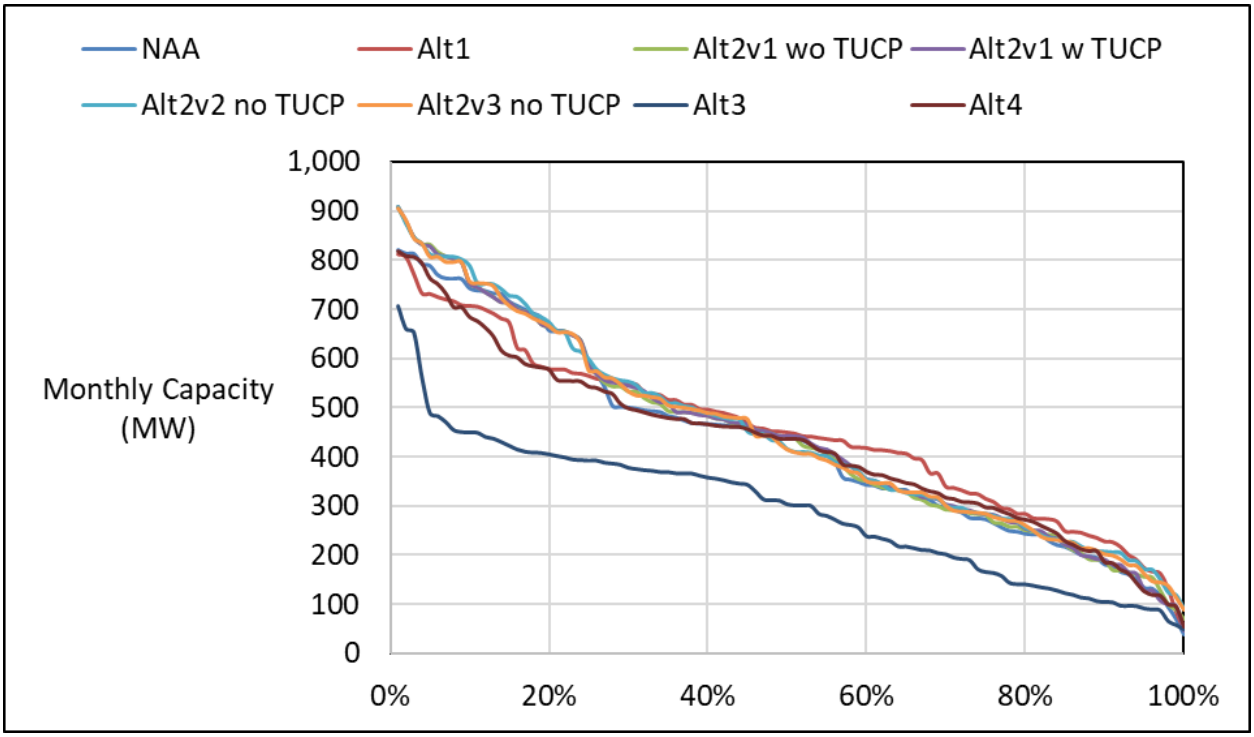

Figure U.1-93. State Water Project Total Capacity, September

Table U.1-83. State Water Project Net Generation, Monthly Generation, No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	390	294	325	699	719	770	512	470	506	646	575	434
20%	367	274	255	308	563	639	400	404	469	635	551	401
30%	349	260	234	262	332	433	344	385	458	627	533	321
40%	310	245	221	200	237	287	275	361	441	615	495	293
50%	284	228	202	150	149	180	241	340	426	592	455	258
60%	245	201	183	126	103	138	222	326	409	556	350	193
70%	203	175	170	79	68	103	202	300	384	370	255	163
80%	147	124	121	61	52	89	152	240	343	319	235	131
90%	116	90	79	48	40	74	108	176	265	245	192	101
Long Term												
Full Simulation Period	266	217	224	238	270	320	295	339	407	500	397	259
Water Year Types												
Wet (32%)	289	258	324	447	561	634	462	418	461	620	531	386
Above Normal (12%)	301	223	200	207	276	405	310	391	449	625	539	369
Below Normal (24%)	274	206	184	162	148	159	250	372	443	548	386	214
Dry (17%)	265	212	182	123	80	109	196	258	378	354	254	140
Critical (15%)	176	150	138	69	53	80	111	171	231	233	180	105

Table U.1-84. State Water Project Net Generation, Monthly Generation, Alternative 1

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	383	301	423	753	796	912	553	505	570	681	595	420
20%	368	294	301	418	643	708	405	440	547	667	578	356
30%	347	279	253	322	427	528	349	408	526	648	548	287
40%	316	263	228	299	286	389	308	392	500	636	511	277
50%	299	255	211	219	241	277	271	375	482	612	466	266
60%	269	231	202	146	165	202	236	351	462	542	383	252
70%	224	185	191	108	105	158	209	320	429	432	319	198
80%	172	164	165	68	63	114	185	293	389	347	267	174
90%	121	114	98	52	51	89	144	234	300	281	224	129
Long Term												
Full Simulation Period	275	235	249	286	320	384	320	369	461	527	424	266
Water Year Types												
Wet (32%)	280	273	368	499	610	727	490	440	504	632	520	324
Above Normal (12%)	312	245	244	298	332	447	310	433	539	651	564	384
Below Normal (24%)	294	230	197	207	223	243	258	384	502	578	445	267
Dry (17%)	269	217	193	158	118	149	243	323	438	405	310	193
Critical (15%)	211	175	143	93	73	96	153	194	270	260	203	128

Table U.1-85. State Water Project Net Generation, Monthly Generation, Alternative 1 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-7	7	98	54	77	142	41	35	64	35	20	-15
20%	0	19	46	110	80	70	5	37	78	32	27	-46
30%	-2	19	18	60	95	96	6	24	68	20	15	-34
40%	7	17	7	99	49	102	33	31	59	22	16	-16
50%	15	27	9	69	92	96	30	35	57	20	11	8
60%	25	30	20	20	62	63	14	25	53	-14	34	60
70%	21	10	20	29	37	54	7	20	45	62	64	35
80%	25	40	44	6	11	25	33	54	46	28	32	43
90%	5	24	19	4	11	15	36	58	35	36	32	28
Long Term												
Full Simulation Period	9	18	25	48	50	64	25	29	55	27	27	7
Water Year Types												
Wet (32%)	-9	15	44	51	49	93	28	22	43	12	-11	-61
Above Normal (12%)	12	22	44	90	57	43	0	42	89	26	25	15
Below Normal (24%)	20	24	13	45	75	84	7	11	59	30	59	53
Dry (17%)	4	5	11	34	37	40	47	65	60	51	55	53
Critical (15%)	35	25	5	24	20	17	42	23	39	27	24	23

Table U.1-86. State Water Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	387	285	344	693	719	772	517	457	510	646	573	442
20%	365	274	249	327	552	626	382	401	486	635	558	393
30%	342	263	231	293	330	417	328	370	471	624	531	341
40%	314	248	206	215	252	285	269	344	449	614	500	301
50%	293	232	197	173	155	179	246	325	434	588	463	250
60%	248	206	180	132	101	147	216	313	416	531	344	199
70%	196	180	165	90	70	111	197	292	386	393	259	163
80%	142	118	117	56	54	91	157	239	345	306	225	142
90%	107	77	74	43	43	67	114	166	250	227	169	84
Long Term												
Full Simulation Period	265	217	222	250	276	323	294	328	413	497	397	261
Water Year Types												
Wet (32%)	289	258	328	463	570	648	464	407	472	616	528	387
Above Normal (12%)	281	225	203	228	272	370	291	375	457	626	544	384
Below Normal (24%)	278	208	179	167	158	167	245	360	455	551	396	215
Dry (17%)	278	211	182	133	90	109	186	247	371	338	244	143
Critical (15%)	166	142	124	76	53	85	135	164	233	231	176	103

Table U.1-87. State Water Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-3	-9	19	-6	1	2	4	-13	4	0	-2	8
20%	-2	-1	-6	19	-11	-13	-18	-3	17	0	7	-9
30%	-6	3	-3	31	-2	-15	-16	-14	13	-3	-2	19
40%	5	2	-15	15	15	-2	-6	-17	8	0	6	8
50%	9	4	-4	23	6	-1	4	-15	8	-4	8	-7
60%	4	5	-2	6	-2	9	-6	-12	7	-25	-5	6
70%	-8	5	-6	10	2	8	-5	-8	2	23	4	0
80%	-5	-6	-4	-5	1	2	5	-1	2	-13	-10	11
90%	-9	-14	-4	-5	3	-7	7	-9	-15	-18	-23	-16
Long Term												
Full Simulation Period	0	-1	-2	12	6	3	-1	-11	6	-4	0	3
Water Year Types												
Wet (32%)	1	0	4	16	9	14	1	-11	11	-4	-3	2
Above Normal (12%)	-19	1	3	21	-4	-35	-20	-16	8	1	5	15
Below Normal (24%)	4	2	-5	5	10	8	-6	-12	12	3	10	1
Dry (17%)	13	-1	0	10	9	0	-10	-11	-7	-17	-11	3
Critical (15%)	-10	-8	-15	8	1	6	24	-7	2	-2	-4	-2

Table U.1-88. State Water Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	387	285	342	687	728	789	516	457	517	645	572	442
20%	361	272	250	328	551	626	382	405	488	635	556	393
30%	346	264	234	293	330	426	328	373	471	627	532	343
40%	317	249	212	215	252	293	273	345	454	615	506	303
50%	294	234	198	173	160	183	246	326	437	590	468	254
60%	256	209	181	131	101	140	217	317	416	543	354	200
70%	209	181	164	91	70	109	197	296	389	393	259	165
80%	147	130	117	56	54	89	157	239	341	315	232	136
90%	106	79	79	46	46	77	113	170	262	236	190	93
Long Term												
Full Simulation Period	269	219	224	250	277	324	294	330	414	500	402	263
Water Year Types												
Wet (32%)	292	259	329	463	570	649	464	407	472	616	528	388
Above Normal (12%)	296	232	205	225	275	381	292	377	458	626	542	386
Below Normal (24%)	275	211	177	169	159	169	251	362	457	561	410	218
Dry (17%)	278	213	178	135	91	108	188	246	371	341	245	144
Critical (15%)	177	146	143	76	55	77	122	170	234	232	186	106

Table U.1-89. State Water Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-4	-9	18	-12	9	20	4	-13	11	-1	-3	8
20%	-6	-2	-6	20	-12	-13	-18	2	19	0	5	-8
30%	-2	3	0	31	-2	-6	-16	-11	13	0	-1	22
40%	7	4	-9	15	15	6	-2	-16	13	0	12	9
50%	10	6	-4	24	10	2	4	-14	11	-2	13	-4
60%	12	8	-2	5	-2	2	-5	-9	7	-13	4	7
70%	6	6	-7	11	2	5	-5	-4	5	23	4	2
80%	0	6	-4	-6	1	0	5	-1	-2	-4	-3	5
90%	-10	-11	0	-1	6	3	5	-6	-3	-9	-2	-8
Long Term												
Full Simulation Period	3	2	0	12	8	4	-2	-10	7	0	5	4
Water Year Types												
Wet (32%)	3	1	4	16	9	15	1	-11	11	-4	-3	2
Above Normal (12%)	-5	9	5	18	0	-24	-18	-14	9	1	3	17
Below Normal (24%)	2	4	-7	7	11	10	0	-10	14	12	24	4
Dry (17%)	13	1	-4	11	11	-1	-8	-11	-7	-13	-9	3
Critical (15%)	1	-4	4	7	2	-3	11	-1	3	-1	7	1

Table U.1-90. State Water Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	387	295	321	695	763	769	524	456	507	645	568	458
20%	366	272	244	331	556	615	382	398	483	634	551	394
30%	348	258	225	285	348	417	325	373	464	626	528	352
40%	314	247	210	217	253	261	265	347	448	612	492	316
50%	292	231	194	169	152	179	236	323	430	591	428	243
60%	249	206	183	126	96	145	212	306	414	530	353	192
70%	210	175	163	90	71	115	194	287	384	381	289	160
80%	141	120	110	54	52	96	152	235	338	306	247	139
90%	117	98	74	41	44	76	121	178	260	251	194	111
Long Term												
Full Simulation Period	268	217	218	245	277	323	293	327	410	499	401	264
Water Year Types												
Wet (32%)	293	253	322	453	576	647	463	411	474	619	528	392
Above Normal (12%)	297	228	197	221	265	359	291	378	458	625	536	389
Below Normal (24%)	277	207	177	169	158	168	241	348	442	547	409	213
Dry (17%)	274	211	176	136	90	113	191	247	365	345	257	142
Critical (15%)	168	151	122	66	51	89	133	166	234	241	175	107

Table U.1-91. State Water Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-3	1	-4	-3	44	-1	11	-14	1	-1	-7	24
20%	-1	-2	-11	23	-7	-23	-18	-6	14	-1	0	-7
30%	0	-2	-10	23	16	-15	-19	-12	6	-1	-5	30
40%	5	2	-11	17	16	-26	-10	-14	7	-3	-2	23
50%	8	3	-8	20	3	-1	-5	-17	4	-1	-27	-15
60%	4	5	0	0	-7	7	-10	-19	6	-26	4	-1
70%	7	0	-8	10	2	11	-8	-13	0	11	34	-3
80%	-6	-4	-11	-8	0	7	0	-5	-5	-13	11	8
90%	1	7	-5	-7	5	2	13	2	-4	6	2	10
Long Term												
Full Simulation Period	2	-1	-6	7	7	3	-2	-12	3	-1	4	5
Water Year Types												
Wet (32%)	5	-5	-2	6	15	13	0	-7	13	-1	-3	6
Above Normal (12%)	-3	5	-3	13	-10	-46	-19	-13	9	0	-3	20
Below Normal (24%)	3	1	-7	7	10	9	-10	-24	-1	-1	23	-1
Dry (17%)	10	-1	-6	13	10	4	-5	-11	-13	-10	2	2
Critical (15%)	-8	1	-16	-2	-2	9	22	-5	3	8	-4	2

Table U.1-92. State Water Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	382	297	321	697	752	774	521	462	500	644	573	444
20%	366	276	243	330	556	612	400	406	473	635	549	402
30%	351	256	223	287	342	417	329	382	456	620	527	340
40%	314	245	208	214	255	261	287	348	441	611	490	318
50%	290	231	192	175	159	182	248	326	421	587	433	241
60%	249	206	182	124	103	145	229	312	405	533	353	192
70%	209	174	158	91	74	113	197	290	381	369	280	160
80%	138	126	106	54	54	94	162	231	321	298	246	137
90%	116	92	70	41	40	77	131	177	258	244	191	108
Long Term												
Full Simulation Period	267	216	216	246	278	320	302	331	402	495	400	262
Water Year Types												
Wet (32%)	293	254	323	452	575	642	465	410	469	618	527	389
Above Normal (12%)	296	228	197	225	266	352	305	393	442	622	540	385
Below Normal (24%)	276	206	173	170	160	167	258	353	429	540	408	215
Dry (17%)	272	208	175	135	91	113	207	255	361	337	250	142
Critical (15%)	167	149	121	69	57	88	131	164	231	238	173	104

Table U.1-93. State Water Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-8	3	-4	-2	33	4	9	-8	-6	-2	-2	10
20%	-1	2	-13	22	-7	-27	0	2	4	-1	-2	0
30%	2	-4	-11	25	10	-16	-15	-2	-3	-7	-6	18
40%	5	-1	-13	14	18	-26	12	-13	0	-4	-5	25
50%	6	3	-10	26	10	2	6	-14	-5	-5	-22	-17
60%	4	5	-1	-2	-1	7	7	-14	-3	-24	4	-1
70%	5	-1	-12	12	6	10	-5	-10	-3	-1	25	-3
80%	-9	2	-15	-8	1	5	10	-9	-22	-21	11	6
90%	-1	2	-8	-7	1	3	23	1	-7	-1	-2	7
Long Term												
Full Simulation Period	1	-2	-7	7	9	0	7	-8	-4	-5	2	3
Water Year Types												
Wet (32%)	4	-4	-1	5	14	8	2	-7	8	-2	-3	3
Above Normal (12%)	-5	5	-3	18	-10	-53	-5	2	-7	-3	1	16
Below Normal (24%)	2	-1	-11	8	12	8	7	-19	-14	-9	22	2
Dry (17%)	7	-5	-7	12	11	4	11	-2	-17	-18	-5	1
Critical (15%)	-9	-2	-17	0	4	8	20	-7	0	5	-6	-1

Table U.1-94. State Water Project Net Generation, Monthly Generation, Alternative 3

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	337	240	573	633	633	707	519	542	353	369	324	287
20%	301	219	350	414	507	565	411	462	340	356	304	256
30%	273	201	269	234	301	420	328	409	326	344	294	241
40%	221	191	218	163	210	260	299	358	316	328	281	213
50%	165	161	198	131	136	217	243	305	292	296	242	197
60%	138	135	150	108	110	185	212	255	279	270	220	150
70%	121	112	133	94	86	166	177	225	270	250	203	118
80%	87	97	107	79	58	120	159	199	233	240	189	82
90%	69	80	84	58	37	71	121	144	185	193	153	61
Long Term												
Full Simulation Period	196	174	249	231	246	307	288	327	287	299	243	180
Water Year Types												
Wet (32%)	225	219	409	441	484	539	459	488	326	370	298	257
Above Normal (12%)	221	169	204	222	280	388	317	391	289	301	261	239
Below Normal (24%)	203	170	202	141	146	213	230	277	284	280	236	161
Dry (17%)	193	162	172	97	87	135	183	229	303	277	219	118
Critical (15%)	107	102	104	86	54	95	110	123	189	198	153	67

Table U.1-95. State Water Project Net Generation, Monthly Generation, Alternative 3 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-53	-54	248	-66	-86	-63	7	72	-153	-277	-251	-147
20%	-66	-56	95	106	-56	-74	11	58	-129	-280	-247	-145
30%	-75	-59	35	-28	-31	-12	-16	24	-132	-284	-239	-80
40%	-89	-54	-2	-37	-27	-27	24	-3	-125	-287	-214	-80
50%	-119	-67	-4	-19	-13	37	1	-35	-134	-296	-213	-61
60%	-106	-66	-33	-17	7	47	-10	-71	-130	-287	-130	-43
70%	-82	-63	-37	15	18	63	-25	-75	-114	-120	-52	-45
80%	-59	-27	-14	17	5	31	7	-41	-110	-79	-46	-49
90%	-47	-10	5	10	-3	-2	14	-32	-80	-53	-39	-39
Long Term												
Full Simulation Period	-69	-44	25	-7	-23	-13	-8	-13	-119	-202	-154	-79
Water Year Types												
Wet (32%)	-63	-39	85	-6	-77	-95	-4	70	-135	-250	-233	-129
Above Normal (12%)	-80	-54	4	15	4	-17	6	1	-161	-324	-278	-130
Below Normal (24%)	-71	-37	17	-21	-2	54	-20	-95	-158	-268	-150	-53
Dry (17%)	-72	-50	-10	-26	6	26	-13	-29	-75	-78	-36	-22
Critical (15%)	-69	-48	-34	17	1	15	-1	-48	-41	-35	-27	-38

Table U.1-96. State Water Project Net Generation, Monthly Generation, Alternative 4

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	381	291	390	713	717	772	522	454	510	647	559	393
20%	356	279	267	345	579	625	387	401	485	638	541	333
30%	335	267	238	306	368	435	328	372	468	627	526	303
40%	310	254	222	217	269	329	277	345	452	619	493	280
50%	295	242	208	151	169	193	254	326	439	598	464	260
60%	257	219	191	127	108	146	217	321	429	556	363	214
70%	211	180	167	101	69	117	198	303	404	408	279	173
80%	162	150	126	64	53	91	165	258	350	336	248	151
90%	114	96	84	49	43	76	120	187	262	244	199	98
Long Term												
Full Simulation Period	267	225	234	258	286	333	296	333	418	511	401	247
Water Year Types												
Wet (32%)	294	266	350	474	573	650	461	407	473	617	502	326
Above Normal (12%)	285	242	210	232	290	394	291	383	458	631	532	376
Below Normal (24%)	268	213	181	179	182	192	252	358	458	576	425	225
Dry (17%)	271	219	188	137	93	114	201	263	388	374	267	157
Critical (15%)	188	146	145	84	55	80	125	173	239	239	192	109

Table U.1-97. State Water Project Net Generation, Monthly Generation, Alternative 4 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-10	-4	65	14	-2	2	9	-16	5	0	-16	-42
20%	-11	5	12	37	16	-14	-14	-3	16	3	-10	-68
30%	-13	6	3	44	36	2	-16	-12	10	-1	-7	-18
40%	0	8	1	17	32	42	2	-16	11	5	-1	-13
50%	10	15	7	2	20	12	13	-14	13	6	10	2
60%	13	18	8	2	4	8	-5	-5	21	-1	14	21
70%	8	5	-4	22	1	13	-5	3	20	38	24	10
80%	16	26	5	3	0	2	13	18	6	17	13	20
90%	-2	6	5	1	3	2	12	11	-3	-1	7	-3
Long Term												
Full Simulation Period	1	7	11	20	16	13	1	-7	11	11	3	-12
Water Year Types												
Wet (32%)	6	8	26	27	12	16	-1	-11	12	-3	-29	-59
Above Normal (12%)	-15	19	10	25	14	-11	-19	-8	8	6	-7	7
Below Normal (24%)	-6	7	-3	17	34	33	2	-14	16	28	39	11
Dry (17%)	6	7	6	13	13	5	5	6	10	20	12	16
Critical (15%)	12	-4	6	15	2	0	14	2	8	6	12	4

Table U.1-98. Annual State Water Project Total Generation

Statistic	Generation (GWh)														
	NAA	Alt1	Alt1 minus NAA	Alt2v1 wo TUCP	Alt2v1 wo TUCP minus NAA	Alt2v1 w TUCP	Alt2v1 w TUCP minus NAA	Alt2v2 no TUCP	Alt2v2 no TUCP minus NAA	Alt2v3 no TUCP	Alt2v3 no TUCP minus NAA	Alt3	Alt3 minus NAA	Alt4	Alt4 minus NAA
PROBABILITY OF EXCEEDANCE															
10%	5,848	6,002	154	5,741	-107	5,740	-108	5,754	-95	5,763	-85	4,848	-1,000	5,830	-19
20%	5,269	5,540	271	5,264	-5	5,263	-5	5,309	40	5,230	-38	4,281	-987	5,205	-64
30%	4,631	5,103	472	4,735	104	4,735	104	4,715	84	4,710	80	3,812	-819	4,684	54
40%	4,143	4,680	537	4,137	-6	4,146	2	4,122	-22	4,139	-4	3,202	-941	4,238	95
50%	3,640	4,251	611	3,668	28	3,705	65	3,675	35	3,687	47	2,649	-991	3,789	148
60%	3,068	3,561	493	3,083	15	3,149	80	3,098	29	3,082	14	2,411	-657	3,206	137
70%	2,775	3,092	316	2,779	4	2,790	15	2,785	10	2,769	-7	2,221	-554	2,898	123
80%	2,344	2,711	367	2,345	1	2,396	52	2,296	-48	2,319	-25	1,941	-403	2,447	103
90%	1,719	2,148	429	1,714	-5	1,799	80	1,739	20	1,744	25	1,436	-283	1,822	103
LONG TERM															
Full Simulation Period	3,732	4,116	384	3,743	11	3,766	33	3,741	9	3,735	3	3,027	-706	3,808	76
WATER YEAR TYPES															
Wet (32%)	5,391	5,669	278	5,431	40	5,436	45	5,431	40	5,418	27	4,514	-877	5,396	5
Above Normal (12%)	4,295	4,760	465	4,256	-39	4,297	1	4,244	-51	4,252	-43	3,281	-1,014	4,325	30
Below Normal (24%)	3,347	3,826	480	3,379	32	3,417	70	3,356	9	3,354	7	2,544	-802	3,508	161
Dry (17%)	2,553	3,016	463	2,531	-22	2,540	-13	2,548	-5	2,545	-8	2,174	-379	2,671	118
Critical (15%)	1,696	1,999	303	1,688	-8	1,724	28	1,703	7	1,692	-4	1,387	-308	1,774	78

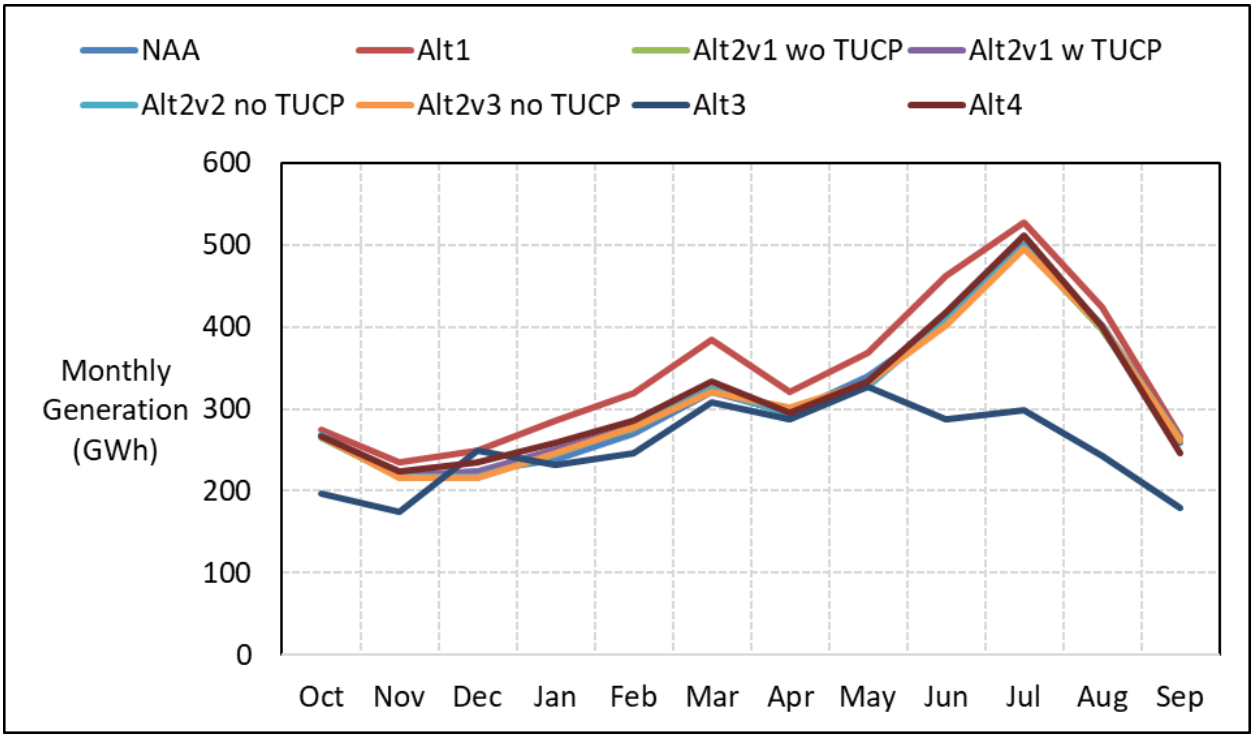

Figure U.1-94. State Water Project Total Generation, Long-Term Average Generation

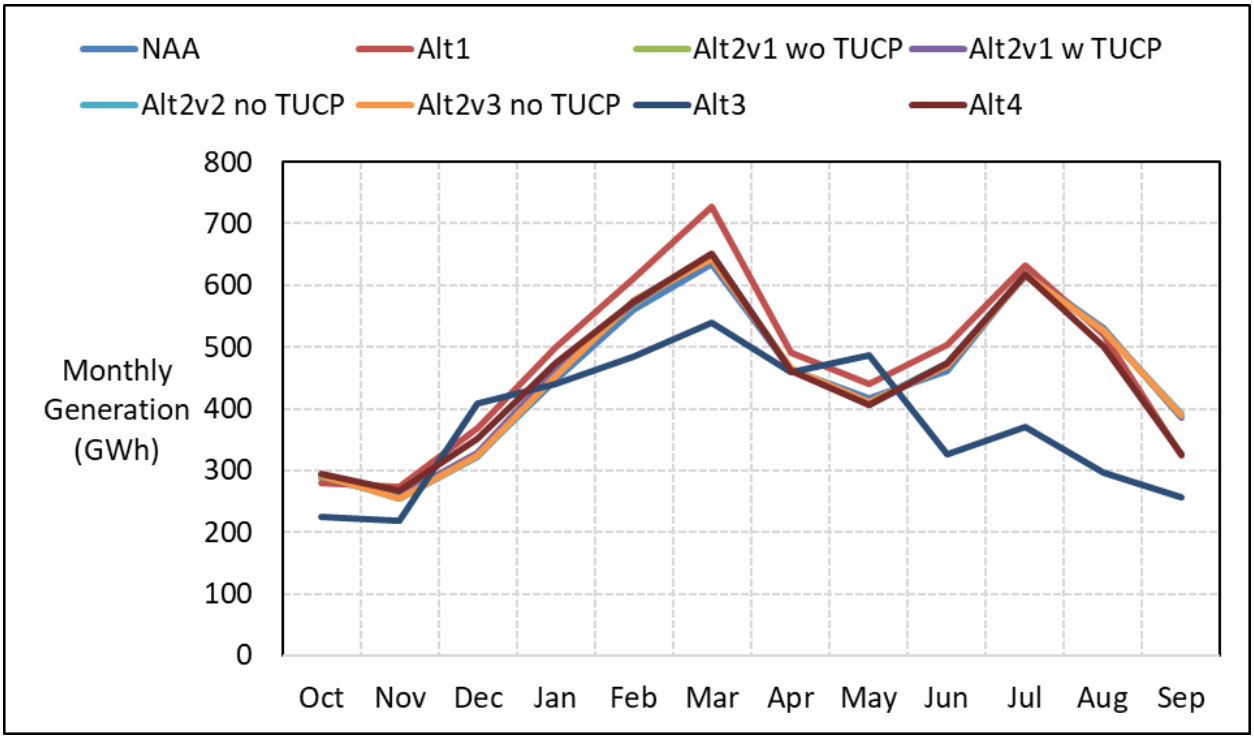

Figure U.1-95. State Water Project Total Generation, Wet Year Average Generation

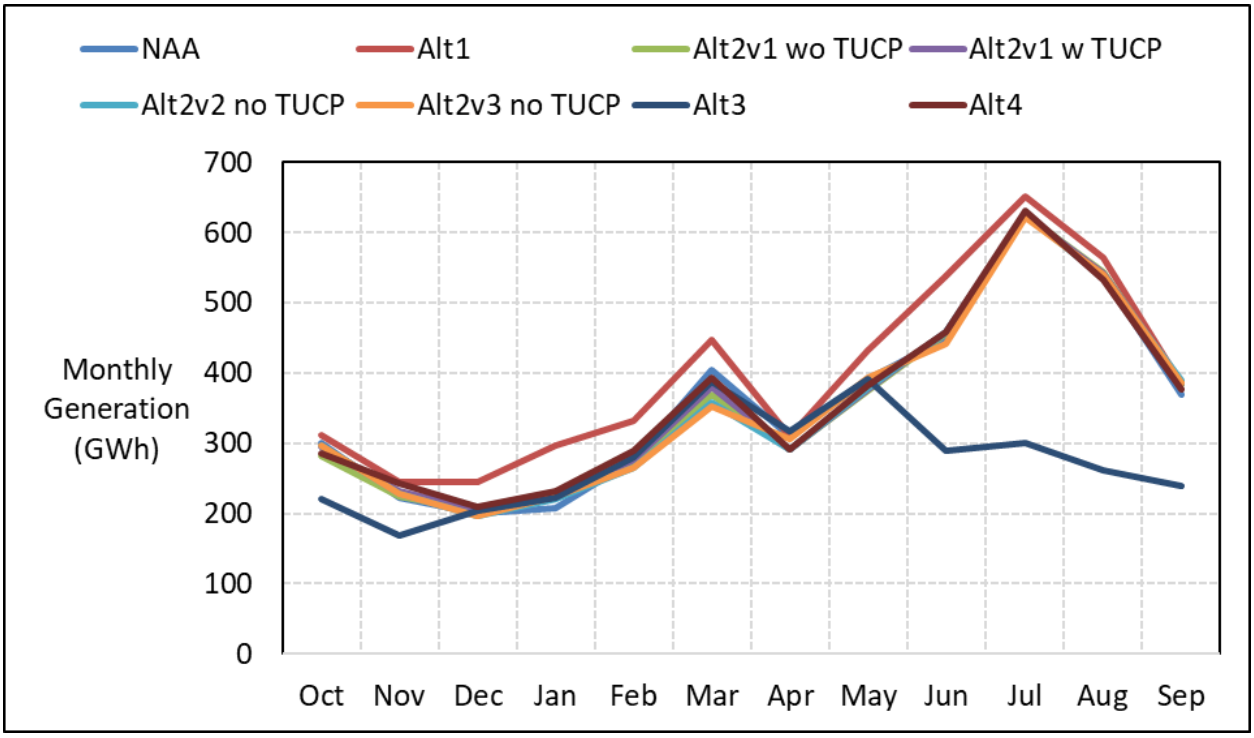

Figure U.1-96. State Water Project Total Generation, Above Normal Year Average Generation

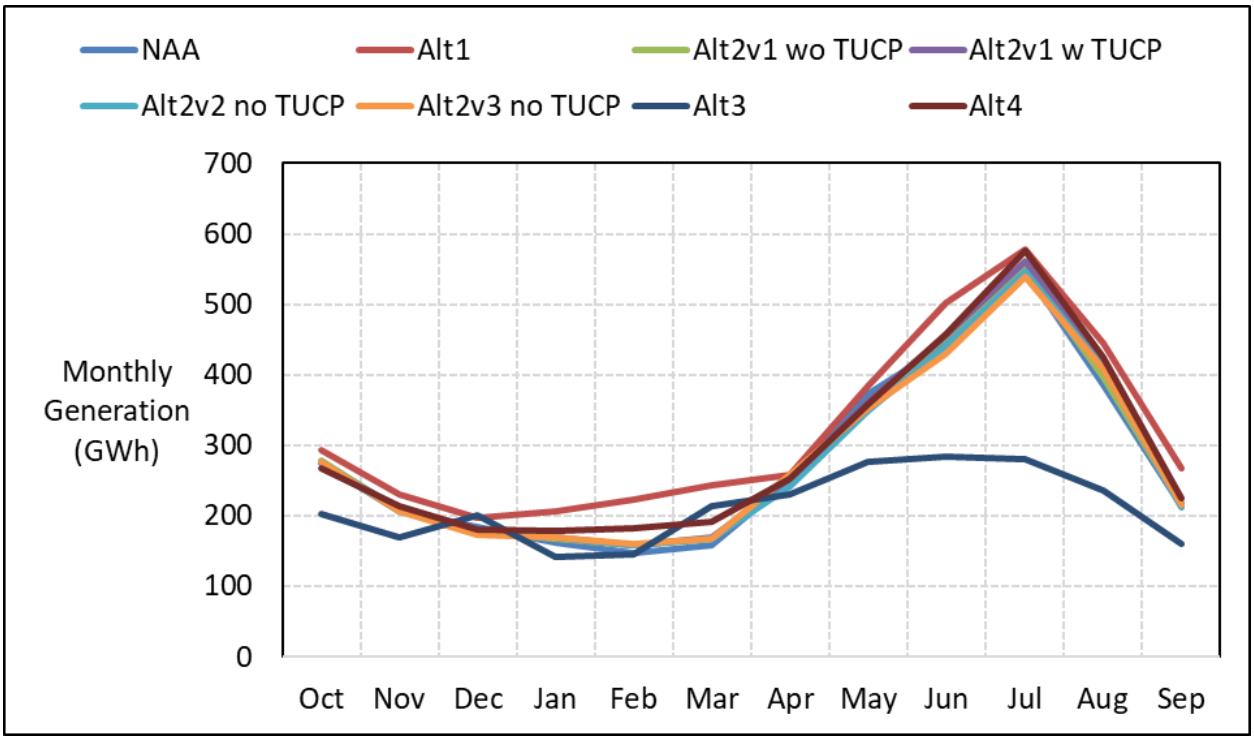

Figure U.1-97. State Water Project Total Generation, Below Normal Year Average Generation

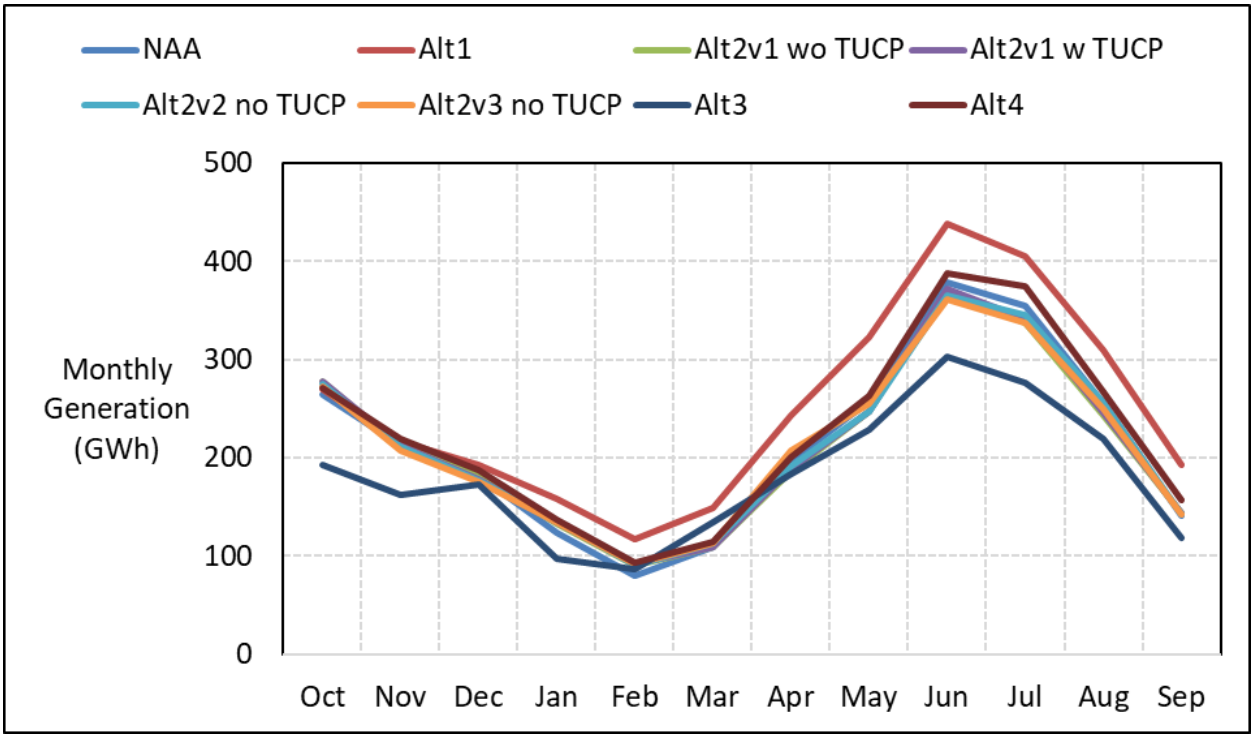

Figure U.1-98. State Water Project Total Generation, Dry Year Average Generation

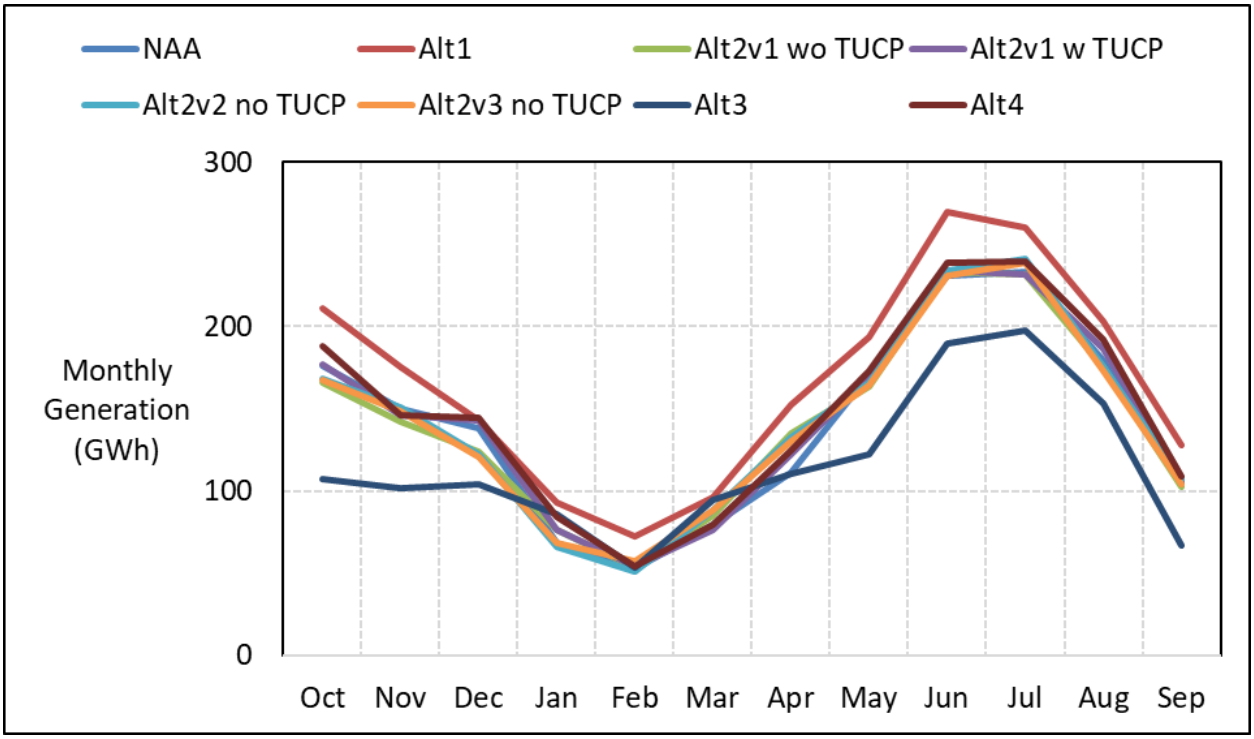

Figure U.1-99. State Water Project Total Generation, Critical Year Average Generation

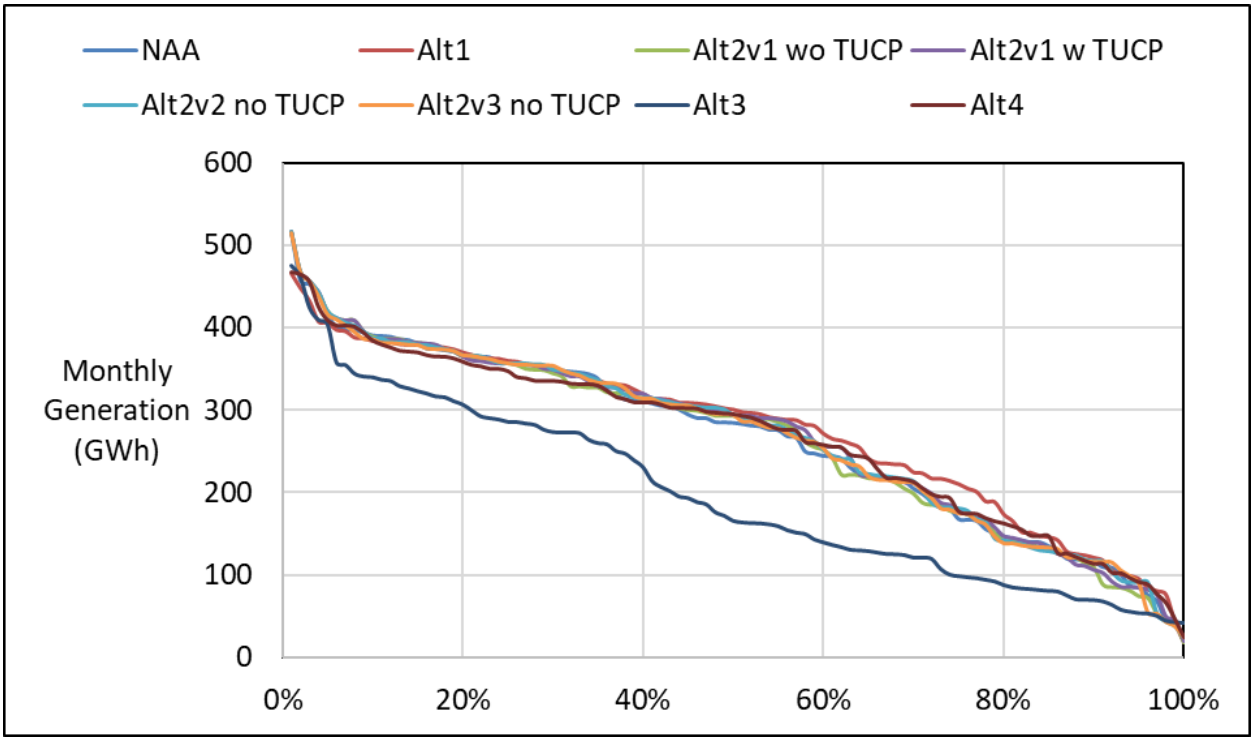

Figure U.1-100. State Water Project Total Generation, October

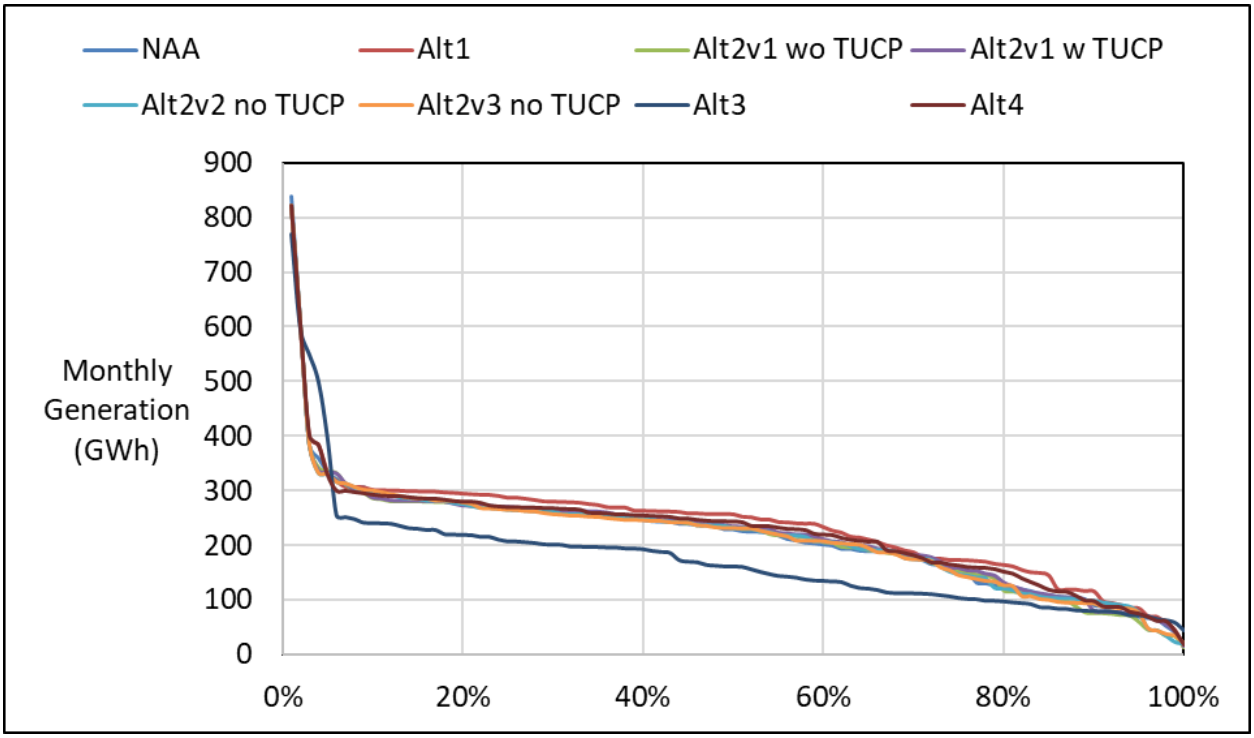

Figure U.1-101. State Water Project Total Generation, November

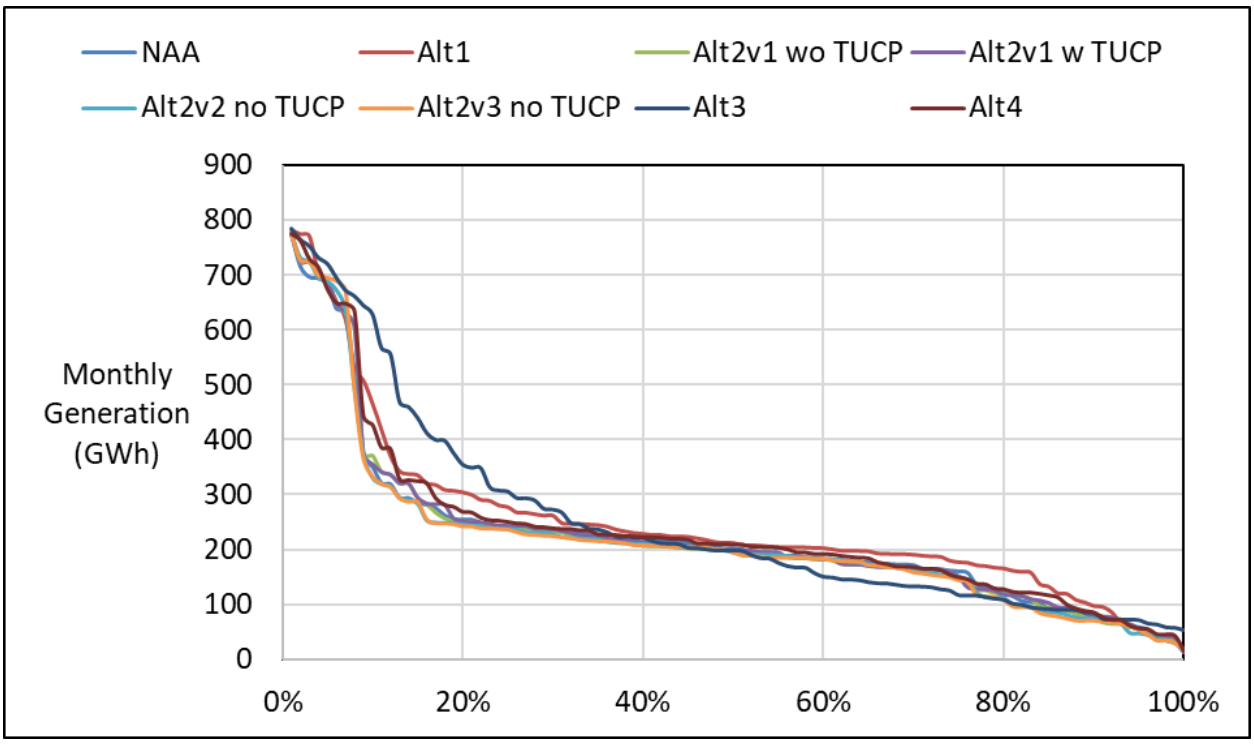

Figure U.1-102. State Water Project Total Generation, December

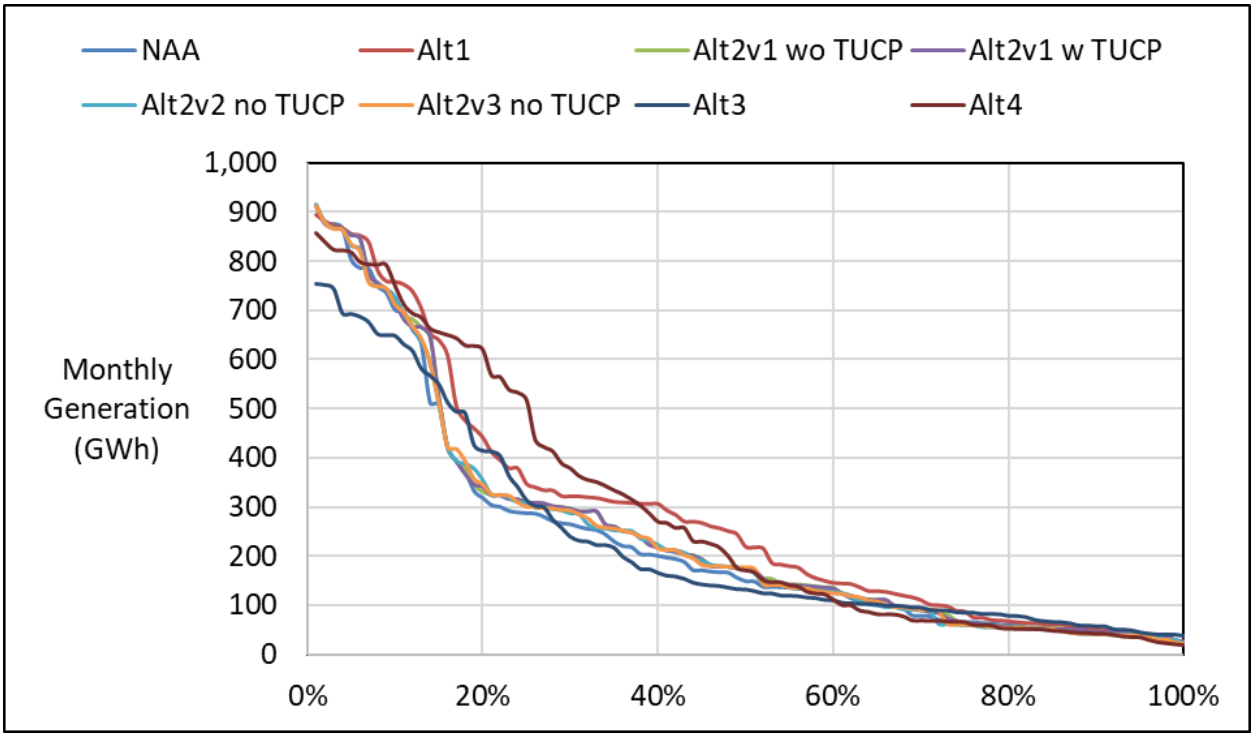

Figure U.1-103. State Water Project Total Generation, January

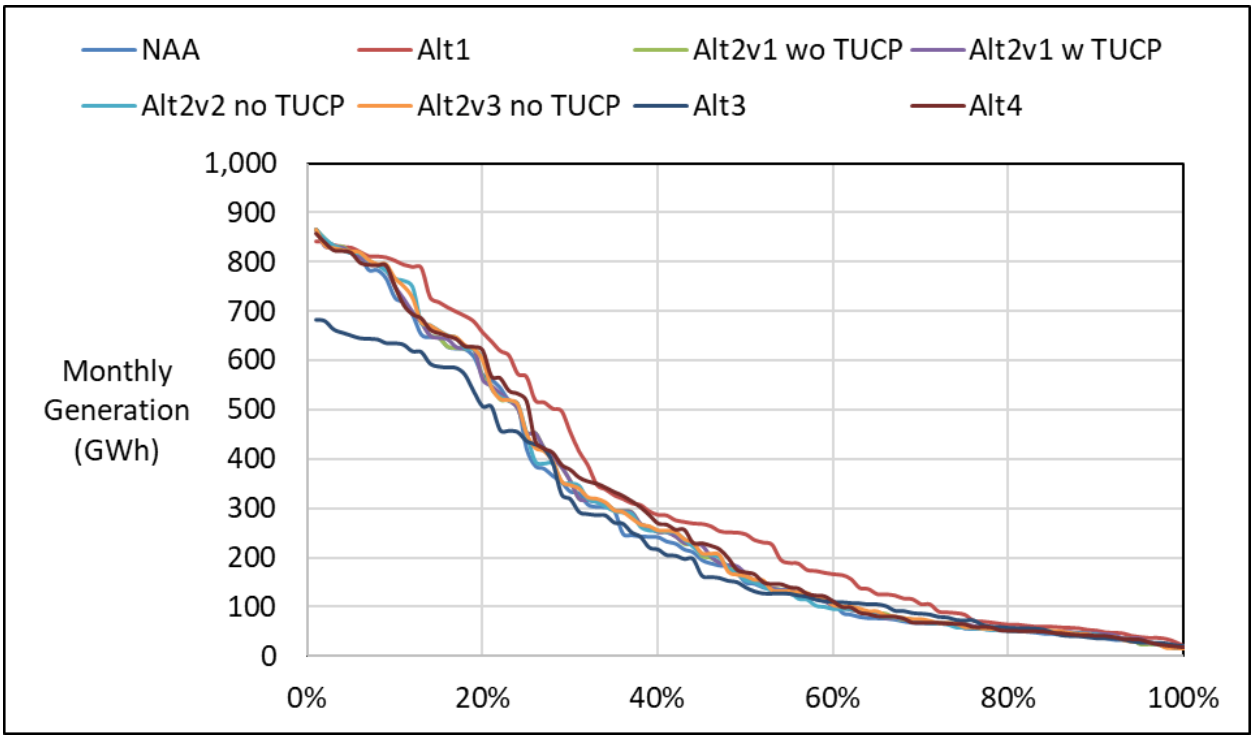

Figure U.1-104. State Water Project Total Generation, February

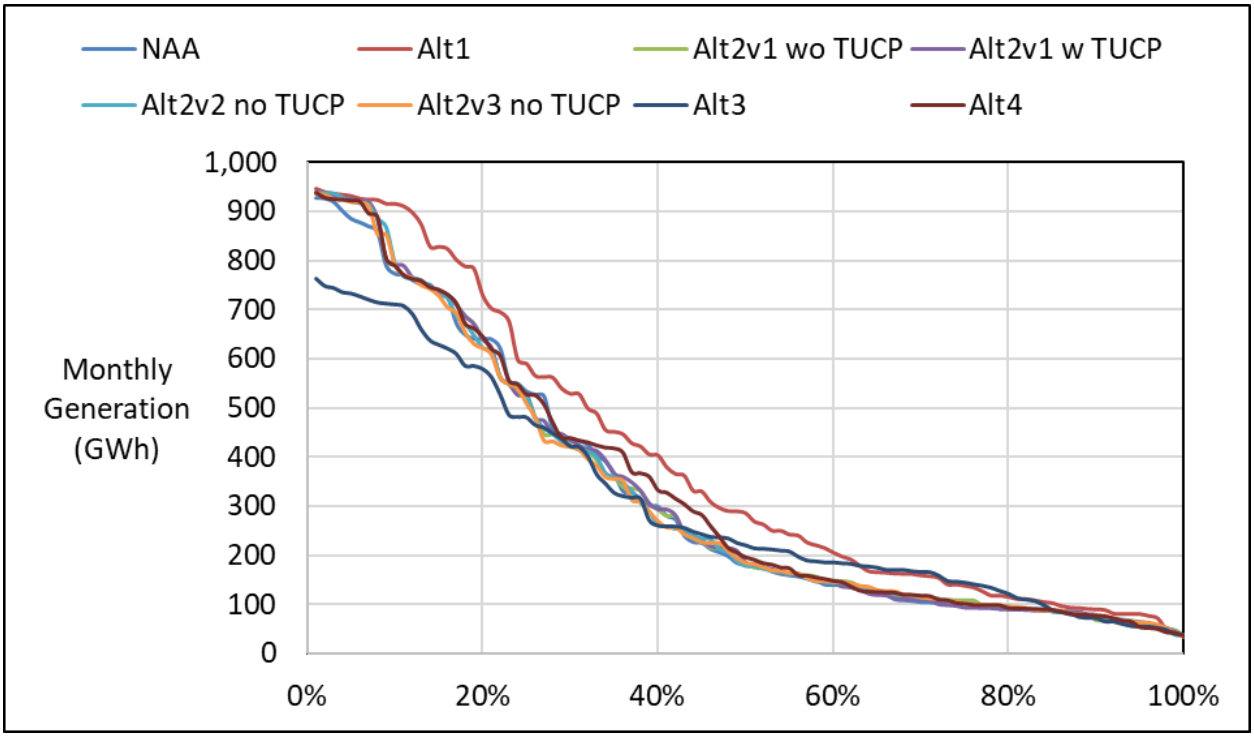

Figure U.1-105. State Water Project Total Generation, March

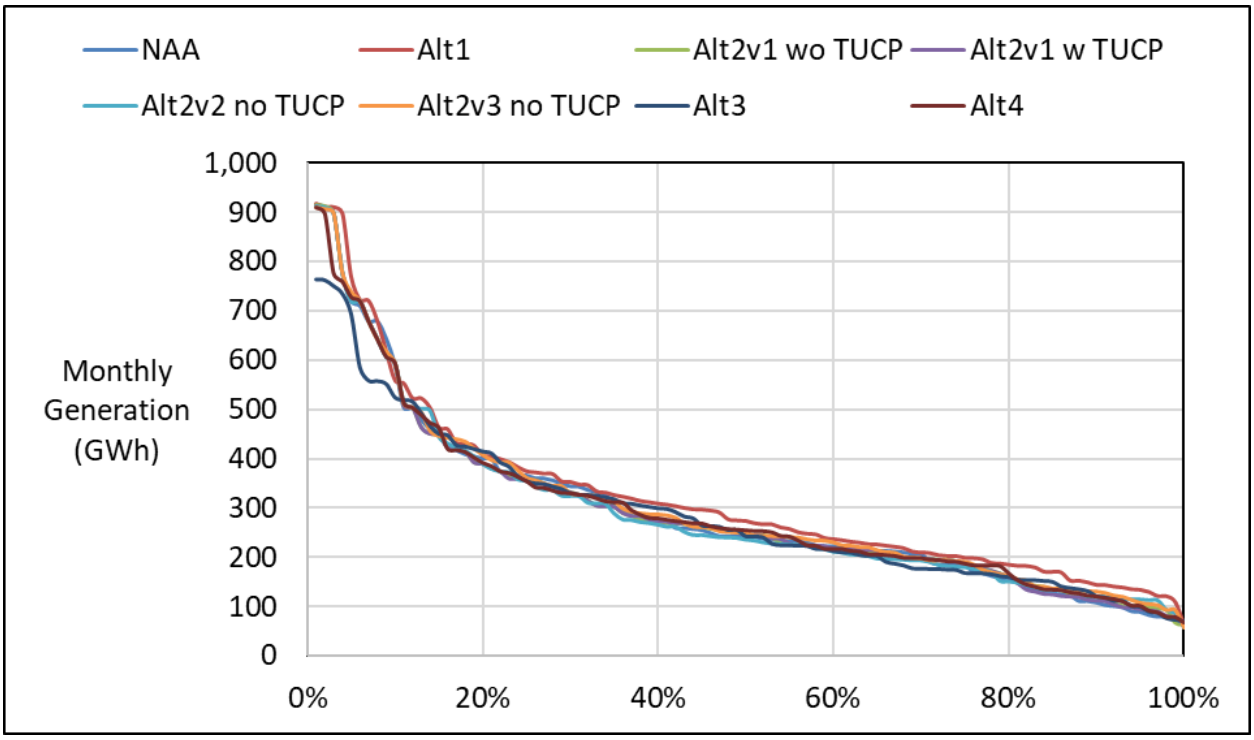

Figure U.1-106. State Water Project Total Generation, April

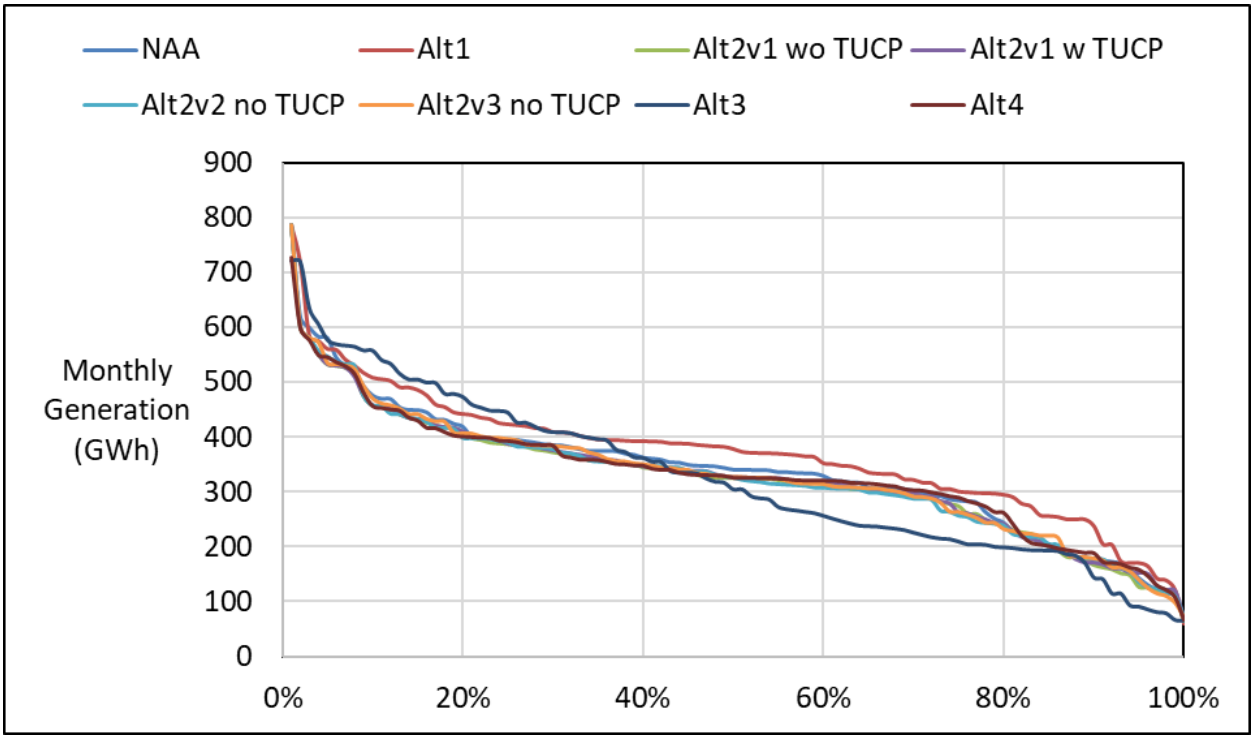

Figure U.1-107. State Water Project Total Generation, May

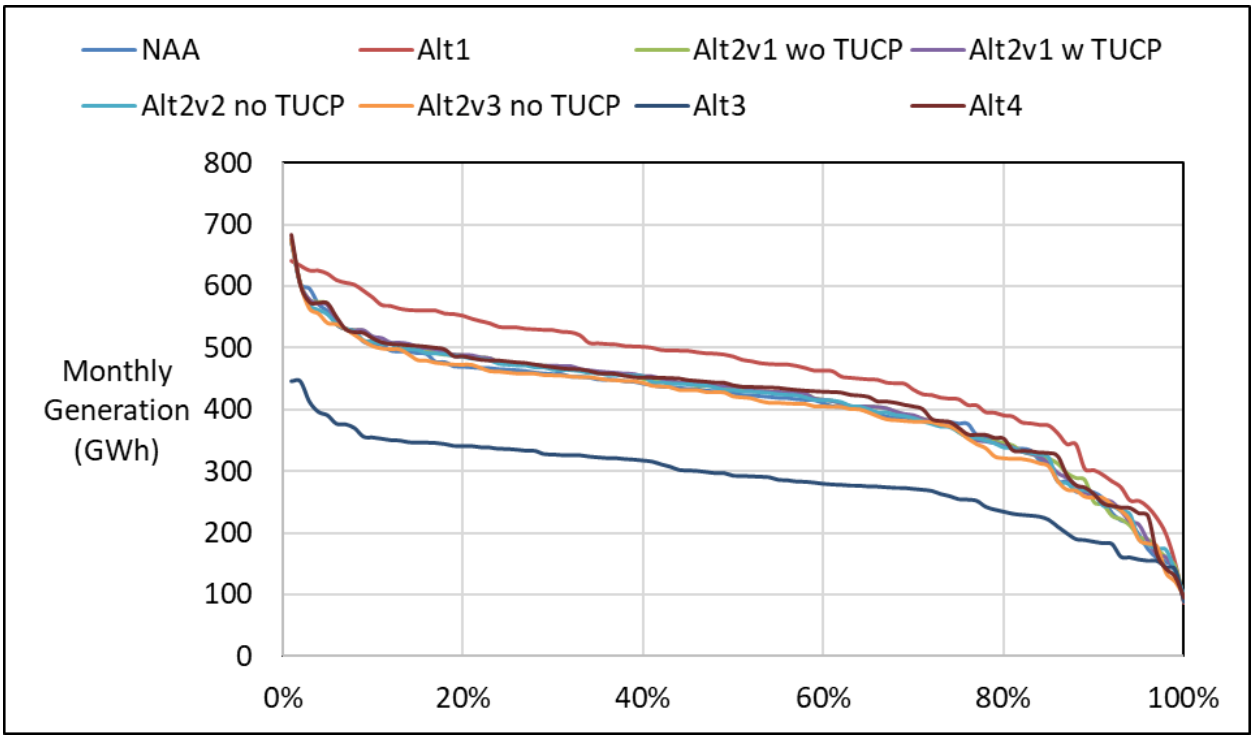

Figure U.1-108. State Water Project Total Generation, June

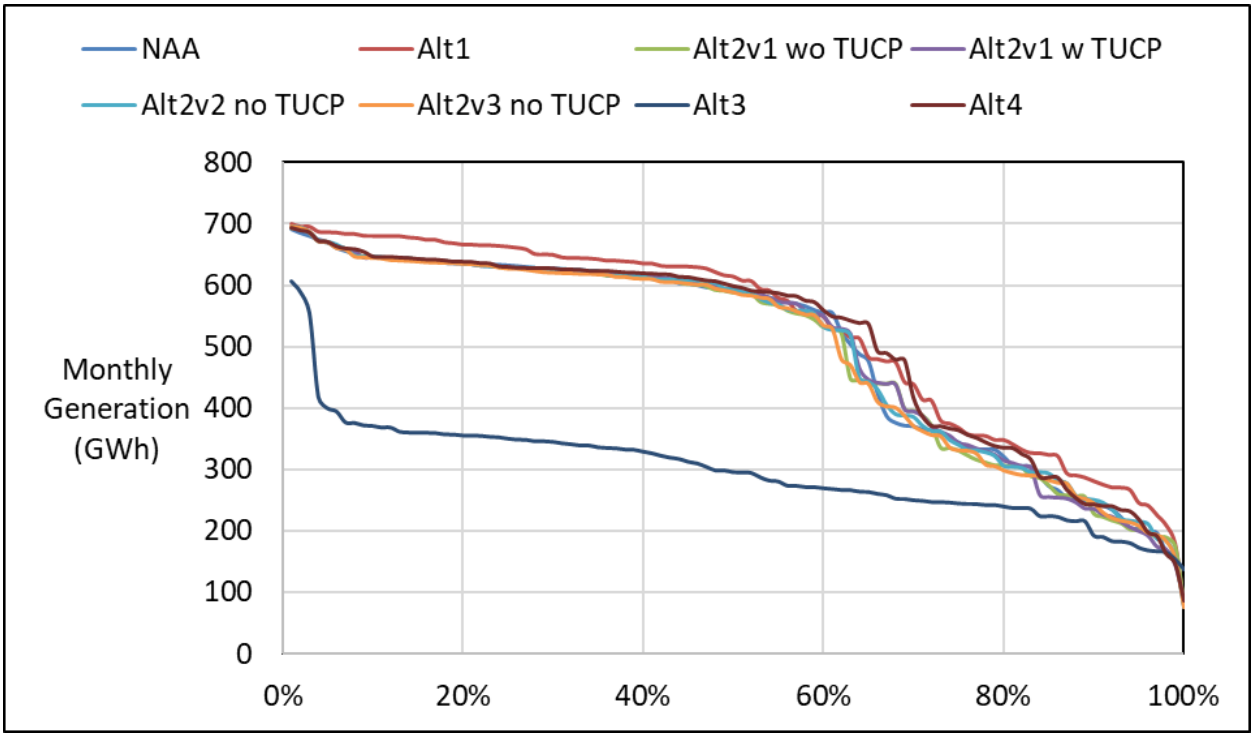

Figure U.1-109. State Water Project Total Generation, July

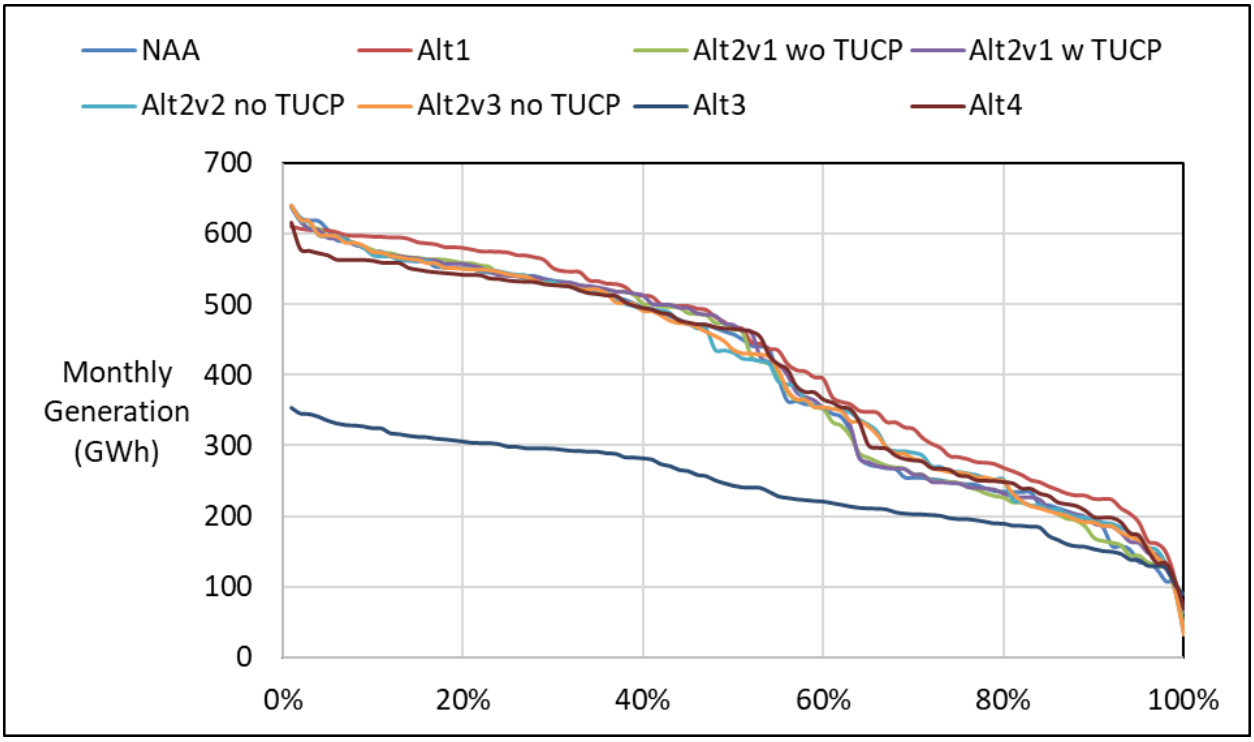

Figure U.1-110. State Water Project Total Generation, August

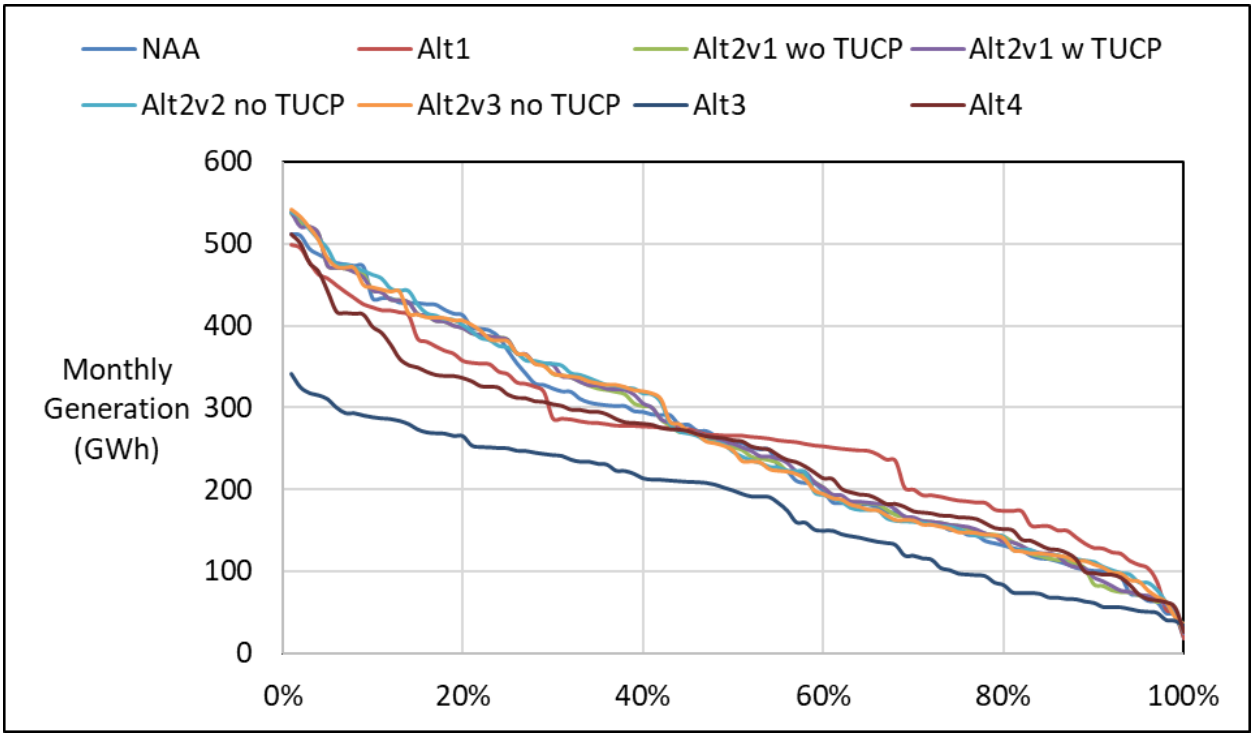

Figure U.1-111. State Water Project Total Generation, September

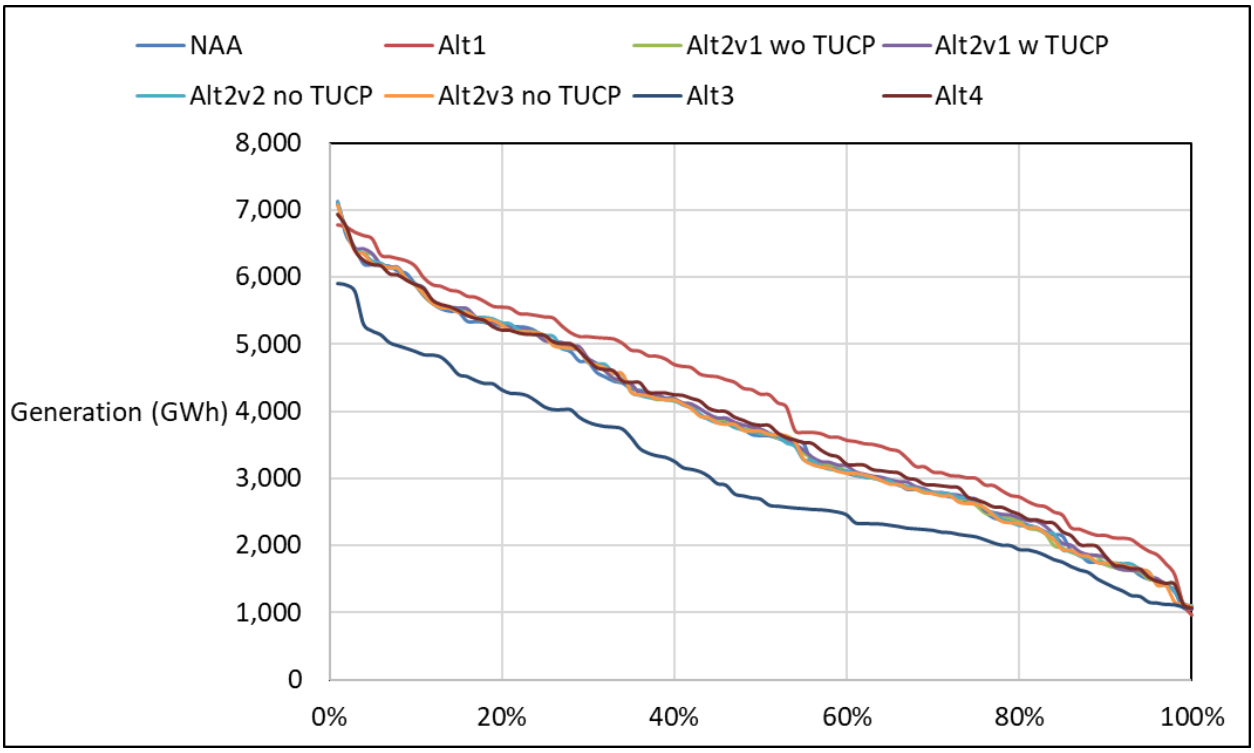

Figure U.1-112. October–September State Water Project Total Generation

Table U.1-99. State Water Project Total Energy Use, Monthly Energy Use, No Action Alternative

Statistic	Monthly Energy Use (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	846	811	668	952	914	966	836	724	803	952	949	858
20%	779	756	617	750	728	624	584	665	722	853	874	770
30%	743	712	585	570	580	558	566	619	702	840	849	713
40%	704	683	555	458	439	496	537	602	683	828	818	674
50%	660	619	526	368	349	432	506	592	666	751	755	626
60%	528	505	488	279	273	378	487	534	578	659	601	555
70%	467	394	412	169	181	273	372	490	468	509	457	456
80%	274	244	312	129	143	235	302	317	357	370	339	328
90%	131	154	209	105	97	176	213	229	272	260	261	223
Long Term												
Full Simulation Period	566	537	484	436	431	477	507	534	573	652	638	568
Water Year Types												
Wet (32%)	645	636	540	650	691	767	707	719	747	879	877	767
Above Normal (12%)	639	583	525	433	482	541	538	595	652	817	820	696
Below Normal (24%)	569	533	456	422	392	388	532	573	609	705	640	589
Dry (17%)	536	524	492	327	213	264	324	346	411	394	387	364
Critical (15%)	370	313	367	130	145	195	220	237	261	247	264	237

Table U.1-100. State Water Project Total Energy Use, Monthly Energy Use, Alternative 1

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	906	818	937	1,133	1,070	1,189	1,077	1,031	862	985	990	930
20%	887	793	768	1,096	1,029	1,112	736	780	843	974	978	914
30%	861	771	689	1,007	959	1,082	663	758	826	968	970	876
40%	813	734	629	875	885	890	617	735	816	948	936	831
50%	765	689	609	662	652	744	594	663	757	873	862	745
60%	653	562	592	542	502	586	553	629	708	820	807	696
70%	504	449	531	369	338	415	497	600	660	679	612	556
80%	373	322	451	246	250	336	386	545	574	520	490	441
90%	181	218	264	179	148	241	299	322	392	370	336	304
Long Term												
Full Simulation Period	642	582	606	672	638	729	604	667	696	770	757	680
Water Year Types												
Wet (32%)	704	655	699	883	937	1,088	837	866	834	953	956	879
Above Normal (12%)	712	607	765	783	765	928	649	771	821	951	953	866
Below Normal (24%)	653	620	575	690	609	670	586	678	748	854	778	685
Dry (17%)	586	528	562	518	380	428	454	524	588	576	576	489
Critical (15%)	499	405	380	276	239	237	271	304	341	323	344	315

Table U.1-101. State Water Project Total Energy Use, Monthly Energy Use, Alternative 1 minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	60	7	269	181	156	223	241	307	59	33	41	73
20%	108	37	151	347	301	488	152	115	121	121	104	144
30%	118	59	104	436	379	524	97	140	125	128	121	163
40%	109	51	74	417	445	394	80	133	132	120	119	158
50%	105	70	83	294	303	312	89	70	90	123	107	119
60%	125	57	104	262	229	208	66	95	130	161	206	141
70%	37	55	120	199	157	141	125	110	192	170	155	100
80%	100	78	140	117	106	102	84	228	217	149	151	112
90%	50	64	55	74	51	65	86	94	120	110	75	81
Long Term												
Full Simulation Period	76	44	122	236	207	251	98	134	124	118	119	112
Water Year Types												
Wet (32%)	59	19	158	233	246	321	130	147	87	74	80	113
Above Normal (12%)	72	25	240	350	284	387	111	177	169	134	134	170
Below Normal (24%)	84	87	118	268	217	282	54	105	139	149	138	96
Dry (17%)	49	4	69	191	168	164	130	178	176	182	189	125
Critical (15%)	129	92	13	146	94	42	51	67	80	75	81	78

Table U.1-102. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v1 Without TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	855	816	675	965	1,003	1,065	971	842	825	954	956	874
20%	795	765	623	859	842	672	644	719	735	870	885	754
30%	734	706	583	652	625	577	600	646	704	846	855	727
40%	700	677	555	511	450	491	571	624	685	825	821	677
50%	658	642	513	401	364	434	539	611	664	775	778	646
60%	558	515	460	296	275	340	507	571	605	676	645	603
70%	457	417	421	177	187	276	383	440	493	545	479	437
80%	240	306	309	123	135	219	286	336	366	376	370	341
90%	142	98	189	96	103	172	195	238	194	266	201	186
Long Term												
Full Simulation Period	567	541	480	467	456	492	532	564	581	661	649	577
Water Year Types												
Wet (32%)	645	641	544	697	734	819	758	777	757	882	884	777
Above Normal (12%)	562	588	556	481	497	516	576	622	652	849	840	724
Below Normal (24%)	579	556	463	437	417	401	557	621	644	727	669	597
Dry (17%)	590	518	477	350	242	262	319	337	402	390	388	367
Critical (15%)	358	292	313	149	135	181	217	227	251	240	256	239

Table U.1-103. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v1 Without TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	9	5	7	12	89	99	135	118	22	2	7	16
20%	16	9	6	109	114	48	60	54	13	16	10	-16
30%	-9	-5	-2	82	45	19	34	28	2	6	5	15
40%	-4	-7	0	53	11	-5	33	22	2	-3	3	3
50%	-2	23	-13	33	15	1	33	18	-3	24	23	20
60%	30	10	-28	16	2	-38	20	37	27	17	44	47
70%	-10	23	9	8	6	2	11	-50	25	37	22	-19
80%	-34	62	-3	-6	-8	-16	-16	19	9	6	31	13
90%	11	-56	-20	-9	6	-4	-18	9	-78	6	-60	-37
Long Term												
Full Simulation Period	0	3	-4	32	25	14	26	30	8	9	11	10
Water Year Types												
Wet (32%)	0	5	3	47	43	51	51	58	9	3	8	11
Above Normal (12%)	-77	6	30	48	15	-24	38	27	1	32	21	29
Below Normal (24%)	10	23	7	16	25	14	25	48	34	22	29	8
Dry (17%)	54	-7	-15	24	29	-2	-5	-10	-10	-4	1	3
Critical (15%)	-12	-21	-54	19	-10	-14	-3	-9	-10	-7	-8	2

Table U.1-104. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v1 With TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	862	811	694	965	1,003	1,066	970	844	826	951	954	873
20%	792	767	631	860	842	641	643	711	742	875	887	758
30%	753	706	584	611	608	572	600	649	706	850	855	734
40%	700	673	553	488	462	490	572	627	689	830	827	685
50%	666	642	513	384	362	437	543	616	664	791	791	650
60%	588	520	458	300	280	340	508	571	606	696	648	603
70%	467	428	411	182	194	279	383	456	493	545	481	457
80%	271	306	317	126	146	224	329	341	401	391	373	355
90%	127	121	219	101	104	177	234	228	250	255	261	188
Long Term												
Full Simulation Period	577	547	486	466	458	495	538	567	584	667	657	579
Water Year Types												
Wet (32%)	652	642	549	690	735	818	756	779	757	882	885	778
Above Normal (12%)	621	609	555	466	496	517	580	624	654	851	842	728
Below Normal (24%)	570	559	450	438	419	407	569	623	646	741	692	604
Dry (17%)	594	527	469	356	244	263	323	334	403	394	392	369
Critical (15%)	373	301	375	160	142	189	231	244	265	252	270	231

Table U.1-105. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v1 With TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	16	0	25	12	89	100	134	120	23	-1	4	16
20%	13	10	14	111	114	17	59	46	21	22	12	-13
30%	10	-6	-1	40	27	14	34	30	5	10	5	21
40%	-4	-10	-3	30	23	-6	35	26	6	2	9	12
50%	6	23	-12	16	13	5	37	23	-3	41	37	24
60%	60	15	-30	20	7	-38	20	37	28	37	47	48
70%	0	34	0	13	13	5	11	-34	25	36	25	1
80%	-2	62	5	-3	3	-10	27	24	44	21	34	27
90%	-3	-33	10	-4	7	1	20	-1	-22	-5	0	-35
Long Term												
Full Simulation Period	11	10	2	30	27	17	31	33	11	15	19	11
Water Year Types												
Wet (32%)	7	6	9	40	44	51	49	59	10	4	8	11
Above Normal (12%)	-19	26	30	33	14	-24	42	29	3	34	22	32
Below Normal (24%)	1	26	-7	16	28	19	37	49	36	36	53	15
Dry (17%)	58	2	-23	29	31	0	-1	-12	-8	0	4	5
Critical (15%)	3	-12	8	30	-3	-5	11	8	4	5	6	-6

Table U.1-106. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v2 Without TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	856	812	649	956	1,004	1,079	844	907	824	962	962	866
20%	783	755	617	848	840	634	612	693	732	867	881	745
30%	744	708	576	652	631	553	569	639	702	849	849	717
40%	704	682	555	465	495	478	544	624	689	833	822	677
50%	670	644	523	380	381	421	506	607	663	784	758	653
60%	578	531	470	256	297	364	473	549	571	669	648	582
70%	472	417	391	151	216	263	355	445	441	532	528	450
80%	301	304	268	120	142	225	292	330	346	384	402	329
90%	203	171	190	100	106	184	221	228	259	265	268	223
Long Term												
Full Simulation Period	584	546	472	459	469	489	510	565	574	665	662	580
Water Year Types												
Wet (32%)	664	624	537	685	754	819	726	792	763	884	887	782
Above Normal (12%)	634	604	537	413	508	513	535	621	659	837	834	724
Below Normal (24%)	585	553	465	450	428	384	521	599	598	725	703	594
Dry (17%)	575	548	459	360	246	263	322	336	399	400	402	367
Critical (15%)	383	322	309	138	147	190	221	239	266	265	275	252

Table U.1-107. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v2 Without TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	10	1	-19	4	90	113	8	183	21	10	13	9
20%	4	-1	0	98	112	10	28	28	10	14	6	-25
30%	1	-4	-9	82	51	-5	3	21	0	9	-1	4
40%	0	-1	-1	7	56	-18	7	22	6	5	4	4
50%	10	25	-3	12	32	-11	0	14	-4	33	3	26
60%	50	26	-18	-23	23	-14	-14	16	-7	10	47	27
70%	5	23	-20	-18	35	-10	-17	-45	-27	24	72	-6
80%	27	60	-44	-9	-2	-9	-10	13	-11	14	64	1
90%	72	17	-18	-5	9	8	8	-1	-13	5	7	0
Long Term												
Full Simulation Period	18	9	-12	23	38	11	3	31	2	13	25	12
Water Year Types												
Wet (32%)	19	-12	-3	36	63	52	19	73	15	6	11	16
Above Normal (12%)	-6	21	12	-20	26	-28	-3	26	8	20	14	29
Below Normal (24%)	16	20	9	28	36	-4	-11	25	-11	20	63	5
Dry (17%)	39	23	-34	34	34	0	-1	-10	-12	7	15	3
Critical (15%)	13	9	-58	8	2	-5	1	2	5	17	11	15

Table U.1-108. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v3 Without TUCP

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	863	803	660	956	1,004	1,065	812	883	825	963	963	863
20%	790	748	627	837	832	634	618	691	734	869	882	749
30%	743	707	580	636	657	551	568	639	700	849	848	719
40%	706	684	553	465	491	482	545	622	679	834	820	676
50%	665	634	514	379	377	422	510	599	653	785	760	650
60%	577	528	470	258	303	360	476	549	582	646	640	583
70%	473	406	392	161	214	261	353	442	432	537	527	450
80%	304	298	266	120	143	227	284	325	351	385	402	327
90%	201	173	193	100	106	186	231	234	268	281	283	238
Long Term												
Full Simulation Period	585	543	472	457	468	488	508	562	570	663	661	578
Water Year Types												
Wet (32%)	668	625	540	680	748	813	722	783	755	884	887	780
Above Normal (12%)	634	604	538	409	503	512	536	622	666	834	837	726
Below Normal (24%)	583	549	455	454	432	386	520	597	591	723	703	593
Dry (17%)	579	532	464	362	247	265	328	341	400	395	395	363
Critical (15%)	377	320	307	132	150	188	217	235	260	259	271	247

Table U.1-109. State Water Project Total Energy Use, Monthly Energy Use, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	16	-8	-8	4	90	99	-24	159	22	11	14	5
20%	11	-8	10	87	104	10	34	26	12	16	8	-21
30%	-1	-5	-5	66	76	-7	2	21	-2	9	-1	7
40%	2	0	-2	8	51	-14	8	20	-4	5	2	2
50%	5	15	-11	11	28	-10	4	6	-14	34	5	23
60%	49	23	-18	-21	30	-18	-12	15	4	-13	39	28
70%	6	12	-20	-9	33	-12	-19	-48	-36	28	70	-6
80%	31	54	-46	-9	0	-7	-18	8	-6	15	64	-1
90%	70	19	-16	-5	9	10	18	6	-4	21	22	15
Long Term												
Full Simulation Period	19	5	-13	21	37	10	2	28	-2	10	23	10
Water Year Types												
Wet (32%)	23	-11	-1	30	57	46	15	63	8	5	10	13
Above Normal (12%)	-5	21	13	-24	21	-29	-3	27	14	17	17	30
Below Normal (24%)	15	16	-1	32	40	-1	-12	23	-19	18	63	4
Dry (17%)	43	8	-28	35	34	1	4	-5	-11	1	8	-1
Critical (15%)	7	7	-60	2	5	-7	-3	-2	-1	12	7	9

Table U.1-110. State Water Project Total Energy Use, Monthly Energy Use, Alternative 3

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	585	534	538	388	351	372	447	565	635	520	555	551
20%	541	489	476	304	275	309	412	533	560	493	521	530
30%	506	427	384	253	231	266	382	495	526	459	486	493
40%	447	352	328	206	197	244	316	347	424	400	414	463
50%	266	291	214	159	169	195	245	249	290	279	244	403
60%	194	227	166	121	151	176	207	197	254	220	123	354
70%	117	186	121	96	111	167	174	160	182	178	90	272
80%	69	123	78	76	86	143	145	123	132	115	40	170
90%	47	66	55	42	60	115	117	93	96	77	22	54
Long Term												
Full Simulation Period	316	311	272	193	190	229	274	311	346	311	283	359
Water Year Types												
Wet (32%)	392	362	319	286	263	298	399	505	566	501	509	520
Above Normal (12%)	369	314	237	137	268	259	305	357	389	354	339	419
Below Normal (24%)	323	359	308	169	170	227	236	249	274	252	197	364
Dry (17%)	287	291	293	128	120	167	191	178	204	177	97	224
Critical (15%)	136	141	116	153	82	133	135	114	119	115	104	112

Table U.1-111. State Water Project Total Energy Use, Monthly Energy Use, Alternative 3 minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-261	-277	-130	-565	-563	-594	-389	-159	-168	-432	-394	-307
20%	-238	-268	-141	-446	-453	-316	-172	-132	-162	-361	-354	-240
30%	-237	-284	-201	-317	-350	-292	-184	-124	-175	-382	-363	-220
40%	-257	-332	-227	-252	-243	-252	-222	-255	-259	-429	-404	-211
50%	-394	-328	-312	-209	-180	-237	-261	-344	-376	-472	-511	-223
60%	-334	-278	-323	-158	-122	-202	-280	-337	-324	-439	-478	-201
70%	-350	-208	-290	-73	-70	-107	-199	-330	-286	-330	-367	-185
80%	-204	-120	-233	-53	-58	-92	-157	-194	-225	-256	-299	-158
90%	-84	-88	-153	-63	-37	-62	-96	-136	-176	-183	-239	-169
Long Term												
Full Simulation Period	-250	-227	-213	-242	-241	-248	-233	-222	-227	-342	-355	-209
Water Year Types												
Wet (32%)	-253	-274	-222	-363	-428	-469	-308	-214	-182	-377	-367	-246
Above Normal (12%)	-270	-269	-288	-296	-214	-282	-233	-238	-263	-464	-480	-277
Below Normal (24%)	-246	-173	-148	-252	-221	-161	-296	-325	-335	-453	-443	-225
Dry (17%)	-250	-233	-199	-198	-92	-96	-133	-169	-207	-217	-291	-140
Critical (15%)	-234	-172	-251	24	-63	-62	-85	-123	-142	-133	-160	-126

Table U.1-112. State Water Project Total Energy Use, Monthly Energy Use, Alternative 4

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	908	825	694	968	1,006	1,084	897	811	825	951	954	870
20%	822	769	612	892	867	703	634	701	736	883	895	782
30%	773	719	582	609	671	579	605	657	709	858	862	739
40%	723	688	548	493	492	489	576	634	686	836	836	710
50%	695	665	510	402	392	455	544	622	669	810	803	658
60%	610	595	459	314	307	373	508	586	619	723	668	615
70%	477	453	389	228	220	295	425	480	520	583	507	473
80%	333	284	318	132	167	242	322	366	419	429	415	371
90%	196	138	217	114	109	189	246	269	257	308	309	227
Long Term												
Full Simulation Period	602	558	484	478	480	509	540	575	593	687	674	595
Water Year Types												
Wet (32%)	685	655	548	677	744	829	747	778	757	883	887	788
Above Normal (12%)	652	638	539	457	537	522	576	629	658	863	858	746
Below Normal (24%)	592	565	431	478	454	434	569	623	644	770	704	623
Dry (17%)	601	542	490	376	266	280	352	370	444	449	444	402
Critical (15%)	400	294	378	185	157	198	240	257	279	265	283	236

Table U.1-113. State Water Project Total Energy Use, Monthly Energy Use, Alternative 4 minus No Action Alternative

	Monthly Energy Use (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	62	14	26	15	92	118	61	87	22	-1	5	12
20%	43	13	-5	143	138	79	50	36	14	30	21	12
30%	30	8	-3	39	91	20	39	39	7	17	13	26
40%	19	5	-8	36	53	-7	39	32	3	8	18	37
50%	34	46	-16	34	43	22	38	29	3	59	49	32
60%	82	90	-29	35	33	-5	21	52	41	63	67	60
70%	10	59	-23	58	39	21	53	-10	52	74	50	17
80%	59	41	7	3	24	7	20	49	62	58	76	43
90%	66	-17	8	9	12	13	33	41	-15	48	48	4
Long Term												
Full Simulation Period	35	21	-1	42	49	32	34	42	20	35	36	27
Water Year Types												
Wet (32%)	40	19	8	27	53	62	40	59	10	4	10	21
Above Normal (12%)	13	55	13	24	55	-19	38	34	6	46	38	50
Below Normal (24%)	23	33	-25	56	62	47	37	49	34	65	64	34
Dry (17%)	65	18	-3	49	54	16	28	24	32	55	56	38
Critical (15%)	30	-19	10	56	12	3	20	20	18	18	20	-2

Table U.1-114. Annual State Water Project Total Energy Use

Statistic	Energy Use (GWh)														
	NAA	Alt1	Alt1 minus NAA	Alt2v1 wo TUCP	Alt2v1 wo TUCP minus NAA	Alt2v1 w TUCP	Alt2v1 w TUCP minus NAA	Alt2v2 no TUCP	Alt2v2 no TUCP minus NAA	Alt2v3 no TUCP	Alt2v3 no TUCP minus NAA	Alt3	Alt3 minus NAA	Alt4	Alt4 minus NAA
PROBABILITY OF EXCEEDANCE															
10%	9,471	10,810	1,339	9,586	116	9,592	121	9,579	108	9,580	109	5,481	-3,990	9,590	120
20%	8,493	10,456	1,964	8,524	31	8,538	45	8,641	148	8,607	114	5,045	-3,448	8,706	213
30%	7,999	10,018	2,019	8,281	282	8,283	284	8,186	187	8,176	177	4,534	-3,466	8,360	361
40%	7,378	9,569	2,191	7,814	436	7,838	460	7,669	290	7,622	244	3,685	-3,693	7,926	547
50%	6,546	8,620	2,074	6,721	175	6,812	266	6,726	181	6,776	230	3,133	-3,413	7,077	531
60%	5,732	7,691	1,960	5,881	149	5,939	208	5,930	199	6,006	274	2,730	-3,001	6,204	472
70%	4,888	6,663	1,775	5,107	219	5,110	222	5,258	370	5,126	237	2,407	-2,482	5,671	782
80%	4,290	5,395	1,104	4,328	37	4,370	79	4,063	-227	4,197	-93	2,054	-2,236	4,469	178
90%	2,911	4,087	1,176	2,921	10	3,030	119	3,000	89	2,948	38	1,319	-1,592	3,253	342
LONG TERM															
Full Simulation Period	6,403	8,043	1,640	6,566	163	6,621	218	6,575	172	6,552	150	3,395	-3,007	6,775	372
WATER YEAR TYPES															
Wet (32%)	8,625	10,292	1,667	8,914	289	8,923	298	8,918	293	8,884	259	4,921	-3,704	8,978	353
Above Normal (12%)	7,320	9,572	2,252	7,464	144	7,543	222	7,420	100	7,421	101	3,748	-3,572	7,674	354
Below Normal (24%)	6,407	8,145	1,739	6,667	260	6,716	310	6,604	197	6,585	179	3,128	-3,278	6,886	479
Dry (17%)	4,582	6,208	1,626	4,641	59	4,669	87	4,679	97	4,672	91	2,358	-2,224	5,014	432
Critical (15%)	2,986	3,936	950	2,858	-128	3,034	48	3,005	19	2,962	-24	1,461	-1,525	3,173	186

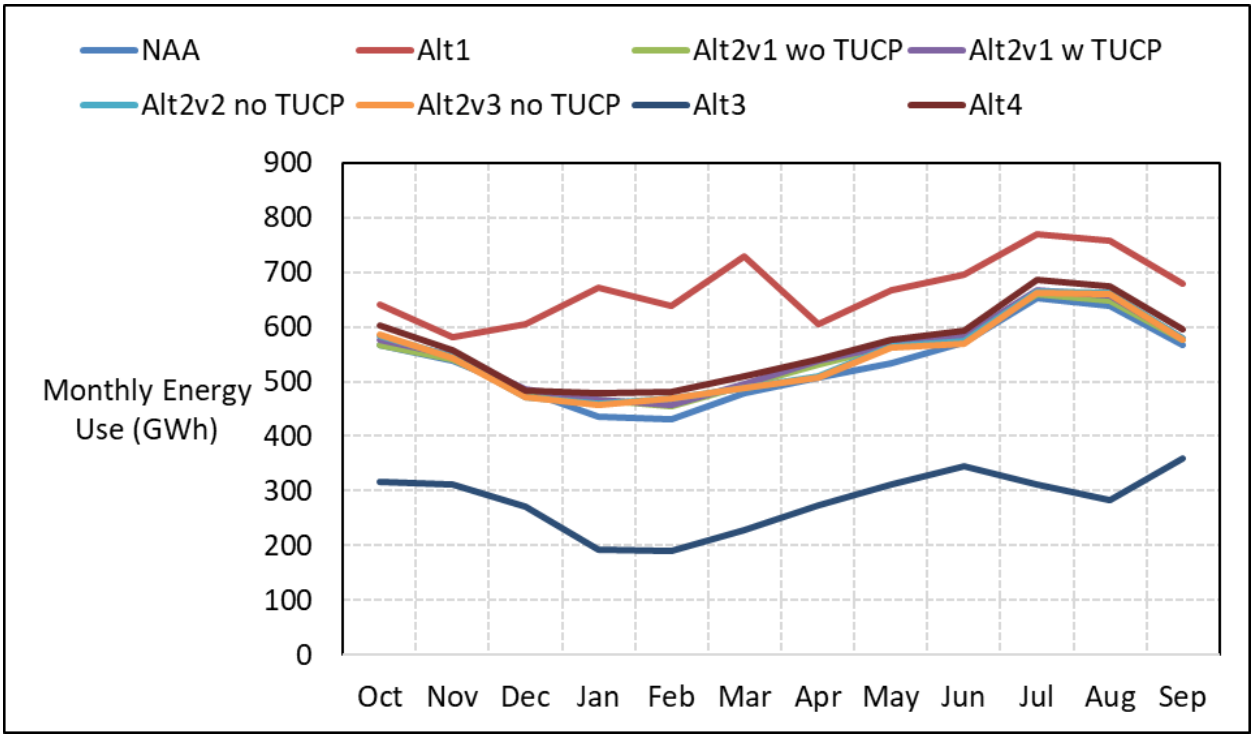

Figure U.1-113. State Water Project Total Energy Use, Long-Term Average Energy Use

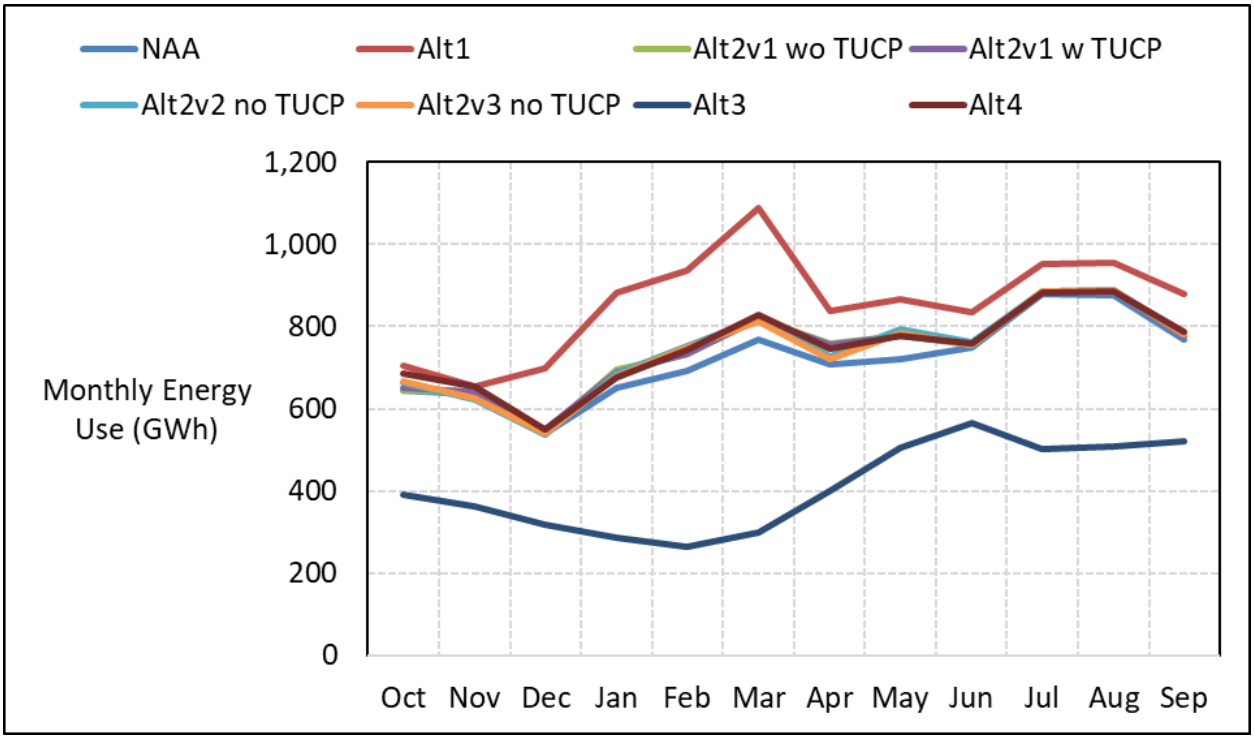

Figure U.1-114. State Water Project Total Energy Use, Wet Year Average Energy Use

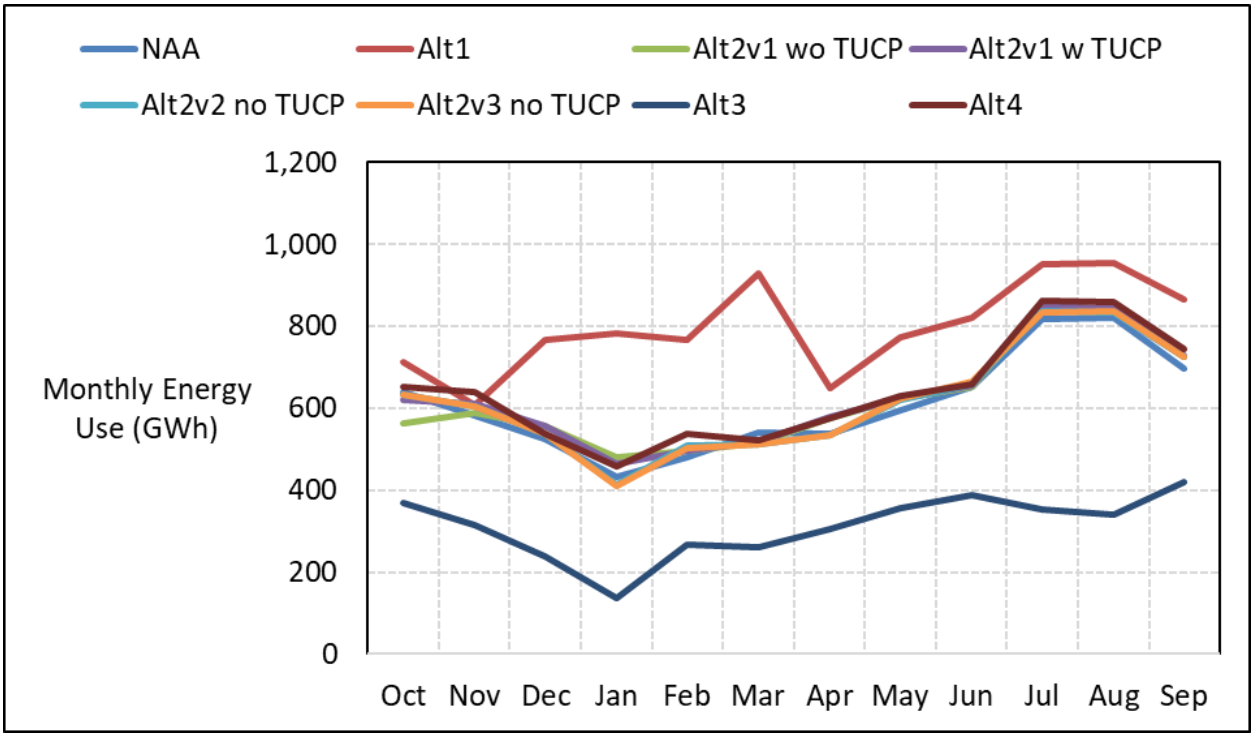

Figure U.1-115. State Water Project Total Energy Use, Above Normal Year Average Energy Use

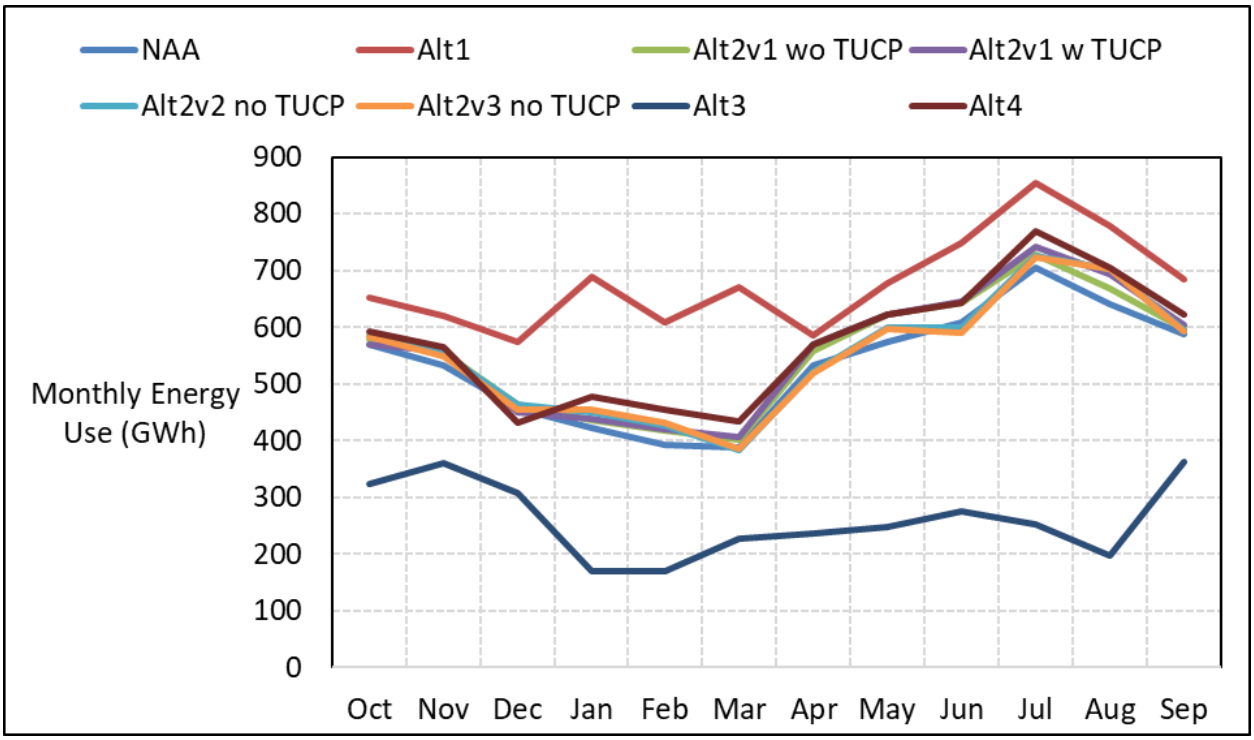

Figure U.1-116. State Water Project Total Energy Use, Below Normal Year Average Energy Use

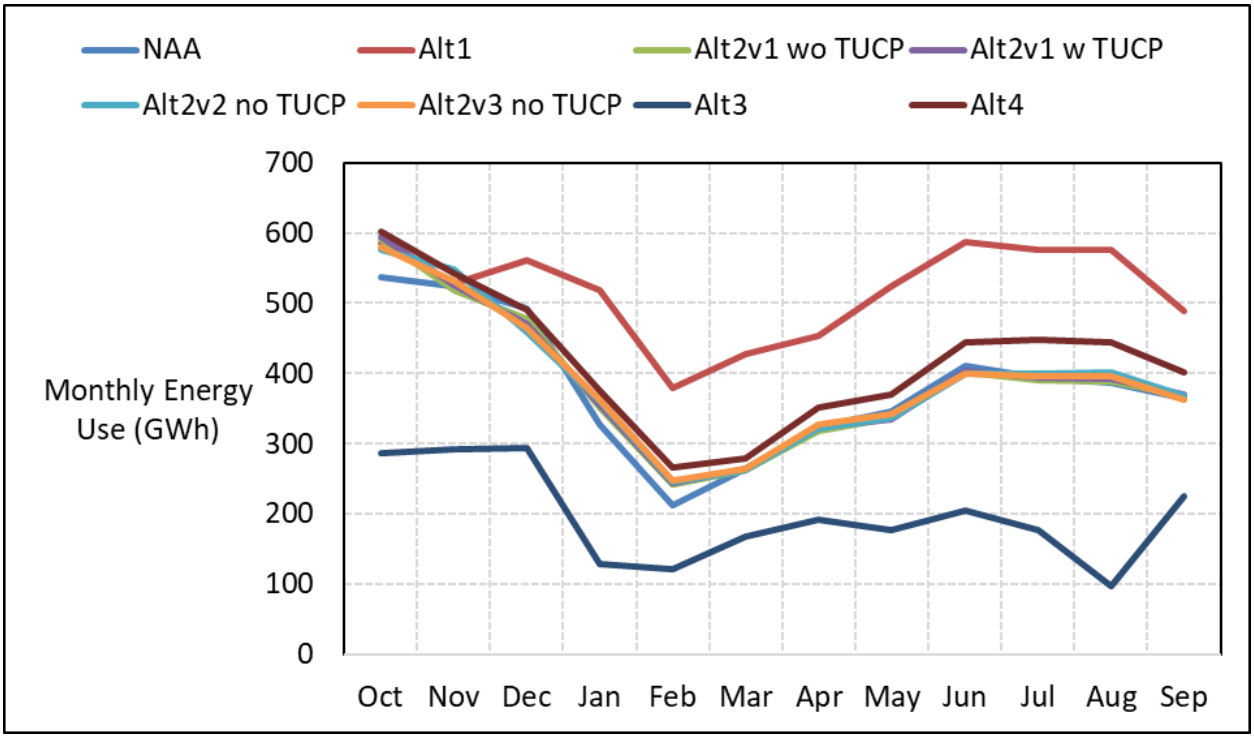

Figure U.1-117. State Water Project Total Energy Use, Dry Year Average Energy Use

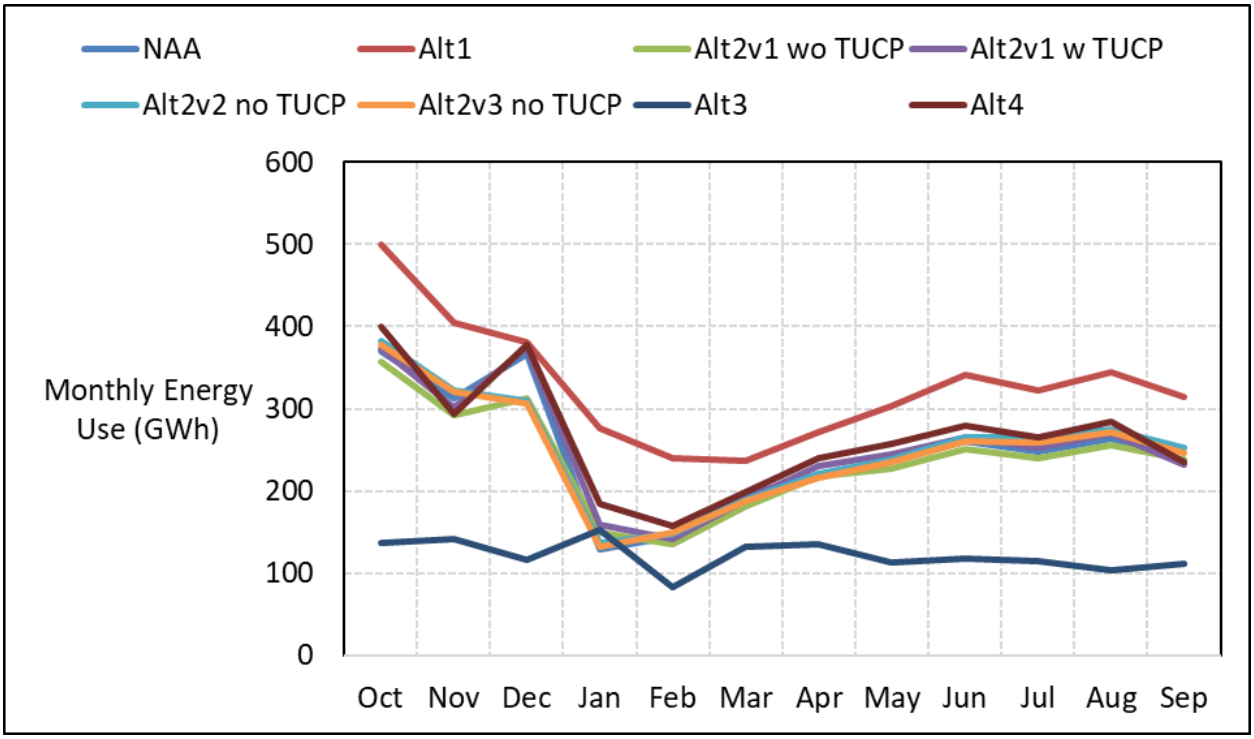

Figure U.1-118. State Water Project Total Energy Use, Critical Year Average Energy Use

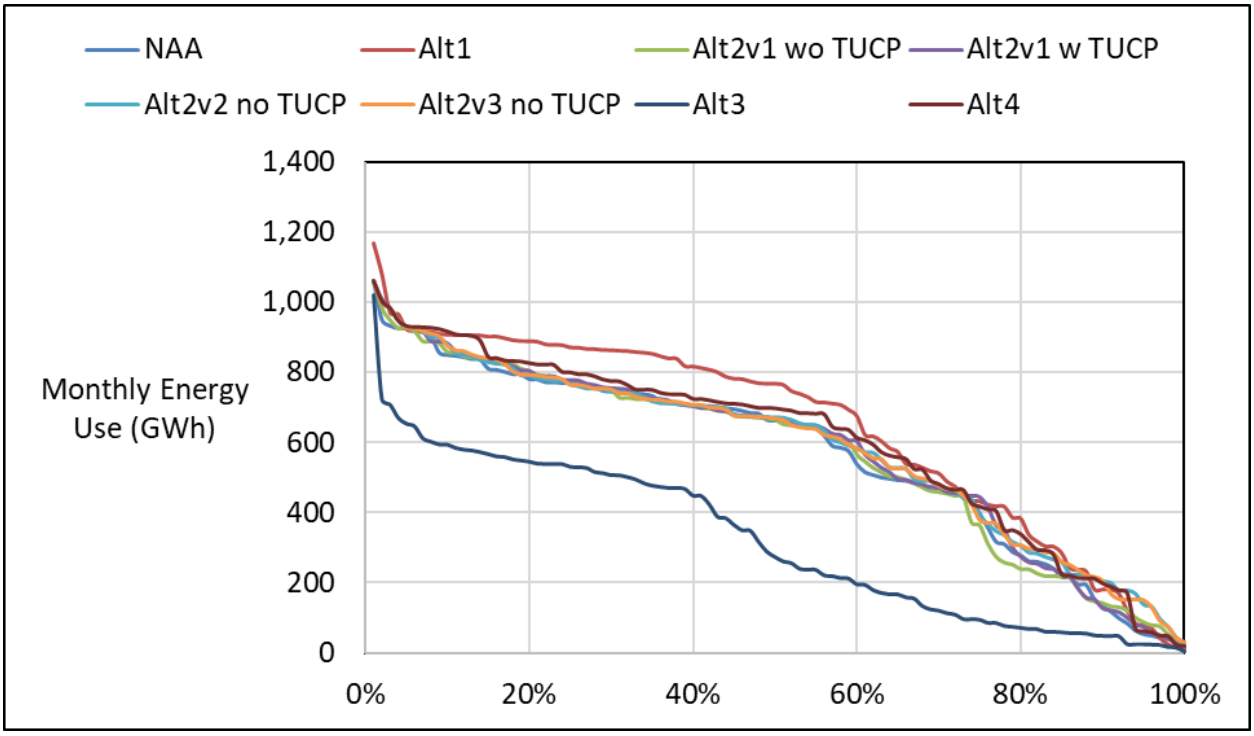

Figure U.1-119. State Water Project Total Energy Use, October

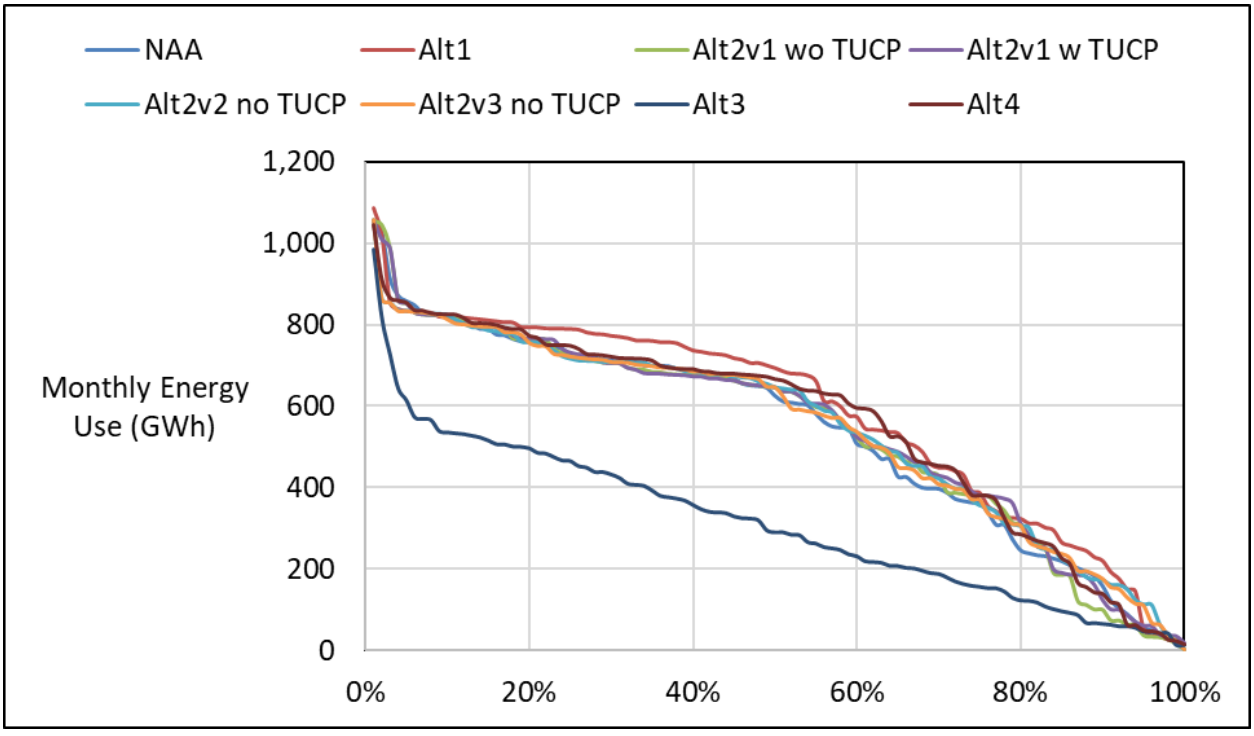

Figure U.1-120. State Water Project Total Energy Use, November

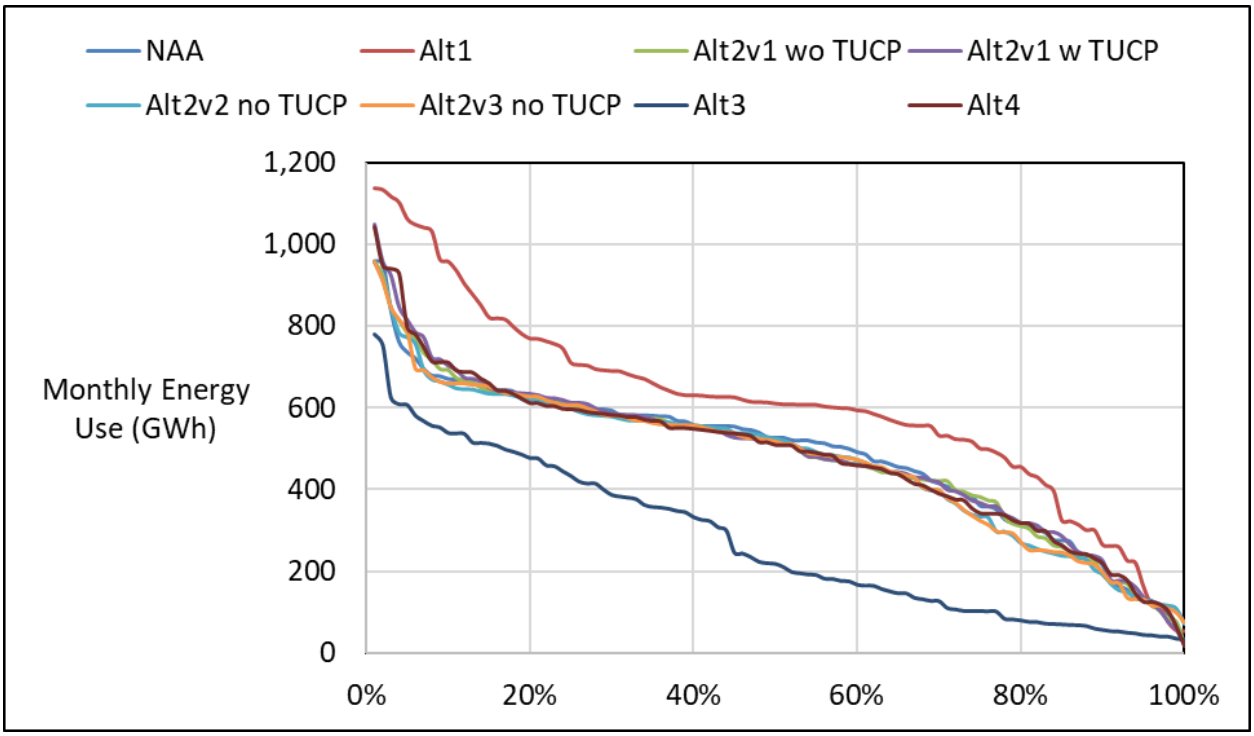

Figure U.1-121. State Water Project Total Energy Use, December

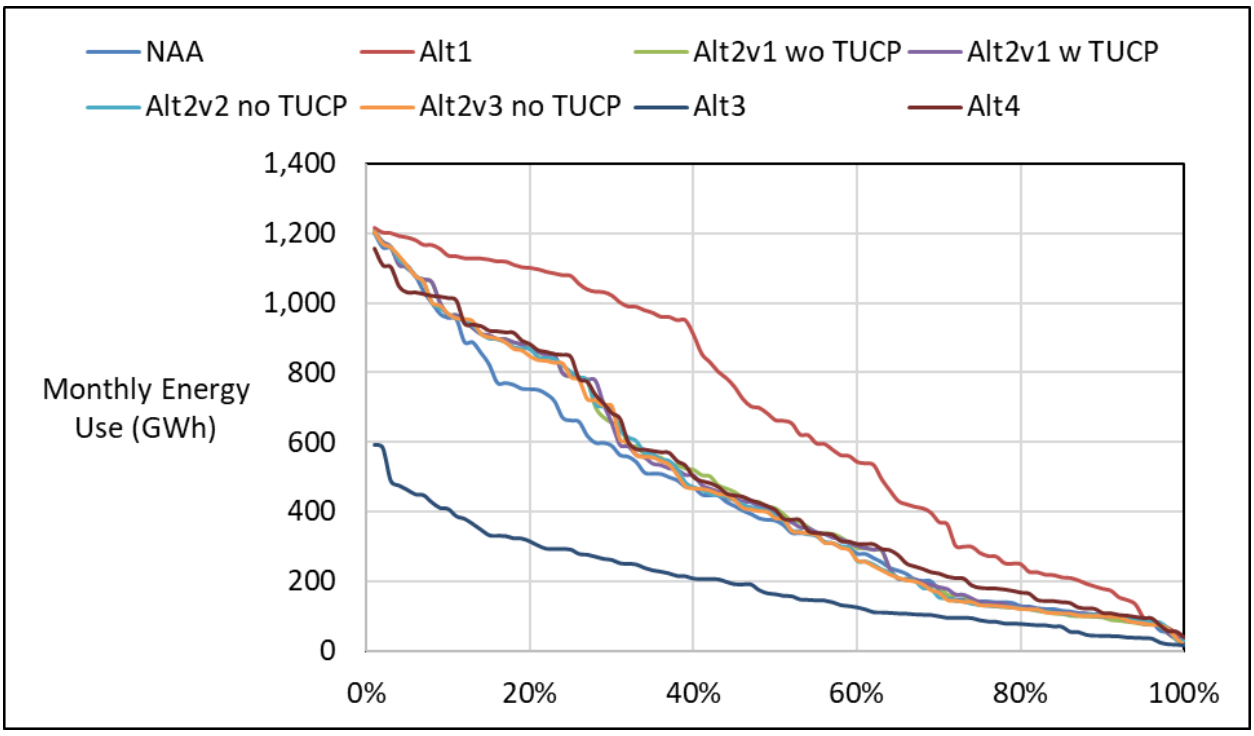

Figure U.1-122. State Water Project Total Energy Use, January

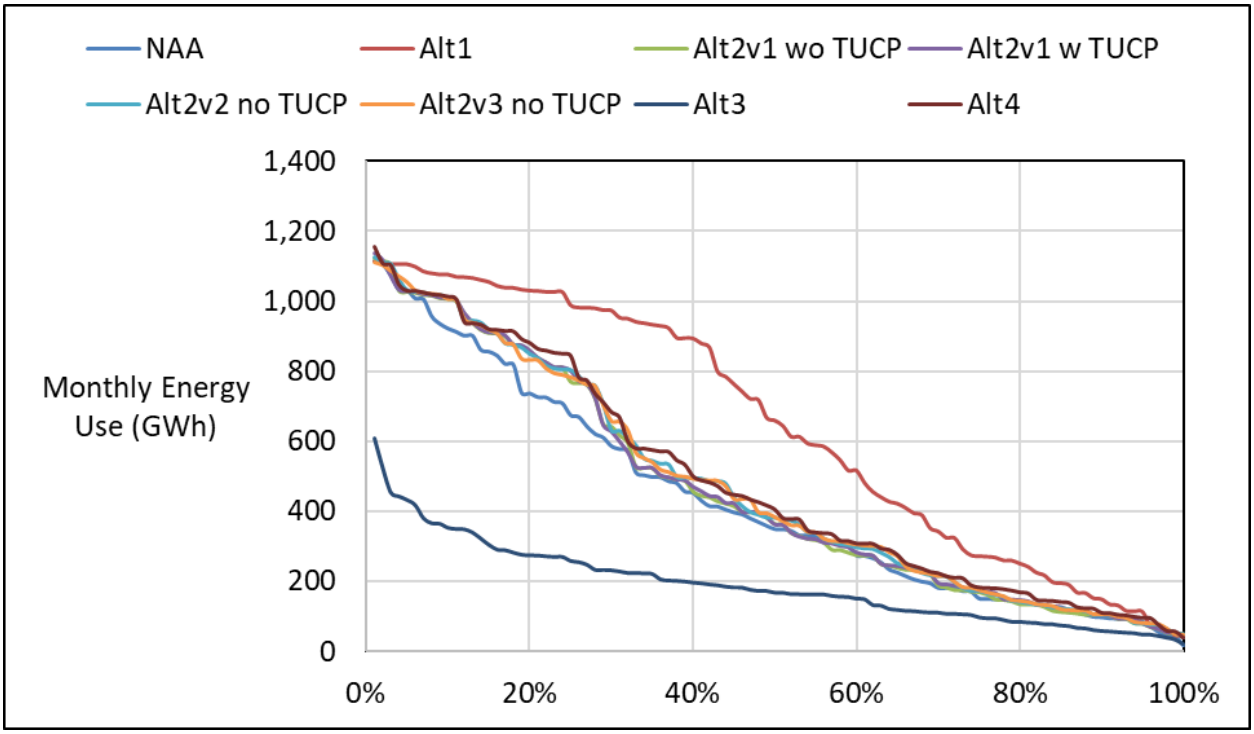

Figure U.1-123. State Water Project Total Energy Use, February

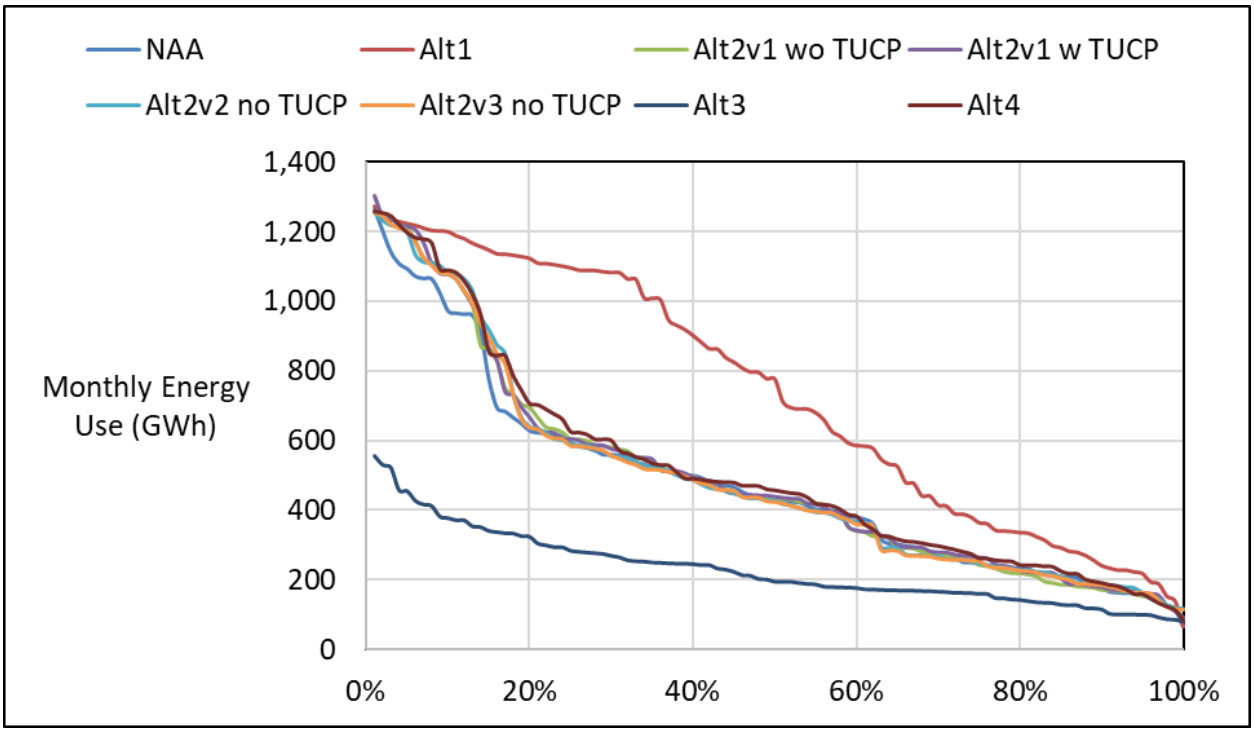

Figure U.1-124. State Water Project Total Energy Use, March

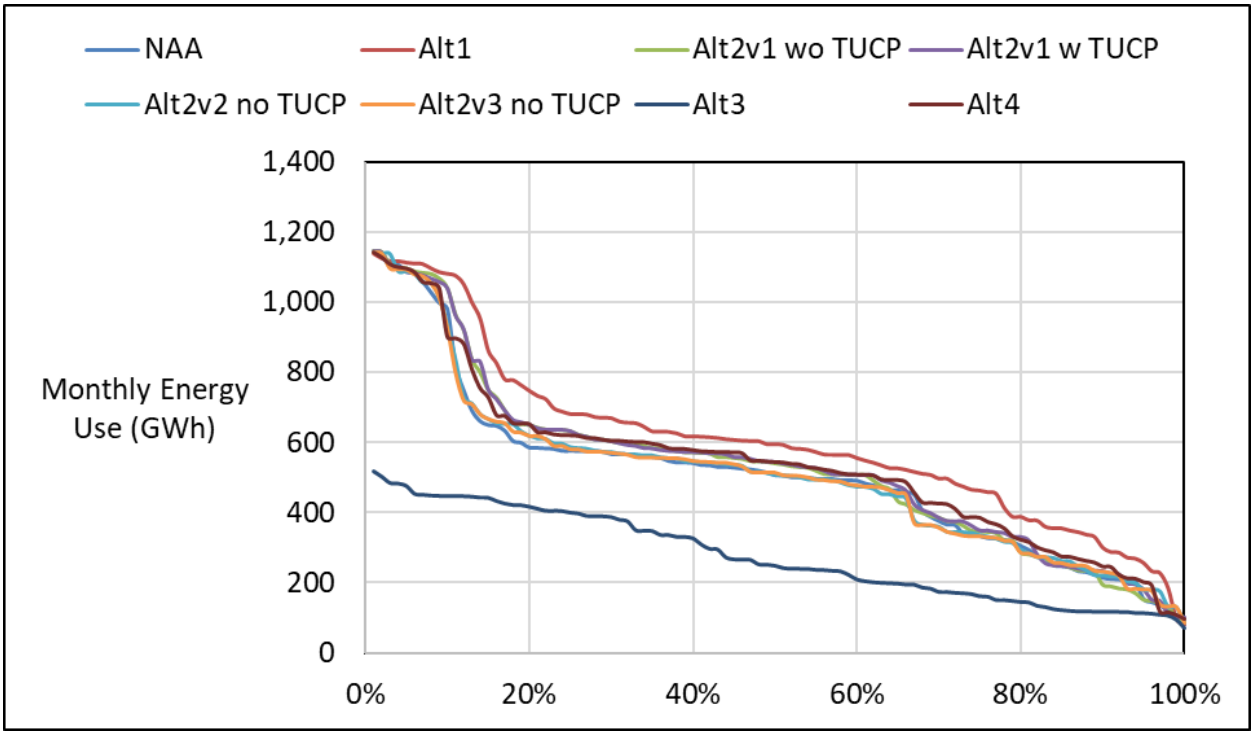

Figure U.1-125. State Water Project Total Energy Use, April

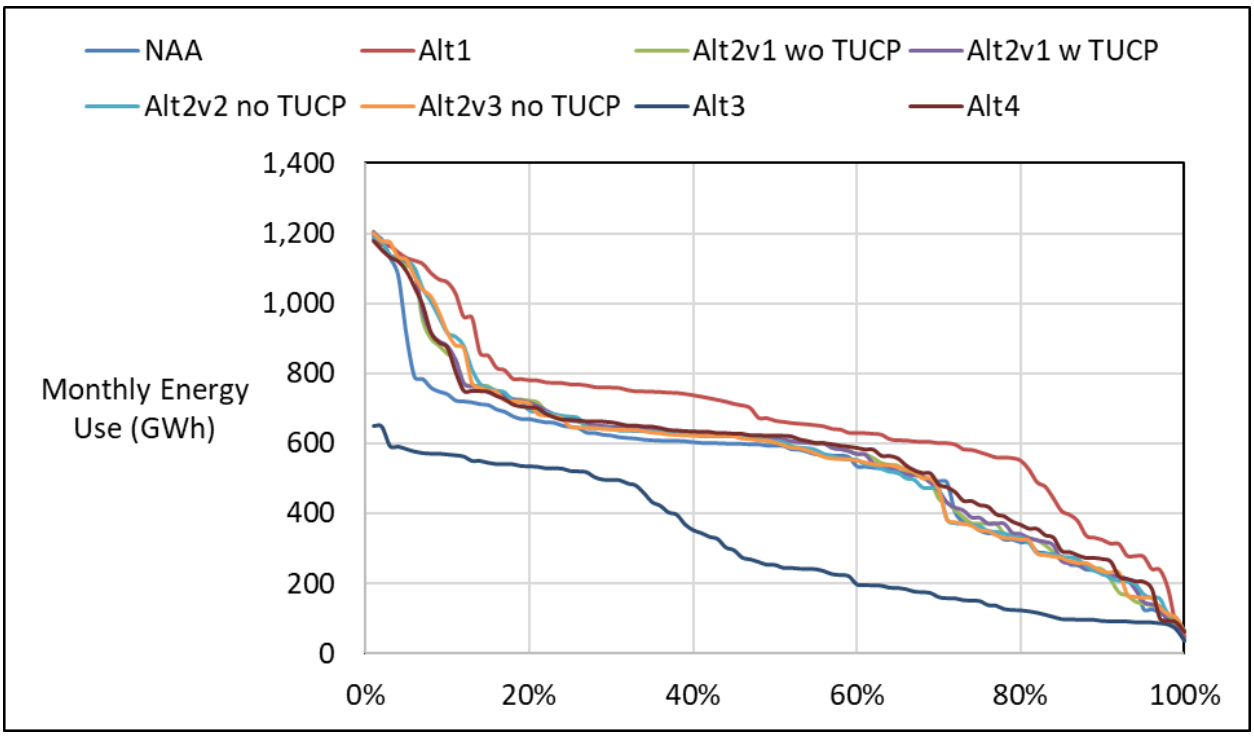

Figure U.1-126. State Water Project Total Energy Use, May

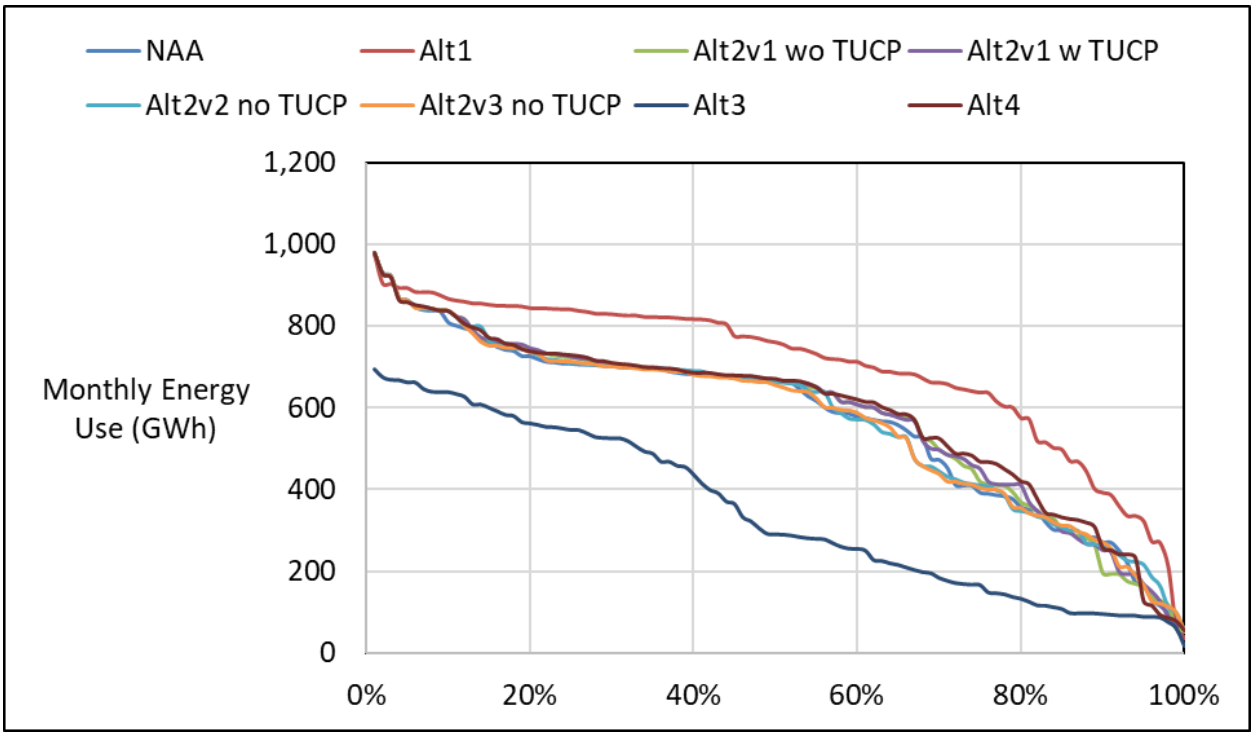

Figure U.1-127. State Water Project Total Energy Use, June

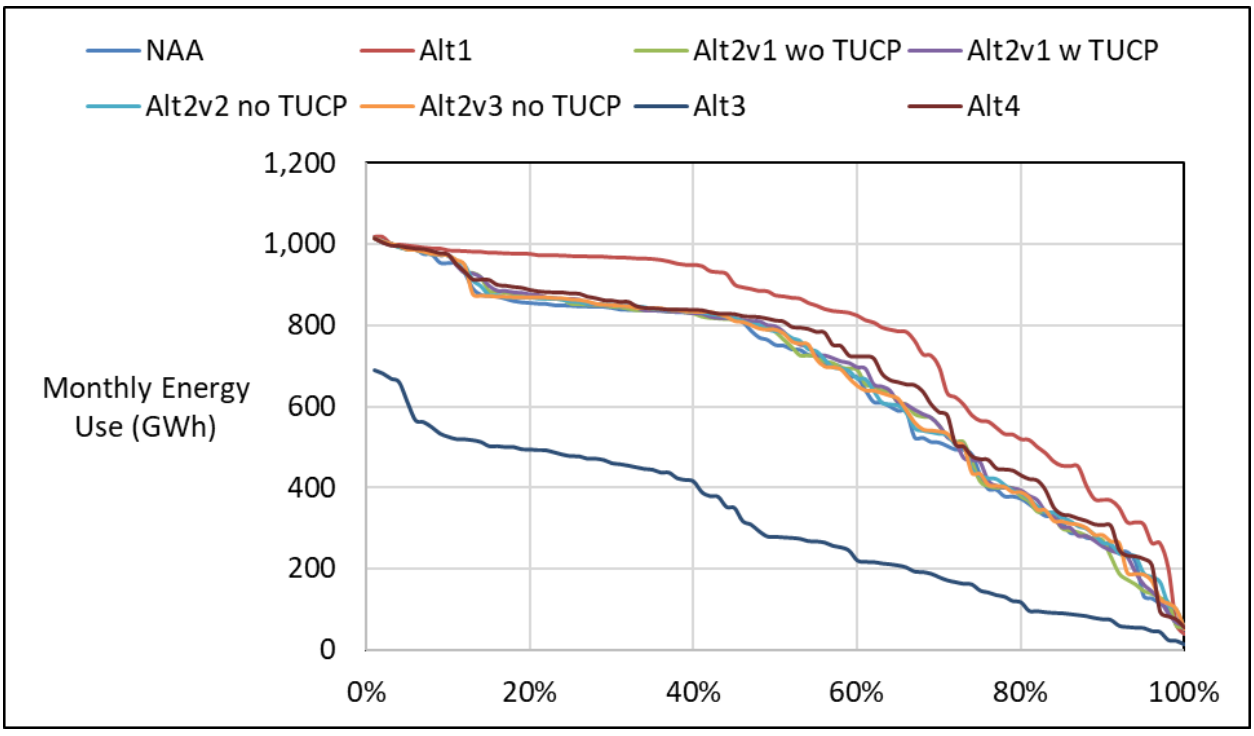

Figure U.1-128. State Water Project Total Energy Use, July

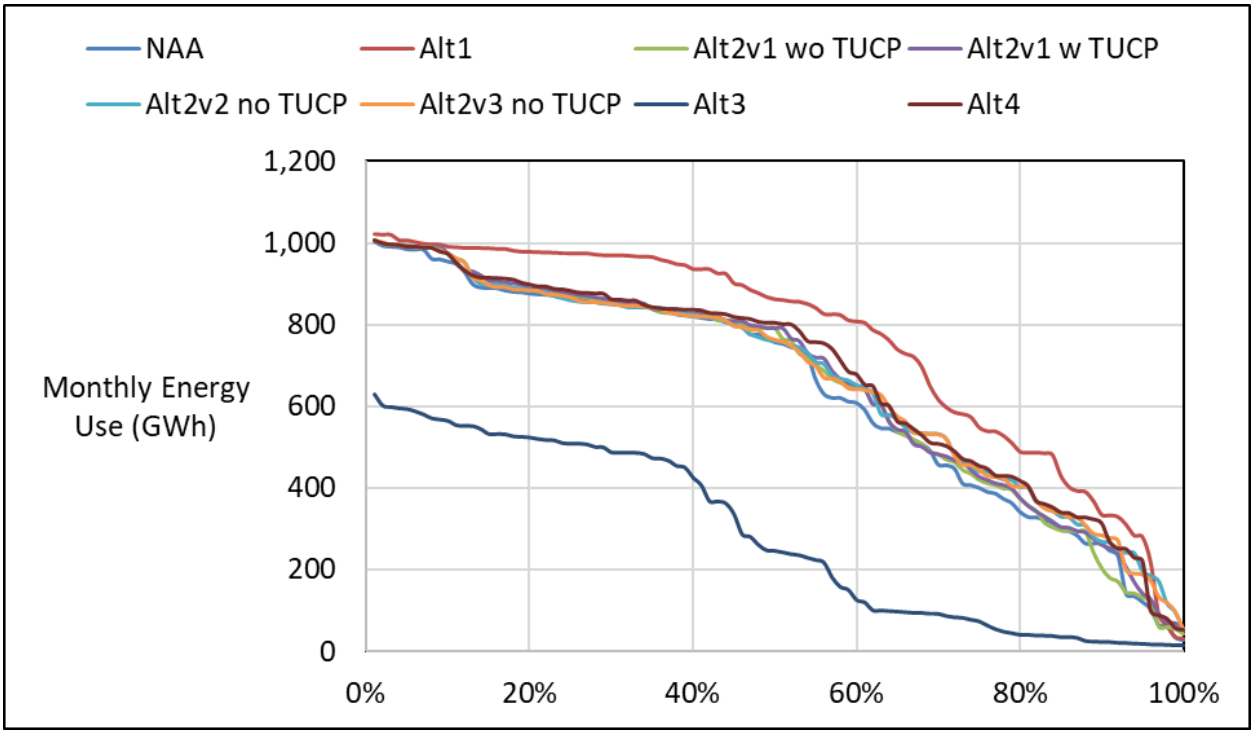

Figure U.1-129. State Water Project Total Energy Use, August

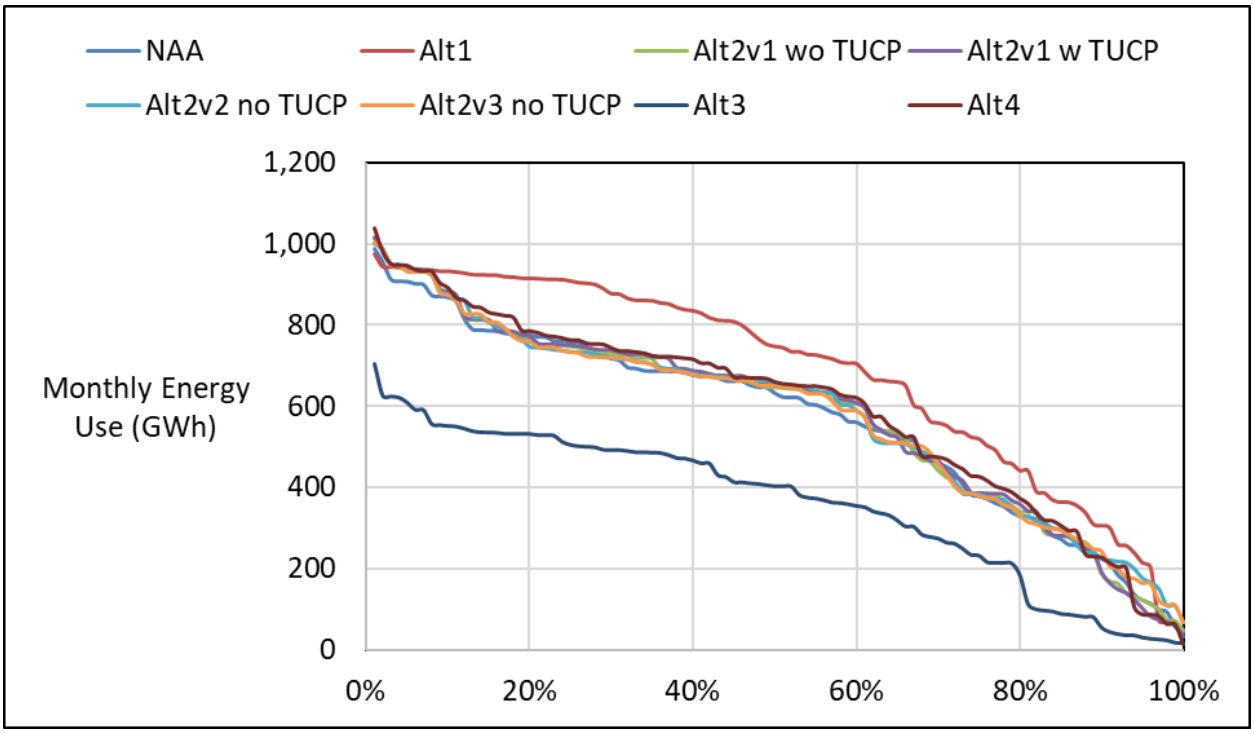

Figure U.1-130. State Water Project Total Energy Use, September

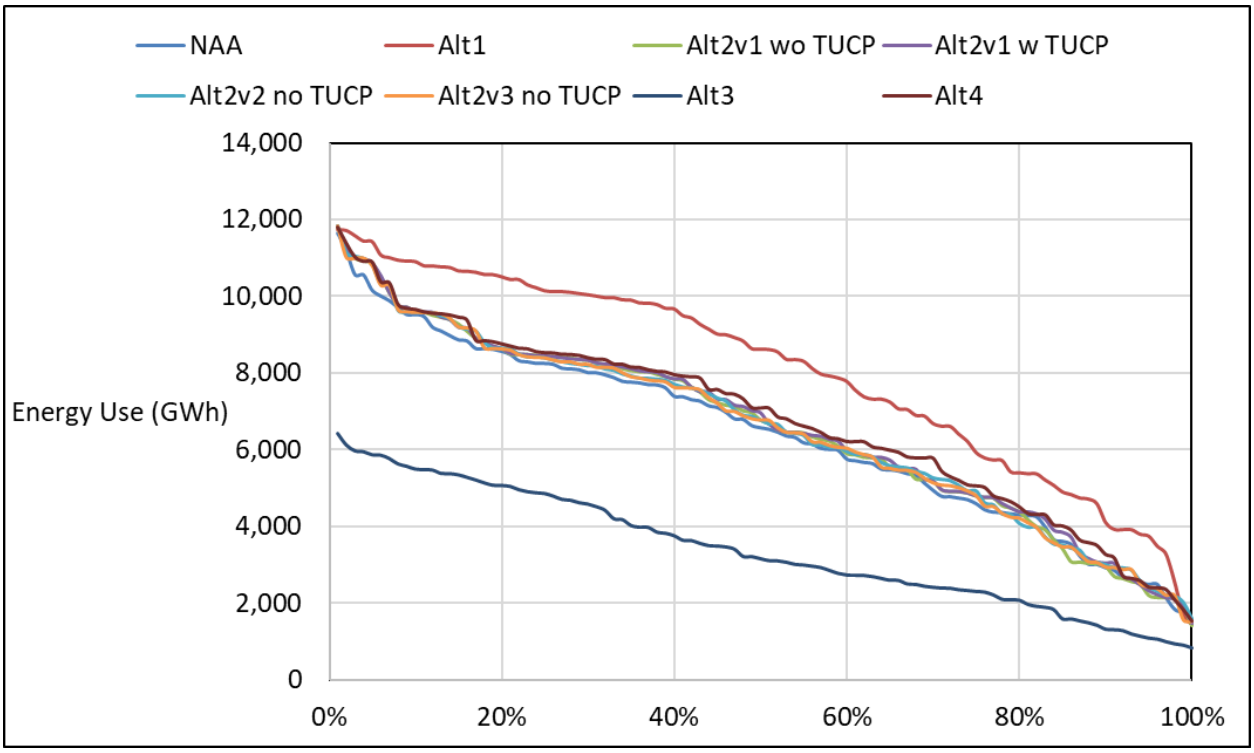

Figure U.1-131. October–September State Water Project Total Energy Use

Table U.1-115. State Water Project Net Generation, Monthly Generation, No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-22	-52	-46	-22	5	78	-67	-27	44	13	-19	-121
20%	-143	-139	-140	-53	-53	-72	-113	-71	-19	-37	-115	-188
30%	-239	-210	-199	-84	-83	-104	-151	-98	-86	-72	-172	-236
40%	-302	-290	-254	-111	-95	-136	-176	-148	-152	-127	-242	-306
50%	-346	-361	-293	-170	-129	-157	-202	-191	-198	-170	-272	-330
60%	-377	-422	-326	-212	-169	-174	-236	-230	-217	-202	-297	-355
70%	-391	-456	-342	-241	-223	-215	-276	-259	-248	-214	-311	-384
80%	-416	-487	-379	-339	-315	-274	-294	-285	-279	-238	-342	-429
90%	-494	-510	-419	-465	-425	-339	-357	-368	-341	-283	-372	-472
Long Term												
Full Simulation Period	-301	-320	-261	-198	-161	-157	-211	-194	-166	-152	-240	-309
Water Year Types												
Wet (32%)	-356	-378	-216	-202	-130	-133	-244	-302	-287	-259	-346	-381
Above Normal (12%)	-339	-360	-325	-226	-206	-136	-228	-204	-202	-192	-281	-327
Below Normal (24%)	-295	-326	-272	-260	-244	-228	-282	-201	-167	-157	-254	-375
Dry (17%)	-272	-312	-310	-203	-132	-154	-127	-88	-33	-40	-133	-224
Critical (15%)	-194	-163	-229	-61	-92	-115	-109	-66	-30	-14	-84	-132

Table U.1-116. State Water Project Net Generation, Monthly Generation, Alternative 1

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-78	-96	-58	-96	-68	-139	-109	-108	-79	-93	-119	-164
20%	-172	-147	-179	-155	-138	-166	-174	-184	-133	-157	-251	-266
30%	-272	-245	-273	-205	-184	-209	-218	-230	-188	-211	-289	-355
40%	-364	-321	-326	-285	-213	-252	-245	-264	-213	-252	-344	-430
50%	-434	-411	-384	-349	-274	-293	-271	-286	-244	-279	-372	-458
60%	-477	-460	-406	-448	-343	-369	-315	-318	-275	-296	-392	-487
70%	-495	-478	-436	-561	-422	-423	-356	-352	-297	-305	-402	-505
80%	-521	-509	-473	-671	-532	-534	-371	-392	-330	-315	-414	-529
90%	-555	-533	-675	-714	-624	-647	-413	-457	-370	-331	-446	-630
Long Term												
Full Simulation Period	-367	-347	-357	-386	-319	-344	-284	-298	-235	-243	-333	-414
Water Year Types												
Wet (32%)	-425	-382	-330	-384	-326	-361	-347	-426	-330	-321	-436	-555
Above Normal (12%)	-399	-362	-521	-486	-433	-480	-339	-339	-282	-299	-389	-482
Below Normal (24%)	-359	-390	-378	-483	-386	-427	-329	-295	-246	-276	-333	-418
Dry (17%)	-317	-311	-369	-360	-262	-279	-211	-201	-149	-171	-267	-295
Critical (15%)	-288	-230	-237	-183	-167	-140	-119	-110	-72	-63	-141	-187

Table U.1-117. State Water Project Net Generation, Monthly Generation, Alternative 1 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-56	-44	-12	-74	-72	-217	-42	-80	-123	-106	-100	-43
20%	-29	-8	-40	-102	-85	-93	-61	-113	-114	-120	-136	-78
30%	-33	-36	-74	-120	-102	-105	-67	-132	-102	-139	-117	-119
40%	-62	-30	-73	-174	-118	-116	-69	-116	-62	-126	-101	-124
50%	-88	-50	-90	-179	-145	-136	-68	-94	-47	-110	-100	-128
60%	-101	-38	-80	-237	-174	-195	-79	-88	-58	-94	-95	-131
70%	-105	-22	-94	-321	-199	-208	-80	-94	-49	-91	-91	-121
80%	-105	-22	-94	-332	-217	-260	-78	-107	-51	-77	-73	-99
90%	-62	-22	-256	-249	-198	-308	-56	-89	-29	-49	-74	-158
Long Term												
Full Simulation Period	-66	-27	-97	-188	-158	-187	-73	-104	-69	-91	-92	-105
Water Year Types												
Wet (32%)	-68	-4	-115	-182	-196	-228	-102	-124	-44	-62	-91	-174
Above Normal (12%)	-60	-2	-196	-260	-227	-344	-111	-135	-80	-108	-109	-155
Below Normal (24%)	-64	-63	-106	-224	-142	-198	-47	-93	-80	-119	-79	-43
Dry (17%)	-45	1	-59	-157	-130	-124	-83	-113	-116	-131	-134	-72
Critical (15%)	-94	-67	-8	-122	-74	-25	-10	-44	-41	-49	-57	-55

Table U.1-118. State Water Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-35	-17	-58	-32	0	26	-63	-32	34	14	-44	-102
20%	-107	-165	-144	-61	-51	-72	-107	-93	-41	-60	-131	-185
30%	-246	-235	-201	-81	-83	-106	-143	-131	-92	-94	-183	-241
40%	-296	-295	-257	-114	-122	-127	-183	-195	-162	-152	-248	-309
50%	-340	-378	-292	-185	-152	-158	-227	-235	-194	-185	-290	-339
60%	-363	-420	-325	-234	-188	-181	-270	-264	-213	-212	-296	-356
70%	-392	-449	-345	-301	-258	-214	-310	-298	-248	-224	-318	-395
80%	-441	-481	-379	-355	-345	-299	-358	-344	-270	-244	-339	-431
90%	-495	-517	-409	-551	-458	-362	-405	-425	-339	-305	-391	-477
Long Term												
Full Simulation Period	-302	-324	-258	-218	-180	-168	-238	-236	-168	-164	-252	-316
Water Year Types												
Wet (32%)	-356	-383	-216	-233	-164	-170	-294	-370	-285	-266	-356	-390
Above Normal (12%)	-281	-364	-353	-253	-225	-146	-286	-247	-195	-223	-296	-341
Below Normal (24%)	-301	-348	-284	-270	-259	-234	-312	-261	-189	-176	-273	-382
Dry (17%)	-313	-306	-295	-217	-152	-153	-132	-90	-31	-53	-144	-224
Critical (15%)	-192	-150	-190	-73	-81	-95	-82	-64	-18	-9	-80	-136

Table U.1-119. State Water Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-13	35	-12	-11	-5	-52	4	-5	-10	1	-25	19
20%	36	-27	-4	-8	3	1	5	-23	-23	-22	-15	3
30%	-7	-25	-2	3	0	-1	9	-33	-6	-22	-11	-6
40%	5	-4	-3	-4	-27	9	-7	-47	-11	-25	-6	-3
50%	6	-18	2	-15	-22	-2	-25	-44	3	-15	-18	-9
60%	13	2	1	-22	-18	-7	-33	-33	4	-9	1	-1
70%	-1	8	-4	-60	-35	1	-34	-39	0	-10	-8	-12
80%	-24	6	0	-17	-30	-25	-64	-58	9	-6	3	-2
90%	-1	-7	10	-85	-33	-23	-48	-56	2	-22	-19	-5
Long Term												
Full Simulation Period	-1	-4	2	-20	-18	-11	-27	-41	-2	-12	-11	-7
Water Year Types												
Wet (32%)	1	-5	0	-31	-34	-37	-49	-69	2	-7	-11	-9
Above Normal (12%)	58	-4	-27	-27	-19	-10	-58	-43	7	-31	-15	-14
Below Normal (24%)	-6	-21	-11	-10	-15	-5	-31	-60	-22	-19	-19	-7
Dry (17%)	-41	6	15	-14	-20	2	-5	-1	2	-13	-12	-1
Critical (15%)	2	13	39	-12	11	20	27	2	13	5	4	-4

Table U.1-120. State Water Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-15	-24	-58	-33	0	38	-80	-44	24	-9	-61	-100
20%	-148	-161	-150	-60	-60	-78	-122	-96	-48	-62	-131	-195
30%	-252	-242	-197	-86	-84	-108	-150	-142	-121	-95	-185	-249
40%	-314	-310	-257	-110	-117	-137	-200	-199	-161	-132	-254	-314
50%	-341	-377	-291	-185	-151	-159	-226	-232	-193	-185	-287	-336
60%	-366	-416	-328	-234	-192	-185	-274	-259	-212	-211	-296	-359
70%	-404	-448	-350	-298	-256	-210	-311	-300	-245	-232	-323	-397
80%	-441	-487	-379	-355	-345	-298	-357	-343	-278	-254	-353	-443
90%	-494	-517	-413	-551	-458	-370	-406	-425	-339	-304	-386	-477
Long Term												
Full Simulation Period	-308	-328	-262	-216	-181	-171	-244	-237	-170	-167	-255	-316
Water Year Types												
Wet (32%)	-360	-383	-220	-227	-164	-169	-292	-371	-285	-266	-357	-390
Above Normal (12%)	-325	-377	-350	-241	-220	-136	-288	-247	-196	-225	-299	-342
Below Normal (24%)	-294	-348	-273	-269	-261	-238	-318	-261	-189	-180	-282	-386
Dry (17%)	-316	-314	-291	-221	-153	-155	-135	-88	-32	-53	-146	-225
Critical (15%)	-196	-155	-232	-84	-88	-113	-109	-74	-31	-21	-84	-125

Table U.1-121. State Water Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	6	28	-12	-11	-5	-40	-13	-17	-20	-22	-42	21
20%	-6	-22	-10	-7	-7	-6	-9	-25	-29	-25	-15	-7
30%	-13	-32	2	-2	-2	-4	1	-44	-36	-23	-13	-13
40%	-12	-19	-3	1	-22	-1	-24	-51	-9	-5	-12	-8
50%	5	-16	2	-15	-22	-2	-24	-40	4	-15	-15	-6
60%	11	5	-2	-22	-22	-11	-37	-29	6	-9	1	-3
70%	-14	9	-8	-58	-32	5	-34	-42	3	-18	-12	-13
80%	-25	0	-1	-17	-30	-24	-63	-58	1	-16	-12	-14
90%	0	-7	5	-86	-33	-31	-49	-57	2	-21	-14	-5
Long Term												
Full Simulation Period	-7	-8	-2	-18	-20	-13	-33	-43	-4	-15	-15	-7
Water Year Types												
Wet (32%)	-4	-5	-4	-25	-34	-36	-48	-70	1	-7	-11	-9
Above Normal (12%)	14	-17	-25	-15	-14	0	-60	-43	6	-33	-19	-15
Below Normal (24%)	0	-22	-1	-10	-17	-9	-37	-60	-22	-23	-29	-11
Dry (17%)	-44	-1	19	-18	-21	0	-7	0	1	-13	-14	-2
Critical (15%)	-2	8	-3	-23	5	2	0	-8	-1	-6	1	7

Table U.1-122. State Water Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-92	-67	-67	-34	-25	2	-68	-34	24	1	-64	-122
20%	-165	-156	-135	-57	-72	-65	-107	-89	-33	-46	-150	-186
30%	-271	-232	-175	-80	-93	-116	-146	-123	-80	-94	-195	-242
40%	-306	-307	-249	-104	-129	-139	-168	-190	-148	-146	-239	-312
50%	-341	-389	-295	-173	-165	-156	-181	-232	-199	-195	-287	-335
60%	-367	-427	-317	-217	-200	-179	-230	-265	-217	-213	-300	-349
70%	-398	-448	-338	-263	-244	-219	-280	-292	-240	-225	-324	-385
80%	-438	-475	-374	-393	-351	-267	-330	-341	-269	-244	-357	-436
90%	-474	-508	-416	-570	-454	-337	-401	-432	-337	-302	-390	-478
Long Term												
Full Simulation Period	-316	-330	-255	-214	-192	-166	-216	-237	-165	-166	-261	-316
Water Year Types												
Wet (32%)	-371	-370	-215	-232	-178	-172	-263	-381	-289	-266	-360	-390
Above Normal (12%)	-336	-376	-340	-193	-243	-154	-244	-243	-201	-212	-298	-336
Below Normal (24%)	-308	-346	-288	-281	-270	-216	-281	-251	-157	-178	-294	-381
Dry (17%)	-301	-337	-282	-224	-156	-150	-131	-90	-34	-56	-145	-225
Critical (15%)	-214	-171	-187	-71	-97	-101	-88	-73	-32	-24	-100	-145

Table U.1-123. State Water Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-70	-15	-21	-12	-30	-76	-1	-7	-20	-12	-45	-1
20%	-22	-17	5	-4	-19	8	6	-18	-14	-8	-35	1
30%	-32	-23	24	5	-11	-11	5	-25	6	-22	-23	-6
40%	-5	-17	4	7	-34	-3	8	-42	3	-19	4	-6
50%	5	-28	-1	-3	-36	0	21	-41	-1	-25	-15	-5
60%	10	-5	9	-5	-31	-5	6	-35	0	-10	-3	6
70%	-7	9	3	-23	-21	-4	-4	-33	8	-11	-13	-1
80%	-22	12	5	-55	-36	7	-36	-56	10	-6	-15	-6
90%	20	2	3	-105	-28	2	-44	-64	4	-19	-18	-6
Long Term												
Full Simulation Period	-16	-10	6	-16	-31	-9	-5	-43	1	-14	-21	-7
Water Year Types												
Wet (32%)	-15	8	1	-30	-48	-39	-19	-79	-2	-7	-14	-9
Above Normal (12%)	3	-16	-15	33	-37	-18	-16	-39	1	-21	-17	-9
Below Normal (24%)	-13	-19	-15	-22	-26	13	1	-50	10	-21	-40	-6
Dry (17%)	-29	-25	28	-21	-24	5	-4	-1	-1	-16	-13	-1
Critical (15%)	-20	-8	42	-10	-4	14	21	-7	-1	-9	-15	-12

Table U.1-124. State Water Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-86	-68	-68	-32	-20	38	-45	-35	23	-5	-72	-126
20%	-164	-160	-126	-55	-68	-67	-108	-82	-37	-54	-153	-188
30%	-265	-233	-179	-79	-92	-119	-136	-124	-81	-97	-198	-242
40%	-304	-307	-244	-106	-129	-141	-156	-190	-151	-149	-238	-312
50%	-339	-379	-294	-167	-162	-158	-190	-219	-196	-193	-289	-337
60%	-371	-430	-317	-216	-199	-182	-221	-241	-226	-216	-299	-351
70%	-405	-447	-334	-275	-248	-222	-265	-280	-247	-231	-326	-386
80%	-432	-472	-380	-379	-348	-271	-314	-332	-280	-243	-351	-432
90%	-482	-514	-418	-563	-456	-339	-391	-424	-340	-304	-390	-472
Long Term												
Full Simulation Period	-318	-327	-255	-211	-190	-167	-206	-230	-168	-168	-261	-316
Water Year Types												
Wet (32%)	-375	-371	-216	-228	-173	-171	-257	-372	-286	-266	-360	-391
Above Normal (12%)	-338	-376	-341	-184	-237	-160	-231	-229	-224	-213	-297	-341
Below Normal (24%)	-308	-343	-283	-284	-272	-219	-262	-244	-161	-183	-295	-377
Dry (17%)	-308	-325	-289	-227	-156	-152	-120	-86	-39	-59	-145	-221
Critical (15%)	-210	-172	-186	-63	-93	-100	-86	-71	-30	-21	-98	-143

Table U.1-125. State Water Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-65	-16	-22	-11	-24	-41	22	-8	-21	-19	-53	-5
20%	-21	-21	13	-2	-14	6	5	-12	-19	-17	-38	0
30%	-26	-23	20	5	-9	-15	16	-26	5	-25	-26	-6
40%	-2	-16	10	4	-34	-5	21	-43	1	-22	4	-6
50%	7	-18	-1	3	-33	-1	13	-27	1	-23	-17	-7
60%	6	-8	9	-4	-29	-8	15	-10	-9	-13	-2	4
70%	-14	9	7	-35	-25	-7	11	-21	1	-17	-15	-2
80%	-15	14	-1	-40	-32	3	-21	-46	-1	-4	-10	-3
90%	11	-4	0	-98	-30	0	-34	-56	0	-21	-17	0
Long Term												
Full Simulation Period	-17	-7	5	-13	-28	-10	5	-36	-2	-15	-20	-7
Water Year Types												
Wet (32%)	-18	7	-1	-25	-43	-38	-12	-71	0	-7	-14	-10
Above Normal (12%)	1	-16	-16	42	-31	-24	-2	-25	-21	-21	-16	-14
Below Normal (24%)	-13	-17	-10	-25	-28	9	20	-43	5	-27	-41	-2
Dry (17%)	-36	-13	21	-24	-24	3	7	2	-6	-19	-12	2
Critical (15%)	-16	-9	43	-2	-1	15	23	-5	1	-6	-14	-10

Table U.1-126. State Water Project Net Generation, Monthly Generation, Alternative 3

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	47	26	184	315	318	336	154	129	150	151	167	-3
20%	5	1	93	186	231	235	79	100	97	99	135	-37
30%	-15	-25	53	89	97	134	43	61	59	63	88	-138
40%	-38	-89	14	47	37	66	17	37	23	36	44	-172
50%	-135	-126	-7	27	14	21	3	23	-3	0	-11	-200
60%	-196	-173	-53	-20	-26	-1	-17	3	-121	-56	-107	-229
70%	-224	-211	-109	-41	-45	-28	-47	-15	-187	-110	-190	-251
80%	-250	-248	-164	-79	-65	-62	-67	-61	-221	-132	-216	-269
90%	-281	-321	-254	-148	-105	-111	-111	-140	-282	-150	-237	-297
Long Term												
Full Simulation Period	-120	-137	-23	38	56	78	14	15	-59	-12	-40	-179
Water Year Types												
Wet (32%)	-167	-144	91	155	221	241	60	-18	-239	-131	-212	-263
Above Normal (12%)	-148	-145	-33	85	12	129	11	34	-100	-52	-79	-180
Below Normal (24%)	-119	-190	-106	-28	-24	-13	-6	29	10	28	39	-203
Dry (17%)	-94	-129	-121	-31	-34	-32	-8	51	99	100	122	-106
Critical (15%)	-29	-39	-13	-67	-29	-38	-25	9	71	83	49	-45

Table U.1-127. State Water Project Net Generation, Monthly Generation, Alternative 3 minus No Action Alternative

Statistic	Monthly Net Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	69	79	230	337	313	257	221	156	106	137	186	118
20%	148	140	233	239	285	307	192	171	115	136	250	150
30%	224	185	252	173	179	238	194	159	144	135	261	98
40%	263	202	268	158	132	202	194	184	174	163	287	134
50%	211	234	287	197	143	178	205	214	194	170	261	130
60%	180	248	273	192	143	173	219	234	96	146	190	126
70%	166	245	232	200	178	187	229	244	61	104	121	133
80%	166	239	215	260	250	212	226	224	58	106	126	160
90%	212	189	164	317	320	227	246	229	59	133	136	175
Long Term												
Full Simulation Period	180	183	238	235	217	235	225	209	107	140	201	130
Water Year Types												
Wet (32%)	189	234	307	357	351	374	304	284	47	127	134	118
Above Normal (12%)	190	215	292	310	218	265	240	238	102	140	202	147
Below Normal (24%)	175	137	166	232	219	215	275	230	177	185	293	172
Dry (17%)	178	183	189	172	98	122	120	140	132	139	255	117
Critical (15%)	165	124	216	-6	64	77	84	74	101	97	133	87

Table U.1-128. State Water Project Net Generation, Monthly Generation, Alternative 4

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-82	-11	-54	-38	2	52	-81	-58	9	-3	-84	-116
20%	-167	-140	-124	-73	-67	-72	-135	-112	-63	-65	-147	-209
30%	-266	-249	-176	-98	-99	-110	-156	-152	-112	-112	-201	-279
40%	-343	-358	-215	-159	-130	-144	-197	-208	-161	-160	-251	-331
50%	-366	-383	-274	-190	-159	-163	-231	-243	-197	-196	-293	-367
60%	-406	-444	-308	-220	-202	-195	-285	-272	-223	-214	-315	-389
70%	-429	-459	-356	-287	-279	-252	-314	-298	-250	-236	-345	-444
80%	-477	-492	-371	-367	-355	-308	-354	-334	-280	-273	-372	-477
90%	-521	-522	-412	-569	-492	-351	-409	-417	-340	-309	-426	-543
Long Term												
Full Simulation Period	-335	-334	-249	-220	-194	-177	-244	-243	-175	-176	-273	-348
Water Year Types												
Wet (32%)	-390	-389	-198	-203	-171	-179	-286	-371	-284	-266	-385	-461
Above Normal (12%)	-367	-396	-329	-225	-247	-128	-285	-246	-200	-232	-325	-369
Below Normal (24%)	-324	-353	-250	-299	-272	-242	-316	-265	-185	-194	-279	-398
Dry (17%)	-330	-323	-302	-239	-173	-165	-151	-107	-56	-75	-177	-246
Critical (15%)	-212	-148	-233	-101	-103	-119	-115	-84	-41	-26	-92	-127

Table U.1-129. State Water Project Net Generation, Monthly Generation, Alternative 4 minus No Action Alternative

	Monthly Net Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-60	41	-8	-16	-2	-26	-14	-31	-35	-17	-65	5
20%	-24	-2	16	-20	-13	0	-22	-41	-45	-28	-32	-21
30%	-27	-40	24	-14	-17	-6	-5	-54	-26	-40	-29	-43
40%	-41	-67	38	-49	-35	-8	-20	-61	-9	-33	-9	-25
50%	-20	-22	19	-21	-30	-6	-28	-51	1	-26	-21	-36
60%	-29	-22	18	-8	-33	-21	-48	-41	-5	-12	-18	-34
70%	-39	-2	-14	-46	-56	-36	-38	-39	-2	-21	-35	-60
80%	-60	-5	8	-28	-39	-34	-60	-49	-1	-35	-30	-48
90%	-27	-11	7	-104	-67	-12	-52	-48	1	-27	-53	-71
Long Term												
Full Simulation Period	-34	-14	11	-22	-33	-19	-33	-48	-9	-24	-32	-39
Water Year Types												
Wet (32%)	-34	-11	18	-1	-41	-45	-42	-70	2	-7	-39	-80
Above Normal (12%)	-28	-36	-3	1	-41	8	-57	-42	2	-40	-45	-42
Below Normal (24%)	-30	-26	22	-39	-28	-14	-35	-64	-19	-37	-25	-23
Dry (17%)	-59	-11	8	-36	-41	-11	-23	-18	-23	-35	-44	-22
Critical (15%)	-18	15	-4	-40	-10	-3	-6	-18	-10	-12	-7	6

Table U.1-130. Annual State Water Project Net Generation

Statistic	Net Generation (GWh)														
	NAA	Alt1	Alt1 minus NAA	Alt2v1 wo TUCP	Alt2v1 wo TUCP minus NAA	Alt2v1 w TUCP	Alt2v1 w TUCP minus NAA	Alt2v2 no TUCP	Alt2v2 no TUCP minus NAA	Alt2v3 no TUCP	Alt2v3 no TUCP minus NAA	Alt3	Alt3 minus NAA	Alt4	Alt4 minus NAA
PROBABILITY OF EXCEEDANCE															
10%	-1,143	-1,983	-839	-1,057	87	-1,122	22	-1,223	-79	-1,196	-53	293	1,436	-1,409	-266
20%	-1,712	-2,706	-994	-1,878	-167	-1,989	-277	-1,771	-59	-1,759	-47	77	1,789	-2,072	-360
30%	-2,090	-3,485	-1,396	-2,143	-54	-2,163	-73	-2,285	-195	-2,284	-194	-72	2,017	-2,410	-320
40%	-2,399	-3,918	-1,519	-2,570	-170	-2,593	-193	-2,555	-155	-2,498	-99	-149	2,251	-2,798	-398
50%	-2,692	-4,334	-1,642	-2,965	-274	-2,967	-276	-2,805	-113	-2,739	-47	-316	2,375	-3,019	-327
60%	-3,029	-4,520	-1,491	-3,257	-229	-3,258	-229	-3,242	-214	-3,263	-234	-489	2,540	-3,352	-323
70%	-3,302	-4,700	-1,398	-3,512	-210	-3,512	-210	-3,604	-302	-3,575	-273	-637	2,665	-3,637	-335
80%	-3,589	-4,996	-1,408	-3,864	-275	-3,907	-318	-3,746	-157	-3,801	-213	-812	2,777	-4,028	-439
90%	-3,985	-5,240	-1,255	-4,226	-241	-4,233	-249	-4,203	-218	-4,181	-197	-1,144	2,840	-4,292	-308
LONG TERM															
Full Simulation Period	-2,671	-3,927	-1,256	-2,823	-152	-2,856	-185	-2,834	-163	-2,817	-147	-369	2,302	-2,967	-296
WATER YEAR TYPES															
Wet (32%)	-3,234	-4,623	-1,389	-3,483	-249	-3,487	-253	-3,487	-253	-3,466	-232	-407	2,827	-3,582	-348
Above Normal (12%)	-3,025	-4,812	-1,787	-3,208	-183	-3,246	-221	-3,176	-151	-3,169	-144	-467	2,558	-3,349	-324
Below Normal (24%)	-3,060	-4,319	-1,259	-3,288	-228	-3,300	-240	-3,248	-188	-3,231	-171	-584	2,476	-3,378	-318
Dry (17%)	-2,029	-3,192	-1,163	-2,110	-81	-2,129	-100	-2,131	-102	-2,127	-98	-184	1,845	-2,343	-314
Critical (15%)	-1,290	-1,937	-647	-1,170	120	-1,310	-20	-1,301	-11	-1,271	19	-74	1,217	-1,399	-108

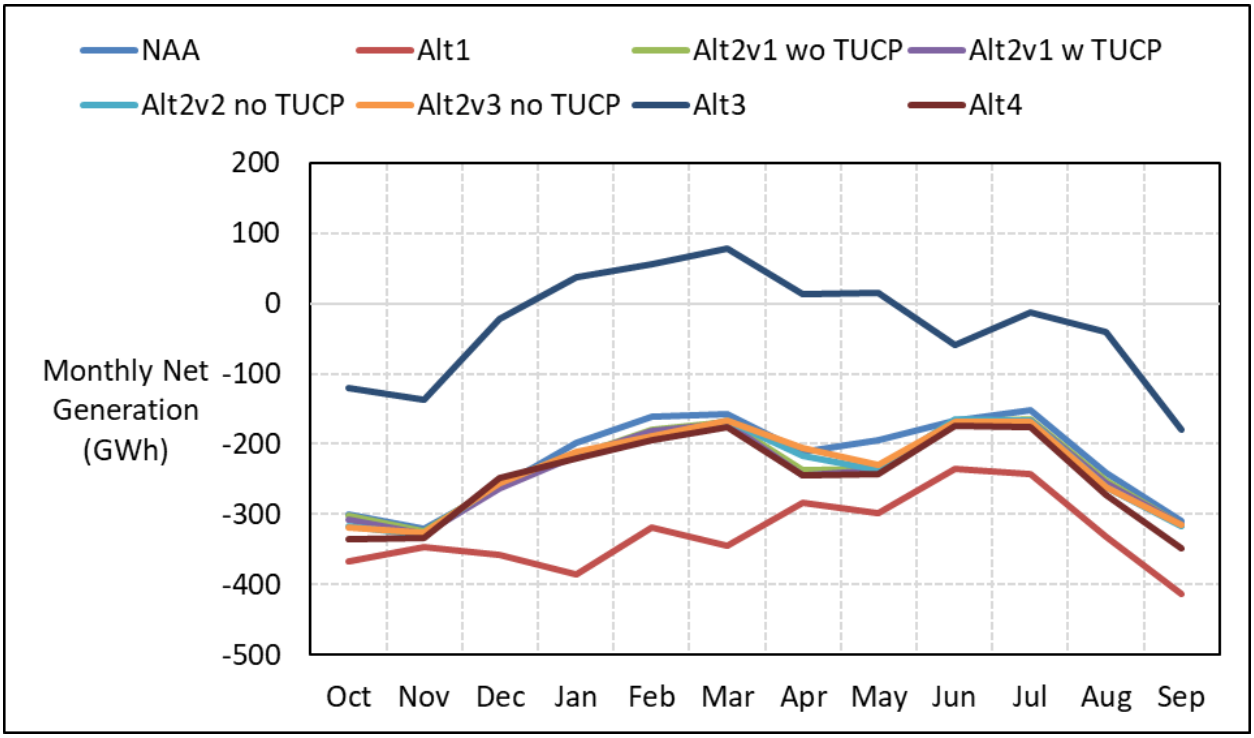

Figure U.1-132. State Water Project Net Generation, Long-Term Average Generation

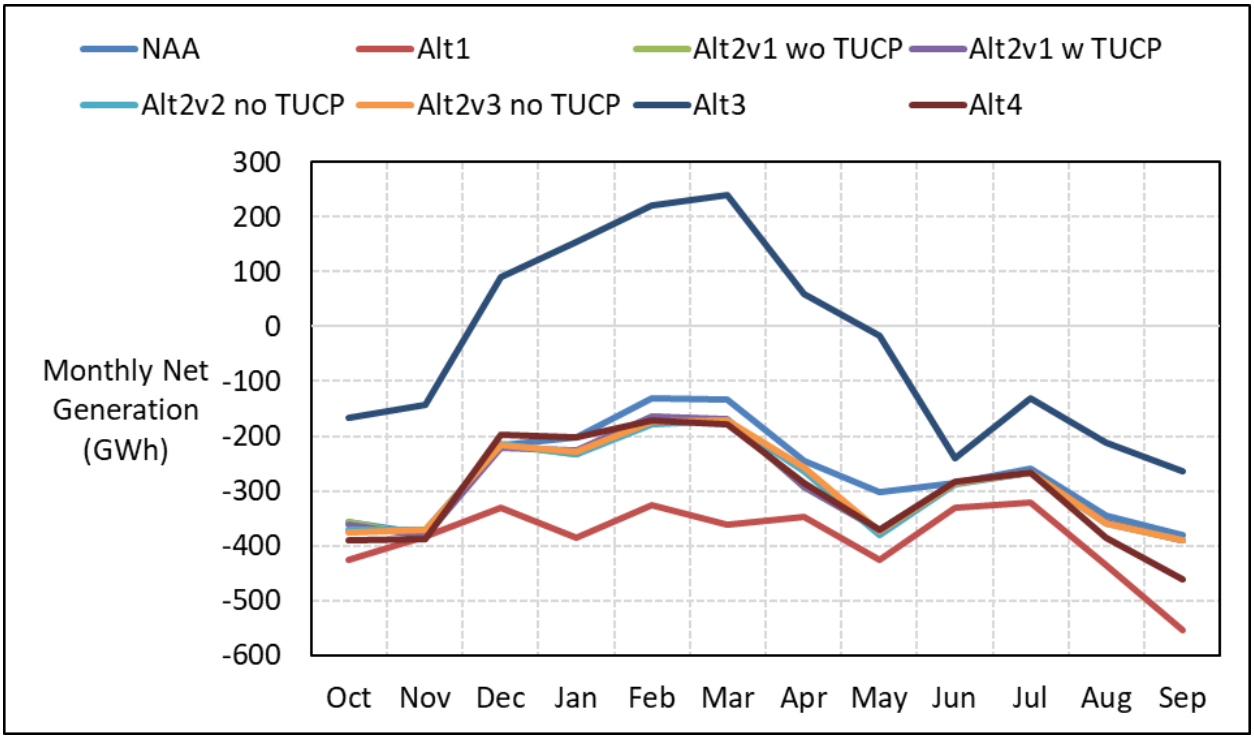

Figure U.1-133. State Water Project Net Generation, Wet Year Average Generation

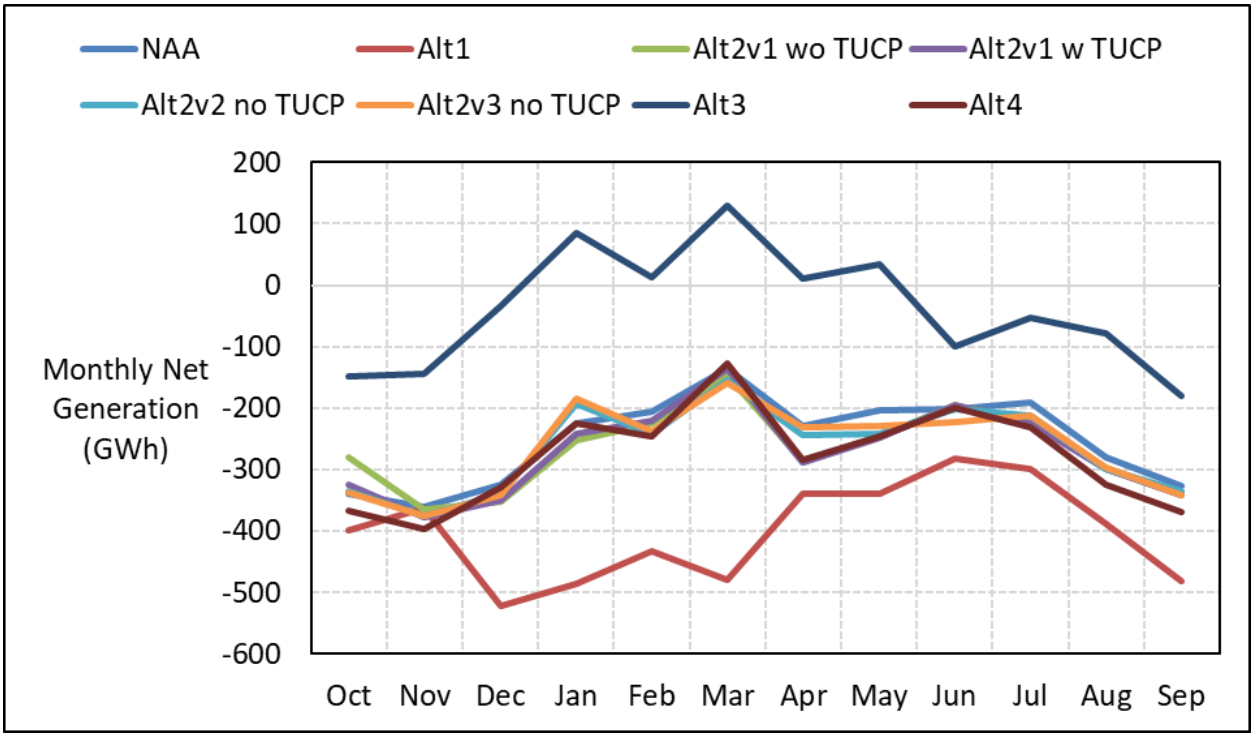

Figure U.1-134. State Water Project Net Generation, Above Normal Year Average Generation

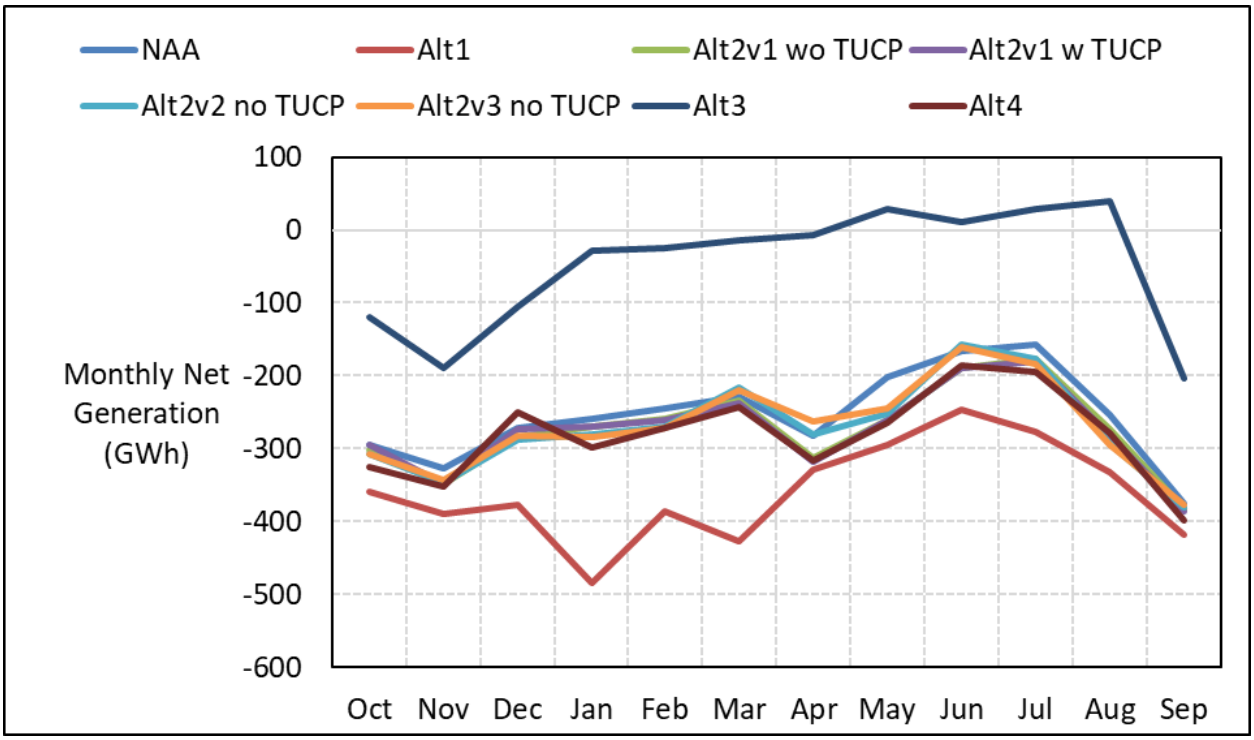

Figure U.1-135. State Water Project Net Generation, Below Normal Year Average Generation

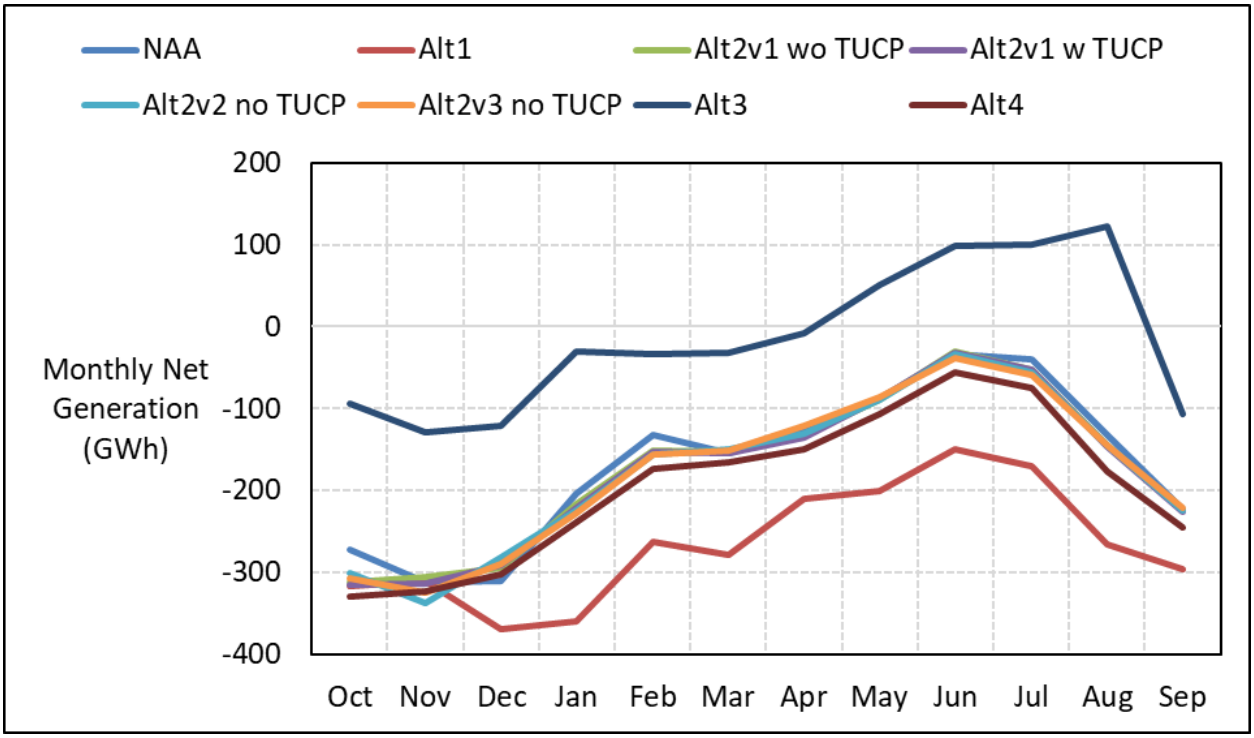

Figure U.1-136. State Water Project Net Generation, Dry Year Average Generation

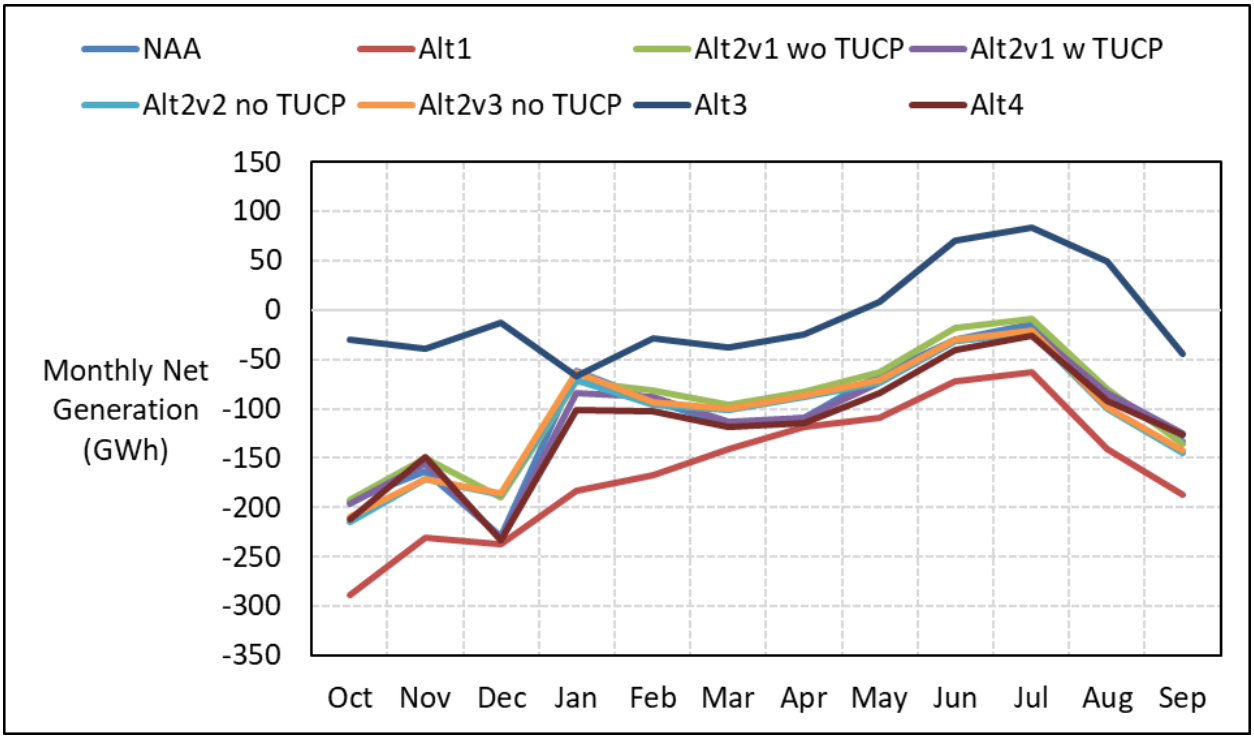

Figure U.1-137. State Water Project Net Generation, Critical Year Average Generation

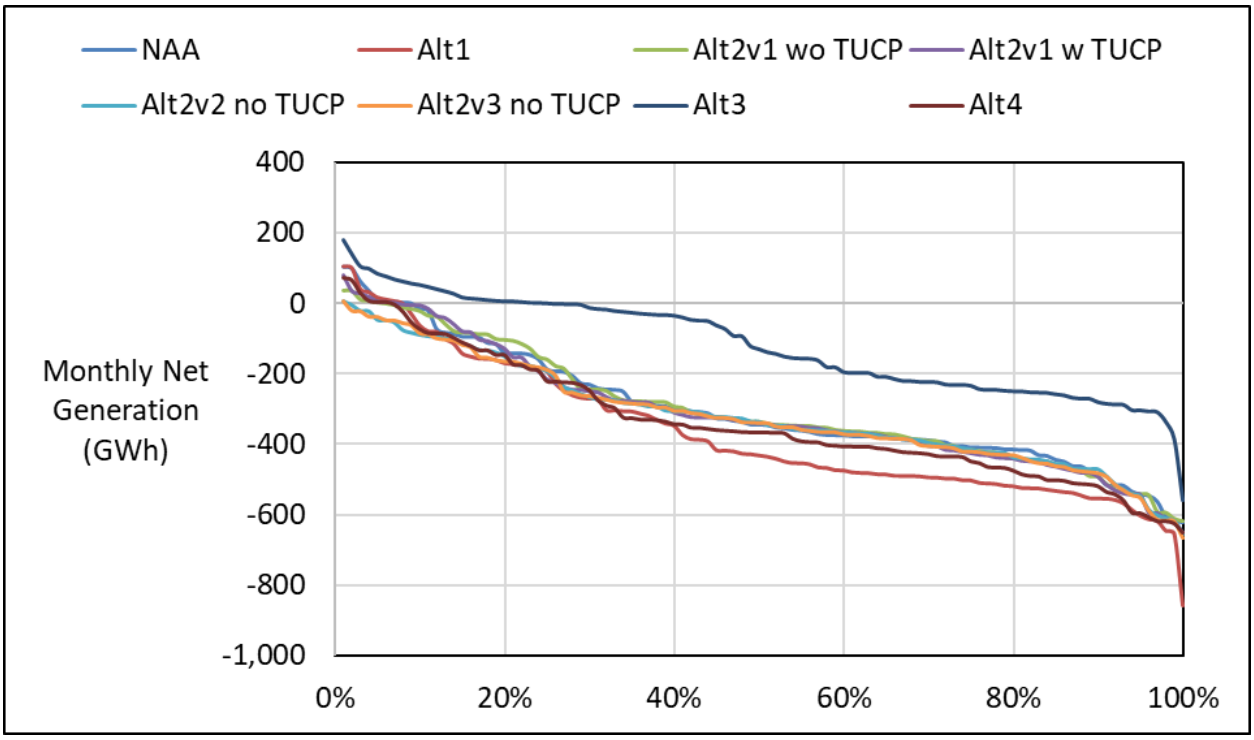

Figure U.1-138. State Water Project Net Generation, October

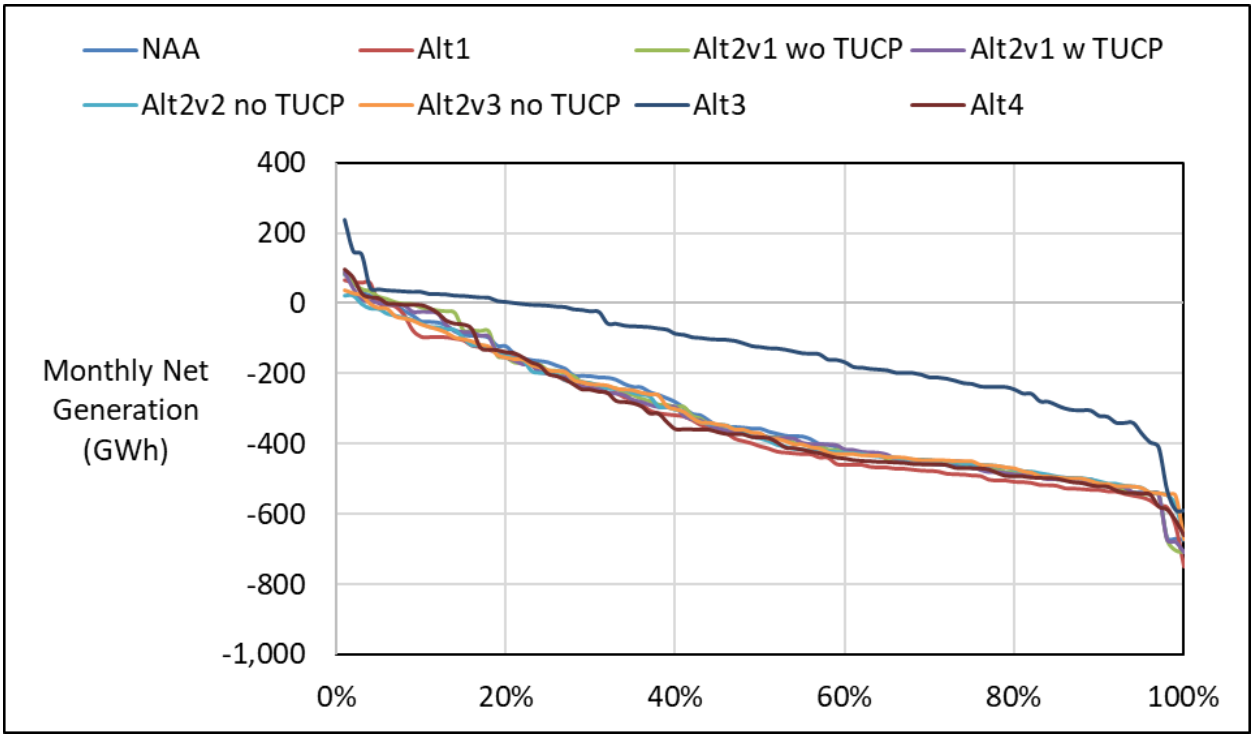

Figure U.1-139. State Water Project Net Generation, November

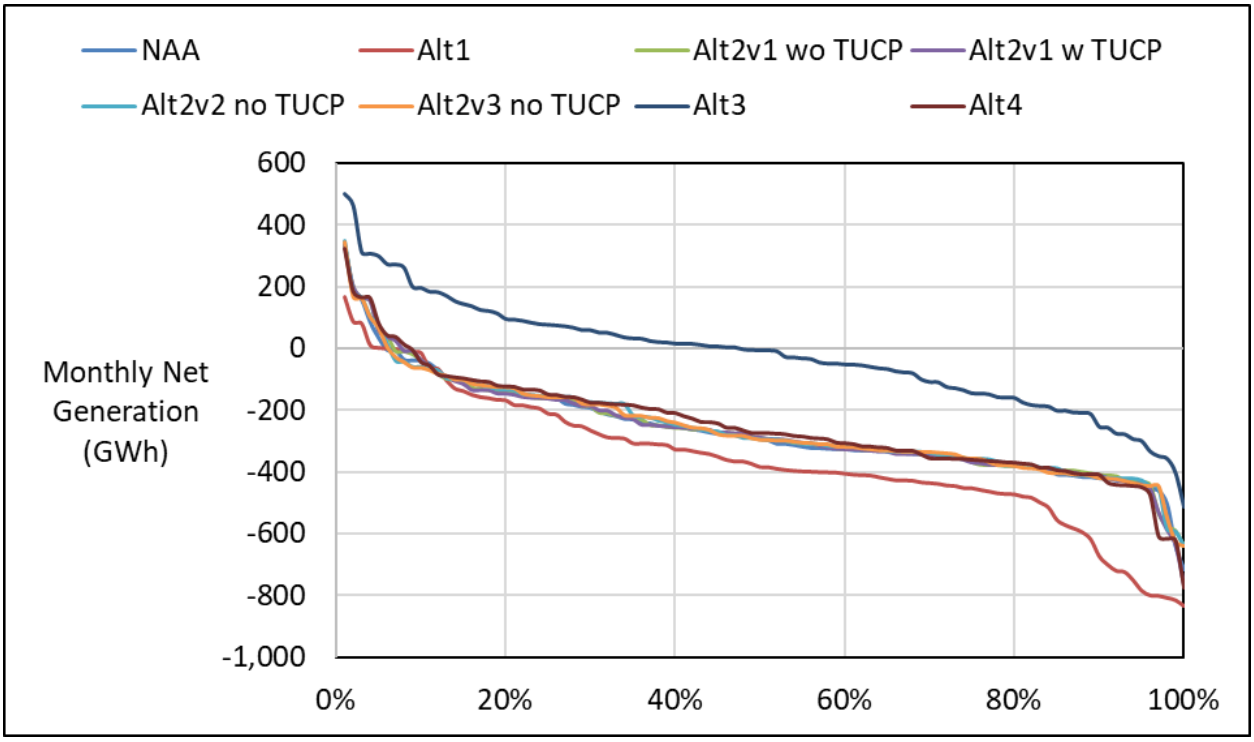

Figure U.1-140. State Water Project Net Generation, December

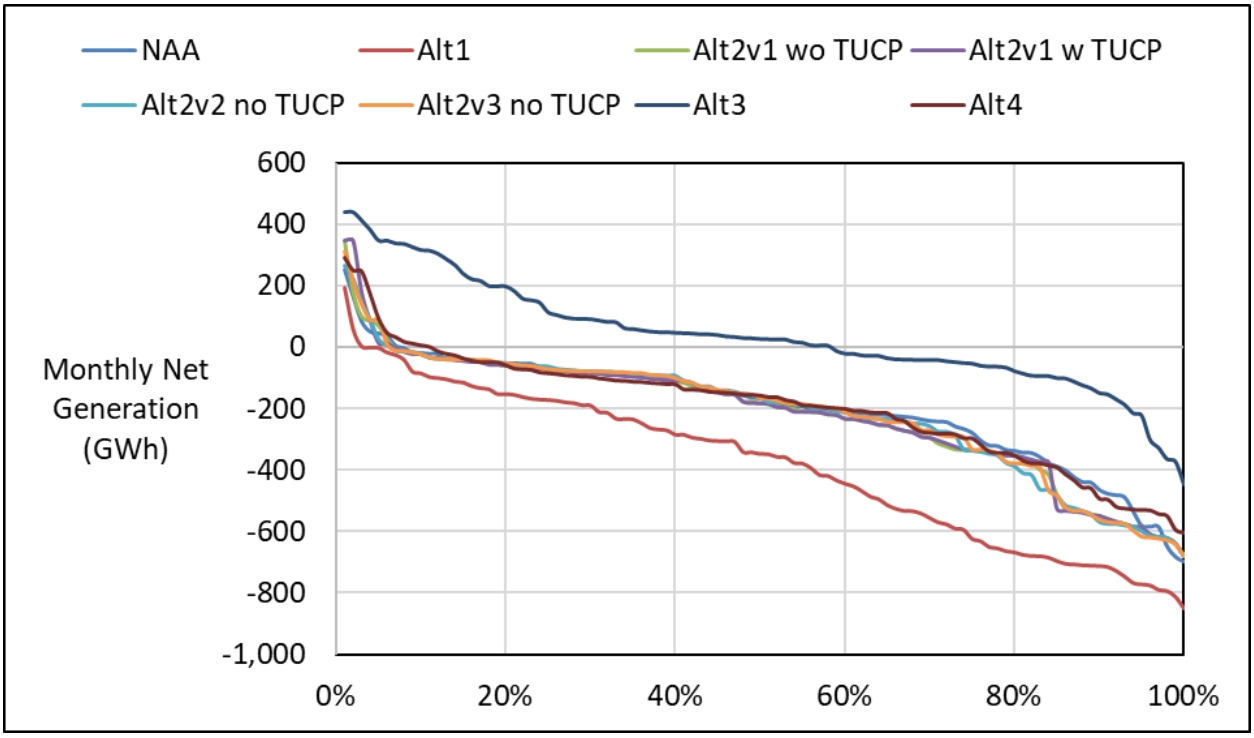

Figure U.1-141. State Water Project Net Generation, January

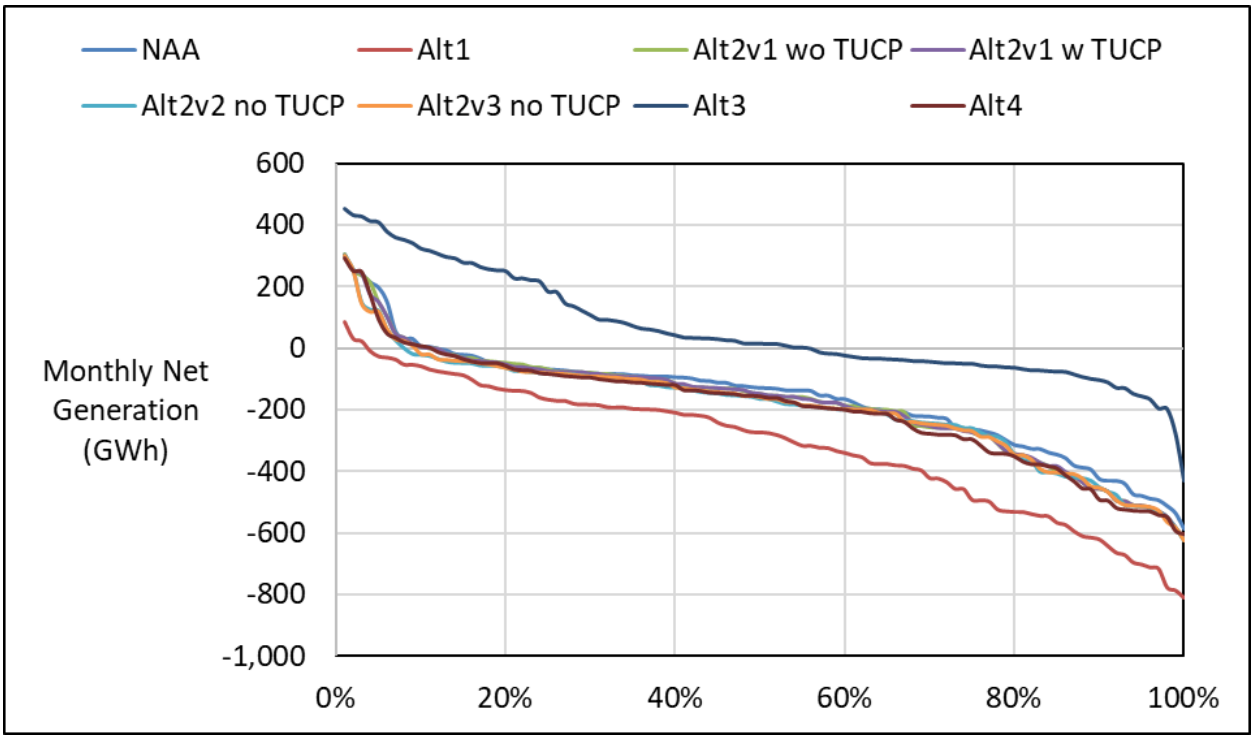

Figure U.1-142. State Water Project Net Generation, February

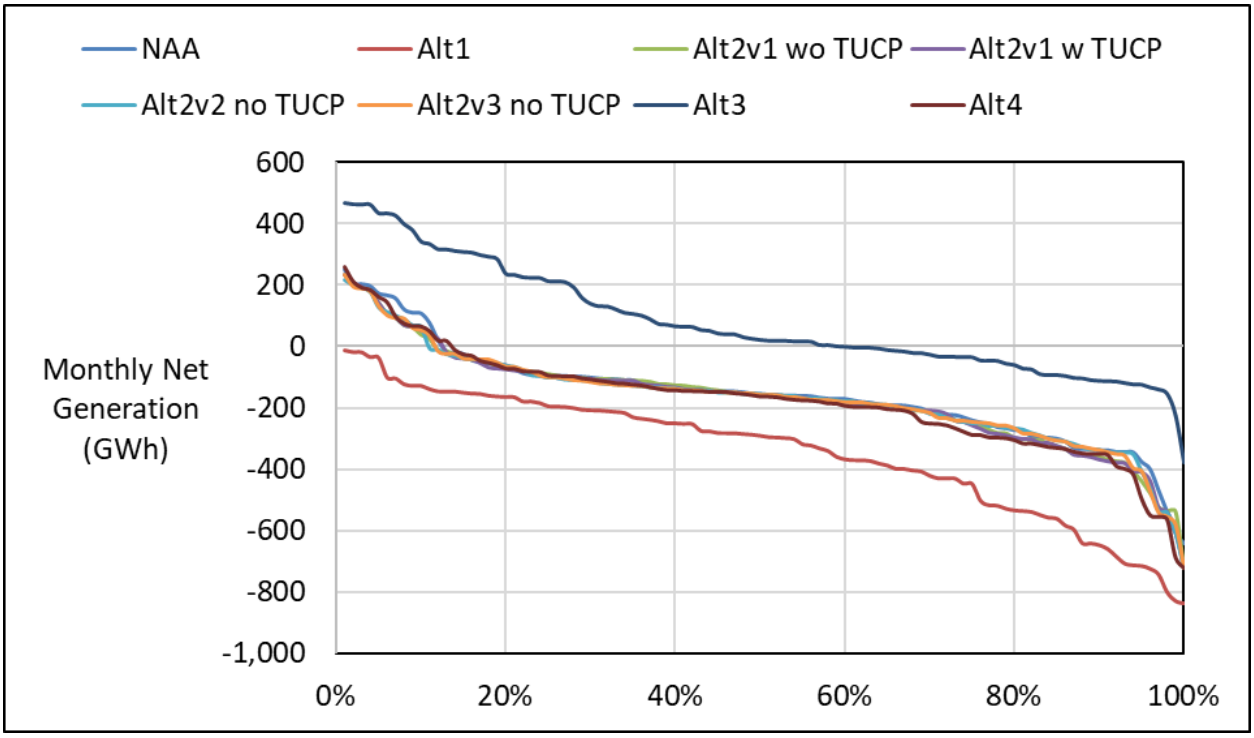

Figure U.1-143. State Water Project Net Generation, March

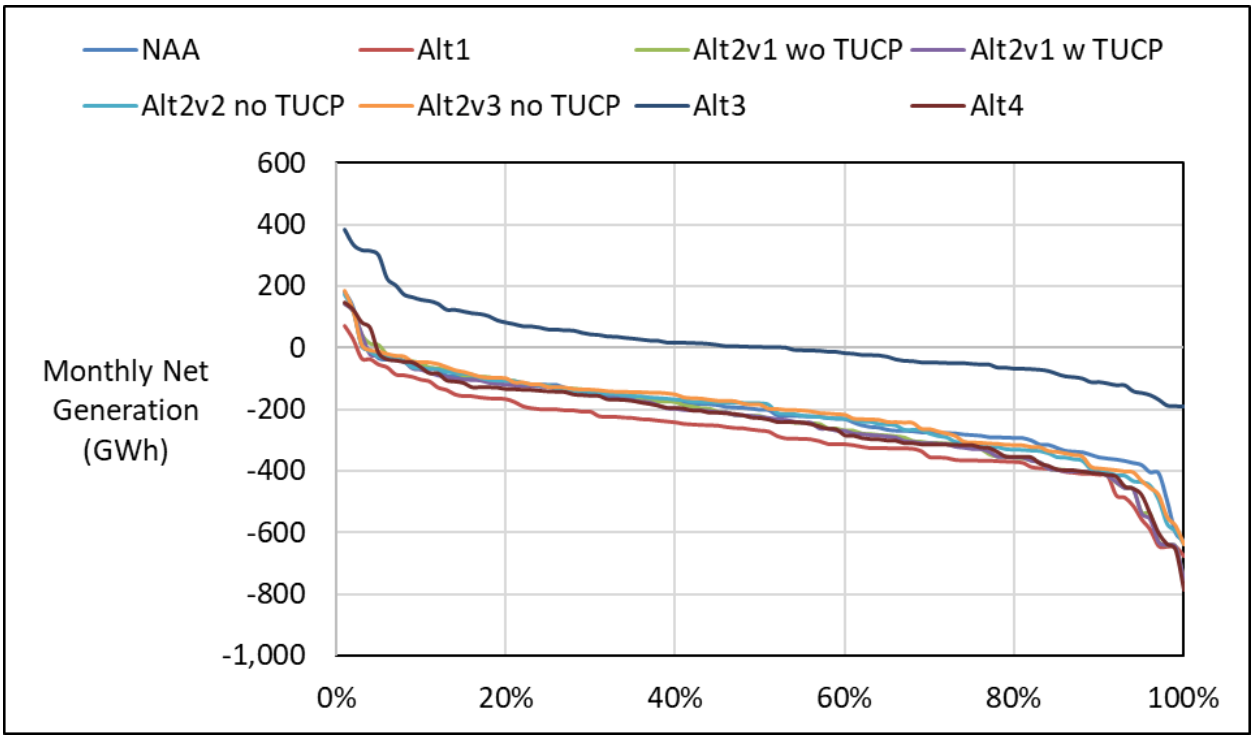

Figure U.1-144. State Water Project Net Generation, April

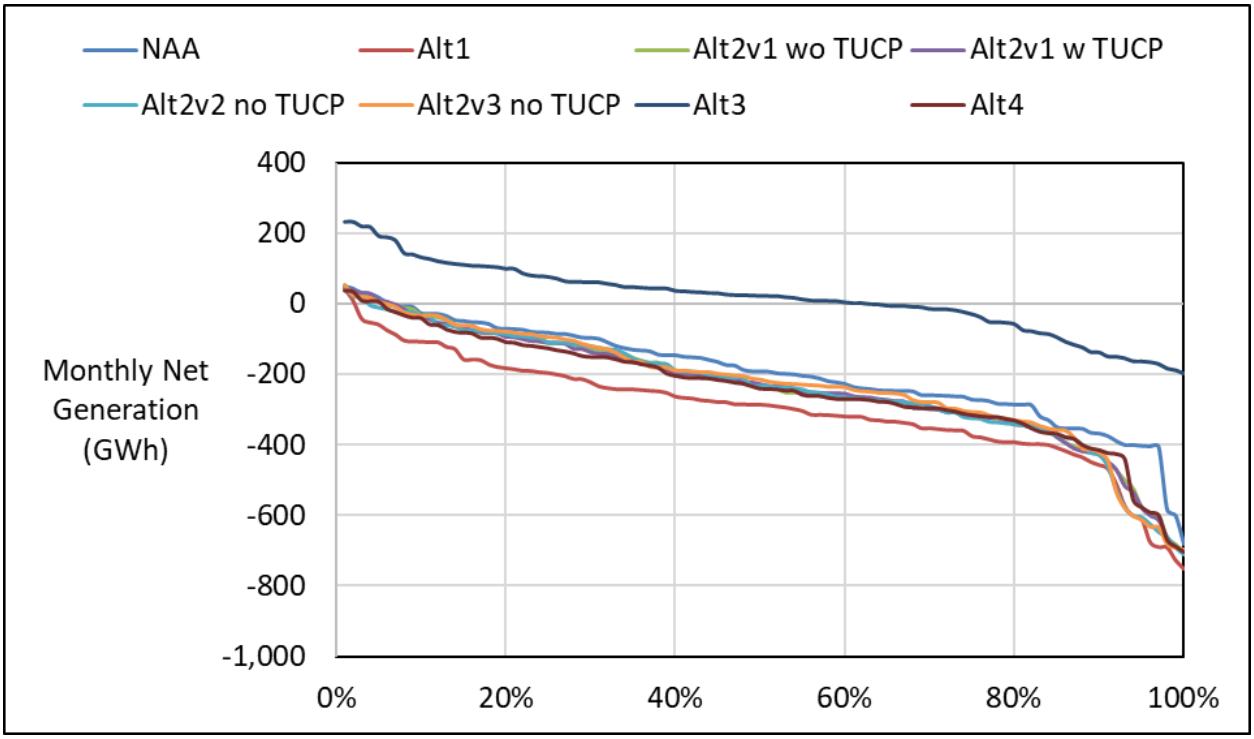

Figure U.1-145. State Water Project Net Generation, May

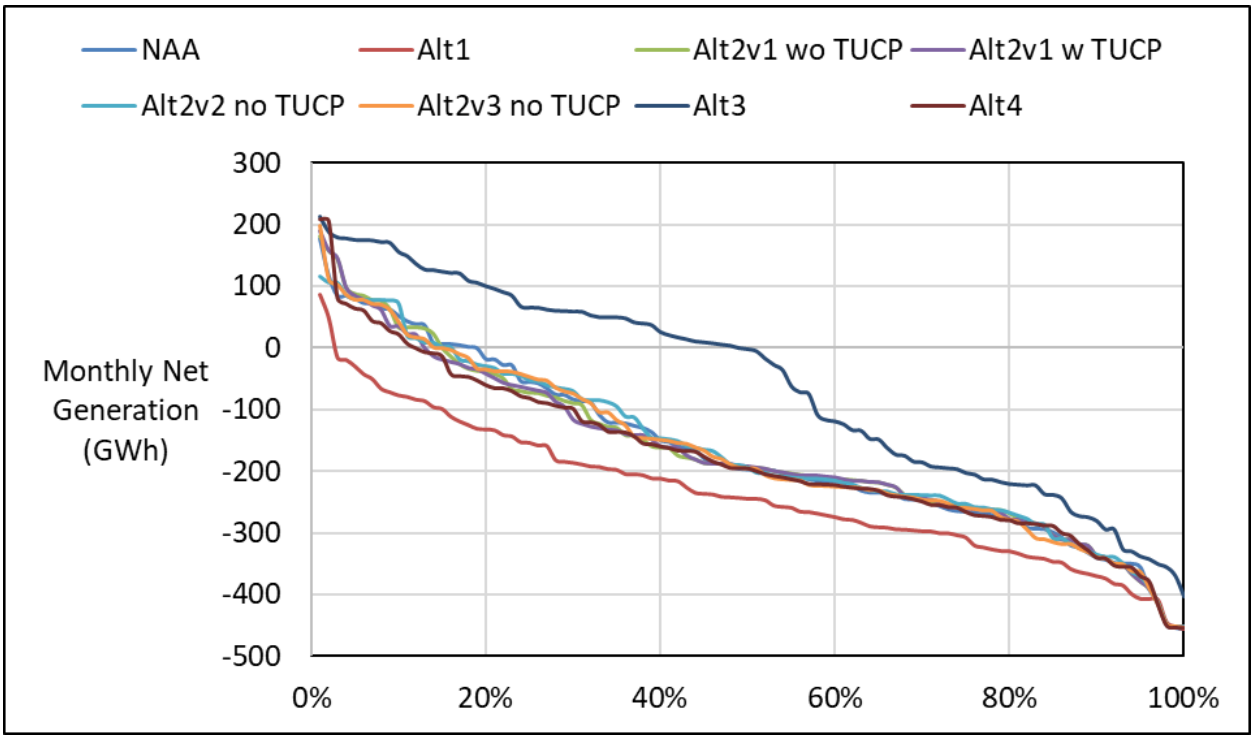

Figure U.1-146. State Water Project Net Generation, June

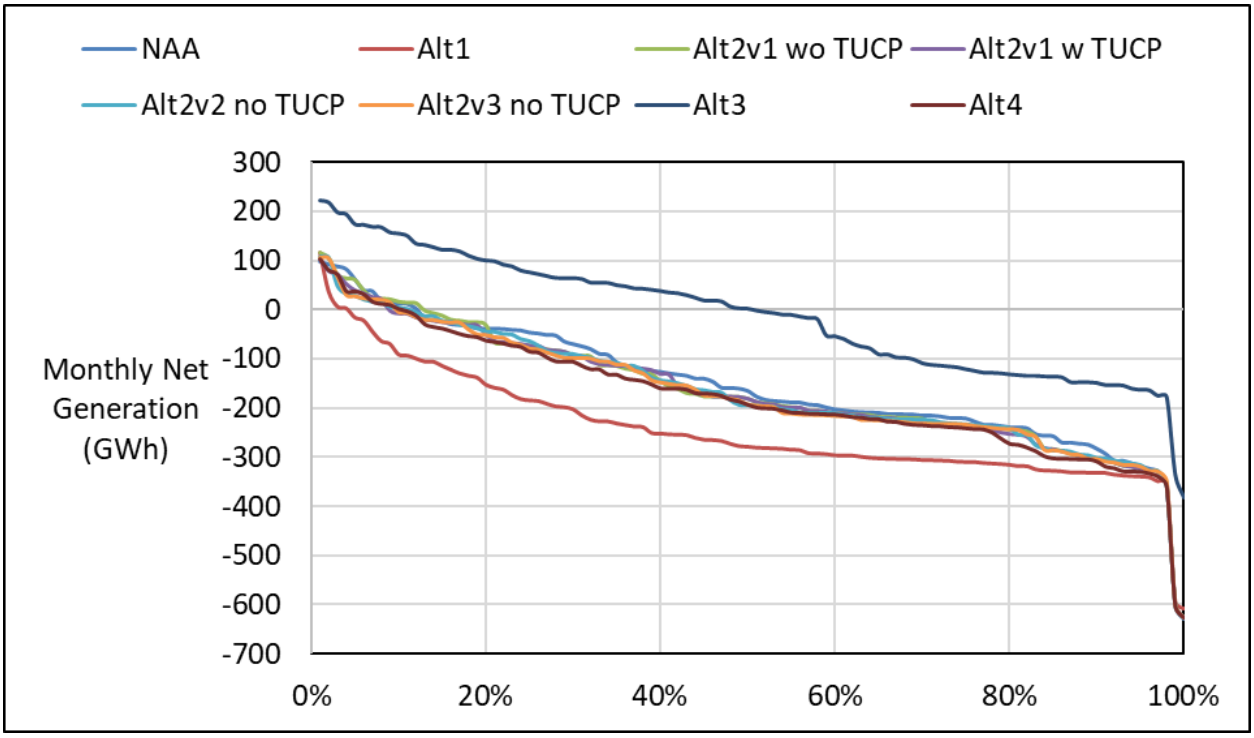

Figure U.1-147. State Water Project Net Generation, July

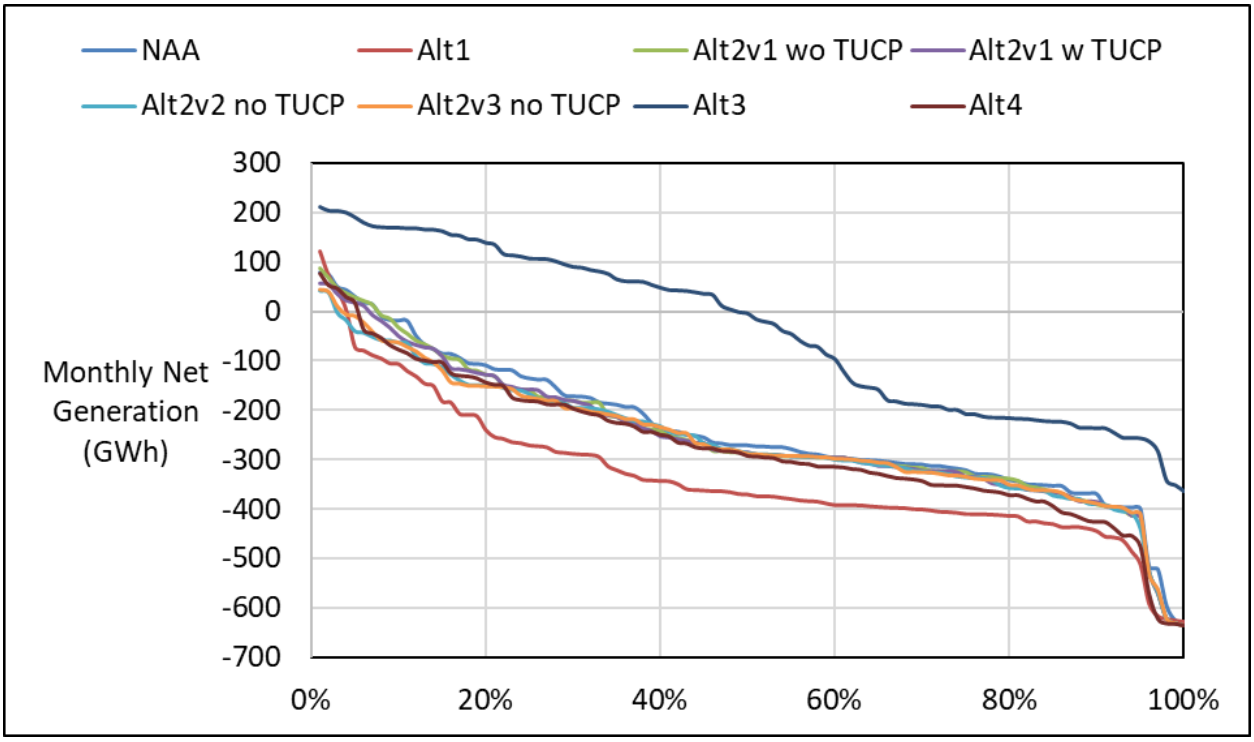

Figure U.1-148. State Water Project Net Generation, August

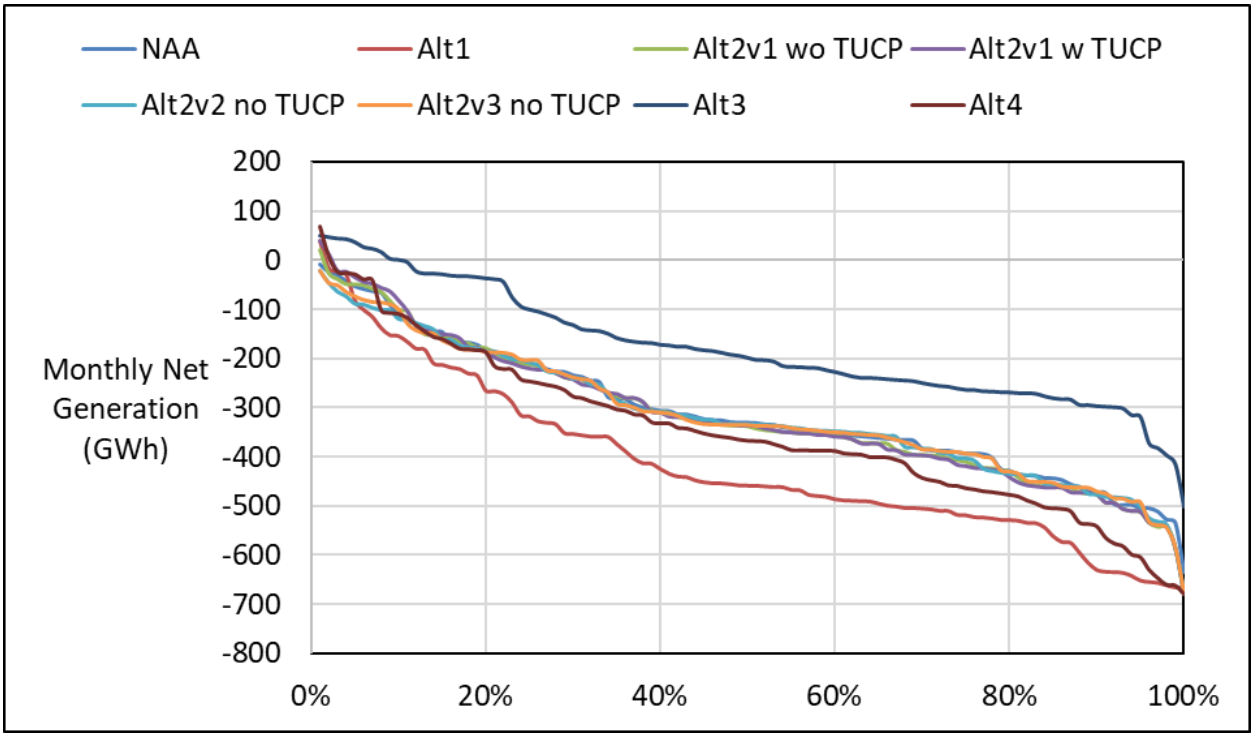

Figure U.1-149. State Water Project Net Generation, September

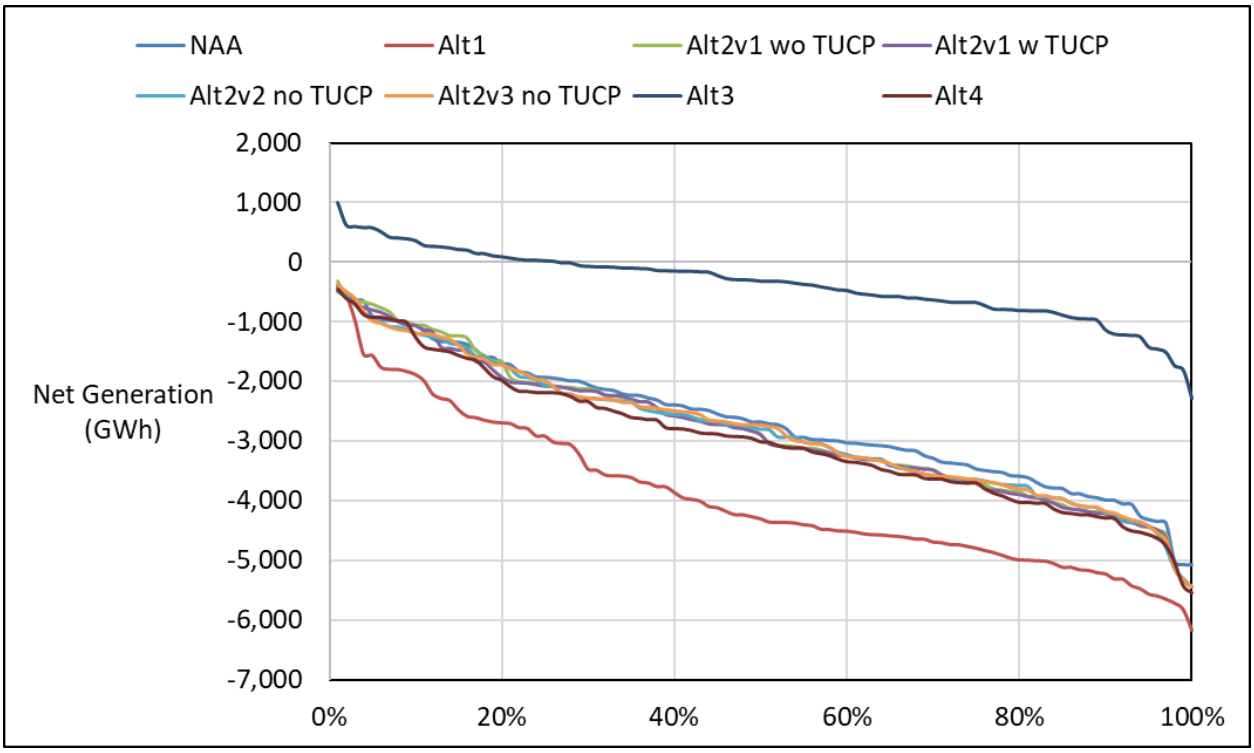

Figure U.1-150. October–September State Water Project Net Generation

Table U.1-131. Central Valley Project and State Water Project Net Generation, Monthly Generation, No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	65	29	236	466	477	552	206	343	433	514	298	47
20%	7	-29	8	202	385	244	135	301	356	452	221	12
30%	-50	-122	-103	46	96	92	74	245	300	402	178	-24
40%	-115	-199	-137	-7	7	-7	41	199	239	370	128	-40
50%	-167	-307	-191	-48	-45	-75	-1	160	201	335	102	-80
60%	-194	-350	-220	-78	-95	-100	-40	123	156	294	67	-116
70%	-217	-390	-274	-133	-141	-123	-79	91	100	252	19	-166
80%	-252	-417	-346	-209	-181	-149	-139	18	34	211	-26	-234
90%	-328	-464	-397	-354	-331	-247	-176	-31	-79	152	-77	-295
Long Term												
Full Simulation Period	-137	-240	-122	-3	39	47	10	155	187	325	100	-101
Water Year Types												
Wet (32%)	-186	-269	87	199	294	276	34	56	26	239	21	-85
Above Normal (12%)	-156	-311	-270	24	12	79	-38	194	148	347	84	-46
Below Normal (24%)	-126	-268	-187	-182	-139	-125	-88	167	215	351	97	-223
Dry (17%)	-102	-238	-265	-156	-103	-72	97	261	403	456	218	-66
Critical (15%)	-74	-80	-183	6	-37	-59	56	194	277	302	155	-25

Table U.1-132. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 1

Statistic	Monthly Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	20	15	221	287	345	359	132	240	329	379	168	-17
20%	-86	-79	-46	38	165	64	82	184	292	318	98	-86
30%	-144	-141	-157	-87	7	-31	40	152	248	287	53	-207
40%	-235	-261	-233	-142	-98	-128	-6	122	211	260	-13	-249
50%	-287	-317	-289	-210	-154	-183	-62	82	161	221	-36	-283
60%	-321	-369	-320	-299	-226	-251	-119	21	134	202	-57	-310
70%	-333	-397	-383	-429	-358	-318	-166	-22	81	164	-85	-337
80%	-389	-416	-456	-526	-454	-423	-200	-54	4	131	-103	-370
90%	-432	-472	-605	-681	-537	-558	-287	-135	-114	99	-161	-406
Long Term												
Full Simulation Period	-236	-259	-221	-207	-132	-160	-64	54	142	226	-7	-245
Water Year Types												
Wet (32%)	-280	-266	-15	1	82	25	-83	-65	14	169	-92	-326
Above Normal (12%)	-286	-288	-461	-260	-225	-312	-160	62	87	215	-77	-330
Below Normal (24%)	-224	-324	-299	-425	-282	-348	-134	74	163	209	18	-274
Dry (17%)	-192	-225	-341	-323	-246	-217	16	149	302	310	85	-130
Critical (15%)	-173	-157	-209	-131	-144	-63	75	161	242	292	87	-90

Table U.1-133. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 1 minus No Action Alternative

Statistic	Monthly Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-45	-14	-15	-179	-132	-193	-73	-103	-104	-136	-130	-63
20%	-93	-51	-54	-164	-220	-179	-53	-117	-64	-134	-123	-98
30%	-94	-19	-54	-133	-88	-123	-35	-93	-52	-115	-125	-184
40%	-119	-62	-96	-135	-106	-122	-46	-77	-28	-110	-141	-209
50%	-120	-9	-98	-161	-109	-108	-61	-78	-40	-114	-138	-204
60%	-127	-19	-99	-221	-131	-151	-79	-102	-22	-91	-125	-194
70%	-116	-7	-108	-296	-217	-194	-87	-113	-20	-88	-104	-170
80%	-137	0	-110	-318	-273	-274	-60	-73	-30	-79	-78	-136
90%	-104	-9	-208	-327	-206	-312	-111	-104	-35	-53	-84	-111
Long Term												
Full Simulation Period	-99	-19	-99	-204	-171	-206	-74	-101	-46	-99	-108	-144
Water Year Types												
Wet (32%)	-94	3	-102	-197	-213	-251	-116	-121	-11	-70	-113	-241
Above Normal (12%)	-130	23	-191	-284	-237	-390	-122	-133	-61	-132	-160	-284
Below Normal (24%)	-98	-56	-112	-243	-143	-224	-46	-93	-51	-142	-79	-51
Dry (17%)	-89	13	-76	-167	-143	-145	-81	-112	-101	-146	-133	-64
Critical (15%)	-99	-78	-26	-136	-107	-5	19	-33	-35	-10	-69	-65

Table U.1-134. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP

Statistic	Monthly Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	91	84	186	430	434	505	217	307	455	493	248	37
20%	-1	-24	-32	141	348	206	139	262	333	444	205	-12
30%	-46	-135	-87	53	99	106	78	206	306	397	159	-35
40%	-105	-233	-145	-16	12	20	28	168	262	356	125	-55
50%	-164	-294	-175	-35	-52	-50	-11	133	182	318	91	-72
60%	-188	-343	-228	-77	-80	-101	-51	82	143	275	59	-113
70%	-218	-385	-279	-116	-125	-120	-100	38	114	233	19	-171
80%	-267	-424	-343	-303	-222	-148	-184	-29	53	200	-33	-251
90%	-328	-471	-408	-413	-368	-265	-280	-128	-75	137	-100	-313
Long Term												
Full Simulation Period	-134	-241	-119	-22	25	33	-20	109	191	309	91	-113
Water Year Types												
Wet (32%)	-184	-270	93	171	252	219	-31	-16	36	232	18	-99
Above Normal (12%)	-91	-309	-309	-22	-6	48	-106	147	169	308	72	-65
Below Normal (24%)	-132	-290	-201	-188	-138	-130	-127	114	199	322	86	-232
Dry (17%)	-140	-234	-246	-163	-113	-71	92	261	415	442	213	-63
Critical (15%)	-60	-56	-145	-8	-17	0	113	168	274	300	131	-50

Table U.1-135. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v1 Without TUCP minus No Action Alternative

Statistic	Monthly Generation (GWh)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	26	54	-50	-36	-43	-48	12	-36	23	-21	-50	-9
20%	-8	4	-40	-60	-37	-38	4	-39	-23	-8	-16	-24
30%	4	-13	16	7	3	14	3	-38	6	-4	-19	-12
40%	11	-34	-8	-9	5	27	-12	-31	22	-13	-3	-14
50%	3	13	16	14	-7	25	-11	-27	-18	-17	-11	8
60%	6	7	-7	0	15	-1	-10	-40	-13	-19	-8	3
70%	-1	4	-5	17	16	4	-21	-53	13	-18	0	-4
80%	-15	-8	3	-95	-40	1	-45	-47	19	-11	-7	-17
90%	-1	-8	-10	-60	-37	-18	-103	-97	5	-15	-23	-18
Long Term												
Full Simulation Period	3	-1	3	-19	-14	-14	-30	-45	4	-16	-10	-12
Water Year Types												
Wet (32%)	2	-2	6	-28	-42	-56	-65	-72	10	-7	-3	-14
Above Normal (12%)	65	2	-39	-46	-18	-31	-68	-47	21	-39	-12	-19
Below Normal (24%)	-6	-22	-14	-6	1	-6	-39	-53	-16	-29	-11	-9
Dry (17%)	-38	5	19	-7	-10	1	-5	0	12	-14	-5	4
Critical (15%)	14	24	38	-14	20	59	57	-26	-3	-1	-24	-26

Table U.1-136. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	98	63	190	423	429	516	206	304	455	489	248	54
20%	6	-24	-38	133	351	192	104	257	333	444	196	-2
30%	-46	-135	-87	56	95	74	53	220	295	396	156	-35
40%	-125	-243	-133	-12	15	2	11	172	261	359	120	-56
50%	-165	-310	-176	-37	-52	-54	-20	132	177	305	91	-73
60%	-193	-338	-230	-66	-71	-99	-55	81	140	271	60	-109
70%	-223	-383	-286	-114	-127	-118	-107	46	109	238	29	-162
80%	-272	-419	-352	-266	-222	-149	-185	-33	57	200	-30	-247
90%	-329	-468	-401	-413	-361	-264	-287	-129	-75	135	-96	-306
Long Term												
Full Simulation Period	-138	-244	-121	-17	27	27	-32	108	189	307	89	-108
Water Year Types												
Wet (32%)	-188	-269	89	184	254	220	-29	-18	35	231	18	-99
Above Normal (12%)	-138	-321	-304	-7	-1	63	-109	145	168	307	70	-61
Below Normal (24%)	-116	-287	-188	-186	-138	-132	-132	115	200	323	76	-235
Dry (17%)	-143	-240	-244	-168	-109	-74	91	263	415	443	211	-64
Critical (15%)	-63	-63	-175	-14	-18	-44	43	160	259	290	138	-10

Table U.1-137. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v1 With TUCP minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	34	34	-47	-43	-48	-37	1	-39	22	-26	-50	7
20%	-2	4	-46	-69	-34	-52	-31	-44	-23	-8	-25	-15
30%	4	-13	16	9	-1	-18	-21	-24	-5	-6	-23	-12
40%	-10	-45	5	-5	8	8	-30	-26	22	-11	-7	-16
50%	2	-3	15	11	-7	21	-20	-28	-23	-30	-11	6
60%	1	12	-10	12	23	1	-15	-42	-16	-23	-8	6
70%	-7	7	-11	19	13	5	-27	-45	9	-13	10	5
80%	-19	-2	-6	-57	-41	1	-45	-51	23	-11	-4	-13
90%	-1	-4	-3	-59	-30	-17	-111	-97	4	-18	-19	-12
Long Term												
Full Simulation Period	-1	-3	1	-14	-13	-19	-42	-47	1	-18	-11	-6
Water Year Types												
Wet (32%)	-2	-1	3	-15	-41	-55	-62	-74	10	-8	-3	-13
Above Normal (12%)	18	-10	-34	-31	-12	-15	-71	-49	20	-40	-13	-15
Below Normal (24%)	10	-18	-2	-4	1	-7	-44	-52	-14	-28	-20	-12
Dry (17%)	-40	-1	20	-11	-6	-2	-6	2	11	-13	-7	3
Critical (15%)	11	17	8	-20	19	15	-13	-34	-18	-12	-18	15

Table U.1-138. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	71	38	220	419	421	486	236	317	465	492	230	23
20%	-18	-34	-4	185	316	218	179	274	337	434	178	-11
30%	-65	-124	-90	58	86	117	98	213	306	392	138	-41
40%	-139	-221	-143	-16	18	71	47	176	245	360	116	-55
50%	-161	-292	-180	-40	-48	-1	14	122	207	315	94	-75
60%	-193	-344	-214	-79	-82	-40	-11	97	148	277	68	-114
70%	-216	-393	-276	-110	-156	-101	-55	63	110	241	25	-155
80%	-268	-412	-340	-311	-217	-143	-138	-18	47	197	-39	-232
90%	-318	-458	-385	-422	-394	-201	-229	-142	-74	162	-103	-312
Long Term												
Full Simulation Period	-148	-243	-119	-22	10	64	20	109	193	311	82	-113
Water Year Types												
Wet (32%)	-198	-258	88	167	239	231	36	-29	30	233	16	-97
Above Normal (12%)	-149	-324	-296	36	-28	98	-32	158	156	324	74	-59
Below Normal (24%)	-137	-278	-209	-202	-150	-59	-83	131	231	328	63	-229
Dry (17%)	-127	-257	-234	-174	-116	-39	93	261	409	443	209	-66
Critical (15%)	-82	-77	-146	-13	-54	-2	112	159	265	293	118	-55

Table U.1-139. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v2 Without TUCP minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	7	9	-16	-47	-56	-67	31	-26	32	-22	-69	-23
20%	-26	-6	-12	-17	-69	-26	44	-27	-19	-19	-43	-24
30%	-14	-2	14	12	-10	24	24	-32	6	-9	-40	-17
40%	-23	-23	-5	-9	11	78	7	-22	6	-10	-12	-15
50%	6	16	10	9	-3	74	15	-38	7	-20	-8	5
60%	1	6	6	-1	13	60	29	-26	-8	-17	1	2
70%	0	-3	-1	23	-15	22	24	-28	10	-11	6	12
80%	-16	5	6	-102	-36	6	1	-37	13	-13	-13	2
90%	9	5	12	-68	-63	46	-53	-111	6	9	-26	-17
Long Term												
Full Simulation Period	-11	-3	3	-19	-30	18	10	-45	6	-14	-18	-11
Water Year Types												
Wet (32%)	-13	11	2	-31	-55	-45	2	-85	5	-6	-6	-12
Above Normal (12%)	6	-13	-26	11	-39	20	6	-36	8	-23	-9	-13
Below Normal (24%)	-11	-9	-22	-21	-11	65	5	-35	17	-23	-34	-6
Dry (17%)	-25	-18	30	-18	-13	33	-4	0	6	-13	-8	0
Critical (15%)	-8	3	37	-18	-17	57	56	-35	-12	-9	-38	-31

Table U.1-140. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	55	28	218	402	424	504	259	306	447	479	229	24
20%	-16	-34	-17	238	348	215	176	275	311	414	180	-27
30%	-65	-121	-96	63	95	113	104	224	283	380	137	-44
40%	-139	-225	-141	-13	19	63	67	181	236	346	118	-57
50%	-166	-292	-177	-30	-37	-1	41	143	177	315	94	-76
60%	-201	-340	-211	-76	-85	-41	1	106	136	277	64	-122
70%	-226	-392	-268	-128	-162	-103	-28	71	94	234	15	-159
80%	-268	-408	-332	-288	-218	-145	-96	-1	38	203	-39	-237
90%	-330	-458	-391	-433	-414	-196	-211	-108	-77	138	-104	-291
Long Term												
Full Simulation Period	-151	-240	-119	-17	16	63	40	118	179	302	80	-113
Water Year Types												
Wet (32%)	-200	-254	89	175	245	234	47	-19	30	230	15	-98
Above Normal (12%)	-157	-322	-298	51	-20	84	6	178	119	316	68	-70
Below Normal (24%)	-139	-276	-201	-204	-150	-63	-48	141	209	313	58	-226
Dry (17%)	-137	-248	-245	-179	-116	-38	105	256	389	423	201	-62
Critical (15%)	-80	-80	-146	4	-30	-2	118	168	261	290	128	-58

Table U.1-141. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 2v3 Without TUCP minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	-10	-1	-19	-64	-53	-48	53	-37	14	-36	-70	-23
20%	-23	-5	-25	36	-37	-29	40	-25	-44	-38	-41	-39
30%	-15	1	7	16	-1	21	29	-21	-17	-22	-41	-20
40%	-24	-26	-4	-6	11	70	27	-17	-3	-24	-9	-17
50%	1	16	14	19	8	74	42	-17	-23	-20	-8	3
60%	-7	10	10	2	10	59	41	-17	-20	-17	-4	-6
70%	-9	-2	6	5	-21	21	52	-20	-6	-18	-4	7
80%	-16	8	14	-79	-37	4	43	-19	4	-8	-13	-3
90%	-3	5	6	-79	-83	51	-35	-76	3	-15	-27	4
Long Term												
Full Simulation Period	-15	0	3	-14	-23	17	30	-37	-8	-23	-20	-12
Water Year Types												
Wet (32%)	-15	15	2	-23	-50	-41	13	-75	4	-8	-7	-13
Above Normal (12%)	-1	-11	-28	26	-31	5	44	-16	-29	-31	-16	-25
Below Normal (24%)	-12	-7	-14	-22	-11	62	40	-26	-6	-38	-39	-3
Dry (17%)	-34	-10	20	-23	-13	34	8	-5	-14	-33	-17	5
Critical (15%)	-6	0	37	-2	7	57	62	-26	-15	-11	-28	-33

Table U.1-142. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 3

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	266	192	762	934	938	944	614	777	596	700	649	213
20%	186	145	457	641	820	681	451	604	492	614	591	153
30%	148	97	257	351	344	427	335	525	436	545	502	119
40%	121	44	153	226	210	301	283	476	372	504	397	86
50%	97	-17	103	148	151	212	252	431	314	470	304	69
60%	30	-51	70	109	104	158	216	401	251	441	237	48
70%	-16	-108	26	64	65	133	187	366	169	396	206	12
80%	-54	-151	-51	-17	9	19	156	311	86	352	189	-41
90%	-101	-231	-152	-83	-36	-59	112	250	-15	309	153	-97
Long Term												
Full Simulation Period	75	-4	192	281	318	343	314	469	293	481	359	62
Water Year Types												
Wet (32%)	41	14	488	623	718	735	479	577	74	392	198	66
Above Normal (12%)	68	-23	135	377	289	420	318	563	231	475	345	138
Below Normal (24%)	80	-73	45	105	155	141	247	441	385	545	487	-12
Dry (17%)	98	3	-21	45	46	92	235	420	541	626	556	84
Critical (15%)	120	77	82	24	55	53	153	267	381	413	286	82

Table U.1-143. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 3 minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	201	163	526	468	461	392	409	434	163	186	351	166
20%	178	173	449	439	435	437	316	303	136	161	370	141
30%	199	219	360	304	249	335	260	280	136	143	324	143
40%	236	243	290	233	203	308	242	277	133	134	269	127
50%	264	291	293	197	196	287	252	271	113	134	202	148
60%	224	299	290	186	199	258	256	278	95	147	170	164
70%	200	281	300	197	205	256	266	275	68	145	187	179
80%	198	266	295	192	190	169	295	293	52	141	214	194
90%	227	233	245	271	295	188	289	281	64	157	230	197
Long Term												
Full Simulation Period	212	236	314	284	279	296	304	315	106	156	258	163
Water Year Types												
Wet (32%)	227	282	401	424	424	459	445	521	49	153	176	151
Above Normal (12%)	224	288	405	352	277	341	356	369	84	128	261	183
Below Normal (24%)	206	195	232	286	294	266	335	275	170	194	390	211
Dry (17%)	200	241	244	201	149	164	138	159	137	170	338	151
Critical (15%)	194	157	265	18	92	112	97	73	105	111	130	107

Table U.1-144. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 4

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	65	84	451	472	432	552	209	283	420	465	248	15
20%	-4	-38	15	162	327	179	96	241	337	416	185	-40
30%	-106	-128	-61	41	122	66	52	198	300	375	135	-104
40%	-176	-228	-101	-2	0	-4	10	163	249	349	70	-129
50%	-225	-327	-142	-49	-48	-52	-25	122	187	312	44	-153
60%	-248	-349	-195	-88	-88	-94	-64	68	139	261	16	-188
70%	-276	-384	-266	-163	-164	-131	-117	20	100	225	-12	-229
80%	-308	-425	-327	-246	-268	-177	-173	-18	48	188	-56	-281
90%	-385	-495	-377	-424	-404	-296	-287	-106	-76	115	-123	-356
Long Term												
Full Simulation Period	-179	-244	-90	-21	10	20	-32	99	185	297	56	-161
Water Year Types												
Wet (32%)	-228	-273	127	206	248	212	-23	-19	37	231	-40	-211
Above Normal (12%)	-208	-337	-236	16	-31	73	-102	144	159	302	4	-153
Below Normal (24%)	-162	-283	-148	-221	-152	-139	-126	94	205	307	80	-245
Dry (17%)	-178	-239	-240	-190	-149	-85	74	240	389	412	175	-85
Critical (15%)	-77	-56	-176	-25	-29	-57	38	161	261	291	129	-12

Table U.1-145. Central Valley Project and State Water Project Net Generation, Monthly Generation, Alternative 4 minus No Action Alternative

	Monthly Generation (GWh)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	0	55	215	6	-46	0	3	-60	-13	-50	-50	-31
20%	-11	-9	7	-39	-58	-64	-39	-60	-19	-37	-37	-53
30%	-56	-6	43	-6	26	-26	-22	-47	0	-27	-43	-80
40%	-61	-30	36	5	-7	3	-30	-36	10	-21	-58	-89
50%	-58	-20	49	0	-2	23	-24	-38	-14	-23	-58	-73
60%	-54	1	25	-10	7	6	-24	-55	-17	-32	-52	-72
70%	-59	6	8	-30	-24	-7	-38	-71	0	-26	-31	-63
80%	-56	-8	19	-37	-87	-28	-33	-36	13	-23	-30	-47
90%	-58	-31	20	-70	-73	-49	-110	-75	3	-37	-46	-62
Long Term												
Full Simulation Period	-42	-4	32	-19	-30	-27	-42	-56	-2	-28	-45	-60
Water Year Types												
Wet (32%)	-43	-4	40	7	-46	-64	-57	-75	11	-7	-62	-126
Above Normal (12%)	-52	-26	34	-9	-43	-6	-64	-50	11	-45	-79	-107
Below Normal (24%)	-36	-14	39	-39	-13	-14	-38	-73	-10	-44	-17	-22
Dry (17%)	-75	-1	25	-34	-46	-13	-23	-21	-14	-44	-42	-19
Critical (15%)	-2	24	8	-31	8	2	-18	-33	-15	-11	-26	13

Table U.1-146. Annual Central Valley Project and State Water Project Net Generation

Statistic	Net Generation (GWh)														
	NAA	Alt1	Alt1 minus NAA	Alt2v1 wo TUCP	Alt2v1 wo TUCP minus NAA	Alt2v1 w TUCP	Alt2v1 w TUCP minus NAA	Alt2v2 no TUCP	Alt2v2 no TUCP minus NAA	Alt2v3 no TUCP	Alt2v3 no TUCP minus NAA	Alt3	Alt3 minus NAA	Alt4	Alt4 minus NAA
PROBABILITY OF EXCEEDANCE															
10%	1,344	275	-1,069	1,276	-68	1,224	-121	1,243	-101	1,256	-89	4,961	3,617	1,065	-279
20%	1,132	-240	-1,372	1,022	-110	977	-155	1,040	-92	1,085	-47	4,293	3,161	912	-220
30%	786	-611	-1,397	713	-73	700	-86	811	25	837	51	3,820	3,034	592	-194
40%	598	-860	-1,458	496	-102	518	-80	382	-216	391	-207	3,485	2,887	380	-217
50%	321	-1,211	-1,533	278	-44	200	-121	213	-109	227	-95	3,023	2,701	37	-284
60%	0	-1,338	-1,338	-178	-178	-187	-187	-159	-159	-130	-130	2,711	2,711	-381	-381
70%	-267	-1,651	-1,384	-558	-292	-529	-262	-327	-60	-365	-98	2,429	2,695	-643	-376
80%	-500	-2,108	-1,609	-743	-243	-745	-245	-690	-190	-624	-124	2,003	2,503	-843	-343
90%	-863	-2,324	-1,462	-1,052	-189	-1,061	-199	-921	-58	-942	-79	1,679	2,542	-1,371	-508
LONG TERM															
Full Simulation Period	261	-1,109	-1,370	108	-153	87	-173	145	-116	158	-103	3,183	2,922	-60	-321
WATER YEAR TYPES															
Wet (32%)	692	-836	-1,527	421	-270	429	-263	458	-233	494	-198	4,404	3,712	266	-425
Above Normal (12%)	67	-2,033	-2,101	-164	-231	-187	-254	-40	-108	-45	-113	3,335	3,267	-369	-436
Below Normal (24%)	-508	-1,847	-1,339	-717	-210	-699	-191	-594	-87	-585	-77	2,547	3,054	-790	-282
Dry (17%)	432	-811	-1,244	394	-39	382	-51	402	-30	350	-82	2,725	2,292	125	-307
Critical (15%)	532	-111	-643	652	120	503	-29	517	-14	574	43	1,993	1,462	449	-83

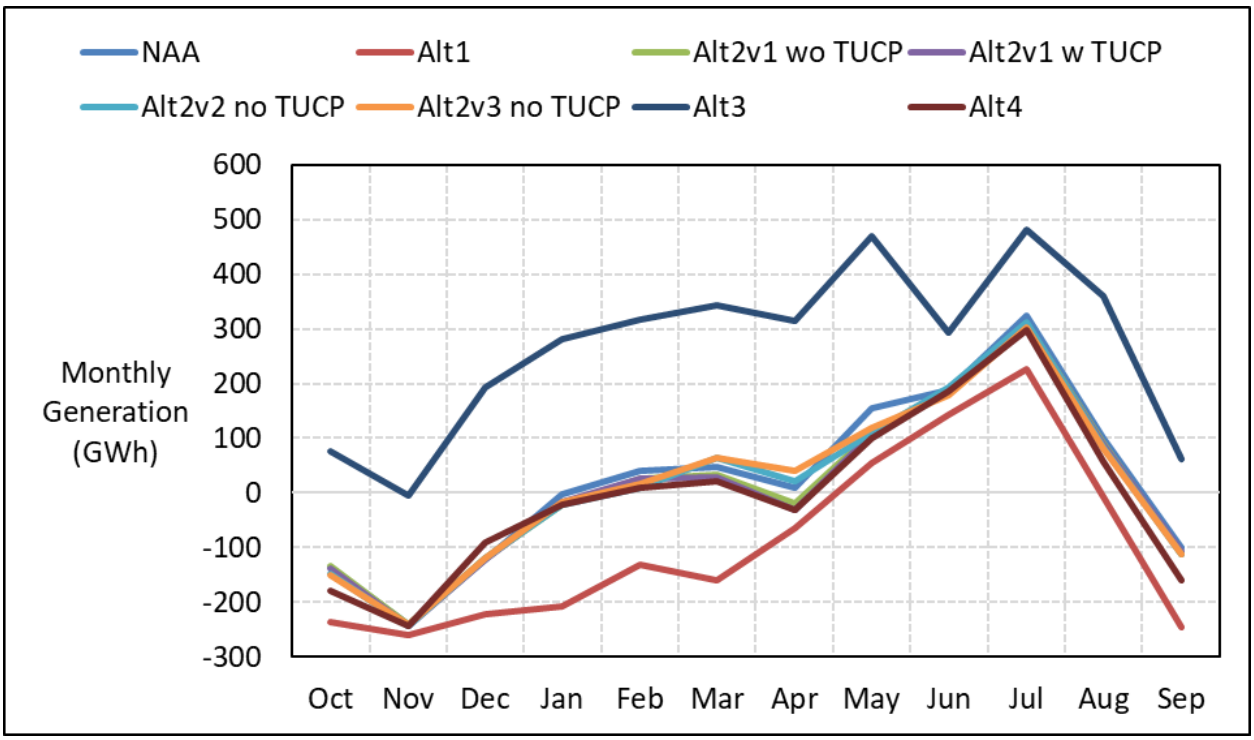

Figure U.1-151. Central Valley Project and State Water Project Net Generation, Long-Term Average Generation

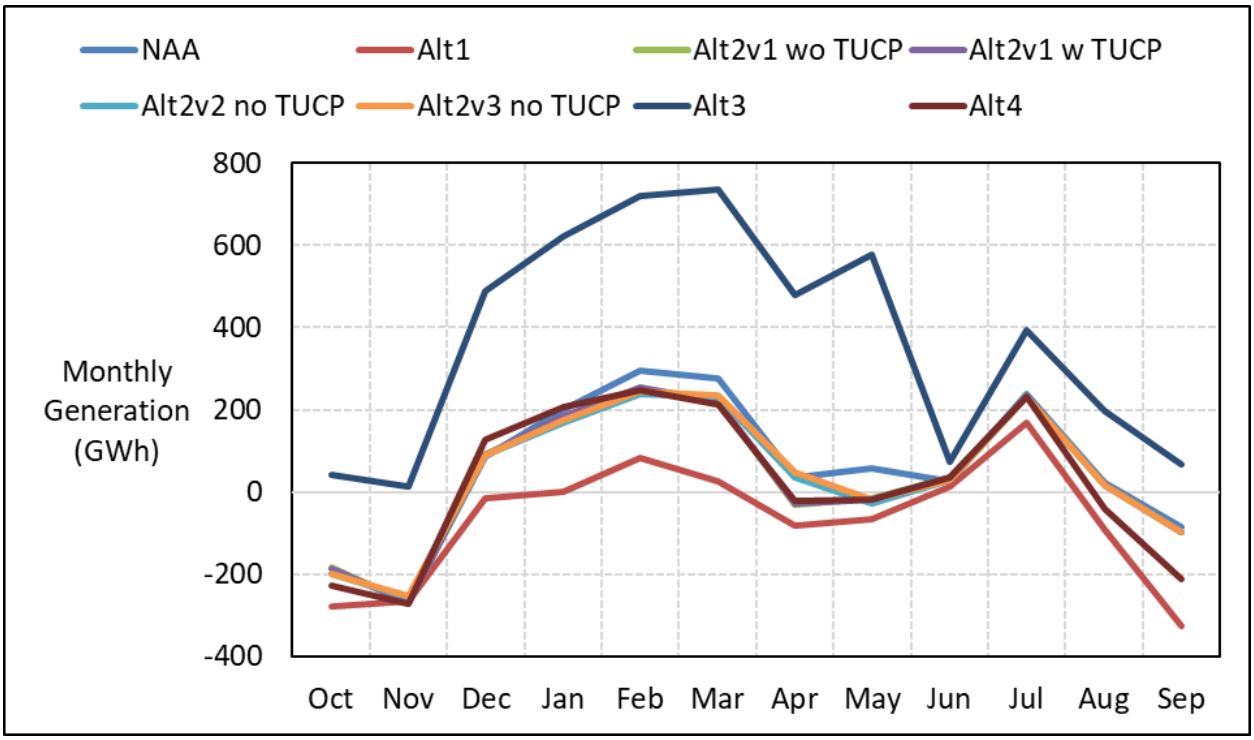

Figure U.1-152. Central Valley Project and State Water Project Net Generation, Wet Year Average Generation

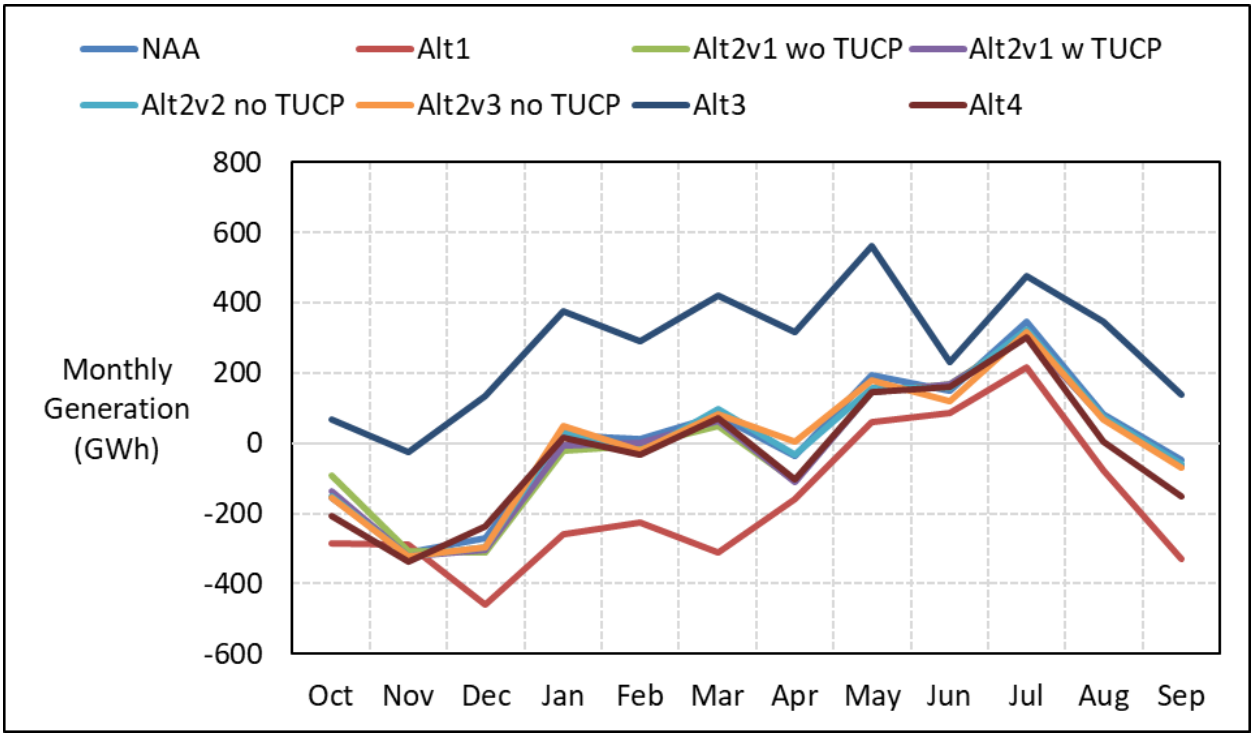

Figure U.1-153. Central Valley Project and State Water Project Net Generation, Above Normal Year Average Generation

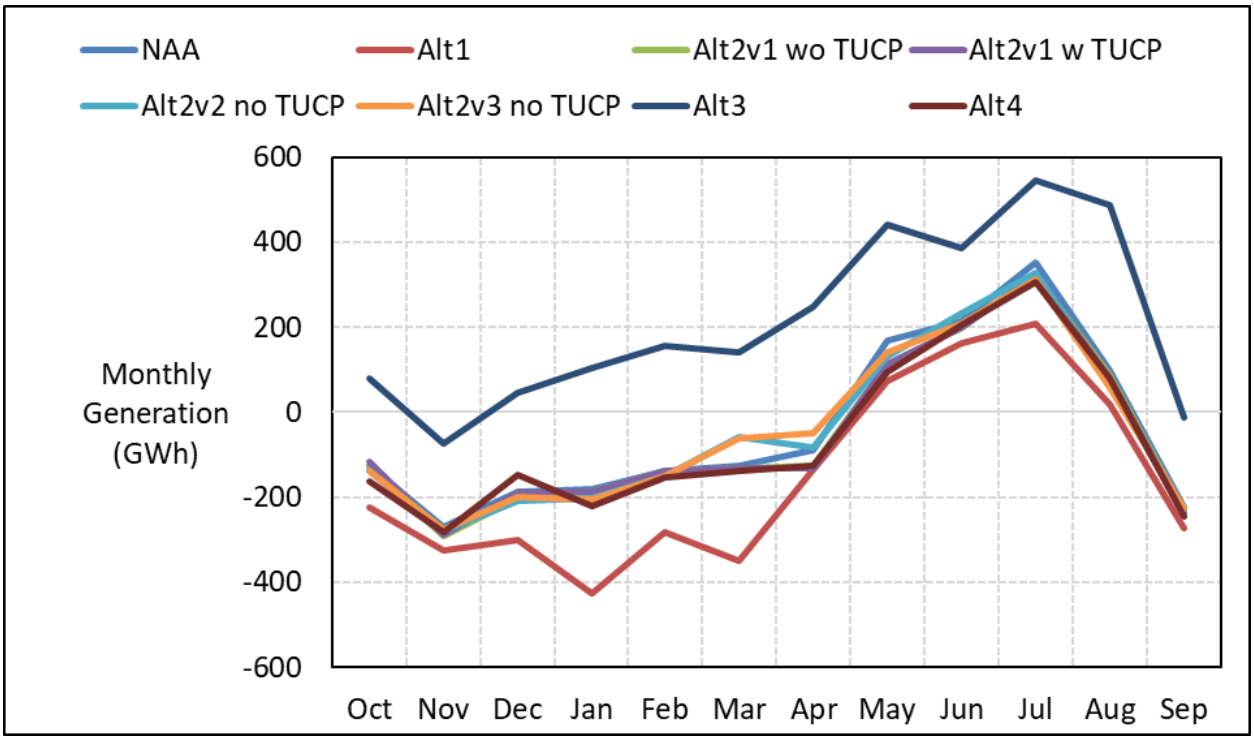

Figure U.1-154. Central Valley Project and State Water Project Net Generation, Below Normal Year Average Generation

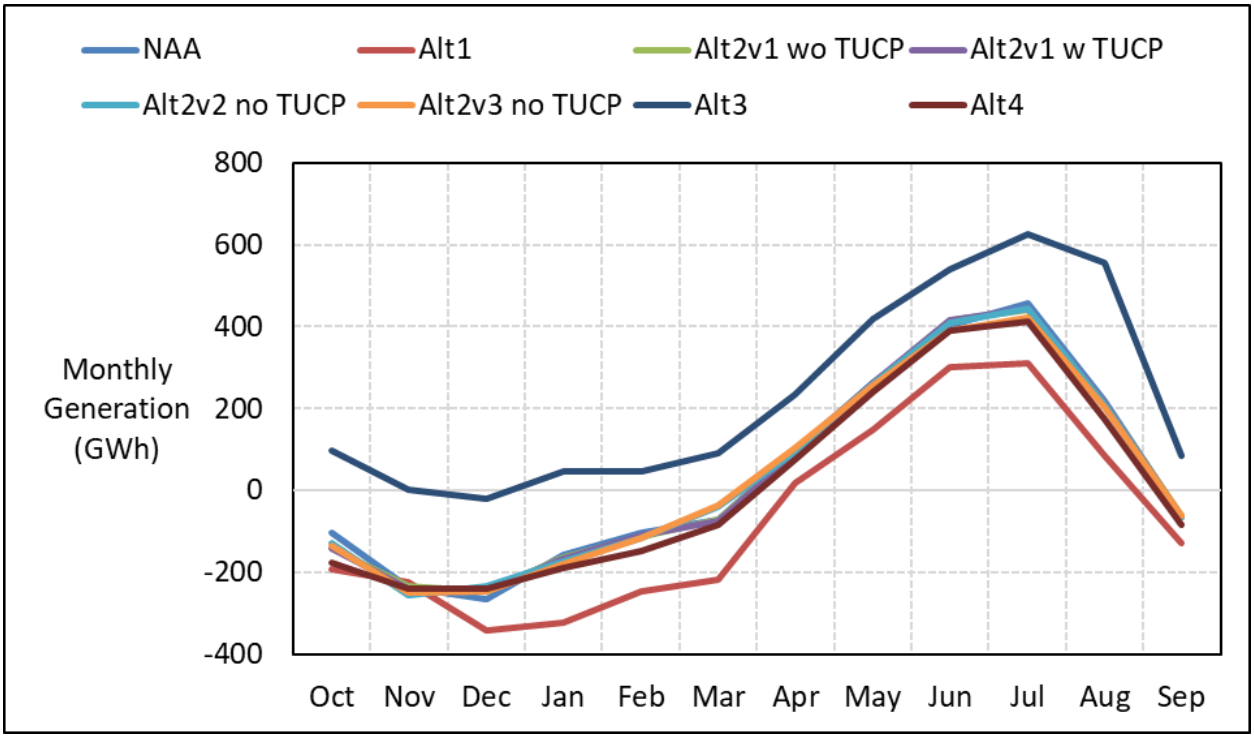

Figure U.1-155. Central Valley Project and State Water Project Net Generation, Dry Year Average Generation

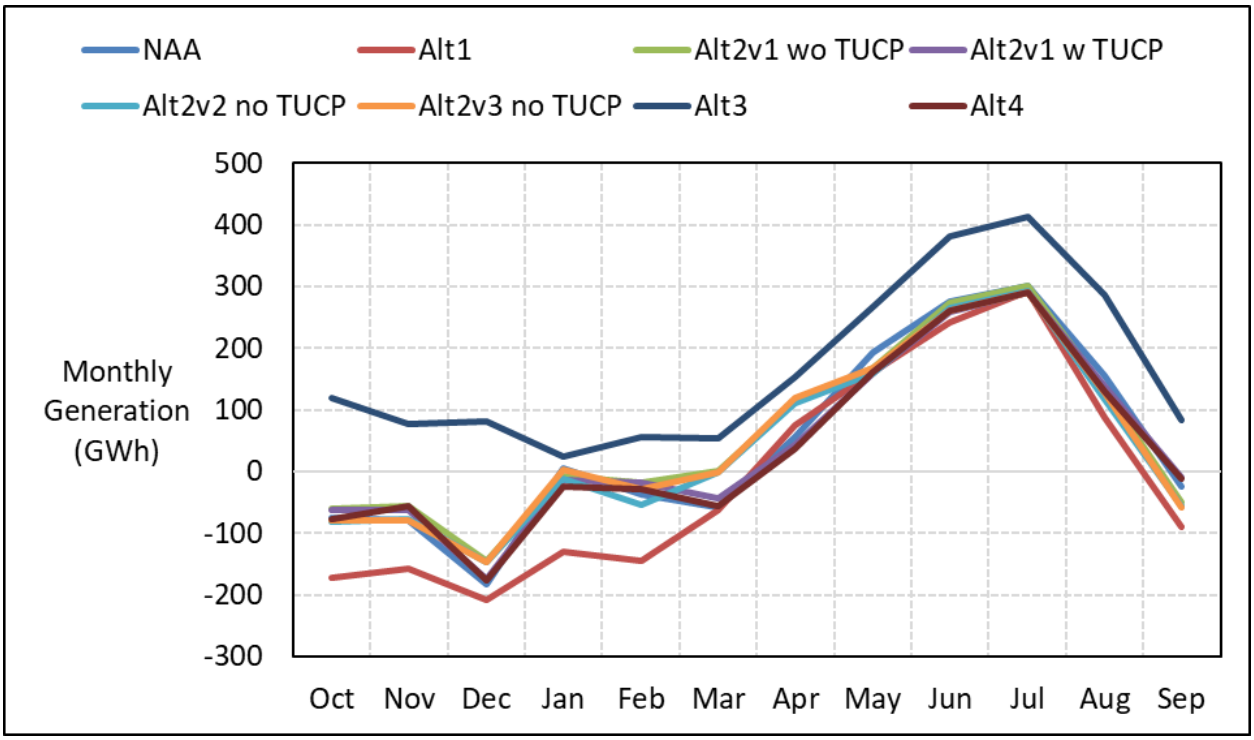

Figure U.1-156. Central Valley Project and State Water Project Net Generation, Critical Year Average Generation

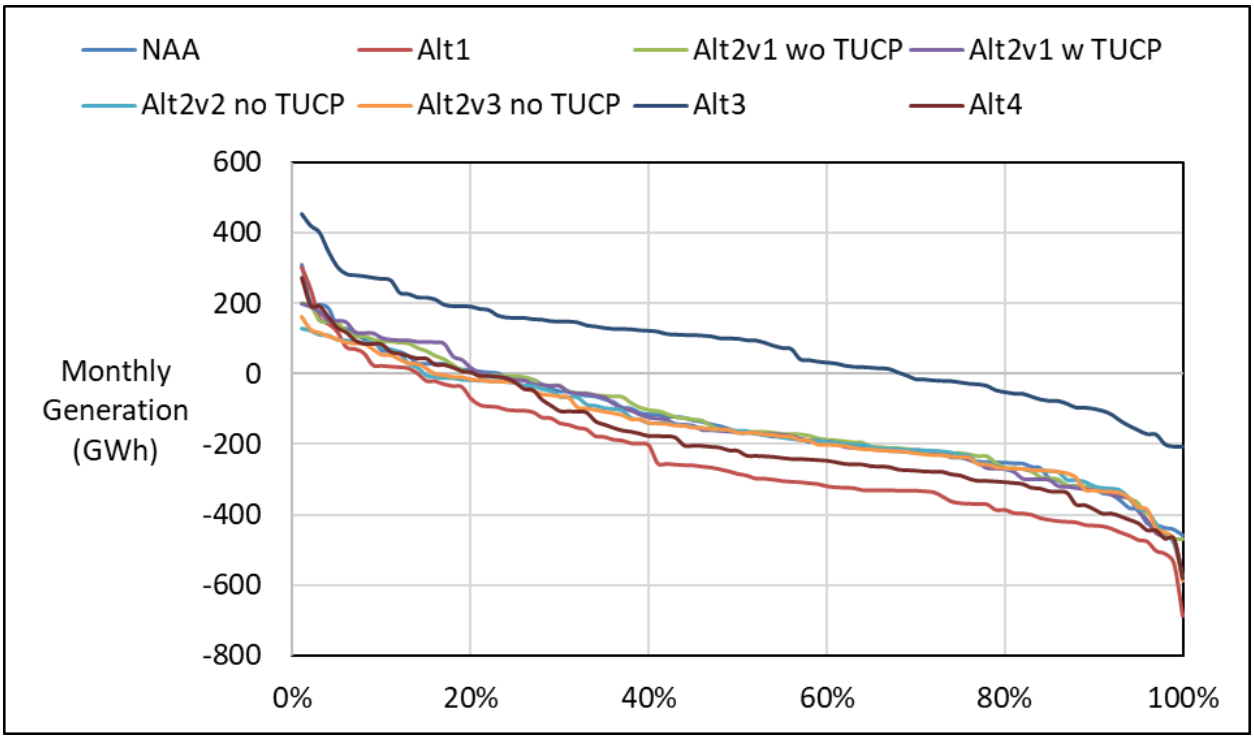

Figure U.1-157. Central Valley Project and State Water Project Net Generation, October

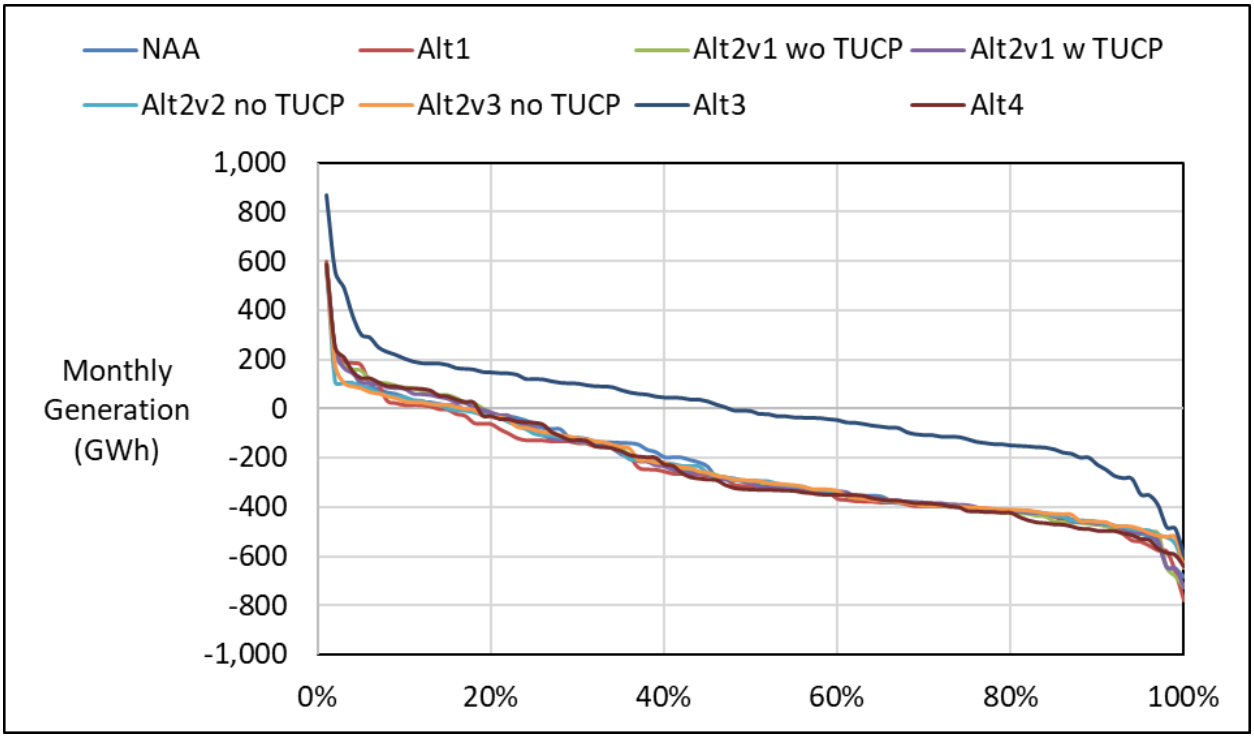

Figure U.1-158. Central Valley Project and State Water Project Net Generation, November

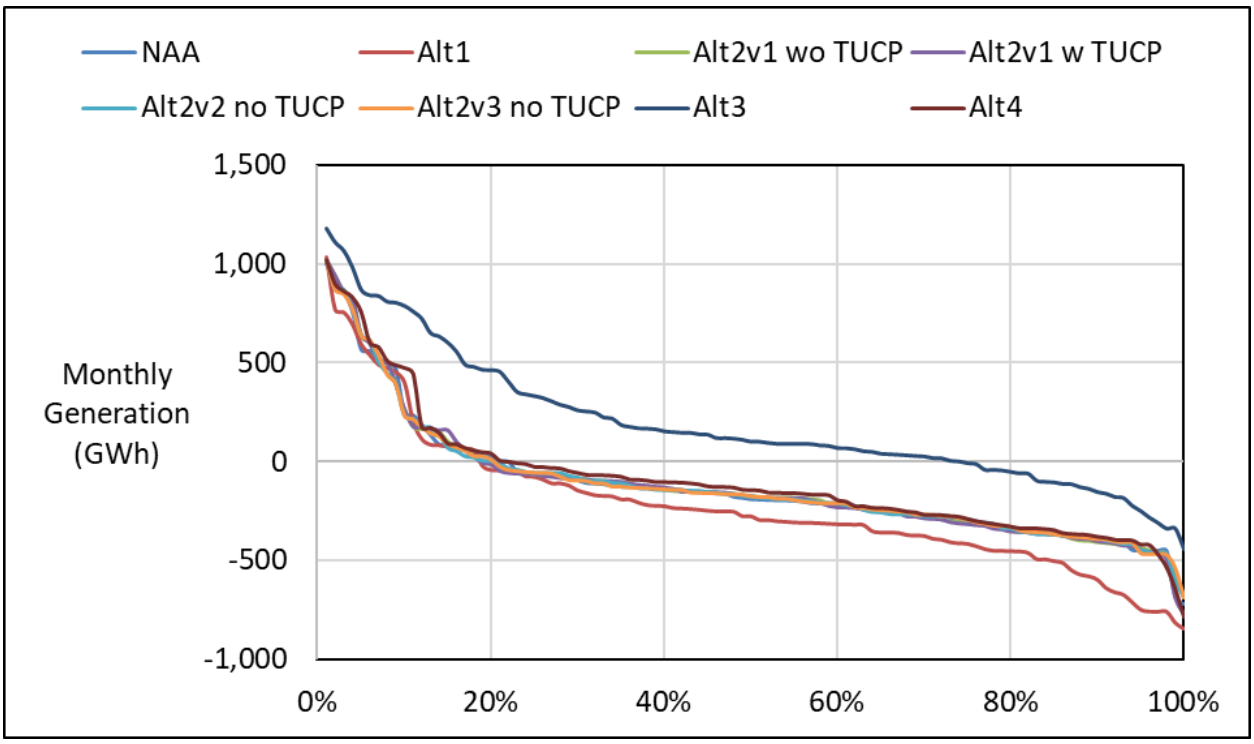

Figure U.1-159. Central Valley Project and State Water Project Net Generation, December

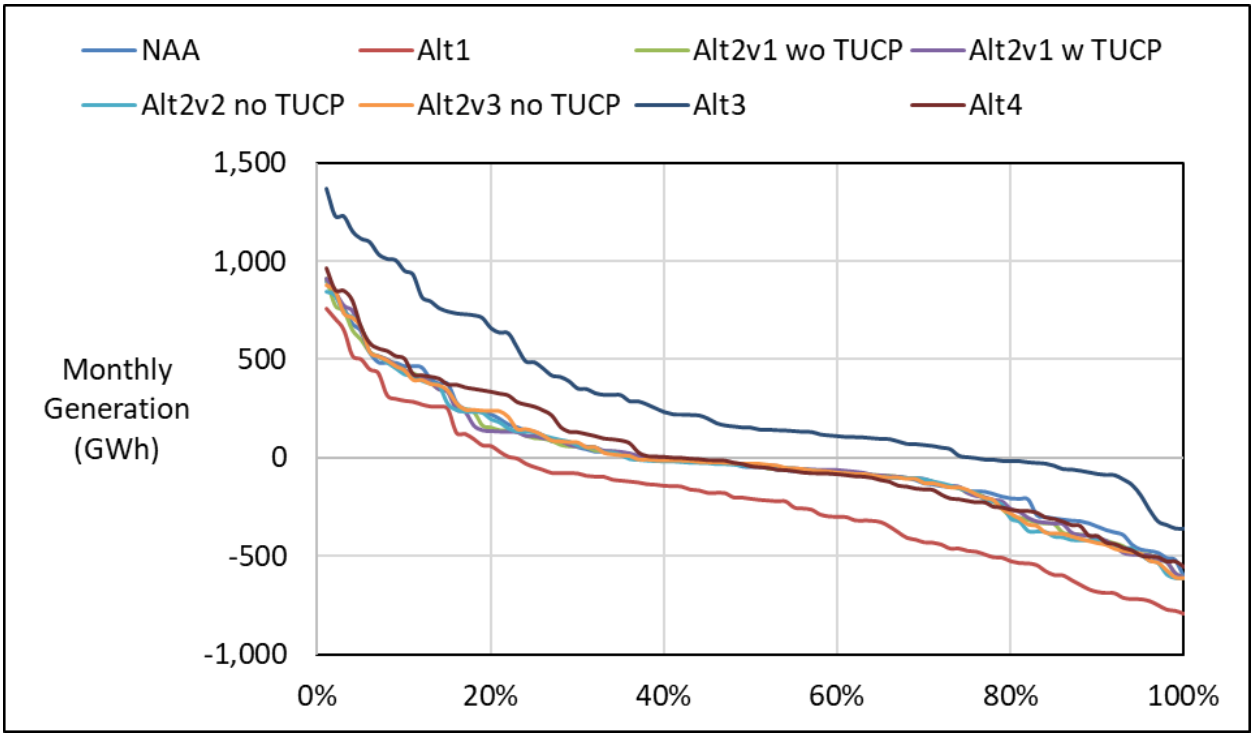

Figure U.1-160. Central Valley Project and State Water Project Net Generation, January

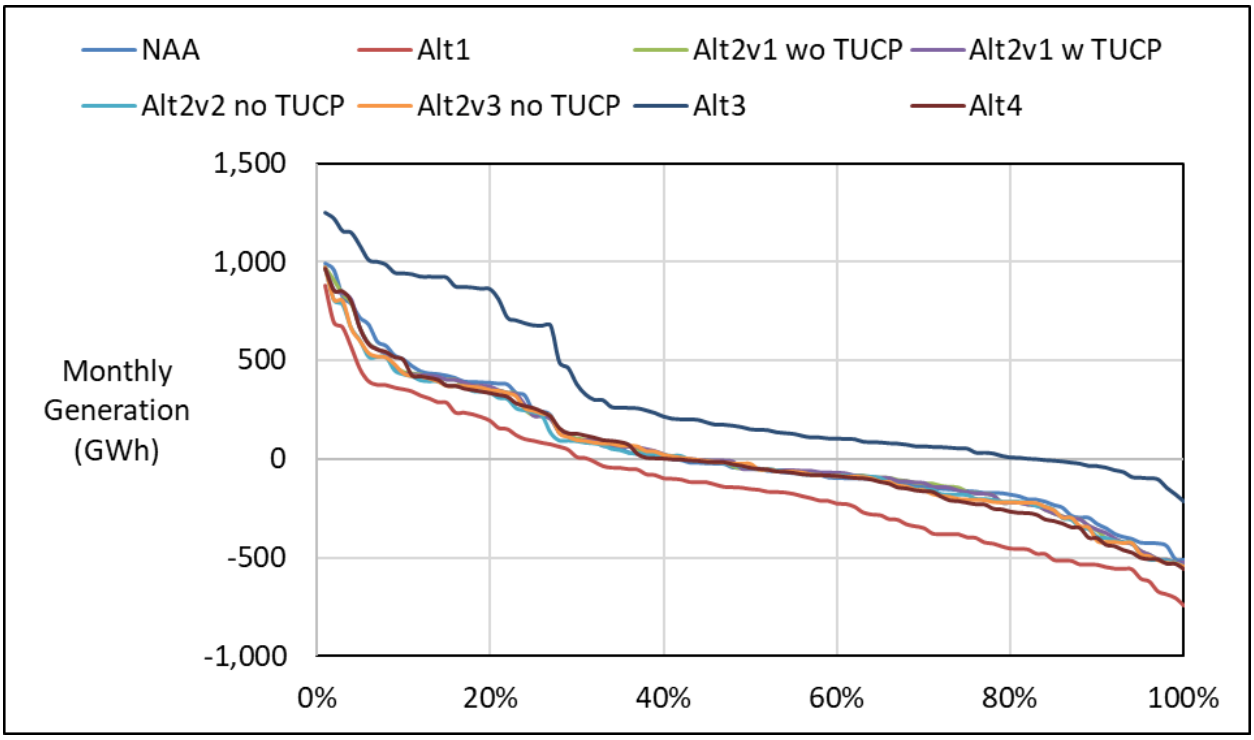

Figure U.1-161. Central Valley Project and State Water Project Net Generation, February

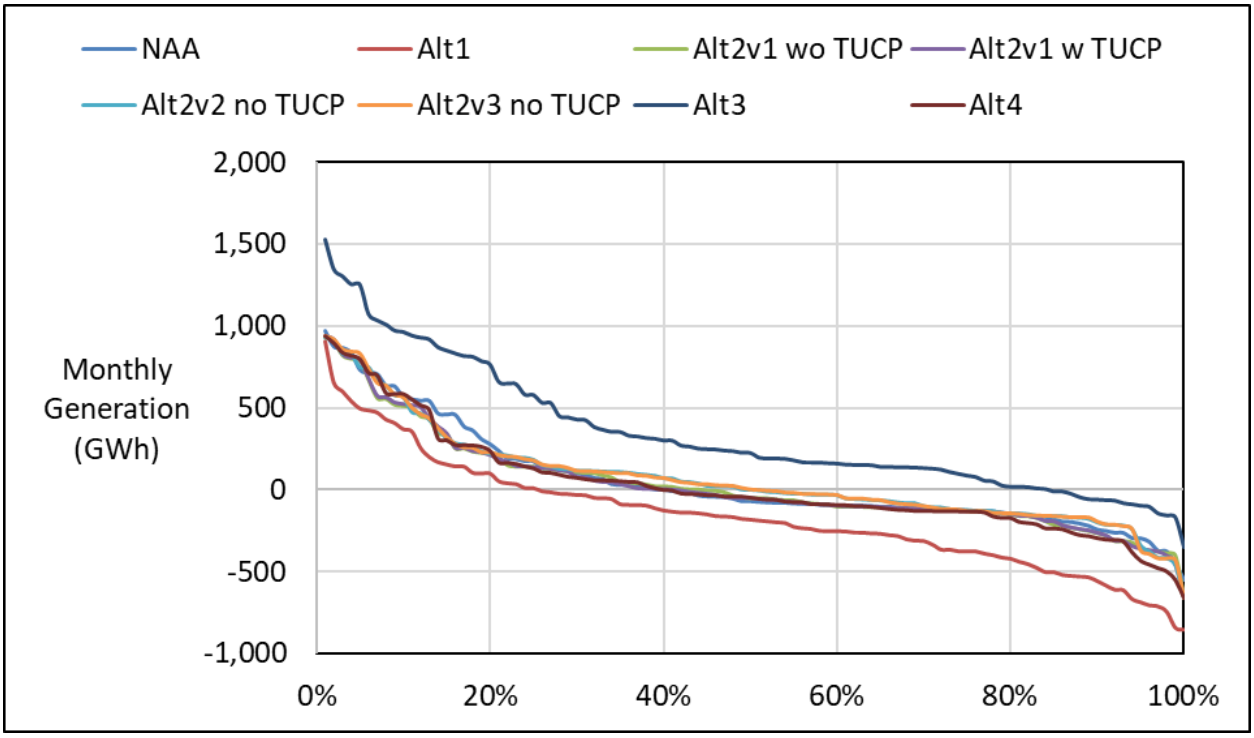

Figure U.1-162. Central Valley Project and State Water Project Net Generation, March

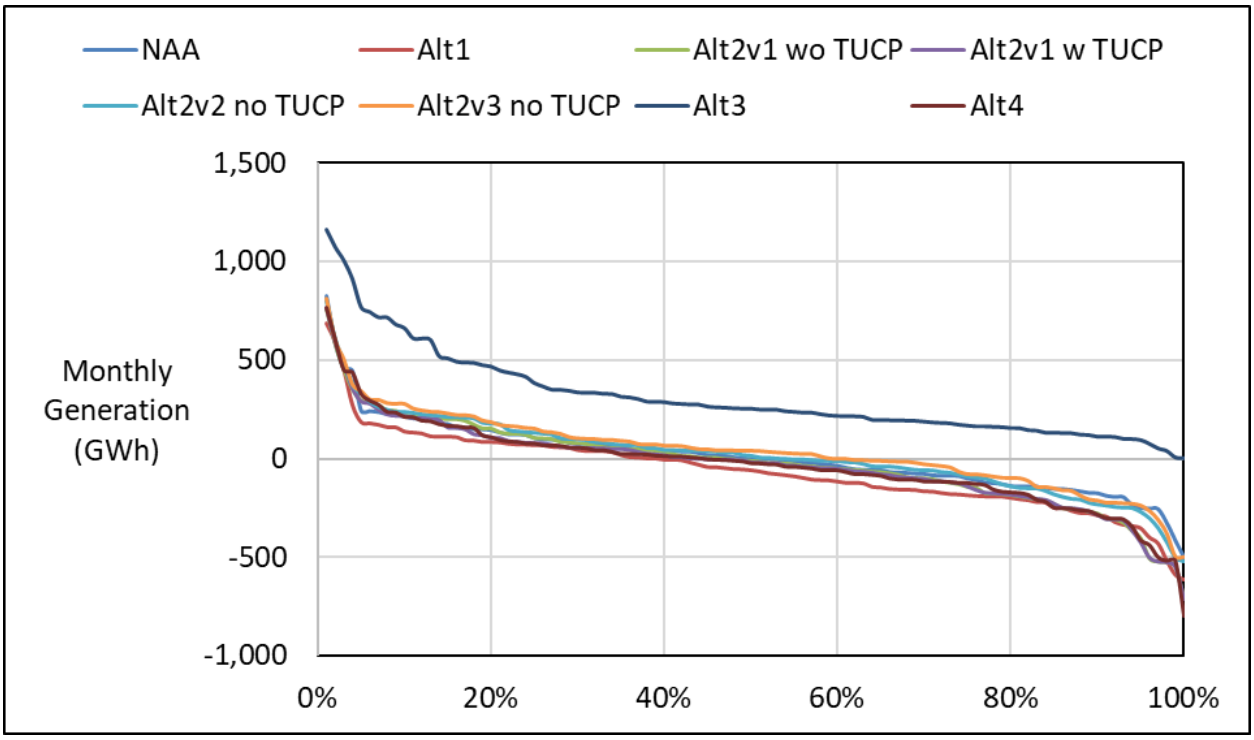

Figure U.1-163. Central Valley Project and State Water Project Net Generation, April

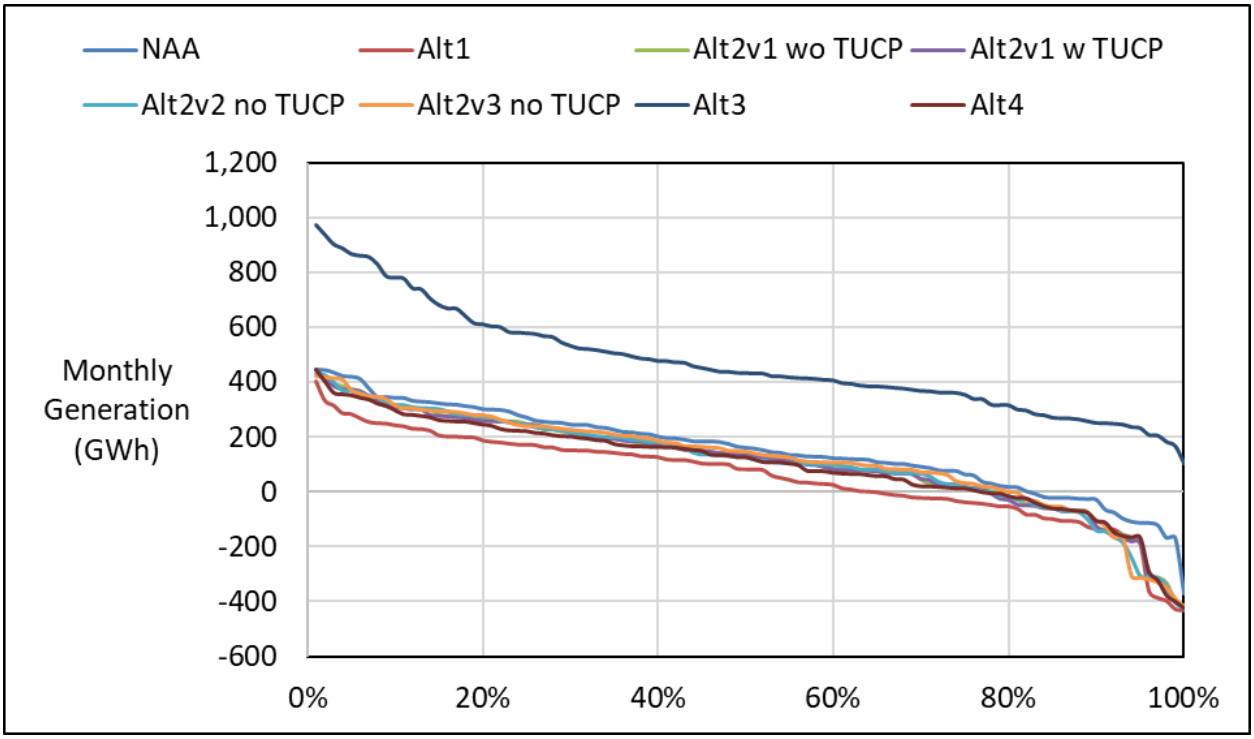

Figure U.1-164. Central Valley Project and State Water Project Net Generation, May

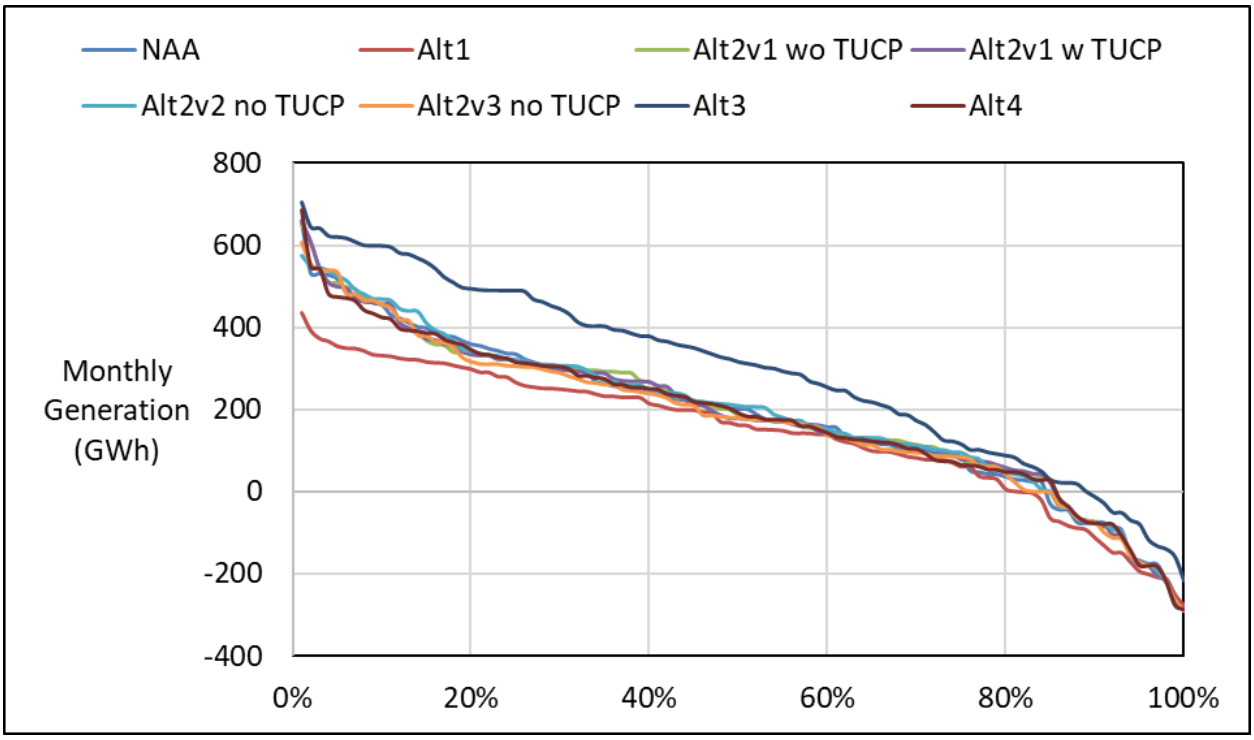

Figure U.1-165. Central Valley Project and State Water Project Net Generation, June

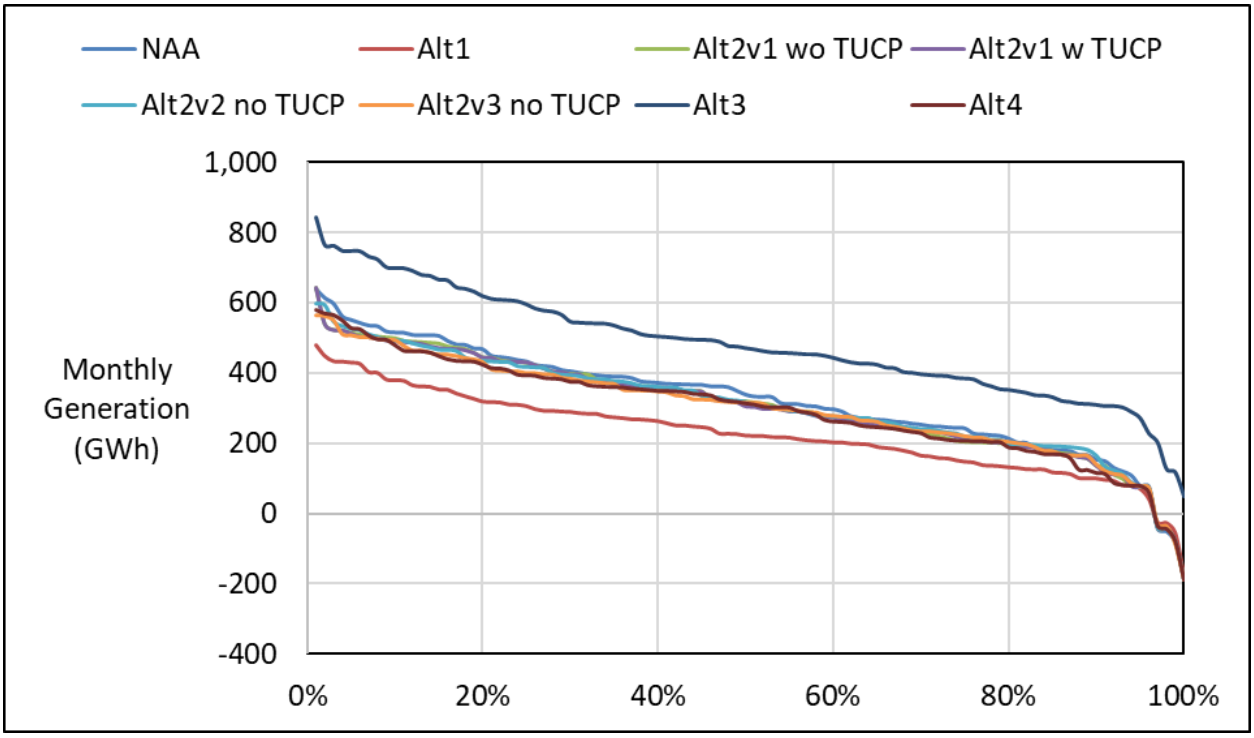

Figure U.1-166. Central Valley Project and State Water Project Net Generation, July

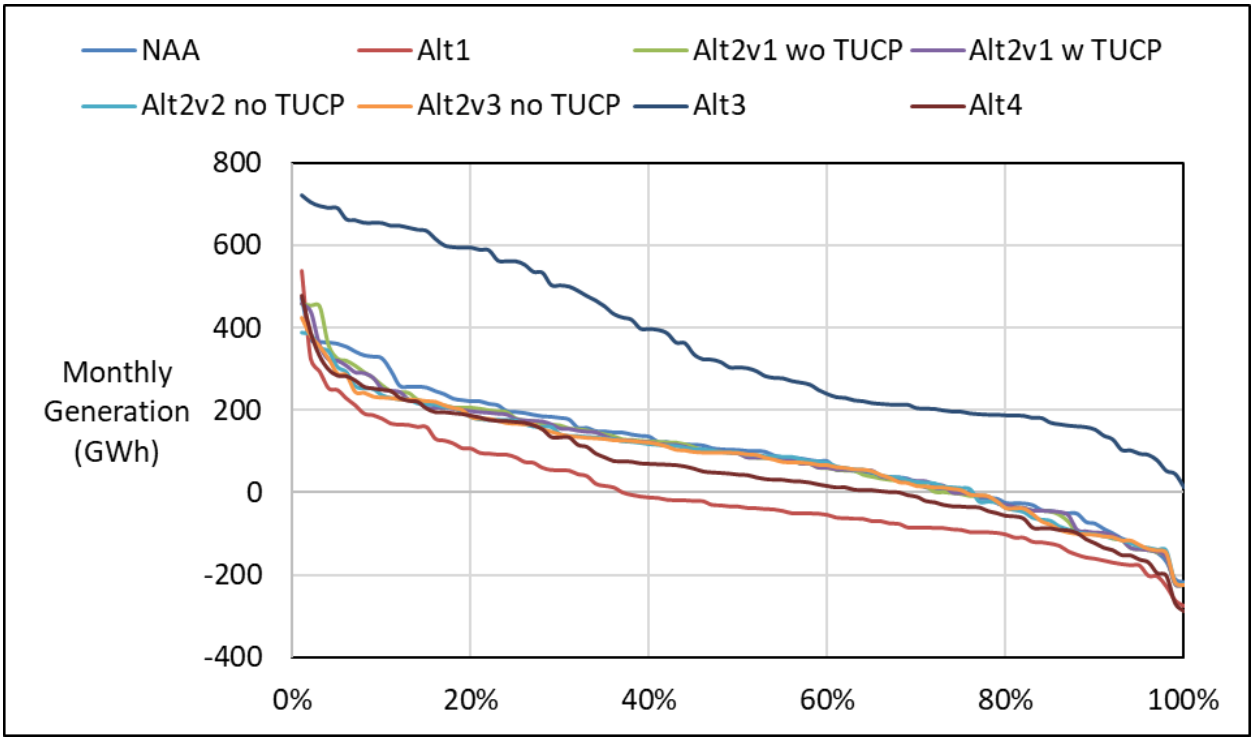

Figure U.1-167. Central Valley Project and State Water Project Net Generation, August

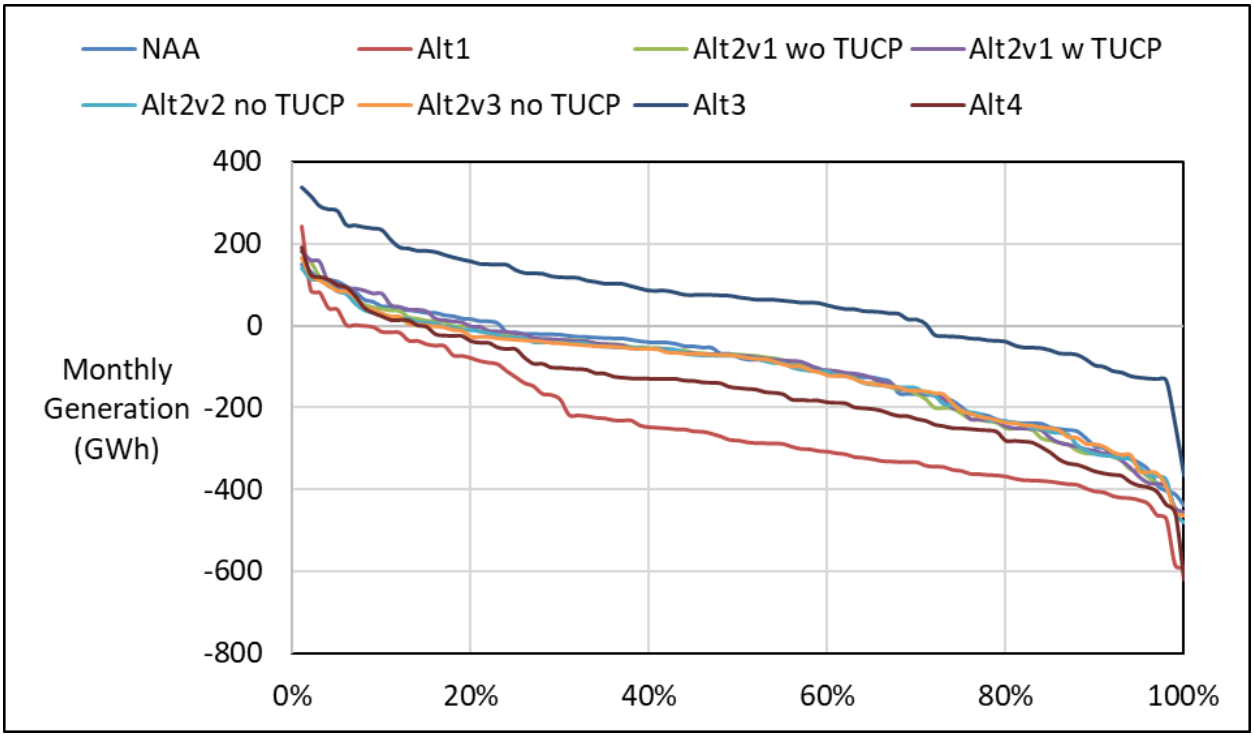

Figure U.1-168. Central Valley Project and State Water Project Net Generation, September

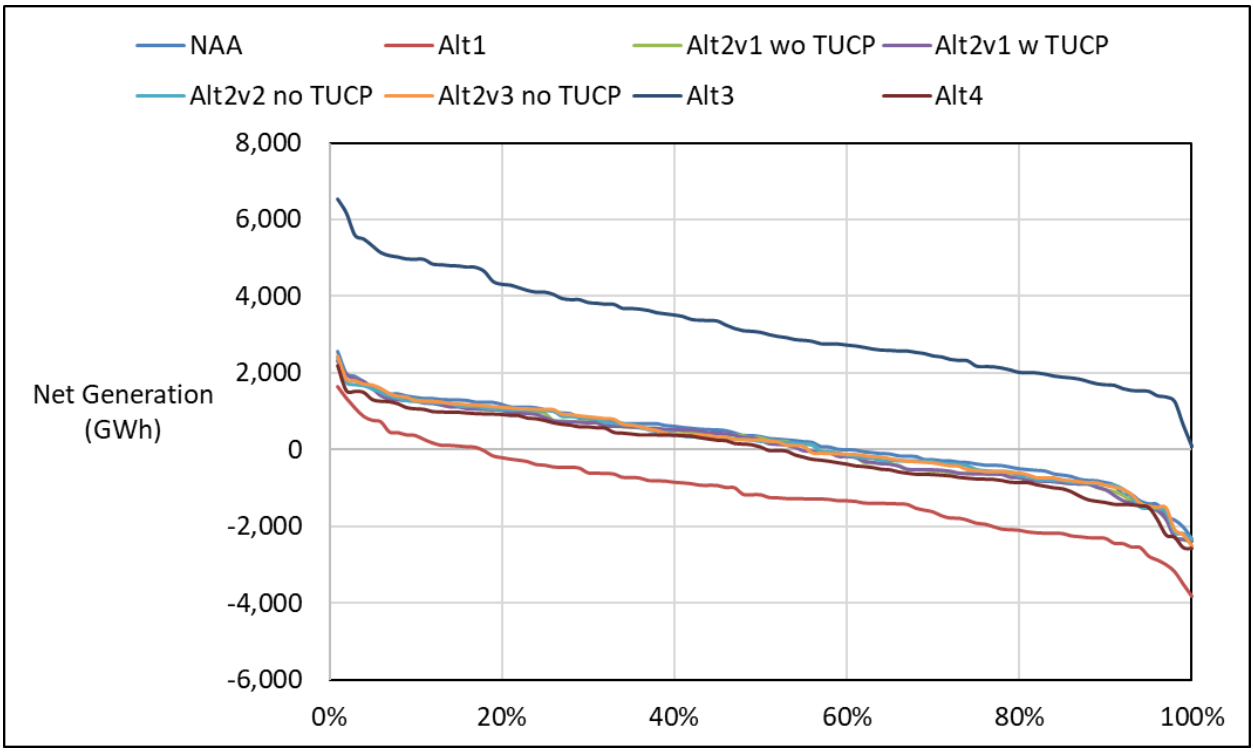

Figure U.1-169. October–September Central Valley Project and State Water Project Net Generation