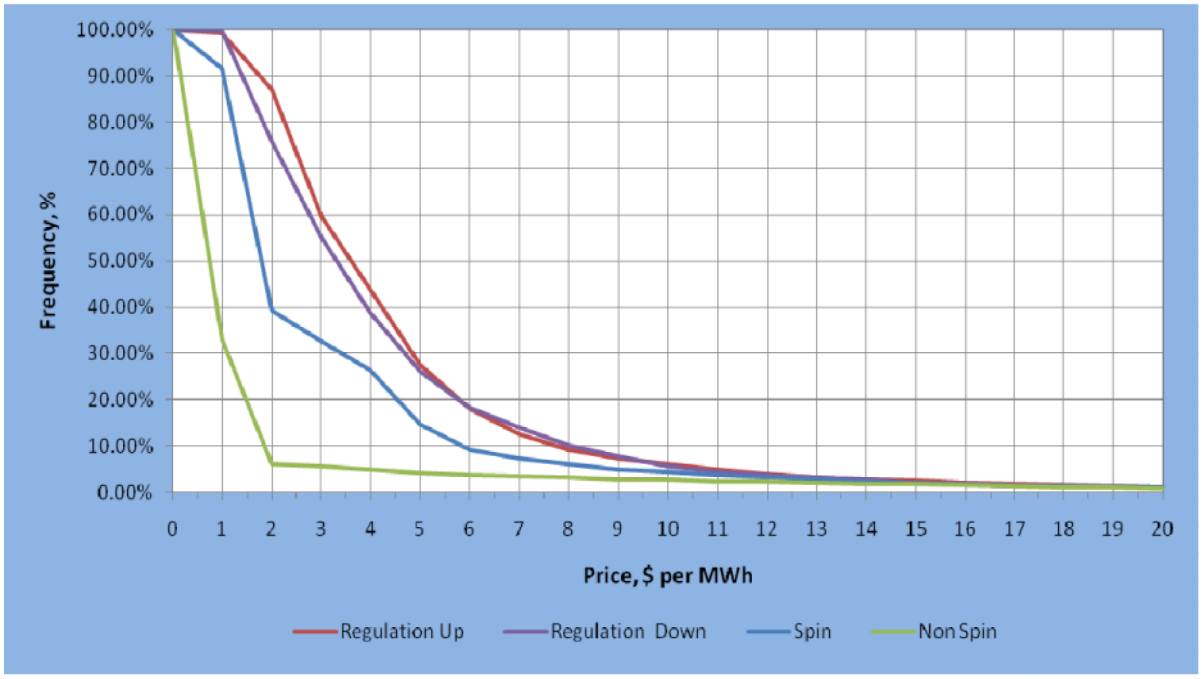

Figure 19- CAISO Markets, Ancillary Services Duration Curves, 06/01/2009 to 11/30/2009

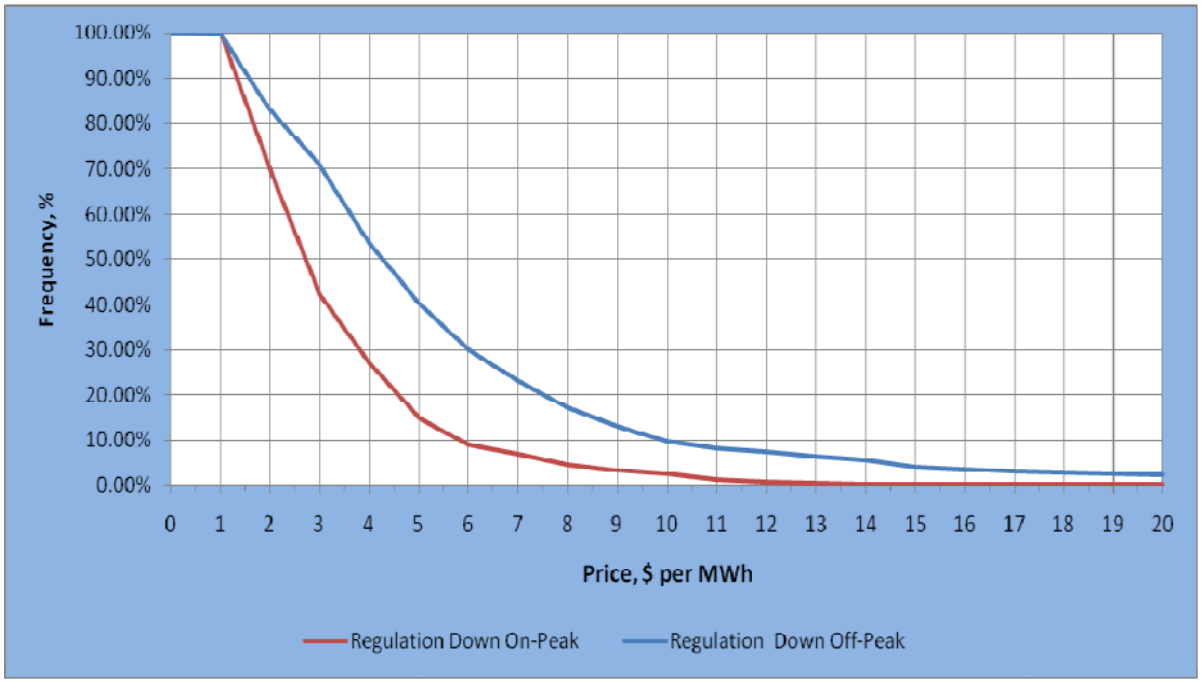

Figure 20- CAISO Market, Regulation Down Duration Curves, 06/01/2009 to 11/30/2009

For the NODOS Project, the total AS revenues in the Pump Cycle for the 30-year planning period in NPV is $3,757,000. The corresponding total AS revenues in the generation cycle for the Project in NPV is $7,817,000. The AS revenues from the Pump-Back operations in NPV are

$5,944,000. The NODOS Project total potential AS revenues in NPV is $17,518,000 for the 30-year planning period. The monthly cash flows for the Project's different AS revenue components in NPV are shown in Figure-21.

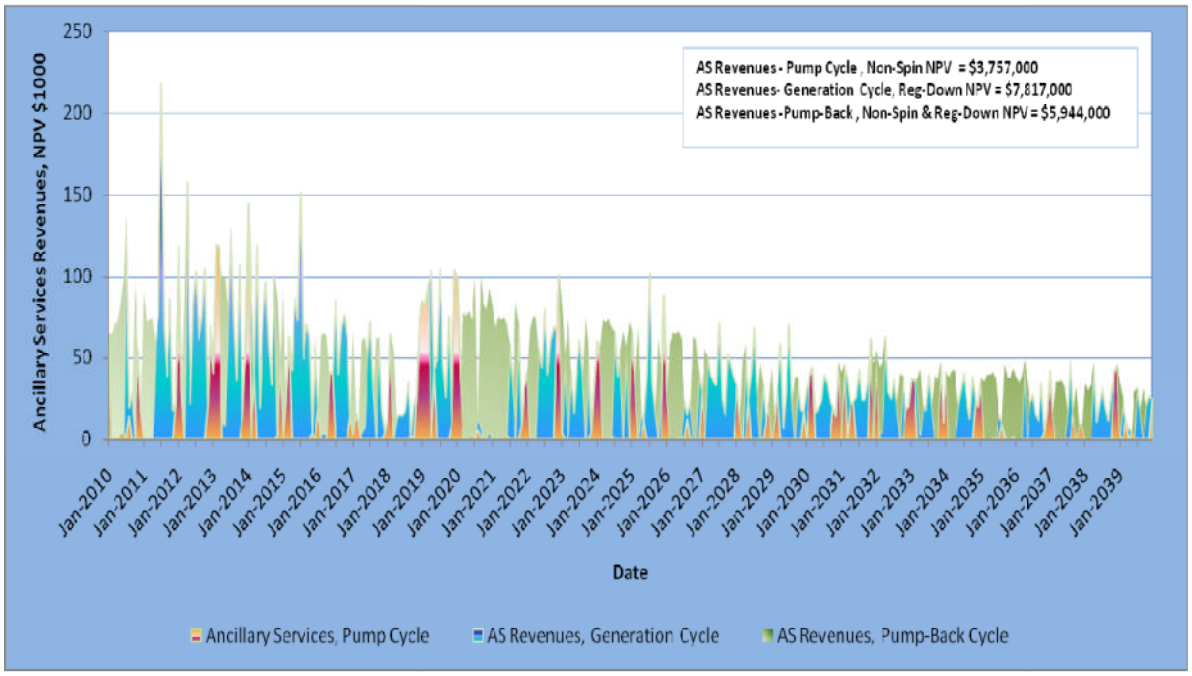

Figure 21- Ancillary Service Potential, Monthly NODOS Project Cash flows, Median Case

8-Recommendations and Next Steps

The current phase of the Power Planning Study of the NODOS Project is meant to provide a preliminary assessment of the designed Project components, and operational scenarios, from a power planning perspective. These scenarios are being used to formulate alternatives for the feasibility study of the Project. Power planning perspective is important in capturing the impacts of Energy market economies and regulatory mandates that will be consequential to the costs and revenues associated with the operations of the Project. Although, the NODOS Project is envisioned to provide off-stream storage needed to support the State Water Project and the Central Valley Project operations, its power portfolio is a major component in determining the Project's ultimate viability. More work is needed to improve on the findings of the current phase of the study,

- Use anticipated CALSIM modeling results (reflecting latest B.O.) for the daily operations to refine the Base, High, and Low Cases of operations of the NODOS Project.
- Model different operational scenarios for the NODOS Project and its power complex, to include Pump-Back operations (a daily cycle for the residual Project capacity from the seasonal cycle), and Pure Pump-Storage Operations (an independent component dedicated for a daily pumping/generating cycle).

- Use available market information (i.e. LMP prices and trends) to optimize the NODOS Project operations. Update the AS duration curves to reflect CAISO locational markets that pertain to the Project.
- Explore and propose modifications to the physical and operational attributes of the power generation complex in light of the modeling results. Consider the change in designed capacities needed to correspond to the optimized operations, and needed Project flexibilities.
- Identify operational scenarios and design modifications that could be modeled to optimize Project's operations and to enhance its value.
- Propose a sensitivity analysis process that would describe the impact of adjusting design parameters, operational and financial uncertainty, on the Project's value.
- Look into trends in technologies and setups that represent current practice in designing hydropower Projects. Many recently designed pump-storage facilities are using separate pumping and generating facilities to increase efficiency and add operational flexibility.
- Consider a 50-year planning period that is more consistent with the life cycle of hydropower Project components.

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Appendix A- Transmission Interconnection Roadmap

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Transmission Interconnection Process

PARO's Transmission Planning Branch Prepared a description of the normal process that DWR has taken when exploring transmission interconnection options for new or existing facilities. The discussion below should serve as a roadmap for the transmission interconnection process for the NODOS Project.

Preliminary Details

Before the Power and Risk Office (PARO) can initiate its actions for obtaining physical interconnection and transmission service for DWR facilities, the following need to be ascertained:

1. Estimated peak capacity needs (MWs) at facilities' start-up and during construction
2. Planned load growth for future enlargements at said facilities
3. Probable location of "Point of Interconnection" to high-voltage system
4. Identification of all potential transmission providers

Transmission Provider Studies

All of the major transmission service providers in California require that they conduct various engineering studies which evaluate the impact of a proposed facility on the overall high-voltage system. These studies, usually known as "System Impact Studies" (SIS), are of value to DWR for two reasons. First, the reports resulting from these studies can be utilized in any EIR/EIS documentation for discussion of transmission impacts (i.e., line routing and substations). Second, the studies, a necessary first level of review required by any of the potential transmission service providers, give a good indication of which provider represents the preferred option. However, it must be noted that any cost estimates provided at the SIS stage are considered preliminary and non-binding.

Once DWR has reviewed the various SIS reports and validated their findings, DWR must initiate the second stage of the transmission planning studies (typically called a Facility Study). These studies build upon the SIS and identify specific hardware that will be needed to implement the transmission service interconnection. Typically, one can assume that the Facility Study will provide accurate cost estimates that could be used in determining the economics of the project.

Transmission Service Request

Once the results of the various studies (i.e., SIS and Facility Study) are compiled, DWR can now determine which provider it will seek an interconnection with, and subsequent transmission service. Typically, DWR will need to arrange for an interconnection service agreement and a transmission service agreement.

Route & Construction

Once DWR completes the transmission interconnection agreements, actual construction-related activities begin. These activities include: ordering & receiving equipment, land acquisition and permitting, and actual construction.

It is important to note that there must be adequate lead time for all of the activities described above before the new DWR facility is expected to be on-line. To illustrate this, Table A-1 represents a typical timeline.

TABLE A-1 – A TYPICAL TIMELINE FOR NEW TRANSMISSION INTERCONNECTION

Phase	Action	PARO's Role	Duration
Preliminary Details			
	Assessing Project Needs (e.g., location and loads)	Support DWR's project team where necessary	(unknown, but for purposes of this timeline, completion of Preliminary Details is T_0)
Transmission Provider Studies			
	Coordination with Transmission Providers	Prepare necessary letters and documentation. Facilitate groundwork discussions between DWR and Providers	2 months
	Formal Studies (System Impact Studies & Facility Studies)	Prepare necessary documentation. Negotiate study agreements. Facilitate payments for studies. Monitor process. Assist DOE-Electrical Engineering in reviewing results. Submit recommendations to Management for which transmission option is preferable.	Up to 2 years
Transmission Service Requests			
	Formal Request to Preferred Transmission Provider	Prepare necessary documentation for request. Negotiate transmission interconnection agreement. Negotiate transmission service agreement. Facilitate upfront payments as required by agreements.	1 year
Construction Phase			
	DWR to order required hardware for its side of interconnection and for Provider to order hardware for their side.	Assist DWR project team and DOE-Electrical Engineering as necessary	3 years
	Install DWR's hardware & Provider installs on their side of interconnection, per agreements	Assist DWR project team and DOE-Electrical Engineering as necessary	2 years
On-line Date **** Assuming no major obstacles to Timeline ****			8 years after Preliminary project Details complete

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Appendix B- High and Low Cases NODOS Project Power Operations

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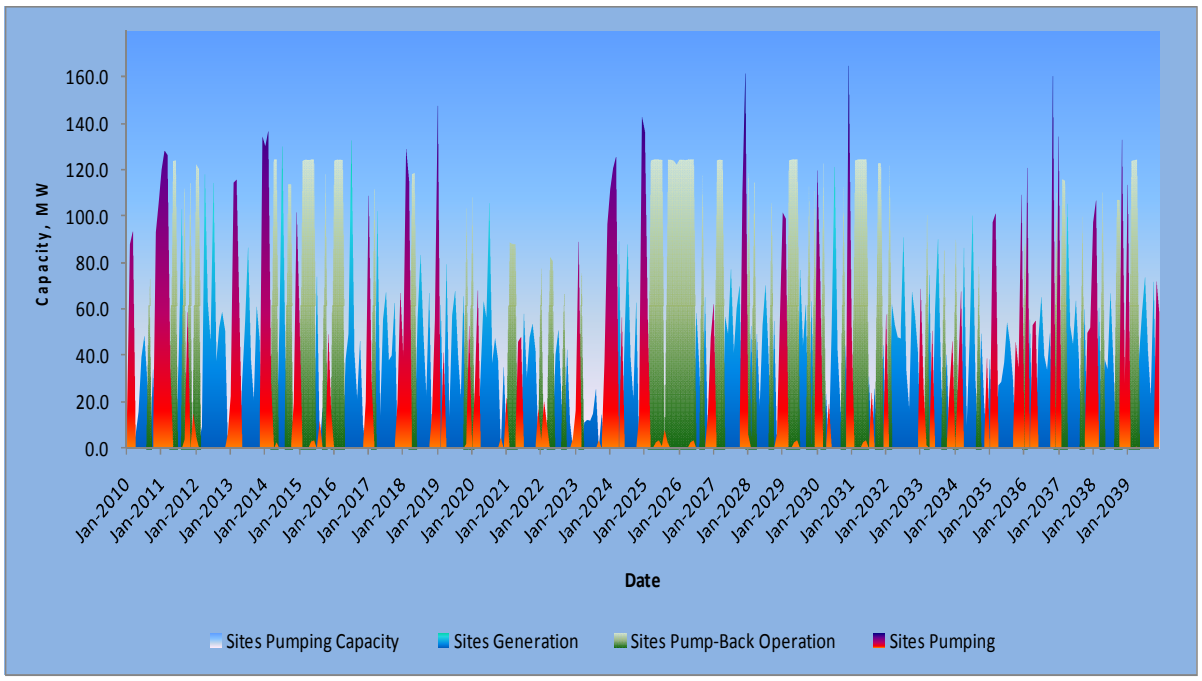

Figure B1- NODOS Project, Sites Reservoir Operations- High Case

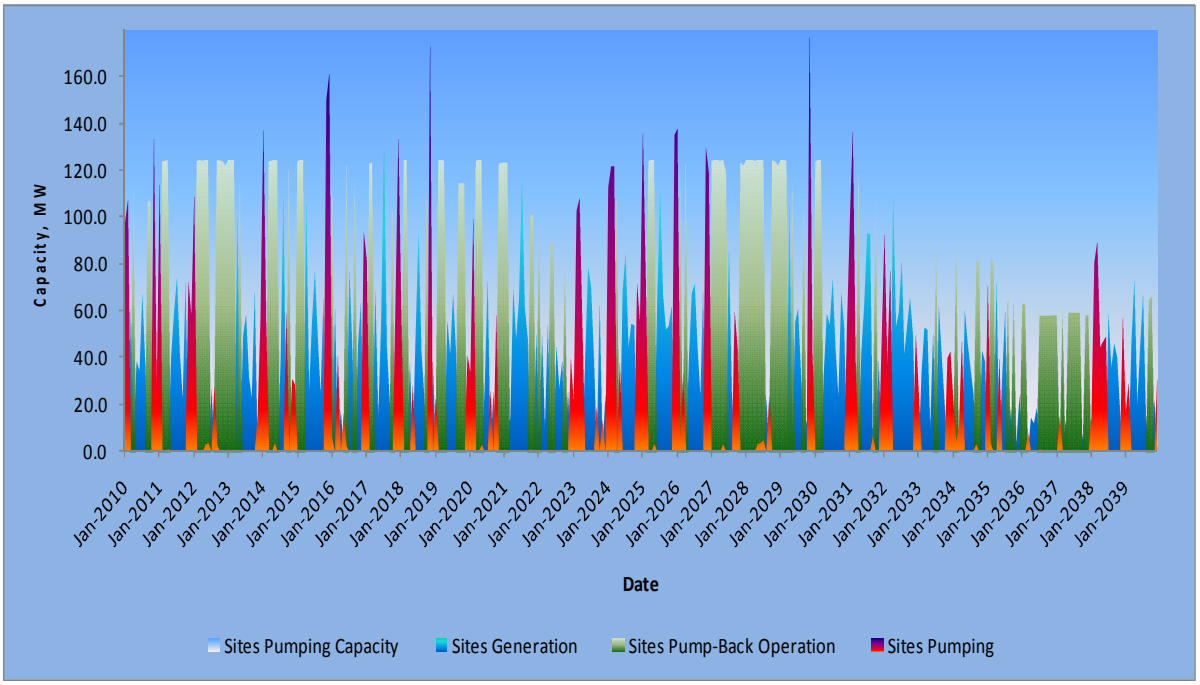

Figure B2- NODOS Project, Sites Reservoir Operations- Low Case

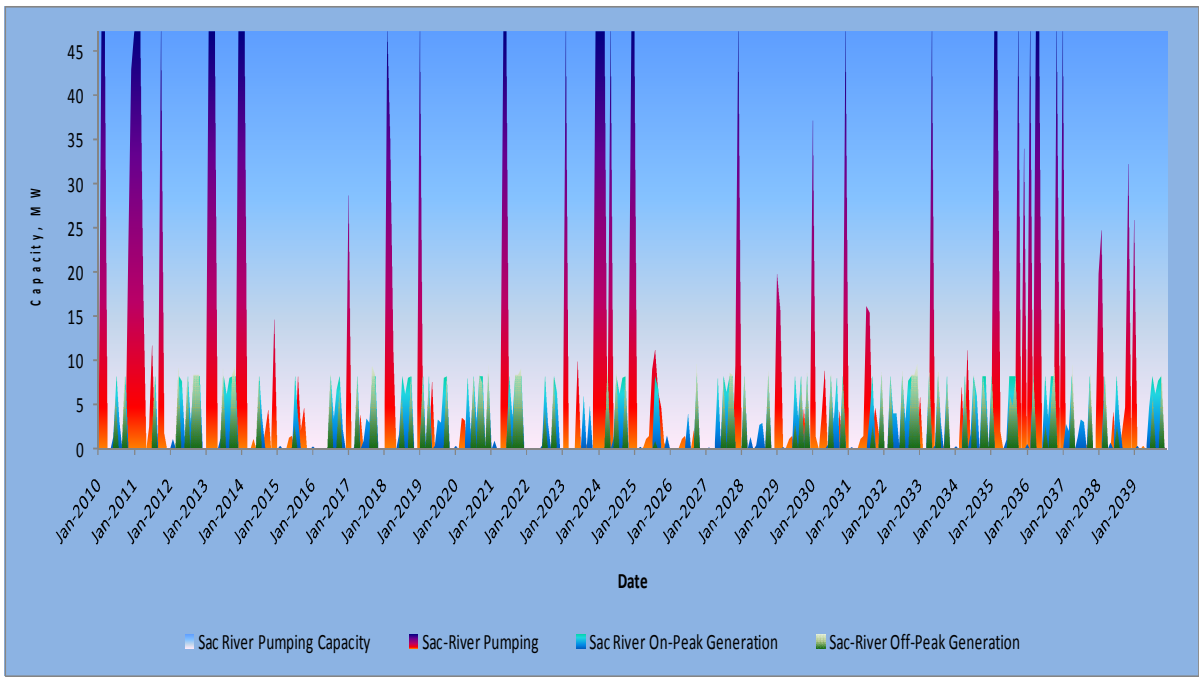

Figure B3- NODOS Project, Sacramento River Pumping Plant Operations- High Case

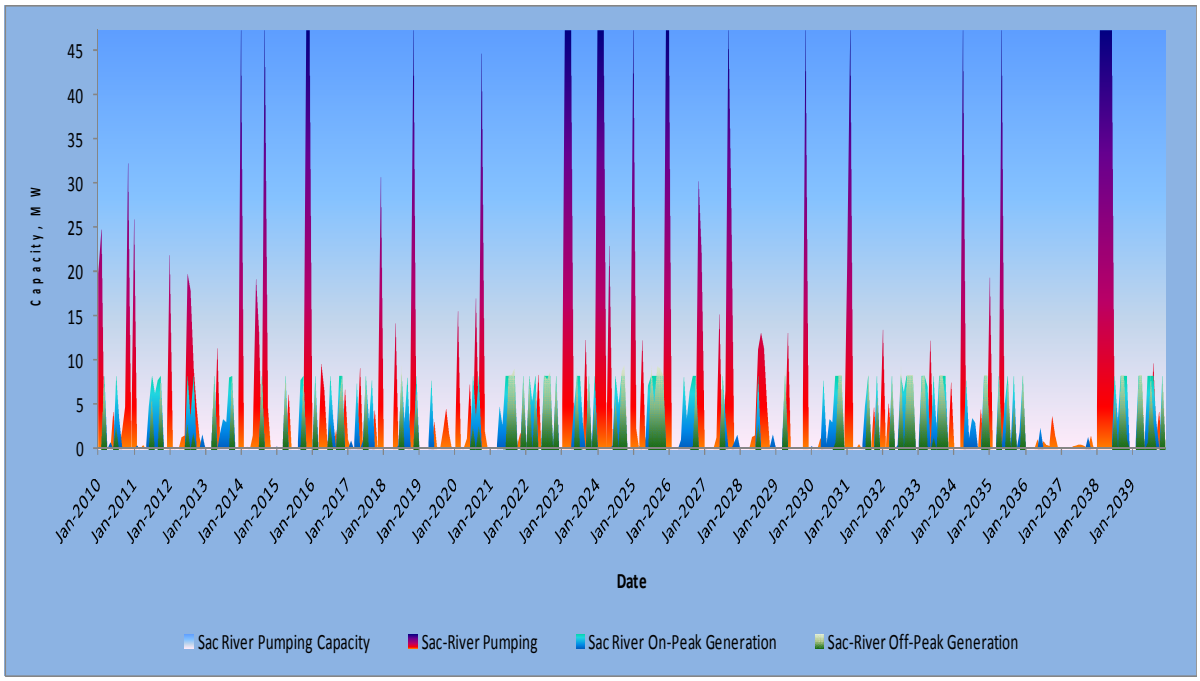

Figure B4- NODOS Project, Sacramento River Pumping Plant Operations- Low Case

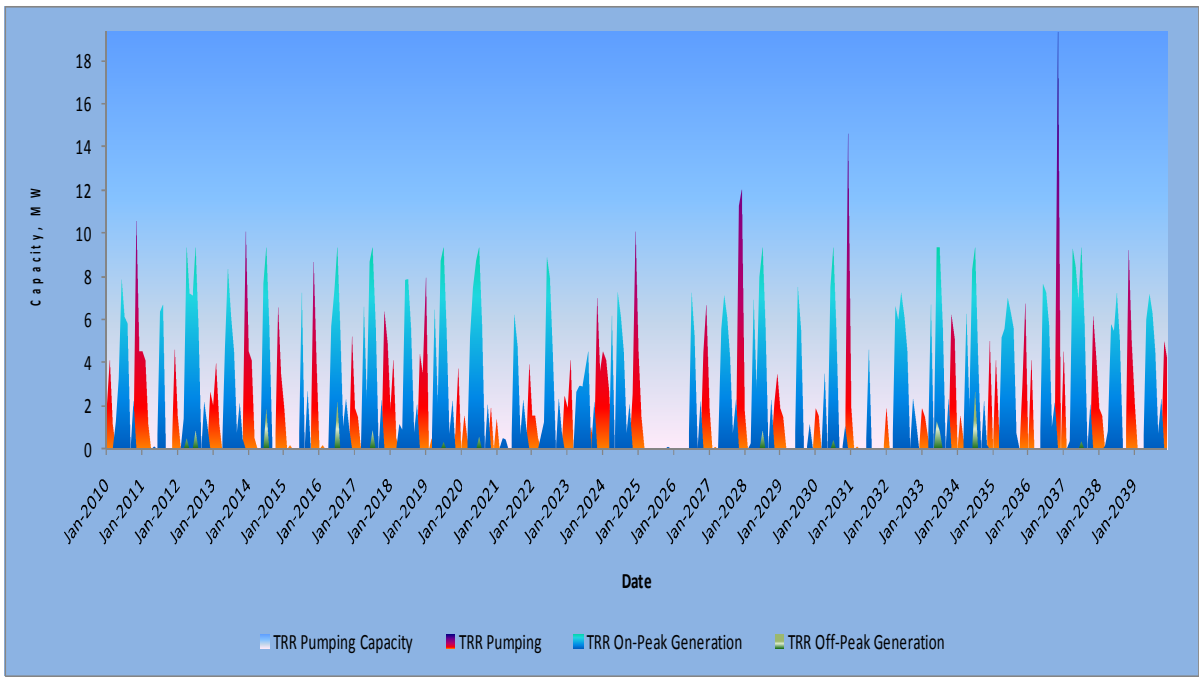

Figure B5- NODOS Project, TRR Pumping Plant Operations- High Case

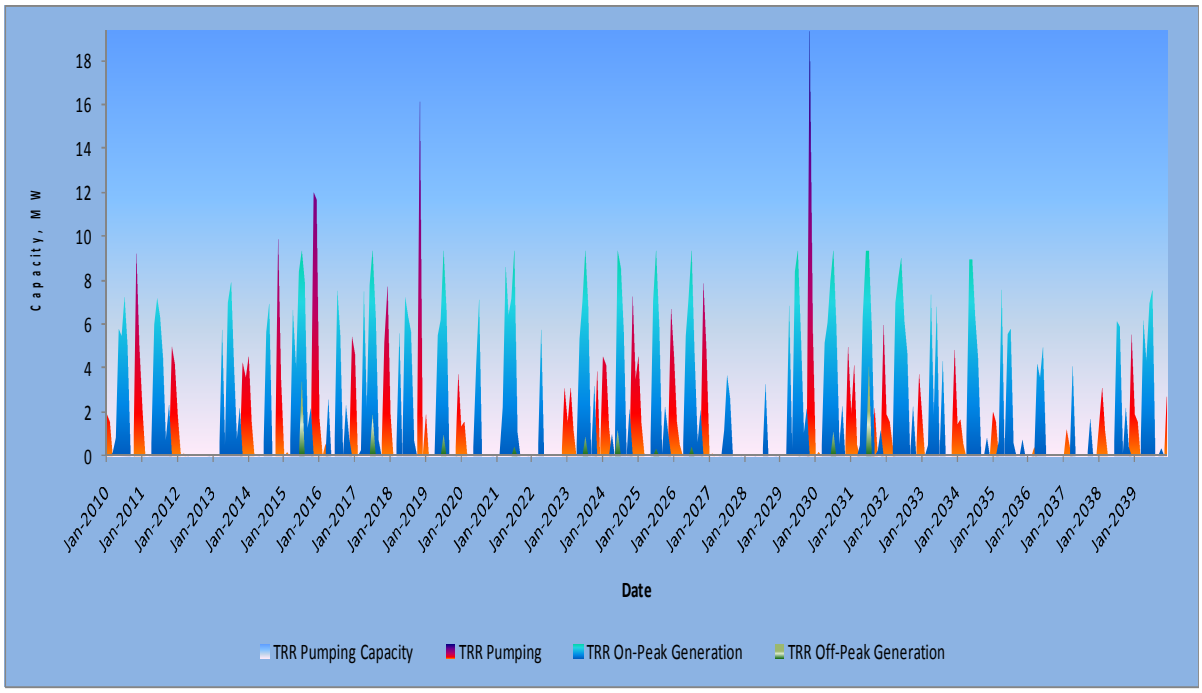

Figure B6- NODOS Project, TRR Pumping Plant Operations- Low Case

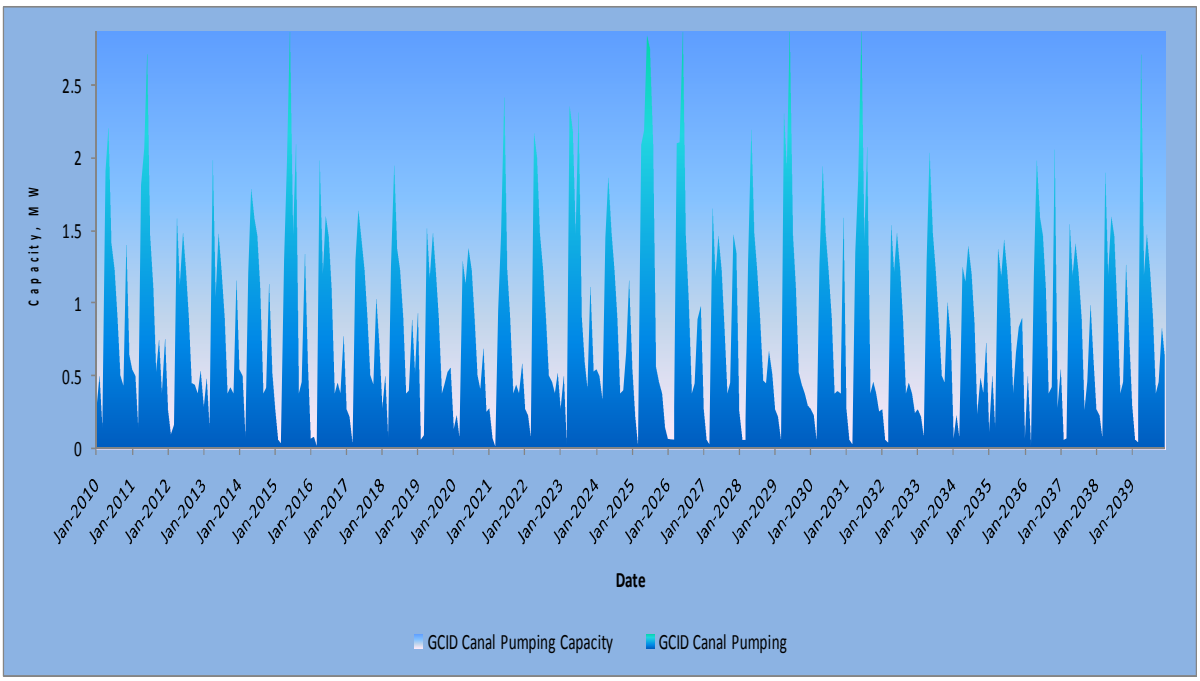

Figure B7- NODOS Project, GCID Canal Pumping Plant Operations- High Case

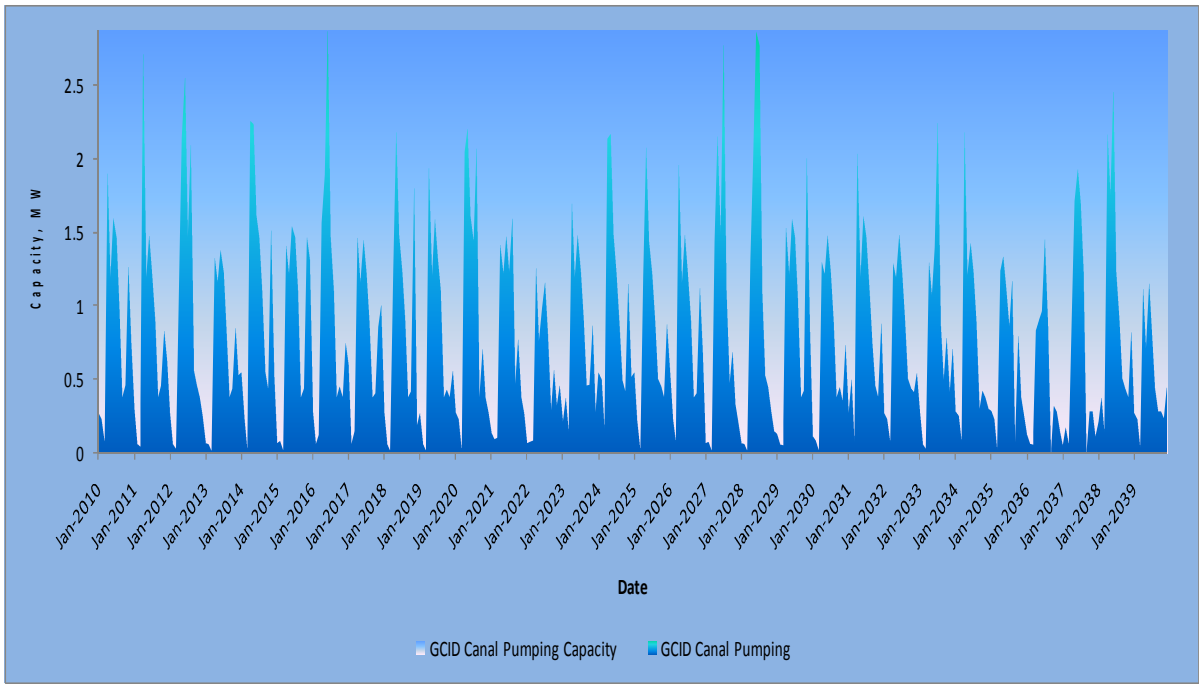

Figure B8- NODOS Project, GCID Canal Pumping Plant Operations- Low Case

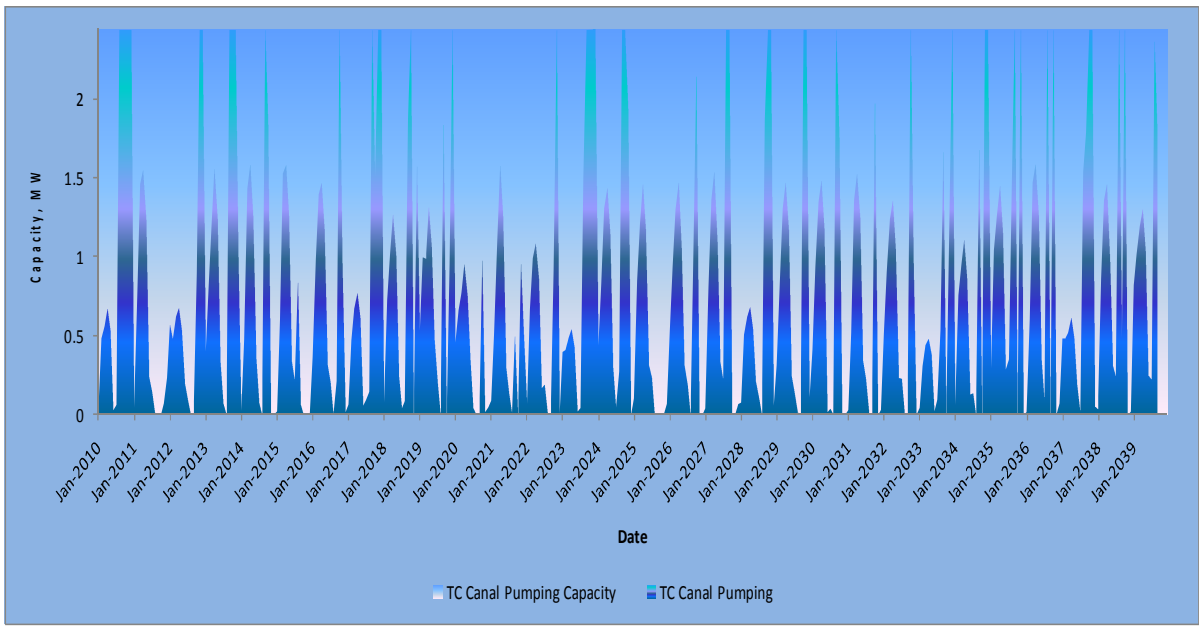

Figure B9- NODOS Project, TC Canal Pumping Plant Operations- High Case

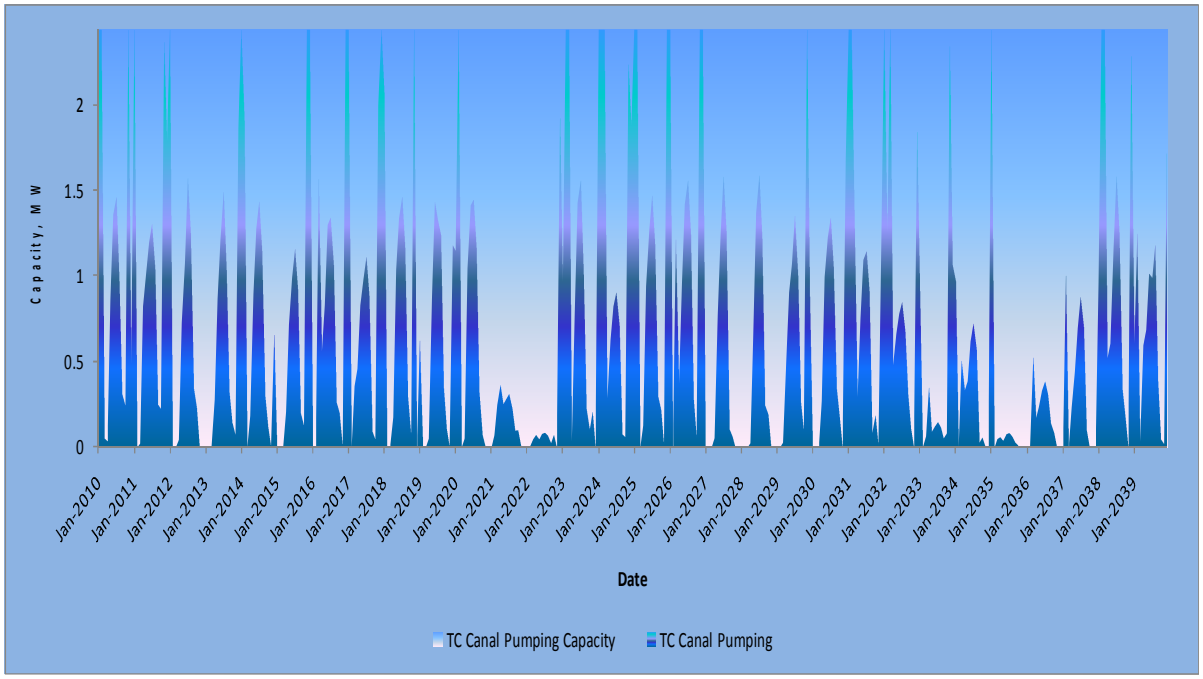

Figure B10- NODOS Project, TC Canal Pumping Plant Operations- Low Case

Table B1- NODOS Project- CALSIM Model - High Case, 30-year Planning Period

Plant Mode	Pumping , MW					Generation, MW					
Plant Name	TRR	Sac River	TC Canal	GCID Canal	Sites	TRR		Sac River		Sites	Pump Back
Installed Capacity, MW	19.36	47.53	2.44	2.87	179.70	9.33		8.27		123.98	123.98
Installed Capacity, cfs	1800	2000	2121	3000	5900	1500		1500		5100	5100
Date	All Hours					On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	On-Peak
Jan-2010	2.02	0.00	0.79	0.29	14.73	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2010	4.15	47.53	2.44	0.50	88.14	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2010	1.17	47.53	2.44	0.14	93.62	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2010	0.00	0.00	0.05	1.91	0.00	1.28	0.00	0.00	0.00	6.29	0.00
May-2010	0.00	0.00	0.49	2.21	0.00	3.28	0.00	0.00	0.00	15.84	0.00
Jun-2010	0.00	0.00	0.56	1.42	0.00	7.85	0.00	1.42	0.00	39.38	0.00
Jul-2010	0.00	0.00	0.67	1.23	0.00	6.13	0.00	8.27	5.87	48.44	0.00
Aug-2010	0.00	0.00	0.54	0.91	0.00	5.82	0.00	3.12	0.00	28.87	0.00
Sep-2010	0.00	0.65	0.03	0.51	0.93	0.00	0.00	0.00	0.00	0.00	75.57
Oct-2010	0.00	0.00	0.07	0.43	0.00	2.25	0.00	8.27	8.24	34.10	0.00
Nov-2010	10.59	22.74	2.44	1.41	93.18	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2010	4.56	43.06	2.44	0.65	106.12	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2011	4.55	47.53	2.44	0.55	120.32	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2011	4.15	47.53	2.44	0.50	128.36	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2011	1.17	47.53	2.44	0.14	126.63	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2011	0.00	18.69	0.05	1.82	34.40	0.00	0.00	0.00	0.00	0.00	0.00
May-2011	0.00	0.00	0.75	2.07	0.00	0.14	0.00	0.00	0.00	0.92	123.30
Jun-2011	0.00	2.55	1.46	2.72	0.00	0.00	0.00	0.00	0.00	0.01	123.62
Jul-2011	0.00	11.81	1.55	1.47	0.00	6.36	0.00	0.00	0.00	42.88	0.00
Aug-2011	0.00	0.00	1.24	1.11	0.00	6.68	0.00	8.27	8.27	102.98	0.00
Sep-2011	0.01	1.86	0.24	0.53	4.10	0.00	0.00	0.00	0.00	0.00	117.22
Oct-2011	0.00	47.53	0.15	0.75	58.91	0.00	0.00	0.00	0.00	0.00	0.00
Nov-2011	0.00	1.80	0.00	0.38	0.00	0.06	0.00	0.00	0.00	0.36	120.51
Dec-2011	4.64	0.00	0.00	0.76	15.13	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2012	1.55	0.00	0.00	0.27	5.14	0.00	0.00	0.00	0.00	0.00	121.98
Feb-2012	0.01	0.00	0.07	0.10	0.00	0.09	0.00	1.17	0.00	3.27	119.94
Mar-2012	0.01	0.00	0.24	0.17	0.00	1.41	0.00	0.00	0.00	9.37	0.00
Apr-2012	0.00	0.00	0.57	1.59	0.00	9.33	0.50	8.27	9.39	117.91	0.00
May-2012	0.00	0.00	0.48	1.12	0.00	7.20	0.00	7.75	0.00	62.91	0.00
Jun-2012	0.00	0.00	0.62	1.49	0.00	7.10	0.00	0.78	0.00	45.52	0.00
Jul-2012	0.00	0.00	0.68	1.23	0.00	9.33	0.87	8.27	8.27	114.16	0.00
Aug-2012	0.00	0.00	0.54	0.90	0.00	5.66	0.00	3.00	0.00	37.51	0.00
Sep-2012	0.01	0.00	0.20	0.46	0.00	0.00	0.00	8.27	8.27	52.14	0.00
Oct-2012	0.00	0.00	0.10	0.44	0.00	2.19	0.00	8.27	8.27	58.71	0.00
Nov-2012	0.00	0.00	0.01	0.38	0.00	1.07	0.00	8.27	8.27	50.94	0.00
Dec-2012	2.66	0.00	0.00	0.54	6.51	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2013	2.02	0.00	0.90	0.29	22.65	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2013	4.00	47.53	2.44	0.49	114.68	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2013	1.17	47.53	2.44	0.14	115.94	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2013	0.01	47.53	0.40	1.99	56.44	0.00	0.00	0.00	0.00	0.00	0.00
May-2013	0.00	0.00	0.81	1.04	0.00	4.71	0.00	0.00	0.00	29.54	0.00
Jun-2013	0.00	0.00	1.20	1.48	0.00	8.34	0.00	1.25	0.00	54.52	0.00
Jul-2013	0.00	0.00	1.56	1.23	0.00	6.13	0.00	8.27	9.03	86.46	0.00
Aug-2013	0.00	0.00	1.24	0.90	0.00	4.51	0.00	6.19	0.00	38.01	0.00
Sep-2013	0.00	0.00	0.33	0.38	0.00	0.76	0.00	8.10	0.00	20.49	0.00
Oct-2013	0.00	0.00	0.07	0.43	0.00	2.14	0.00	8.27	8.27	61.00	0.00
Nov-2013	0.00	0.00	0.00	0.38	0.00	0.49	0.00	8.27	9.17	46.90	0.00

Table B1 (Cont.)- NODOS Project- CALSIM Model - High Case, 30-year Planning Period

Dec-2013	10.10	47.53	2.44	1.16	134.50	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2014	4.55	47.53	2.44	0.55	130.18	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2014	4.15	47.53	2.44	0.50	136.82	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2014	0.54	0.00	1.00	0.08	27.93	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2014	0.00	0.00	0.03	1.21	0.00	0.00	0.00	0.00	0.00	0.00	123.98
May-2014	0.01	1.19	0.48	1.79	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2014	0.00	0.00	1.43	1.59	0.00	7.64	0.00	0.00	0.00	51.98	0.00
Jul-2014	0.00	0.00	1.58	1.47	0.00	9.33	1.85	8.27	8.27	129.84	0.00
Aug-2014	0.00	0.00	1.26	1.11	0.00	5.75	0.00	3.52	0.00	43.70	0.00
Sep-2014	0.00	2.17	0.35	0.38	0.00	0.02	0.00	0.00	0.00	0.12	113.47
Oct-2014	0.00	4.49	0.08	0.42	0.00	0.03	0.00	0.00	0.00	0.17	113.39
Nov-2014	6.60	0.00	0.00	1.14	20.03	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2014	3.49	14.75	2.44	0.52	102.00	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2015	1.91	0.00	1.84	0.28	54.39	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2015	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.42	0.00	1.05	123.36
Mar-2015	0.20	0.00	0.00	0.04	0.67	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2015	0.00	0.00	0.02	1.30	0.00	0.07	0.00	0.00	0.00	0.46	123.71
May-2015	0.01	1.32	0.61	1.98	3.09	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2015	0.00	1.54	1.53	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2015	0.00	0.00	1.58	1.47	0.00	7.24	0.00	8.27	2.65	73.96	0.00
Aug-2015	0.01	8.31	1.26	2.10	11.96	0.00	0.00	3.59	0.00	0.00	0.00
Sep-2015	0.00	2.11	0.34	0.38	0.00	2.69	0.00	0.00	0.00	17.72	0.00
Oct-2015	0.00	4.71	0.22	0.46	0.00	0.03	0.00	0.00	0.00	0.18	120.30
Nov-2015	8.70	0.00	0.84	1.35	49.47	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2015	3.97	0.00	0.06	0.59	14.95	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2016	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.34	0.00	0.86	123.48
Feb-2016	0.20	0.00	0.00	0.09	0.66	0.00	0.00	0.00	0.00	0.00	123.98
Mar-2016	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.08	123.93
Apr-2016	0.01	0.01	0.37	1.99	0.00	0.05	0.00	0.00	0.00	0.32	123.79
May-2016	0.00	0.00	0.99	1.20	0.00	5.68	0.00	0.00	0.00	38.39	0.00
Jun-2016	0.00	0.00	1.40	1.60	0.00	7.35	0.00	0.00	0.00	49.31	0.00
Jul-2016	0.00	0.00	1.47	1.47	0.00	9.33	2.18	8.27	8.27	132.52	0.00
Aug-2016	0.00	0.00	1.18	1.11	0.00	5.54	0.00	3.38	0.00	41.38	0.00
Sep-2016	0.00	0.00	0.32	0.38	0.00	1.07	0.00	6.81	0.00	21.10	0.00
Oct-2016	0.00	0.00	0.20	0.46	0.00	2.32	0.00	8.27	6.70	46.38	0.00
Nov-2016	0.00	0.00	0.00	0.38	0.00	0.96	0.00	2.22	0.00	10.18	0.00
Dec-2016	5.24	0.00	0.22	0.78	20.26	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2017	1.91	28.79	2.44	0.28	109.13	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2017	1.52	0.00	0.96	0.23	28.88	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2017	0.00	0.00	0.02	0.03	0.00	0.06	0.00	0.28	0.00	1.02	117.73
Apr-2017	0.00	0.00	0.07	1.30	0.00	6.60	0.00	8.27	8.27	102.09	0.00
May-2017	0.00	3.90	0.47	1.64	0.00	2.28	0.00	0.00	0.00	14.08	0.00
Jun-2017	0.00	0.00	0.68	1.45	0.00	8.66	0.00	0.96	0.00	55.56	0.00
Jul-2017	0.00	0.00	0.77	1.23	0.00	9.33	0.87	3.51	0.00	67.27	0.00
Aug-2017	0.00	0.00	0.62	0.91	0.00	5.64	0.00	3.00	0.00	38.04	0.00
Sep-2017	0.01	0.00	0.06	0.51	0.00	0.00	0.00	8.27	9.31	40.01	0.00
Oct-2017	0.00	0.00	0.10	0.45	0.00	2.29	0.00	8.27	8.27	62.73	0.00
Nov-2017	6.40	0.00	0.15	1.03	19.65	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2017	4.93	0.00	2.44	0.73	67.27	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2018	1.85	0.00	1.50	0.28	39.35	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2018	4.15	47.53	2.44	0.50	129.17	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2018	0.54	35.25	2.44	0.08	115.46	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2018	0.00	11.06	0.08	1.25	0.00	1.17	0.00	0.00	0.00	7.80	117.74

Table B1 (Cont.)- NODOS Project- CALSIM Model - High Case, 30-year Planning Period

May-2018	0.01	0.00	0.73	1.95	0.00	0.89	0.00	0.00	0.00	5.93	118.24
Jun-2018	0.00	0.00	1.02	1.38	0.00	7.82	0.00	1.74	0.00	56.05	0.00
Jul-2018	0.00	0.00	1.27	1.23	0.00	7.86	0.00	8.27	5.98	83.26	0.00
Aug-2018	0.00	0.00	1.01	0.91	0.00	5.64	0.00	6.21	0.00	48.64	0.00
Sep-2018	0.00	0.00	0.24	0.38	0.00	0.78	0.00	8.10	0.00	22.50	0.00
Oct-2018	0.00	0.00	0.04	0.40	0.00	2.08	0.00	8.27	8.27	66.94	0.00
Nov-2018	4.43	0.00	0.09	0.89	14.97	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2018	3.49	0.00	1.87	0.52	55.16	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2019	7.97	47.53	2.44	0.94	147.85	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2019	0.00	0.00	0.00	0.07	0.00	0.01	0.00	8.27	8.27	61.90	0.00
Mar-2019	0.51	0.00	1.57	0.10	41.51	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2019	0.00	0.00	0.53	1.52	0.00	6.46	0.00	8.27	7.29	79.33	0.00
May-2019	0.00	7.68	1.00	1.17	0.00	2.09	0.00	0.00	0.00	13.47	0.00
Jun-2019	0.00	0.00	0.99	1.49	0.00	8.71	0.00	0.43	0.00	57.32	0.00
Jul-2019	0.00	0.00	1.32	1.22	0.00	9.33	0.35	3.38	0.00	67.79	0.00
Aug-2019	0.00	0.00	1.07	0.90	0.00	5.64	0.00	3.00	0.00	40.18	0.00
Sep-2019	0.00	0.00	0.47	0.38	0.00	0.72	0.00	8.10	0.00	21.46	0.00
Oct-2019	0.00	0.00	0.20	0.45	0.00	2.25	0.00	8.27	8.27	65.53	0.00
Nov-2019	0.75	0.00	0.00	0.53	2.12	0.00	0.00	0.00	0.00	0.00	103.90
Dec-2019	3.76	0.00	1.84	0.56	52.96	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2020	0.00	0.00	0.00	0.14	0.00	0.01	0.00	0.43	0.00	0.94	107.80
Feb-2020	1.57	0.00	0.96	0.23	26.90	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2020	0.54	3.56	2.44	0.08	68.29	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2020	0.00	3.27	0.46	1.29	0.00	5.23	0.00	0.00	0.00	32.71	0.00
May-2020	0.00	0.00	0.66	1.13	0.00	7.47	0.00	8.05	0.00	63.24	0.00
Jun-2020	0.00	0.00	0.77	1.38	0.00	8.72	0.00	1.75	0.00	55.96	0.00
Jul-2020	0.00	0.00	0.95	1.23	0.00	9.33	0.59	8.27	8.27	105.56	0.00
Aug-2020	0.00	0.00	0.76	0.90	0.00	5.81	0.00	3.11	0.00	36.68	0.00
Sep-2020	0.01	0.00	0.35	0.51	0.00	0.00	0.00	8.27	8.27	47.51	0.00
Oct-2020	0.00	0.00	0.04	0.41	0.00	2.07	0.00	8.27	7.38	38.08	0.00
Nov-2020	1.94	0.00	0.00	0.69	4.76	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2020	0.00	0.00	0.00	0.26	0.00	0.00	0.00	8.27	9.37	35.16	0.00
Jan-2021	1.40	0.00	0.98	0.28	21.94	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2021	0.01	0.00	0.02	0.08	0.00	0.06	0.00	1.01	0.00	2.01	88.51
Mar-2021	0.00	0.00	0.05	0.02	0.00	0.53	0.00	0.00	0.00	2.57	87.92
Apr-2021	0.00	0.00	0.09	0.95	0.00	0.46	0.00	0.00	0.00	2.23	87.93
May-2021	0.01	47.53	0.52	1.47	46.05	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2021	0.01	47.53	1.10	2.42	48.23	0.00	0.00	0.00	0.00	0.00	0.00
Jul-2021	0.00	0.00	1.58	1.23	0.00	6.23	0.00	8.27	5.87	58.08	0.00
Aug-2021	0.00	0.00	1.26	0.91	0.00	4.78	0.00	3.58	0.00	30.24	0.00
Sep-2021	0.00	0.00	0.30	0.38	0.00	0.68	0.00	8.27	8.27	47.82	0.00
Oct-2021	0.00	0.00	0.14	0.44	0.00	2.28	0.00	8.27	8.27	53.60	0.00
Nov-2021	0.00	0.00	0.01	0.38	0.00	1.03	0.00	8.27	8.95	42.09	0.00
Dec-2021	3.95	0.00	0.50	0.59	17.03	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2022	1.57	0.00	0.00	0.28	3.47	0.00	0.00	0.00	0.00	0.00	80.74
Feb-2022	1.57	0.00	0.96	0.23	20.37	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2022	0.54	0.00	0.51	0.08	10.35	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2022	0.00	0.00	0.07	2.17	0.00	0.68	0.00	0.10	0.00	3.29	82.49
May-2022	0.01	0.01	0.67	2.01	0.00	1.27	0.00	0.00	0.00	5.79	80.48
Jun-2022	0.00	0.00	0.99	1.49	0.00	8.87	0.00	0.46	0.00	40.47	0.00
Jul-2022	0.00	0.00	1.09	1.23	0.00	7.94	0.00	8.27	4.45	50.89	0.00
Aug-2022	0.00	0.00	0.86	0.90	0.00	4.50	0.00	3.00	0.00	21.53	0.00
Sep-2022	0.01	0.46	0.17	0.51	0.61	0.00	0.00	0.00	0.00	0.00	70.44

Table B1 (Cont.)- NODOS Project- CALSIM Model - High Case, 30-year Planning Period

Oct-2022	0.00	0.00	0.19	0.46	0.00	2.35	0.00	8.27	8.27	42.61	0.00
Nov-2022	0.00	0.00	0.00	0.38	0.00	0.83	0.00	6.49	0.00	10.87	0.00
Dec-2022	2.49	0.00	0.00	0.52	4.35	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2023	1.91	0.00	0.91	0.28	16.49	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2023	4.15	47.53	2.44	0.50	89.31	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2023	0.00	0.00	0.01	0.03	0.00	0.06	0.00	0.00	0.00	0.27	79.38
Apr-2023	0.00	0.00	0.40	2.36	0.00	2.65	0.00	0.00	0.00	11.37	0.00
May-2023	0.01	0.01	0.41	2.19	0.00	2.95	0.00	0.00	0.00	12.46	0.00
Jun-2023	0.00	9.98	0.49	1.47	0.00	2.91	0.00	0.00	0.00	12.02	0.00
Jul-2023	0.01	0.48	0.54	2.32	0.00	3.72	0.00	0.00	0.00	15.00	0.00
Aug-2023	0.00	0.00	0.43	0.91	0.00	4.52	0.00	6.03	0.00	25.65	0.00
Sep-2023	1.03	0.53	0.02	0.60	3.67	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2023	0.00	0.00	0.05	0.41	0.00	2.20	0.00	4.93	0.00	14.75	0.00
Nov-2023	7.02	0.00	1.51	1.12	37.59	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2023	3.62	47.53	2.44	0.53	96.76	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2024	4.55	47.53	2.44	0.55	111.87	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2024	4.15	47.53	2.44	0.50	120.98	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2024	2.74	47.53	2.46	0.34	125.85	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2024	0.00	0.00	0.44	1.45	0.00	6.19	0.00	8.27	9.40	89.26	0.00
May-2024	0.01	47.53	0.83	1.87	56.75	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2024	0.00	0.00	1.31	1.49	0.00	7.25	0.00	1.20	0.00	48.52	0.00
Jul-2024	0.00	0.00	1.44	1.23	0.00	6.13	0.00	8.27	9.18	87.86	0.00
Aug-2024	0.00	0.00	1.15	0.90	0.00	4.51	0.00	6.24	0.00	39.24	0.00
Sep-2024	0.00	0.00	0.30	0.38	0.00	0.76	0.00	8.10	0.00	21.08	0.00
Oct-2024	0.00	0.00	0.05	0.41	0.00	2.09	0.00	8.27	8.27	62.78	0.00
Nov-2024	2.57	0.00	0.28	0.66	13.04	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2024	10.10	47.53	2.44	1.16	143.01	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2025	4.55	47.53	2.44	0.55	136.67	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2025	1.52	0.00	1.94	0.23	55.74	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2025	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.33	0.00	0.80	123.52
Apr-2025	0.01	0.24	0.11	2.09	0.57	0.00	0.00	0.00	0.00	0.00	123.98
May-2025	0.01	1.19	0.85	2.19	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2025	0.01	1.54	1.21	2.85	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2025	0.01	9.10	1.46	2.76	0.97	0.00	0.00	0.00	0.00	0.00	123.78
Aug-2025	0.01	11.28	1.18	2.10	8.03	0.00	0.00	8.27	0.93	0.00	0.00
Sep-2025	0.01	6.59	0.31	0.57	2.87	0.00	0.00	6.84	0.00	0.00	123.98
Oct-2025	0.00	4.74	0.24	0.46	0.00	0.03	0.00	0.00	0.00	0.19	123.83
Nov-2025	0.00	0.81	0.00	0.38	0.00	0.12	0.00	0.00	0.00	0.84	123.52
Dec-2025	0.00	0.00	0.00	0.15	0.00	0.02	0.00	1.59	0.00	3.86	121.77
Jan-2026	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Feb-2026	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.07	123.94
Mar-2026	0.01	0.00	0.07	0.06	0.00	0.08	0.00	0.00	0.00	0.51	123.68
Apr-2026	0.01	0.18	0.53	2.10	0.42	0.00	0.00	0.00	0.00	0.00	123.98
May-2026	0.01	1.19	0.94	2.11	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2026	0.00	1.54	1.30	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2026	0.00	0.00	1.47	1.47	0.00	7.24	0.00	4.04	0.00	58.37	0.00
Aug-2026	0.00	0.00	1.06	1.03	0.00	5.30	0.00	0.00	0.00	35.01	0.00
Sep-2026	0.00	2.17	0.31	0.38	0.00	0.02	0.00	0.00	0.00	0.13	119.65
Oct-2026	0.00	0.00	0.19	0.45	0.00	2.22	0.00	8.27	9.47	65.24	0.00
Nov-2026	4.49	0.00	0.00	0.89	14.20	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2026	6.70	0.00	1.04	0.98	47.84	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2027	1.91	0.00	2.14	0.28	62.37	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2027	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.26	0.00	0.66	123.59

Table B1 (Cont.)- NODOS Project- CALSIM Model - High Case, 30-year Planning Period

Apr-2027	0.00	0.00	0.04	1.66	0.00	0.06	0.00	0.00	0.00	0.43	123.72
May-2027	0.00	0.00	0.81	1.18	0.00	5.57	0.00	8.05	0.00	56.70	0.00
Jun-2027	0.00	0.00	1.36	1.47	0.00	7.12	0.00	0.71	0.00	49.01	0.00
Jul-2027	0.00	0.00	1.54	1.23	0.00	6.12	0.00	8.27	7.89	77.19	0.00
Aug-2027	0.00	0.00	1.10	0.83	0.00	4.29	0.00	6.45	0.00	40.99	0.00
Sep-2027	0.00	0.00	0.33	0.38	0.00	0.75	0.00	8.27	8.50	60.20	0.00
Oct-2027	0.00	0.00	0.22	0.46	0.00	2.32	0.00	8.27	8.27	69.86	0.00
Nov-2027	11.29	9.54	2.44	1.48	110.23	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2027	12.05	47.53	2.44	1.35	161.73	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2028	1.78	0.00	0.00	0.26	5.99	0.00	0.00	0.00	0.00	0.00	123.98
Feb-2028	0.00	0.00	0.00	0.07	0.00	0.01	0.00	8.27	8.71	52.85	0.00
Mar-2028	0.00	0.00	0.07	0.06	0.00	0.30	0.00	0.00	0.00	1.97	120.93
Apr-2028	0.00	0.00	0.08	1.29	0.00	6.92	0.00	1.42	0.00	49.40	0.00
May-2028	0.01	0.01	0.51	2.20	0.00	2.77	0.00	0.00	0.00	18.09	0.00
Jun-2028	0.00	0.00	0.62	1.48	0.00	7.95	0.00	0.47	0.00	53.04	0.00
Jul-2028	0.00	0.00	0.68	1.23	0.00	9.33	0.87	2.76	0.00	70.33	0.00
Aug-2028	0.00	0.00	0.55	0.90	0.00	5.66	0.00	3.00	0.00	40.96	0.00
Sep-2028	0.01	0.39	0.21	0.47	0.82	0.00	0.00	0.00	0.00	0.00	110.74
Oct-2028	0.00	0.00	0.11	0.45	0.00	2.30	0.00	8.27	8.91	54.96	0.00
Nov-2028	2.16	0.00	0.00	0.67	6.35	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2028	3.49	0.00	1.87	0.52	54.96	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2029	1.91	19.87	2.44	0.28	101.85	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2029	1.52	15.84	2.44	0.23	99.38	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2029	0.01	0.00	0.06	0.06	0.00	0.00	0.00	0.28	0.00	0.68	123.57
Apr-2029	0.01	0.21	0.31	2.31	0.50	0.00	0.00	0.00	0.00	0.00	123.98
May-2029	0.01	1.19	0.84	1.93	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2029	0.00	1.54	1.31	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2029	0.00	0.00	1.47	1.47	0.00	7.52	0.00	8.27	2.93	76.80	0.00
Aug-2029	0.00	0.00	1.18	1.11	0.00	5.54	0.00	3.44	0.00	44.08	0.00
Sep-2029	0.00	0.00	0.25	0.53	0.00	0.02	0.00	8.27	8.27	61.88	0.00
Oct-2029	0.00	4.60	0.14	0.44	0.00	0.03	0.00	0.00	0.00	0.18	115.85
Nov-2029	0.00	0.00	0.02	0.38	0.00	1.16	0.00	8.27	8.67	63.37	0.00
Dec-2029	0.00	0.00	0.00	0.30	0.00	0.02	0.00	0.00	0.00	0.12	113.11
Jan-2030	1.91	37.27	2.44	0.28	119.97	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2030	1.57	1.44	2.44	0.23	72.26	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2030	0.01	0.00	0.11	0.05	0.00	0.01	0.00	0.00	0.00	0.09	123.93
Apr-2030	0.00	4.02	0.42	1.27	0.00	3.51	0.00	0.00	0.00	23.67	0.00
May-2030	0.01	8.96	0.94	1.95	19.31	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2030	0.00	0.00	1.35	1.49	0.00	7.50	0.00	0.52	0.00	52.16	0.00
Jul-2030	0.00	0.00	1.48	1.23	0.00	9.33	0.44	8.27	8.69	121.14	0.00
Aug-2030	0.00	0.00	1.18	0.90	0.00	5.66	0.00	3.00	0.00	42.19	0.00
Sep-2030	0.00	0.00	0.02	0.38	0.00	0.03	0.00	8.10	0.00	18.27	0.00
Oct-2030	0.00	4.32	0.04	0.40	0.00	0.03	0.00	0.00	0.00	0.17	112.99
Nov-2030	0.00	0.00	0.00	0.38	0.00	1.08	0.00	8.27	8.23	44.39	0.00
Dec-2030	14.64	47.53	2.44	1.59	165.12	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2031	1.91	0.00	1.76	0.28	52.32	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2031	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.29	0.00	0.75	123.53
Mar-2031	0.14	0.00	0.00	0.03	0.48	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2031	0.00	0.00	0.03	1.35	0.00	0.00	0.00	0.00	0.00	0.00	123.98
May-2031	0.01	1.19	0.52	1.85	2.78	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2031	0.00	1.54	1.36	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2031	0.00	16.21	1.53	1.43	0.00	4.61	0.00	0.00	0.00	31.07	0.00
Aug-2031	0.01	15.55	1.25	2.08	24.19	0.00	0.00	3.59	0.00	0.00	0.00

Table B1 (Cont.)- NODOS Project- CALSIM Model - High Case, 30-year Planning Period

Sep-2031	0.00	2.11	0.34	0.38	0.00	0.02	0.00	8.27	2.69	25.85	0.00
Oct-2031	0.00	4.71	0.23	0.46	0.00	0.03	0.00	0.00	0.00	0.19	122.38
Nov-2031	0.00	2.35	0.01	0.38	0.00	0.05	0.00	0.00	0.00	0.34	122.36
Dec-2031	0.00	0.00	0.00	0.26	0.00	0.02	0.00	8.27	8.88	44.52	0.00
Jan-2032	1.91	0.00	1.97	0.28	57.91	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2032	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2032	0.01	0.00	0.03	0.05	0.00	0.01	0.00	8.27	8.27	61.99	0.00
Apr-2032	0.00	0.00	0.51	1.54	0.00	6.62	0.00	4.09	0.00	53.19	0.00
May-2032	0.00	0.00	0.90	1.22	0.00	5.96	0.00	4.11	0.00	47.84	0.00
Jun-2032	0.00	0.00	1.24	1.49	0.00	7.25	0.00	0.39	0.00	47.29	0.00
Jul-2032	0.00	0.00	1.36	1.23	0.00	6.12	0.00	8.27	8.84	90.81	0.00
Aug-2032	0.00	0.00	1.05	0.88	0.00	4.56	0.00	3.11	0.00	33.42	0.00
Sep-2032	0.00	0.00	0.23	0.38	0.00	0.04	0.00	7.79	0.00	16.63	0.00
Oct-2032	0.00	0.00	0.23	0.46	0.00	2.35	0.00	8.27	8.27	67.42	0.00
Nov-2032	0.00	0.00	0.01	0.38	0.00	1.20	0.00	8.27	8.27	57.12	0.00
Dec-2032	0.00	0.00	0.00	0.25	0.00	0.02	0.00	8.27	9.48	41.76	0.00
Jan-2033	1.91	5.93	2.44	0.28	69.01	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2033	1.52	0.00	0.96	0.23	25.53	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2033	0.54	0.00	0.00	0.08	1.55	0.00	0.00	0.00	0.00	0.00	104.68
Apr-2033	0.00	0.00	0.05	1.29	0.00	6.70	0.00	8.27	9.01	74.72	0.00
May-2033	0.01	47.53	0.31	2.04	50.95	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2033	0.00	0.00	0.44	1.49	0.00	9.33	1.29	0.46	0.00	59.71	0.00
Jul-2033	0.00	0.00	0.48	1.23	0.00	9.33	0.86	8.27	9.10	90.03	0.00
Aug-2033	0.00	0.00	0.39	0.91	0.00	5.63	0.00	3.00	0.00	33.24	0.00
Sep-2033	0.00	0.51	0.02	0.51	0.86	0.00	0.00	0.00	0.00	0.00	90.13
Oct-2033	0.00	0.00	0.10	0.46	0.00	2.34	0.00	8.27	7.89	40.52	0.00
Nov-2033	6.25	0.00	0.53	1.01	24.98	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2033	5.15	0.00	1.67	0.77	46.40	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2034	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.37	0.00	0.72	94.41
Feb-2034	1.57	0.00	1.25	0.23	29.80	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2034	0.54	7.06	2.44	0.08	67.95	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2034	0.00	0.00	0.06	1.25	0.00	6.28	0.00	8.27	8.27	86.40	0.00
May-2034	0.00	11.27	0.76	1.15	0.00	1.88	0.00	0.00	0.00	10.01	0.00
Jun-2034	0.00	0.00	0.94	1.40	0.00	8.31	0.00	1.75	0.00	46.83	0.00
Jul-2034	0.00	0.00	1.11	1.21	0.00	9.33	2.65	8.27	8.27	100.23	0.00
Aug-2034	0.00	0.00	0.87	0.87	0.00	4.35	0.00	6.13	0.00	29.16	0.00
Sep-2034	0.01	0.37	0.13	0.24	0.57	0.00	0.00	0.00	0.00	0.00	81.25
Oct-2034	0.00	0.00	0.14	0.49	0.00	2.24	0.00	8.27	8.27	49.56	0.00
Nov-2034	0.00	0.00	0.00	0.38	0.00	0.21	0.00	8.27	4.88	19.54	0.00
Dec-2034	5.04	0.00	1.68	0.73	39.06	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2035	0.00	0.00	0.00	0.12	0.00	0.01	0.00	8.27	8.27	38.55	0.00
Feb-2035	4.15	47.53	2.44	0.50	97.50	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2035	1.17	47.53	2.44	0.14	101.45	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2035	0.00	1.98	0.29	1.38	0.00	5.17	0.00	0.00	0.00	27.33	0.00
May-2035	0.00	0.00	1.05	1.19	0.00	5.57	0.00	0.00	0.00	28.75	0.00
Jun-2035	0.00	0.00	1.26	1.44	0.00	7.00	0.00	1.09	0.00	37.04	0.00
Jul-2035	0.00	0.00	1.45	1.23	0.00	6.36	0.00	8.27	5.98	54.21	0.00
Aug-2035	0.00	0.00	1.16	0.91	0.00	5.62	0.00	8.27	4.95	45.32	0.00
Sep-2035	0.00	0.00	0.29	0.38	0.00	0.74	0.00	8.27	7.99	29.85	0.00
Oct-2035	0.00	47.53	0.35	0.66	45.98	0.00	0.00	0.00	0.00	0.00	0.00
Nov-2035	2.99	0.00	1.46	0.84	34.19	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2035	6.78	34.11	2.44	0.90	109.56	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2036	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.61	0.00	1.20	98.41

Table B1 (Cont.)- NODOS Project- CALSIM Model - High Case, 30-year Planning Period

Feb-2036	4.15	47.53	2.44	0.50	121.05	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2036	0.00	0.00	0.00	0.02	0.00	0.00	0.00	8.27	8.27	55.61	0.00
Apr-2036	0.00	47.53	0.02	1.19	53.34	0.00	0.00	0.00	0.00	0.00	0.00
May-2036	0.01	47.53	0.61	1.99	55.21	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2036	0.00	0.00	1.47	1.59	0.00	7.65	0.00	0.00	0.00	47.15	0.00
Jul-2036	0.00	0.00	1.59	1.47	0.00	7.24	0.00	8.27	2.65	65.19	0.00
Aug-2036	0.00	0.00	1.27	1.11	0.00	5.75	0.00	3.52	0.00	39.92	0.00
Sep-2036	0.00	0.00	0.35	0.38	0.00	1.05	0.00	8.27	5.85	33.63	0.00
Oct-2036	0.00	0.00	0.09	0.43	0.00	2.16	0.00	8.27	9.21	49.60	0.00
Nov-2036	19.36	47.53	2.44	2.06	160.65	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2036	0.00	0.00	0.00	0.28	0.00	0.02	0.00	0.22	0.00	0.57	110.47
Jan-2037	4.55	47.53	2.44	0.55	134.60	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2037	0.00	0.00	0.00	0.06	0.00	0.01	0.00	2.88	0.00	6.57	115.58
Mar-2037	0.00	0.00	0.07	0.08	0.00	0.39	0.00	2.04	0.00	7.11	114.94
Apr-2037	0.00	0.00	0.48	1.55	0.00	9.27	0.00	8.27	9.33	105.36	0.00
May-2037	0.00	0.00	0.48	1.19	0.00	8.45	0.00	0.00	0.00	52.71	0.00
Jun-2037	0.00	0.00	0.52	1.42	0.00	6.88	0.00	1.45	0.00	44.57	0.00
Jul-2037	0.00	0.00	0.62	1.22	0.00	9.33	0.37	3.38	0.00	63.73	0.00
Aug-2037	0.00	0.00	0.49	0.90	0.00	5.83	0.00	3.12	0.00	38.85	0.00
Sep-2037	0.01	0.56	0.19	0.27	1.07	0.00	0.00	0.00	0.00	0.00	101.79
Oct-2037	0.00	0.00	0.02	0.46	0.00	2.08	0.00	8.27	8.50	60.02	0.00
Nov-2037	6.18	0.00	1.54	0.99	49.91	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2037	4.16	0.00	1.79	0.62	52.14	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2038	1.91	19.87	2.44	0.28	97.47	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2038	1.57	24.85	2.44	0.23	107.01	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2038	0.01	0.00	0.05	0.07	0.00	0.16	0.00	8.27	8.27	60.66	0.00
Apr-2038	0.00	0.00	0.04	1.90	0.00	0.86	0.00	0.00	0.00	5.45	113.77
May-2038	0.00	0.00	0.86	1.20	0.00	5.78	0.00	0.80	0.00	38.43	0.00
Jun-2038	0.00	4.22	1.36	1.60	0.00	5.45	0.00	0.00	0.00	34.05	0.00
Jul-2038	0.00	0.00	1.46	1.47	0.00	7.23	0.00	8.27	2.65	66.81	0.00
Aug-2038	0.00	0.00	0.97	0.98	0.00	5.07	0.00	3.45	0.00	36.89	0.00
Sep-2038	0.00	2.17	0.31	0.38	0.00	0.01	0.00	0.00	0.00	0.03	106.74
Oct-2038	0.00	4.76	0.24	0.46	0.00	0.03	0.00	0.00	0.00	0.17	106.62
Nov-2038	9.25	32.36	2.44	1.27	133.29	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2038	5.06	0.00	0.48	0.75	27.90	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2039	2.10	26.02	2.44	0.30	113.76	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2039	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.43	0.00	1.08	123.34
Mar-2039	0.00	0.00	0.02	0.05	0.00	0.06	0.00	0.00	0.00	0.43	123.69
Apr-2039	0.01	0.44	0.82	2.71	1.03	0.00	0.00	0.00	0.00	0.00	123.98
May-2039	0.00	0.00	1.02	1.20	0.00	5.99	0.00	0.00	0.00	40.51	0.00
Jun-2039	0.00	0.00	1.20	1.48	0.00	7.18	0.00	4.81	0.00	58.95	0.00
Jul-2039	0.00	0.00	1.30	1.22	0.00	6.32	0.00	8.27	5.98	73.74	0.00
Aug-2039	0.00	0.00	1.04	0.90	0.00	4.49	0.00	6.26	0.00	42.03	0.00
Sep-2039	0.00	0.00	0.25	0.38	0.00	0.73	0.00	7.79	0.00	21.84	0.00
Oct-2039	0.00	0.00	0.22	0.46	0.00	2.35	0.00	8.27	8.27	71.74	0.00
Nov-2039	5.00	0.00	2.37	0.83	72.23	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2039	4.22	0.00	1.78	0.63	57.66	0.00	0.00	0.00	0.00	0.00	0.00

Table B2- NODOS Project- CALSIM Model – Median Case, 30-year Planning Period

Plant Mode	Pumping , MW					Generation, MW					
Plant Name	TRR	Sac River	TC Canal	GCID Canal	Sites	TRR		Sac River		Sites	Pump Back
Installed Capacity, MW	19.36	47.53	2.44	2.87	179.70	9.33		8.27		123.98	123.98
Installed Capacity, cfs	1800	2000	2121	3000	5900	1500		1500		5100	5100
Date	All Hours					On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	On-Peak
Jan-2010	1.91	0.00	1.84	0.28	54.39	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2010	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.42	0.00	1.05	123.36
Mar-2010	0.20	0.00	0.00	0.04	0.67	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2010	0.00	0.00	0.02	1.30	0.00	0.07	0.00	0.00	0.00	0.46	123.71
May-2010	0.01	1.32	0.61	1.98	3.09	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2010	0.00	1.54	1.53	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2010	0.00	0.00	1.58	1.47	0.00	7.24	0.00	8.27	2.65	73.96	0.00
Aug-2010	0.01	8.31	1.26	2.10	11.96	0.00	0.00	3.59	0.00	0.00	0.00
Sep-2010	0.00	2.11	0.34	0.38	0.00	2.69	0.00	0.00	0.00	17.72	0.00
Oct-2010	0.00	4.71	0.22	0.46	0.00	0.03	0.00	0.00	0.00	0.19	120.30
Nov-2010	8.70	0.00	0.84	1.35	49.47	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2010	3.97	0.00	0.06	0.59	14.95	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2011	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.34	0.00	0.86	123.48
Feb-2011	0.20	0.00	0.00	0.09	0.66	0.00	0.00	0.00	0.00	0.00	123.98
Mar-2011	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.08	123.93
Apr-2011	0.01	0.01	0.37	1.99	0.00	0.05	0.00	0.00	0.00	0.32	123.79
May-2011	0.00	0.00	0.99	1.20	0.00	5.68	0.00	0.00	0.00	38.39	0.00
Jun-2011	0.00	0.00	1.40	1.60	0.00	7.35	0.00	0.00	0.00	49.31	0.00
Jul-2011	0.00	0.00	1.47	1.47	0.00	9.33	2.18	8.27	8.27	132.52	0.00
Aug-2011	0.00	0.00	1.18	1.11	0.00	5.54	0.00	3.38	0.00	41.38	0.00
Sep-2011	0.00	0.00	0.32	0.38	0.00	1.07	0.00	6.81	0.00	21.10	0.00
Oct-2011	0.00	0.00	0.20	0.46	0.00	2.32	0.00	8.27	6.70	46.38	0.00
Nov-2011	0.00	0.00	0.00	0.38	0.00	0.96	0.00	2.22	0.00	10.18	0.00
Dec-2011	5.24	0.00	0.22	0.78	20.26	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2012	1.91	28.79	2.44	0.28	109.13	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2012	1.52	0.00	0.96	0.23	28.88	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2012	0.00	0.00	0.02	0.03	0.00	0.06	0.00	0.28	0.00	1.02	117.73
Apr-2012	0.00	0.00	0.07	1.30	0.00	6.60	0.00	8.27	8.27	102.09	0.00
May-2012	0.00	3.90	0.47	1.64	0.00	2.28	0.00	0.00	0.00	14.08	0.00
Jun-2012	0.00	0.00	0.68	1.45	0.00	8.66	0.00	0.96	0.00	55.56	0.00
Jul-2012	0.00	0.00	0.77	1.23	0.00	9.33	0.87	3.51	0.00	67.27	0.00
Aug-2012	0.00	0.00	0.62	0.91	0.00	5.64	0.00	3.00	0.00	38.04	0.00
Sep-2012	0.01	0.00	0.06	0.51	0.00	0.00	0.00	8.27	9.25	41.61	0.00
Oct-2012	0.00	0.00	0.10	0.45	0.00	2.20	0.00	8.27	8.27	60.40	0.00
Nov-2012	6.40	0.00	0.15	1.03	19.65	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2012	4.93	0.00	2.44	0.73	67.27	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2013	1.85	0.00	1.50	0.28	39.35	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2013	4.15	47.53	2.44	0.50	129.17	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2013	0.54	35.25	2.44	0.08	115.46	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2013	0.00	11.06	0.08	1.25	0.00	1.13	0.00	0.00	0.00	7.50	117.74
May-2013	0.01	0.00	0.73	1.95	0.00	0.89	0.00	0.00	0.00	5.93	118.24
Jun-2013	0.00	0.00	1.02	1.38	0.00	8.13	0.00	1.81	0.00	58.29	0.00
Jul-2013	0.00	0.00	1.27	1.23	0.00	7.57	0.00	8.27	5.87	80.18	0.00
Aug-2013	0.00	0.00	1.01	0.91	0.00	5.64	0.00	6.21	0.00	48.64	0.00
Sep-2013	0.00	0.00	0.24	0.38	0.00	0.78	0.00	8.10	0.00	22.50	0.00
Oct-2013	0.00	0.00	0.04	0.40	0.00	2.08	0.00	8.27	8.27	66.94	0.00
Nov-2013	4.43	0.00	0.09	0.89	14.97	0.00	0.00	0.00	0.00	0.00	0.00

Table B2 (Cont.)- NODOS Project- CALSIM Model – Median Case, 30-year Planning Period

Dec-2013	3.49	0.00	1.87	0.52	55.16	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2014	7.97	47.53	2.44	0.94	147.85	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2014	0.00	0.00	0.00	0.07	0.00	0.01	0.00	8.27	8.27	61.90	0.00
Mar-2014	0.51	0.00	1.57	0.10	41.51	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2014	0.00	0.00	0.53	1.52	0.00	6.46	0.00	8.27	7.29	79.33	0.00
May-2014	0.00	7.68	1.00	1.17	0.00	2.09	0.00	0.00	0.00	13.47	0.00
Jun-2014	0.00	0.00	0.99	1.49	0.00	8.71	0.00	0.43	0.00	57.32	0.00
Jul-2014	0.00	0.00	1.32	1.22	0.00	9.33	0.35	3.38	0.00	67.79	0.00
Aug-2014	0.00	0.00	1.07	0.90	0.00	5.85	0.00	3.12	0.00	41.72	0.00
Sep-2014	0.00	0.00	0.47	0.38	0.00	0.69	0.00	7.79	0.00	20.64	0.00
Oct-2014	0.00	0.00	0.20	0.45	0.00	2.25	0.00	8.27	8.27	65.53	0.00
Nov-2014	0.75	0.00	0.00	0.53	2.12	0.00	0.00	0.00	0.00	0.00	103.90
Dec-2014	3.76	0.00	1.84	0.56	52.96	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2015	0.00	0.00	0.00	0.14	0.00	0.01	0.00	0.43	0.00	0.94	107.80
Feb-2015	1.57	0.00	0.96	0.23	26.90	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2015	0.54	3.56	2.44	0.08	68.29	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2015	0.00	3.27	0.46	1.29	0.00	5.23	0.00	0.00	0.00	32.71	0.00
May-2015	0.00	0.00	0.66	1.13	0.00	7.47	0.00	8.05	0.00	63.24	0.00
Jun-2015	0.00	0.00	0.77	1.38	0.00	8.72	0.00	1.75	0.00	55.96	0.00
Jul-2015	0.00	0.00	0.95	1.23	0.00	9.33	0.59	8.27	8.27	105.56	0.00
Aug-2015	0.00	0.00	0.76	0.90	0.00	5.81	0.00	3.11	0.00	36.68	0.00
Sep-2015	0.01	0.00	0.35	0.51	0.00	0.00	0.00	8.27	8.27	47.51	0.00
Oct-2015	0.00	0.00	0.04	0.41	0.00	2.07	0.00	8.27	7.38	38.08	0.00
Nov-2015	1.94	0.00	0.00	0.69	4.76	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2015	0.00	0.00	0.00	0.26	0.00	0.00	0.00	8.27	9.37	35.16	0.00
Jan-2016	1.40	0.00	0.98	0.28	21.94	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2016	0.01	0.00	0.02	0.08	0.00	0.06	0.00	0.97	0.00	1.93	88.51
Mar-2016	0.00	0.00	0.05	0.02	0.00	0.53	0.00	0.00	0.00	2.57	87.92
Apr-2016	0.00	0.00	0.09	0.95	0.00	0.46	0.00	0.00	0.00	2.23	87.93
May-2016	0.01	47.53	0.52	1.47	46.05	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2016	0.01	47.53	1.10	2.42	48.23	0.00	0.00	0.00	0.00	0.00	0.00
Jul-2016	0.00	0.00	1.58	1.23	0.00	6.47	0.00	8.27	5.98	60.32	0.00
Aug-2016	0.00	0.00	1.26	0.91	0.00	4.60	0.00	3.44	0.00	29.12	0.00
Sep-2016	0.00	0.00	0.30	0.38	0.00	0.68	0.00	8.27	8.27	47.82	0.00
Oct-2016	0.00	0.00	0.14	0.44	0.00	2.28	0.00	8.27	8.27	53.60	0.00
Nov-2016	0.00	0.00	0.01	0.38	0.00	1.03	0.00	8.27	8.95	42.09	0.00
Dec-2016	3.95	0.00	0.50	0.59	17.03	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2017	1.57	0.00	0.00	0.28	3.47	0.00	0.00	0.00	0.00	0.00	80.74
Feb-2017	1.57	0.00	0.96	0.23	20.37	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2017	0.54	0.00	0.51	0.08	10.35	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2017	0.00	0.00	0.07	2.17	0.00	0.71	0.00	0.10	0.00	3.42	82.49
May-2017	0.01	0.01	0.67	2.01	0.00	1.22	0.00	0.00	0.00	5.57	80.48
Jun-2017	0.00	0.00	0.99	1.49	0.00	8.87	0.00	0.46	0.00	40.47	0.00
Jul-2017	0.00	0.00	1.09	1.23	0.00	7.94	0.00	8.27	4.45	50.89	0.00
Aug-2017	0.00	0.00	0.86	0.90	0.00	4.50	0.00	3.00	0.00	21.53	0.00
Sep-2017	0.01	0.46	0.17	0.51	0.61	0.00	0.00	0.00	0.00	0.00	70.44
Oct-2017	0.00	0.00	0.19	0.46	0.00	2.35	0.00	8.27	8.27	42.61	0.00
Nov-2017	0.00	0.00	0.00	0.38	0.00	0.83	0.00	6.49	0.00	10.87	0.00
Dec-2017	2.49	0.00	0.00	0.52	4.35	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2018	1.91	0.00	0.91	0.28	16.49	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2018	4.15	47.53	2.44	0.50	89.31	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2018	0.00	0.00	0.01	0.03	0.00	0.06	0.00	0.00	0.00	0.27	79.38
Apr-2018	0.00	0.00	0.40	2.36	0.00	2.65	0.00	0.00	0.00	11.37	0.00

Table B2 (Cont.)- NODOS Project- CALSIM Model – Median Case, 30-year Planning Period

May-2018	0.01	0.01	0.41	2.19	0.00	2.95	0.00	0.00	0.00	12.46	0.00
Jun-2018	0.00	9.98	0.49	1.47	0.00	2.91	0.00	0.00	0.00	12.02	0.00
Jul-2018	0.01	0.48	0.54	2.32	0.00	3.72	0.00	0.00	0.00	15.00	0.00
Aug-2018	0.00	0.00	0.43	0.91	0.00	4.52	0.00	6.03	0.00	25.65	0.00
Sep-2018	1.03	0.53	0.02	0.60	3.67	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2018	0.00	0.00	0.05	0.41	0.00	2.11	0.00	4.75	0.00	14.20	0.00
Nov-2018	7.02	0.00	1.51	1.12	37.59	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2018	3.62	47.53	2.44	0.53	96.76	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2019	4.55	47.53	2.44	0.55	111.87	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2019	4.15	47.53	2.44	0.50	120.98	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2019	2.74	47.53	2.46	0.34	125.85	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2019	0.00	0.00	0.44	1.45	0.00	6.19	0.00	8.27	9.40	89.26	0.00
May-2019	0.01	47.53	0.83	1.87	56.75	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2019	0.00	0.00	1.31	1.49	0.00	7.25	0.00	1.20	0.00	48.52	0.00
Jul-2019	0.00	0.00	1.44	1.23	0.00	6.13	0.00	8.27	9.18	87.86	0.00
Aug-2019	0.00	0.00	1.15	0.90	0.00	4.51	0.00	6.24	0.00	39.24	0.00
Sep-2019	0.00	0.00	0.30	0.38	0.00	0.76	0.00	8.10	0.00	21.08	0.00
Oct-2019	0.00	0.00	0.05	0.41	0.00	2.09	0.00	8.27	8.27	62.78	0.00
Nov-2019	2.57	0.00	0.28	0.66	13.04	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2019	10.10	47.53	2.44	1.16	143.01	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2020	4.55	47.53	2.44	0.55	136.67	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2020	1.52	0.00	1.94	0.23	55.74	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2020	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.33	0.00	0.80	123.52
Apr-2020	0.01	0.24	0.11	2.09	0.57	0.00	0.00	0.00	0.00	0.00	123.98
May-2020	0.01	1.19	0.85	2.19	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2020	0.01	1.54	1.21	2.85	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2020	0.01	9.10	1.46	2.76	0.97	0.00	0.00	0.00	0.00	0.00	123.78
Aug-2020	0.01	11.28	1.18	2.10	8.03	0.00	0.00	8.27	0.93	0.00	0.00
Sep-2020	0.01	6.59	0.31	0.57	2.87	0.00	0.00	6.84	0.00	0.00	123.98
Oct-2020	0.00	4.74	0.24	0.46	0.00	0.03	0.00	0.00	0.00	0.19	123.83
Nov-2020	0.00	0.81	0.00	0.38	0.00	0.12	0.00	0.00	0.00	0.84	123.52
Dec-2020	0.00	0.00	0.00	0.15	0.00	0.02	0.00	1.59	0.00	3.86	121.77
Jan-2021	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Feb-2021	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.07	123.94
Mar-2021	0.01	0.00	0.07	0.06	0.00	0.07	0.00	0.00	0.00	0.49	123.68
Apr-2021	0.01	0.18	0.53	2.10	0.42	0.00	0.00	0.00	0.00	0.00	123.98
May-2021	0.01	1.19	0.94	2.11	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2021	0.00	1.54	1.30	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2021	0.00	0.00	1.47	1.47	0.00	7.24	0.00	4.04	0.00	58.37	0.00
Aug-2021	0.00	0.00	1.06	1.03	0.00	5.30	0.00	0.00	0.00	35.01	0.00
Sep-2021	0.00	2.17	0.31	0.38	0.00	0.02	0.00	0.00	0.00	0.13	119.65
Oct-2021	0.00	0.00	0.19	0.45	0.00	2.31	0.00	8.27	9.41	67.75	0.00
Nov-2021	4.49	0.00	0.00	0.89	14.20	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2021	6.70	0.00	1.04	0.98	47.84	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2022	1.91	0.00	2.14	0.28	62.37	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2022	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.26	0.00	0.66	123.59
Mar-2022	0.13	0.00	0.00	0.03	0.42	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2022	0.00	0.00	0.04	1.66	0.00	0.06	0.00	0.00	0.00	0.43	123.72
May-2022	0.00	0.00	0.81	1.18	0.00	5.57	0.00	8.05	0.00	56.70	0.00
Jun-2022	0.00	0.00	1.36	1.47	0.00	7.12	0.00	0.71	0.00	49.01	0.00
Jul-2022	0.00	0.00	1.54	1.23	0.00	6.36	0.00	8.27	7.91	80.15	0.00
Aug-2022	0.00	0.00	1.10	0.83	0.00	4.13	0.00	6.21	0.00	39.47	0.00
Sep-2022	0.00	0.00	0.33	0.38	0.00	0.75	0.00	8.27	8.50	60.20	0.00

Table B2 (Cont.)- NODOS Project- CALSIM Model – Median Case, 30-year Planning Period

Oct-2022	0.00	0.00	0.22	0.46	0.00	2.32	0.00	8.27	8.27	69.86	0.00
Nov-2022	11.29	9.54	2.44	1.48	110.23	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2022	12.05	47.53	2.44	1.35	161.73	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2023	1.78	0.00	0.00	0.26	5.99	0.00	0.00	0.00	0.00	0.00	123.98
Feb-2023	0.00	0.00	0.00	0.07	0.00	0.01	0.00	8.27	9.42	55.05	0.00
Mar-2023	0.00	0.00	0.07	0.06	0.00	0.30	0.00	0.00	0.00	1.97	120.93
Apr-2023	0.00	0.00	0.08	1.29	0.00	6.92	0.00	1.42	0.00	49.40	0.00
May-2023	0.01	0.01	0.51	2.20	0.00	2.77	0.00	0.00	0.00	18.09	0.00
Jun-2023	0.00	0.00	0.62	1.48	0.00	7.95	0.00	0.47	0.00	53.04	0.00
Jul-2023	0.00	0.00	0.68	1.23	0.00	9.33	0.87	2.76	0.00	70.33	0.00
Aug-2023	0.00	0.00	0.55	0.90	0.00	5.66	0.00	3.00	0.00	40.96	0.00
Sep-2023	0.01	0.39	0.21	0.47	0.82	0.00	0.00	0.00	0.00	0.00	110.74
Oct-2023	0.00	0.00	0.11	0.45	0.00	2.30	0.00	8.27	8.91	54.96	0.00
Nov-2023	2.16	0.00	0.00	0.67	6.35	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2023	3.49	0.00	1.87	0.52	54.96	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2024	1.91	19.87	2.44	0.28	101.85	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2024	1.52	15.84	2.44	0.23	99.38	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2024	0.01	0.00	0.06	0.06	0.00	0.00	0.00	0.29	0.00	0.70	123.57
Apr-2024	0.01	0.21	0.31	2.31	0.50	0.00	0.00	0.00	0.00	0.00	123.98
May-2024	0.01	1.19	0.84	1.93	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2024	0.00	1.54	1.31	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2024	0.00	0.00	1.47	1.47	0.00	7.24	0.00	8.27	2.65	73.96	0.00
Aug-2024	0.00	0.00	1.18	1.11	0.00	5.54	0.00	3.44	0.00	44.08	0.00
Sep-2024	0.00	0.00	0.25	0.53	0.00	0.02	0.00	8.27	8.27	61.88	0.00
Oct-2024	0.00	4.60	0.14	0.44	0.00	0.03	0.00	0.00	0.00	0.18	115.85
Nov-2024	0.00	0.00	0.02	0.38	0.00	1.16	0.00	8.27	8.67	63.37	0.00
Dec-2024	0.00	0.00	0.00	0.30	0.00	0.02	0.00	0.00	0.00	0.12	113.11
Jan-2025	1.91	37.27	2.44	0.28	119.97	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2025	1.57	1.44	2.44	0.23	72.26	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2025	0.01	0.00	0.11	0.05	0.00	0.01	0.00	0.00	0.00	0.09	123.93
Apr-2025	0.00	4.02	0.42	1.27	0.00	3.51	0.00	0.00	0.00	23.67	0.00
May-2025	0.01	8.96	0.94	1.95	19.31	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2025	0.00	0.00	1.35	1.49	0.00	7.50	0.00	0.52	0.00	52.16	0.00
Jul-2025	0.00	0.00	1.48	1.23	0.00	9.33	0.44	8.27	8.69	121.14	0.00
Aug-2025	0.00	0.00	1.18	0.90	0.00	5.88	0.00	3.12	0.00	43.81	0.00
Sep-2025	0.00	0.00	0.02	0.38	0.00	0.03	0.00	7.79	0.00	17.56	0.00
Oct-2025	0.00	4.32	0.04	0.40	0.00	0.03	0.00	0.00	0.00	0.17	112.99
Nov-2025	0.00	0.00	0.00	0.38	0.00	1.12	0.00	8.27	8.23	46.17	0.00
Dec-2025	14.64	47.53	2.44	1.59	165.12	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2026	1.91	0.00	1.76	0.28	52.32	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2026	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.29	0.00	0.75	123.53
Mar-2026	0.14	0.00	0.00	0.03	0.48	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2026	0.00	0.00	0.03	1.35	0.00	0.00	0.00	0.00	0.00	0.00	123.98
May-2026	0.01	1.19	0.52	1.85	2.78	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2026	0.00	1.54	1.36	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2026	0.00	16.21	1.53	1.43	0.00	4.61	0.00	0.00	0.00	31.07	0.00
Aug-2026	0.01	15.55	1.25	2.08	24.19	0.00	0.00	3.59	0.00	0.00	0.00
Sep-2026	0.00	2.11	0.34	0.38	0.00	0.02	0.00	8.27	2.69	25.85	0.00
Oct-2026	0.00	4.71	0.23	0.46	0.00	0.03	0.00	0.00	0.00	0.19	122.38
Nov-2026	0.00	2.35	0.01	0.38	0.00	0.05	0.00	0.00	0.00	0.34	122.36
Dec-2026	0.00	0.00	0.00	0.26	0.00	0.02	0.00	8.27	8.88	44.52	0.00
Jan-2027	1.91	0.00	1.97	0.28	57.91	0.00	0.00	0.00	0.00	0.00	0.00

Table B2 (Cont.)- NODOS Project- CALSIM Model – Median Case, 30-year Planning Period

Feb-2027	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2027	0.01	0.00	0.03	0.05	0.00	0.01	0.00	8.27	8.27	61.99	0.00
Apr-2027	0.00	0.00	0.51	1.54	0.00	6.62	0.00	4.09	0.00	53.19	0.00
May-2027	0.00	0.00	0.90	1.22	0.00	5.96	0.00	4.11	0.00	47.84	0.00
Jun-2027	0.00	0.00	1.24	1.49	0.00	7.25	0.00	0.39	0.00	47.29	0.00
Jul-2027	0.00	0.00	1.36	1.23	0.00	6.12	0.00	8.27	8.84	90.81	0.00
Aug-2027	0.00	0.00	1.05	0.88	0.00	4.56	0.00	3.11	0.00	33.42	0.00
Sep-2027	0.00	0.00	0.23	0.38	0.00	0.04	0.00	7.79	0.00	16.63	0.00
Oct-2027	0.00	0.00	0.23	0.46	0.00	2.35	0.00	8.27	8.27	67.42	0.00
Nov-2027	0.00	0.00	0.01	0.38	0.00	1.20	0.00	8.27	8.27	57.12	0.00
Dec-2027	0.00	0.00	0.00	0.25	0.00	0.02	0.00	8.27	9.48	41.76	0.00
Jan-2028	1.91	5.93	2.44	0.28	69.01	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2028	1.52	0.00	0.96	0.23	25.53	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2028	0.54	0.00	0.00	0.08	1.55	0.00	0.00	0.00	0.00	0.00	104.68
Apr-2028	0.00	0.00	0.05	1.29	0.00	6.96	0.00	8.27	8.97	77.71	0.00
May-2028	0.01	47.53	0.31	2.04	50.95	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2028	0.00	0.00	0.44	1.49	0.00	9.33	1.29	0.46	0.00	59.71	0.00
Jul-2028	0.00	0.00	0.48	1.23	0.00	9.33	0.86	8.27	9.10	90.03	0.00
Aug-2028	0.00	0.00	0.39	0.91	0.00	5.63	0.00	3.00	0.00	33.24	0.00
Sep-2028	0.00	0.51	0.02	0.51	0.86	0.00	0.00	0.00	0.00	0.00	90.13
Oct-2028	0.00	0.00	0.10	0.46	0.00	2.34	0.00	8.27	7.89	40.52	0.00
Nov-2028	6.25	0.00	0.53	1.01	24.98	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2028	5.15	0.00	1.67	0.77	46.40	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2029	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.36	0.00	0.70	94.41
Feb-2029	1.57	0.00	1.25	0.23	29.80	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2029	0.54	7.06	2.44	0.08	67.95	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2029	0.00	0.00	0.06	1.25	0.00	6.28	0.00	8.27	8.27	86.40	0.00
May-2029	0.00	11.27	0.76	1.15	0.00	1.88	0.00	0.00	0.00	10.01	0.00
Jun-2029	0.00	0.00	0.94	1.40	0.00	8.31	0.00	1.75	0.00	46.83	0.00
Jul-2029	0.00	0.00	1.11	1.21	0.00	9.33	2.65	8.27	8.27	100.23	0.00
Aug-2029	0.00	0.00	0.87	0.87	0.00	4.35	0.00	6.13	0.00	29.16	0.00
Sep-2029	0.01	0.37	0.13	0.24	0.57	0.00	0.00	0.00	0.00	0.00	81.25
Oct-2029	0.00	0.00	0.14	0.49	0.00	2.16	0.00	8.27	8.27	47.73	0.00
Nov-2029	0.00	0.00	0.00	0.38	0.00	0.21	0.00	8.27	4.88	19.54	0.00
Dec-2029	5.04	0.00	1.68	0.73	39.06	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2030	0.00	0.00	0.00	0.12	0.00	0.01	0.00	8.27	8.27	38.55	0.00
Feb-2030	4.15	47.53	2.44	0.50	97.50	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2030	1.17	47.53	2.44	0.14	101.45	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2030	0.00	1.98	0.29	1.38	0.00	4.97	0.00	0.00	0.00	26.28	0.00
May-2030	0.00	0.00	1.05	1.19	0.00	5.57	0.00	0.00	0.00	28.75	0.00
Jun-2030	0.00	0.00	1.26	1.44	0.00	7.28	0.00	1.13	0.00	38.52	0.00
Jul-2030	0.00	0.00	1.45	1.23	0.00	6.13	0.00	8.27	5.87	52.21	0.00
Aug-2030	0.00	0.00	1.16	0.91	0.00	5.62	0.00	8.27	4.95	45.32	0.00
Sep-2030	0.00	0.00	0.29	0.38	0.00	0.74	0.00	8.27	7.99	29.85	0.00
Oct-2030	0.00	47.53	0.35	0.66	45.98	0.00	0.00	0.00	0.00	0.00	0.00
Nov-2030	2.99	0.00	1.46	0.84	34.19	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2030	6.78	34.11	2.44	0.90	109.56	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2031	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.61	0.00	1.20	98.41
Feb-2031	4.15	47.53	2.44	0.50	121.05	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2031	0.00	0.00	0.00	0.02	0.00	0.00	0.00	8.27	8.27	55.61	0.00
Apr-2031	0.00	47.53	0.02	1.19	53.34	0.00	0.00	0.00	0.00	0.00	0.00
May-2031	0.01	47.53	0.61	1.99	55.21	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2031	0.00	0.00	1.47	1.59	0.00	7.65	0.00	0.00	0.00	47.15	0.00

Table B2 (Cont.)- NODOS Project- CALSIM Model – Median Case, 30-year Planning Period

Jul-2031	0.00	0.00	1.59	1.47	0.00	7.24	0.00	8.27	2.65	65.19	0.00
Aug-2031	0.00	0.00	1.27	1.11	0.00	5.75	0.00	3.52	0.00	39.92	0.00
Sep-2031	0.00	0.00	0.35	0.38	0.00	1.05	0.00	8.27	5.85	33.63	0.00
Oct-2031	0.00	0.00	0.09	0.43	0.00	2.16	0.00	8.27	9.21	49.60	0.00
Nov-2031	19.36	47.53	2.44	2.06	160.65	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2031	0.00	0.00	0.00	0.28	0.00	0.02	0.00	0.22	0.00	0.57	110.47
Jan-2032	4.55	47.53	2.44	0.55	134.60	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2032	0.00	0.00	0.00	0.06	0.00	0.01	0.00	2.88	0.00	6.57	115.58
Mar-2032	0.00	0.00	0.07	0.08	0.00	0.38	0.00	1.96	0.00	6.84	114.94
Apr-2032	0.00	0.00	0.48	1.55	0.00	9.27	0.00	8.27	9.33	105.36	0.00
May-2032	0.00	0.00	0.48	1.19	0.00	8.45	0.00	0.00	0.00	52.71	0.00
Jun-2032	0.00	0.00	0.52	1.42	0.00	6.88	0.00	1.45	0.00	44.57	0.00
Jul-2032	0.00	0.00	0.62	1.22	0.00	9.33	0.37	3.38	0.00	63.73	0.00
Aug-2032	0.00	0.00	0.49	0.90	0.00	5.83	0.00	3.12	0.00	38.85	0.00
Sep-2032	0.01	0.56	0.19	0.27	1.07	0.00	0.00	0.00	0.00	0.00	101.79
Oct-2032	0.00	0.00	0.02	0.46	0.00	2.16	0.00	8.27	8.49	62.33	0.00
Nov-2032	6.18	0.00	1.54	0.99	49.91	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2032	4.16	0.00	1.79	0.62	52.14	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2033	1.91	19.87	2.44	0.28	97.47	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2033	1.57	24.85	2.44	0.23	107.01	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2033	0.01	0.00	0.05	0.07	0.00	0.16	0.00	8.27	8.27	60.66	0.00
Apr-2033	0.00	0.00	0.04	1.90	0.00	0.86	0.00	0.00	0.00	5.45	113.77
May-2033	0.00	0.00	0.86	1.20	0.00	5.78	0.00	0.80	0.00	38.43	0.00
Jun-2033	0.00	4.22	1.36	1.60	0.00	5.45	0.00	0.00	0.00	34.05	0.00
Jul-2033	0.00	0.00	1.46	1.47	0.00	7.51	0.00	8.27	2.93	69.37	0.00
Aug-2033	0.00	0.00	0.97	0.98	0.00	4.89	0.00	3.32	0.00	35.52	0.00
Sep-2033	0.00	2.17	0.31	0.38	0.00	0.01	0.00	0.00	0.00	0.03	106.74
Oct-2033	0.00	4.76	0.24	0.46	0.00	0.03	0.00	0.00	0.00	0.17	106.62
Nov-2033	9.25	32.36	2.44	1.27	133.29	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2033	5.06	0.00	0.48	0.75	27.90	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2034	2.10	26.02	2.44	0.30	113.76	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2034	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.43	0.00	1.08	123.34
Mar-2034	0.00	0.00	0.02	0.05	0.00	0.06	0.00	0.00	0.00	0.43	123.69
Apr-2034	0.01	0.44	0.82	2.71	1.03	0.00	0.00	0.00	0.00	0.00	123.98
May-2034	0.00	0.00	1.02	1.20	0.00	5.77	0.00	0.00	0.00	39.01	0.00
Jun-2034	0.00	0.00	1.20	1.48	0.00	7.18	0.00	4.81	0.00	58.95	0.00
Jul-2034	0.00	0.00	1.30	1.22	0.00	6.32	0.00	8.27	5.98	73.74	0.00
Aug-2034	0.00	0.00	1.04	0.90	0.00	4.49	0.00	6.26	0.00	42.03	0.00
Sep-2034	0.00	0.00	0.25	0.38	0.00	0.73	0.00	7.79	0.00	21.84	0.00
Oct-2034	0.00	0.00	0.22	0.46	0.00	2.35	0.00	8.27	8.27	71.74	0.00
Nov-2034	5.00	0.00	2.37	0.83	72.23	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2034	4.22	0.00	1.78	0.63	57.66	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2035	1.91	21.95	2.44	0.28	108.61	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2035	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.27	0.00	0.70	123.57
Mar-2035	0.13	0.00	0.00	0.03	0.45	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2035	0.00	0.00	0.05	1.09	0.00	0.07	0.00	0.00	0.00	0.47	123.71
May-2035	0.01	1.32	0.73	2.15	3.09	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2035	0.01	1.54	1.08	2.55	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2035	0.00	19.81	1.57	1.47	0.00	0.01	0.00	8.27	2.93	26.69	0.00
Aug-2035	0.01	17.98	1.25	2.10	27.62	0.00	0.00	3.46	0.00	0.00	0.00
Sep-2035	0.01	9.12	0.34	0.56	2.80	0.00	0.00	8.27	1.88	0.00	123.98
Oct-2035	0.00	4.74	0.23	0.46	0.00	0.03	0.00	0.00	0.00	0.19	123.83
Nov-2035	0.00	1.34	0.00	0.38	0.00	0.11	0.00	0.00	0.00	0.72	123.57

Table B2 (Cont.)- NODOS Project- CALSIM Model – Median Case, 30-year Planning Period

Dec-2035	0.00	0.00	0.00	0.26	0.00	0.02	0.00	1.66	0.00	4.01	121.77
Jan-2036	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Feb-2036	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2036	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.08	123.93
Apr-2036	0.00	0.00	0.28	1.33	0.00	5.76	0.00	8.27	8.27	99.63	0.00
May-2036	0.00	11.41	0.87	1.16	0.00	0.50	0.00	0.00	0.00	3.27	118.04
Jun-2036	0.00	0.00	1.21	1.38	0.00	6.96	0.00	1.82	0.00	49.56	0.00
Jul-2036	0.00	0.00	1.49	1.23	0.00	7.90	0.00	3.38	0.00	58.11	0.00
Aug-2036	0.00	0.00	1.04	0.82	0.00	4.22	0.00	3.11	0.00	32.82	0.00
Sep-2036	0.00	0.00	0.32	0.38	0.00	0.75	0.00	7.79	0.00	21.70	0.00
Oct-2036	0.00	0.00	0.14	0.44	0.00	2.20	0.00	8.27	8.27	67.86	0.00
Nov-2036	4.28	0.00	0.07	0.85	14.18	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2036	3.57	0.00	1.86	0.53	55.26	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2037	4.55	47.53	2.44	0.55	136.82	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2037	1.57	0.00	1.91	0.23	55.08	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2037	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.29	0.00	0.77	123.53
Apr-2037	0.01	0.01	0.18	2.26	0.00	0.06	0.00	0.00	0.00	0.41	123.71
May-2037	0.01	1.54	0.89	2.24	3.59	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2037	0.00	19.26	1.28	1.62	0.00	0.00	0.00	0.00	0.00	0.01	123.80
Jul-2037	0.00	13.32	1.43	1.47	0.00	5.63	0.00	0.00	0.00	37.97	0.00
Aug-2037	0.00	0.00	1.15	1.11	0.00	6.92	0.00	8.27	8.27	107.16	0.00
Sep-2037	0.01	47.53	0.30	0.55	58.92	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2037	0.00	4.60	0.12	0.43	0.00	0.03	0.00	0.00	0.00	0.18	120.53
Nov-2037	9.89	0.00	0.00	1.52	30.92	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2037	3.49	0.00	0.66	0.52	28.82	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2038	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.34	0.00	0.87	123.47
Feb-2038	0.20	0.00	0.00	0.09	0.66	0.00	0.00	0.00	0.00	0.00	123.98
Mar-2038	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.08	123.93
Apr-2038	0.00	0.00	0.21	1.41	0.00	6.65	0.00	8.27	8.27	105.56	0.00
May-2038	0.00	6.18	0.72	1.22	0.00	3.98	0.00	0.00	0.00	25.90	0.00
Jun-2038	0.00	0.00	0.99	1.54	0.00	8.38	0.00	0.00	0.00	54.65	0.00
Jul-2038	0.00	0.00	1.16	1.47	0.00	9.33	3.36	0.00	0.00	76.59	0.00
Aug-2038	0.00	0.00	0.92	1.11	0.00	7.93	0.00	0.00	0.00	48.43	0.00
Sep-2038	0.00	0.00	0.20	0.38	0.00	1.28	0.00	7.79	0.00	24.08	0.00
Oct-2038	0.00	0.00	0.12	0.44	0.00	2.27	0.00	8.27	8.27	67.71	0.00
Nov-2038	12.02	47.53	2.44	1.47	149.70	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2038	11.71	47.53	2.44	1.32	160.84	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2039	1.71	0.00	0.00	0.28	5.75	0.00	0.00	0.00	0.00	0.00	123.98
Feb-2039	0.00	0.00	0.00	0.07	0.00	0.01	0.00	8.27	8.27	63.10	0.00
Mar-2039	0.58	0.00	1.57	0.13	41.02	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2039	0.00	9.65	0.56	1.57	0.00	2.59	0.00	0.00	0.00	17.48	0.00
May-2039	0.01	6.70	0.83	1.90	14.92	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2039	0.00	1.04	1.30	2.87	2.42	0.00	0.00	0.00	0.00	0.00	123.92
Jul-2039	0.00	0.00	1.34	1.47	0.00	7.52	0.00	8.27	2.93	76.76	0.00
Aug-2039	0.00	0.00	1.07	1.11	0.00	5.52	0.00	3.39	0.00	43.86	0.00
Sep-2039	0.00	2.17	0.26	0.38	0.00	0.02	0.00	0.00	0.00	0.13	118.47
Oct-2039	0.00	0.00	0.20	0.46	0.00	2.32	0.00	8.27	5.19	45.59	0.00
Nov-2039	0.00	0.00	0.00	0.38	0.00	0.83	0.00	8.27	8.27	63.30	0.00
Dec-2039	5.45	6.76	2.44	0.75	93.37	0.00	0.00	0.00	0.00	0.00	0.00

Table B3- NODOS Project- CALSIM Model – Low Case, 30-year Planning Period

Plant Mode	Pumping , MW					Generation, MW					
Plant Name	TRR	Sac River	TC Canal	GCID Canal	Sites	TRR		Sac River		Sites	Pump Back
Installed Capacity, MW	19.36	47.53	2.44	2.87	179.70	9.33		8.27		123.98	123.98
Installed Capacity, cfs	1800	2000	2121	3000	5900	1500		1500		5100	5100
Date	All Hours					On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	On-Peak
Jan-2010	1.91	19.874	2.44	0.28	97.47	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2010	1.57	24.849	2.44	0.23	107.01	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2010	0.01	0.000	0.05	0.07	0.00	0.16	0.00	8.27	8.27	60.66	0.00
Apr-2010	0.00	0.000	0.04	1.90	0.00	0.86	0.00	0.00	0.00	5.45	113.77
May-2010	0.00	0.000	0.86	1.20	0.00	5.78	0.00	0.80	0.00	38.43	0.00
Jun-2010	0.00	4.215	1.36	1.60	0.00	5.45	0.00	0.00	0.00	34.05	0.00
Jul-2010	0.00	0.000	1.46	1.47	0.00	7.23	0.00	8.27	2.65	66.81	0.00
Aug-2010	0.00	0.000	0.97	0.98	0.00	5.07	0.00	3.45	0.00	36.89	0.00
Sep-2010	0.00	2.172	0.31	0.38	0.00	0.01	0.00	0.00	0.00	0.03	106.74
Oct-2010	0.00	4.763	0.24	0.46	0.00	0.03	0.00	0.00	0.00	0.17	106.62
Nov-2010	9.25	32.356	2.44	1.27	133.29	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2010	5.06	0.000	0.48	0.75	27.90	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2011	2.10	26.023	2.44	0.30	113.76	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2011	0.00	0.000	0.00	0.07	0.00	0.01	0.00	0.43	0.00	1.08	123.34
Mar-2011	0.00	0.000	0.02	0.05	0.00	0.06	0.00	0.00	0.00	0.43	123.69
Apr-2011	0.01	0.440	0.82	2.71	1.03	0.00	0.00	0.00	0.00	0.00	123.98
May-2011	0.00	0.000	1.02	1.20	0.00	5.99	0.00	0.00	0.00	40.51	0.00
Jun-2011	0.00	0.000	1.20	1.48	0.00	7.18	0.00	4.81	0.00	58.95	0.00
Jul-2011	0.00	0.000	1.30	1.22	0.00	6.32	0.00	8.27	5.98	73.74	0.00
Aug-2011	0.00	0.000	1.04	0.90	0.00	4.49	0.00	6.26	0.00	42.03	0.00
Sep-2011	0.00	0.000	0.25	0.38	0.00	0.73	0.00	7.79	0.00	21.84	0.00
Oct-2011	0.00	0.000	0.22	0.46	0.00	2.35	0.00	8.27	8.27	71.74	0.00
Nov-2011	5.00	0.000	2.37	0.83	72.23	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2011	4.22	0.000	1.78	0.63	57.66	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2012	1.91	21.950	2.44	0.28	108.61	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2012	0.00	0.000	0.00	0.07	0.00	0.01	0.00	0.26	0.00	0.67	123.57
Mar-2012	0.13	0.000	0.00	0.03	0.45	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2012	0.00	0.000	0.05	1.09	0.00	0.07	0.00	0.00	0.00	0.47	123.71
May-2012	0.01	1.323	0.73	2.15	3.09	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2012	0.01	1.536	1.08	2.55	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2012	0.00	19.810	1.57	1.47	0.00	0.01	0.00	8.27	2.93	26.69	0.00
Aug-2012	0.01	17.982	1.25	2.10	27.62	0.00	0.00	3.46	0.00	0.00	0.00
Sep-2012	0.01	9.122	0.34	0.56	2.80	0.00	0.00	8.27	1.88	0.00	123.98
Oct-2012	0.00	4.740	0.23	0.46	0.00	0.03	0.00	0.00	0.00	0.19	123.83
Nov-2012	0.00	1.341	0.00	0.38	0.00	0.11	0.00	0.00	0.00	0.72	123.57
Dec-2012	0.00	0.000	0.00	0.26	0.00	0.02	0.00	1.66	0.00	4.01	121.77
Jan-2013	0.00	0.000	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Feb-2013	0.00	0.000	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2013	0.00	0.000	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.08	123.93
Apr-2013	0.00	0.000	0.28	1.33	0.00	5.76	0.00	8.27	8.27	99.63	0.00
May-2013	0.00	11.410	0.87	1.16	0.00	0.50	0.00	0.00	0.00	3.27	118.04
Jun-2013	0.00	0.000	1.21	1.38	0.00	6.96	0.00	1.82	0.00	49.56	0.00
Jul-2013	0.00	0.000	1.49	1.23	0.00	7.90	0.00	3.38	0.00	58.11	0.00
Aug-2013	0.00	0.000	1.04	0.82	0.00	4.06	0.00	3.00	0.00	31.60	0.00
Sep-2013	0.00	0.000	0.32	0.38	0.00	0.78	0.00	8.10	0.00	22.57	0.00
Oct-2013	0.00	0.000	0.14	0.44	0.00	2.20	0.00	8.27	8.27	67.86	0.00
Nov-2013	4.28	0.000	0.07	0.85	14.18	0.00	0.00	0.00	0.00	0.00	0.00

Table B3 (Cont.)- NODOS Project- CALSIM Model – Low Case, 30-year Planning Period

Dec-2013	3.57	0.000	1.86	0.53	55.26	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2014	4.55	47.533	2.44	0.55	136.82	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2014	1.57	0.000	1.91	0.23	55.08	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2014	0.00	0.000	0.00	0.02	0.00	0.01	0.00	0.29	0.00	0.77	123.53
Apr-2014	0.01	0.012	0.18	2.26	0.00	0.06	0.00	0.00	0.00	0.41	123.71
May-2014	0.01	1.540	0.89	2.24	3.59	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2014	0.00	19.258	1.28	1.62	0.00	0.00	0.00	0.00	0.00	0.01	123.80
Jul-2014	0.00	13.321	1.43	1.47	0.00	5.63	0.00	0.00	0.00	37.97	0.00
Aug-2014	0.00	0.000	1.15	1.11	0.00	6.92	0.00	8.27	8.27	107.16	0.00
Sep-2014	0.01	47.533	0.30	0.55	58.92	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2014	0.00	4.600	0.12	0.43	0.00	0.03	0.00	0.00	0.00	0.18	120.53
Nov-2014	9.89	0.000	0.00	1.52	30.92	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2014	3.49	0.000	0.66	0.52	28.82	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2015	0.00	0.000	0.00	0.07	0.00	0.01	0.00	0.33	0.00	0.84	123.47
Feb-2015	0.20	0.000	0.00	0.09	0.66	0.00	0.00	0.00	0.00	0.00	123.98
Mar-2015	0.00	0.000	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.08	123.93
Apr-2015	0.00	0.000	0.21	1.41	0.00	6.65	0.00	8.27	8.27	105.56	0.00
May-2015	0.00	6.177	0.72	1.22	0.00	3.98	0.00	0.00	0.00	25.90	0.00
Jun-2015	0.00	0.000	0.99	1.54	0.00	8.38	0.00	0.00	0.00	54.65	0.00
Jul-2015	0.00	0.000	1.16	1.47	0.00	9.33	3.36	0.00	0.00	76.59	0.00
Aug-2015	0.00	0.000	0.92	1.11	0.00	7.93	0.00	0.00	0.00	48.43	0.00
Sep-2015	0.00	0.000	0.20	0.38	0.00	1.28	0.00	7.79	0.00	24.08	0.00
Oct-2015	0.00	0.000	0.12	0.44	0.00	2.19	0.00	8.27	8.27	65.20	0.00
Nov-2015	12.02	47.533	2.44	1.47	149.70	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2015	11.71	47.533	2.44	1.32	160.84	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2016	1.71	0.000	0.00	0.28	5.75	0.00	0.00	0.00	0.00	0.00	123.98
Feb-2016	0.00	0.000	0.00	0.07	0.00	0.01	0.00	8.27	7.60	60.58	0.00
Mar-2016	0.58	0.000	1.57	0.13	41.02	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2016	0.00	9.655	0.56	1.57	0.00	2.59	0.00	0.00	0.00	17.48	0.00
May-2016	0.01	6.701	0.83	1.90	14.92	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2016	0.00	1.038	1.30	2.87	2.42	0.00	0.00	0.00	0.00	0.00	123.92
Jul-2016	0.00	0.000	1.34	1.47	0.00	7.52	0.00	8.27	2.93	76.76	0.00
Aug-2016	0.00	0.000	1.07	1.11	0.00	5.52	0.00	3.39	0.00	43.86	0.00
Sep-2016	0.00	2.172	0.26	0.38	0.00	0.02	0.00	0.00	0.00	0.13	118.47
Oct-2016	0.00	0.000	0.20	0.46	0.00	2.32	0.00	8.27	5.19	45.59	0.00
Nov-2016	0.00	0.000	0.00	0.38	0.00	0.83	0.00	8.27	8.27	63.30	0.00
Dec-2016	5.45	6.761	2.44	0.75	93.37	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2017	4.67	1.112	2.44	0.61	81.74	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2017	0.01	0.000	0.00	0.06	0.00	0.01	0.00	0.97	0.00	2.29	122.66
Mar-2017	0.01	0.000	0.36	0.15	0.00	0.28	0.00	0.00	0.00	1.91	122.74
Apr-2017	0.00	0.000	0.46	1.47	0.00	7.49	0.00	7.45	0.00	68.30	0.00
May-2017	0.00	9.174	0.83	1.16	0.00	2.19	0.00	0.00	0.00	14.41	0.00
Jun-2017	0.00	0.000	0.98	1.45	0.00	7.77	0.00	0.92	0.00	53.47	0.00
Jul-2017	0.00	0.000	1.11	1.23	0.00	9.33	1.86	8.27	8.27	128.14	0.00
Aug-2017	0.00	0.000	0.89	0.90	0.00	6.31	0.00	3.00	0.00	44.43	0.00
Sep-2017	0.00	0.000	0.09	0.38	0.00	0.74	0.00	7.79	0.00	20.92	0.00
Oct-2017	0.00	4.385	0.05	0.41	0.00	0.03	0.00	0.00	0.00	0.19	107.78
Nov-2017	5.19	0.000	1.99	0.86	62.84	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2017	7.74	30.807	2.44	1.01	133.16	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2018	1.91	0.000	2.07	0.28	60.46	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2018	0.00	0.000	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2018	0.00	0.000	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	123.98
Apr-2018	0.00	0.000	0.18	1.25	0.00	5.59	0.00	0.00	0.00	37.81	0.00

Table B3 (Cont.)- NODOS Project- CALSIM Model – Low Case, 30-year Planning Period

May-2018	0.01	14.244	1.03	2.18	28.19	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2018	0.00	0.000	1.34	1.48	0.00	7.22	0.00	0.42	0.00	49.98	0.00
Jul-2018	0.00	0.000	1.46	1.23	0.00	6.36	0.00	8.27	9.40	92.57	0.00
Aug-2018	0.00	0.000	1.17	0.90	0.00	5.66	0.00	3.00	0.00	42.77	0.00
Sep-2018	0.00	0.000	0.29	0.38	0.00	0.71	0.00	8.10	0.00	22.73	0.00
Oct-2018	0.00	4.492	0.07	0.42	0.00	0.03	0.00	0.00	0.00	0.17	114.41
Nov-2018	16.16	47.533	2.44	1.80	172.50	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2018	0.00	0.000	0.00	0.19	0.00	0.02	0.00	8.27	6.45	36.45	0.00
Jan-2019	1.91	0.000	0.62	0.28	22.69	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2019	0.00	0.000	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2019	0.00	0.000	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	123.98
Apr-2019	0.00	0.000	0.05	1.94	0.00	0.06	0.00	0.00	0.00	0.39	123.75
May-2019	0.00	0.000	0.87	1.21	0.00	5.49	0.00	7.75	0.00	55.43	0.00
Jun-2019	0.00	3.101	1.43	1.59	0.00	6.19	0.00	0.00	0.00	41.03	0.00
Jul-2019	0.00	0.000	1.33	1.33	0.00	9.33	0.97	0.00	0.00	66.73	0.00
Aug-2019	0.00	0.000	1.24	1.11	0.00	6.65	0.00	0.00	0.00	42.28	0.00
Sep-2019	0.00	2.172	0.34	0.38	0.00	0.02	0.00	0.00	0.00	0.13	114.25
Oct-2019	0.00	4.546	0.11	0.43	0.00	0.03	0.00	0.00	0.00	0.17	114.18
Nov-2019	0.00	1.742	0.00	0.38	0.00	0.05	0.00	0.00	0.00	0.29	114.18
Dec-2019	3.76	0.000	1.18	0.56	40.96	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2020	1.37	0.000	1.15	0.28	33.16	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2020	1.57	15.619	2.44	0.23	99.24	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2020	0.00	0.000	0.00	0.02	0.00	0.00	0.00	0.27	0.00	0.64	123.61
Apr-2020	0.00	0.196	0.05	2.05	0.46	0.00	0.00	0.00	0.00	0.00	123.98
May-2020	0.01	1.188	1.04	2.21	2.77	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2020	0.00	7.331	1.41	1.61	0.00	4.14	0.00	0.00	0.00	27.90	0.00
Jul-2020	0.00	0.000	1.45	1.44	0.00	7.11	0.00	8.27	2.65	72.29	0.00
Aug-2020	0.01	17.060	1.17	2.07	25.81	0.00	0.00	3.53	0.00	0.00	0.00
Sep-2020	0.00	2.172	0.32	0.38	0.00	0.02	0.00	8.27	2.69	25.26	0.00
Oct-2020	0.00	44.751	0.07	0.71	58.10	0.00	0.00	0.00	0.00	0.00	0.00
Nov-2020	0.00	1.988	0.00	0.38	0.00	0.07	0.00	0.00	0.00	0.45	122.66
Dec-2020	0.00	0.000	0.00	0.28	0.00	0.02	0.00	0.18	0.00	0.54	122.72
Jan-2021	0.00	0.000	0.00	0.14	0.00	0.01	0.00	0.00	0.00	0.07	122.99
Feb-2021	0.01	0.000	0.07	0.10	0.00	0.08	0.00	0.00	0.00	0.51	122.73
Mar-2021	0.00	0.000	0.25	0.11	0.00	2.22	0.00	0.00	0.00	14.84	0.00
Apr-2021	0.00	0.000	0.36	1.42	0.00	8.60	0.00	4.79	0.00	68.90	0.00
May-2021	0.00	0.000	0.25	1.22	0.00	6.40	0.00	2.63	0.00	47.57	0.00
Jun-2021	0.00	0.000	0.28	1.47	0.00	7.16	0.00	8.27	0.04	64.48	0.00
Jul-2021	0.00	0.000	0.31	1.23	0.00	9.33	0.43	8.27	8.27	113.92	0.00
Aug-2021	0.01	0.000	0.23	1.60	0.00	1.08	0.00	8.27	8.27	61.19	0.00
Sep-2021	0.01	0.000	0.10	0.47	0.00	0.00	0.00	8.27	9.03	48.45	0.00
Oct-2021	0.00	0.528	0.10	0.78	1.01	0.00	0.00	0.00	0.00	0.00	100.87
Nov-2021	0.00	1.866	0.00	0.38	0.00	0.06	0.00	0.00	0.00	0.31	100.76
Dec-2021	0.00	0.000	0.00	0.27	0.00	0.02	0.00	8.27	8.27	49.84	0.00
Jan-2022	0.00	0.000	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.06	97.53
Feb-2022	0.00	0.000	0.01	0.08	0.00	0.10	0.00	8.27	8.27	49.31	0.00
Mar-2022	0.00	0.000	0.05	0.09	0.00	0.00	0.00	5.35	0.00	9.64	0.00
Apr-2022	0.00	0.000	0.07	1.26	0.00	5.76	0.00	8.27	6.45	54.03	0.00
May-2022	0.00	8.414	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	88.86
Jun-2022	0.01	0.303	0.08	0.99	0.51	0.00	0.00	0.00	0.00	0.00	88.71
Jul-2022	0.01	0.000	0.09	1.16	0.00	0.00	0.00	8.27	8.27	44.72	0.00
Aug-2022	0.01	0.000	0.07	0.81	0.00	0.00	0.00	8.27	7.82	26.58	0.00
Sep-2022	0.01	0.000	0.02	0.29	0.00	0.00	0.00	8.27	8.63	38.65	0.00

Table B3 (Cont.)- NODOS Project- CALSIM Model – Low Case, 30-year Planning Period

Oct-2022	0.00	0.610	0.07	0.57	0.89	0.00	0.00	0.00	0.00	0.00	77.38
Nov-2022	0.00	0.000	0.00	0.32	0.00	0.00	0.00	8.27	8.23	25.55	0.00
Dec-2022	3.11	0.000	1.92	0.46	39.46	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2023	1.52	0.000	0.96	0.22	20.39	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2023	3.12	47.533	2.44	0.38	102.59	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2023	1.17	47.533	2.44	0.14	107.83	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2023	0.01	47.533	0.03	1.70	52.83	0.00	0.00	0.00	0.00	0.00	0.00
May-2023	0.00	0.000	0.78	1.20	0.00	5.34	0.00	4.50	0.00	40.19	0.00
Jun-2023	0.00	0.000	1.43	1.48	0.00	7.00	0.00	8.27	9.21	78.26	0.00
Jul-2023	0.00	0.000	1.56	1.23	0.00	9.33	0.87	8.27	0.15	69.91	0.00
Aug-2023	0.00	0.000	1.01	0.91	0.00	6.82	0.00	3.00	0.00	39.98	0.00
Sep-2023	0.01	12.354	0.22	0.46	19.05	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2023	0.00	0.000	0.10	0.47	0.00	3.20	0.00	8.27	8.27	62.21	0.00
Nov-2023	3.89	0.000	0.21	0.87	13.37	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2023	0.00	0.000	0.00	0.28	0.00	0.02	0.00	8.27	5.45	23.97	0.00
Jan-2024	4.55	47.533	2.44	0.55	112.44	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2024	4.15	47.533	2.44	0.50	121.48	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2024	1.30	47.533	2.44	0.16	121.59	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2024	0.01	0.011	0.29	2.14	0.00	1.01	0.00	0.00	0.00	6.40	113.01
May-2024	0.01	23.019	0.63	2.17	37.98	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2024	0.00	0.000	0.82	1.49	0.00	9.33	1.17	0.41	0.00	68.49	0.00
Jul-2024	0.00	0.000	0.90	1.23	0.00	8.54	0.00	8.27	5.87	83.74	0.00
Aug-2024	0.00	0.000	0.71	0.90	0.00	5.65	0.00	4.97	0.00	44.24	0.00
Sep-2024	0.01	0.000	0.08	0.50	0.00	0.00	0.00	8.27	8.67	54.39	0.00
Oct-2024	0.00	0.000	0.06	0.42	0.00	2.14	0.00	8.27	9.43	53.74	0.00
Nov-2024	7.29	0.000	2.23	1.15	71.31	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2024	3.49	0.000	1.87	0.52	54.65	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2025	4.55	47.533	2.44	0.55	135.63	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2025	1.52	2.250	2.44	0.23	73.94	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2025	0.00	0.000	0.00	0.02	0.00	0.00	0.00	0.29	0.00	0.71	123.57
Apr-2025	0.00	12.339	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.01	123.95
May-2025	0.01	1.401	0.94	2.08	3.27	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2025	0.00	0.000	1.26	1.44	0.00	7.04	0.00	7.18	0.00	64.53	0.00
Jul-2025	0.00	0.000	1.47	1.22	0.00	9.33	0.35	8.27	9.32	109.40	0.00
Aug-2025	0.00	0.000	1.19	0.91	0.00	5.89	0.00	8.27	5.14	66.55	0.00
Sep-2025	0.00	0.000	0.29	0.51	0.00	0.13	0.00	8.27	9.27	51.99	0.00
Oct-2025	0.00	0.000	0.22	0.46	0.00	2.25	0.00	8.27	9.02	53.38	0.00
Nov-2025	0.00	0.000	0.01	0.38	0.00	1.14	0.00	8.27	8.27	61.69	0.00
Dec-2025	6.72	47.533	2.44	0.88	134.81	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2026	4.55	47.533	2.44	0.55	137.51	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2026	1.57	0.000	0.00	0.23	5.23	0.00	0.00	0.00	0.00	0.00	122.25
Mar-2026	0.54	0.000	1.21	0.08	33.45	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2026	0.01	0.012	0.37	1.96	0.00	0.00	0.00	0.00	0.00	0.00	123.98
May-2026	0.00	0.000	0.95	1.16	0.00	5.46	0.00	1.03	0.00	39.22	0.00
Jun-2026	0.00	0.000	1.42	1.49	0.00	7.23	0.00	8.15	0.00	67.46	0.00
Jul-2026	0.00	0.000	1.56	1.23	0.00	9.33	0.44	3.38	0.00	71.07	0.00
Aug-2026	0.00	0.000	1.24	0.91	0.00	4.70	0.00	6.45	0.00	43.64	0.00
Sep-2026	0.00	0.000	0.28	0.38	0.00	0.63	0.00	8.27	0.43	23.14	0.00
Oct-2026	0.00	0.000	0.05	0.41	0.00	2.10	0.00	8.27	8.27	67.89	0.00
Nov-2026	7.88	30.332	2.44	1.12	129.36	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2026	4.92	22.251	2.44	0.69	118.92	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2027	0.00	0.000	0.00	0.07	0.00	0.01	0.00	0.24	0.00	0.63	123.61
Feb-2027	0.14	0.000	0.00	0.08	0.48	0.00	0.00	0.00	0.00	0.00	123.98

Table B3 (Cont.)- NODOS Project- CALSIM Model – Low Case, 30-year Planning Period

Mar-2027	0.00	0.000	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	123.98
Apr-2027	0.00	0.000	0.05	1.44	0.00	0.07	0.00	0.00	0.00	0.44	123.71
May-2027	0.01	1.321	0.77	2.16	3.08	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2027	0.00	15.272	1.24	1.49	0.00	1.19	0.00	0.00	0.00	8.00	118.97
Jul-2027	0.01	0.000	1.58	2.78	0.00	3.67	0.00	8.27	8.27	85.12	0.00
Aug-2027	0.00	6.612	1.26	1.11	0.00	2.66	0.00	3.52	0.00	25.21	0.00
Sep-2027	0.01	47.533	0.10	0.48	59.42	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2027	0.00	27.280	0.06	0.69	44.14	0.00	0.00	0.00	0.00	0.00	0.00
Nov-2027	0.00	0.000	0.00	0.33	0.00	0.02	0.00	0.80	0.00	2.01	122.84
Dec-2027	0.00	0.000	0.00	0.21	0.00	0.02	0.00	1.59	0.00	3.86	121.77
Jan-2028	0.00	0.000	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Feb-2028	0.00	0.000	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2028	0.01	0.000	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	123.98
Apr-2028	0.00	0.000	0.03	1.32	0.00	0.09	0.00	0.00	0.00	0.61	123.63
May-2028	0.01	1.362	0.66	2.03	3.18	0.00	0.00	0.00	0.00	0.00	123.98
Jun-2028	0.00	1.536	1.37	2.87	3.58	0.00	0.00	0.00	0.00	0.00	123.98
Jul-2028	0.01	11.287	1.59	2.78	4.86	0.00	0.00	8.27	2.93	0.00	123.98
Aug-2028	0.00	13.174	1.22	1.09	0.00	3.28	0.00	0.00	0.00	22.09	0.00
Sep-2028	0.01	11.414	0.25	0.53	23.67	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2028	0.00	4.654	0.19	0.45	0.00	0.03	0.00	0.00	0.00	0.20	123.83
Nov-2028	0.00	0.000	0.00	0.29	0.00	0.02	0.00	0.29	0.00	0.81	123.52
Dec-2028	0.00	0.000	0.00	0.15	0.00	0.02	0.00	1.66	0.00	4.01	121.77
Jan-2029	0.00	0.000	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Feb-2029	0.00	0.000	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Mar-2029	0.01	0.000	0.03	0.06	0.00	0.07	0.00	0.00	0.00	0.49	123.68
Apr-2029	0.00	0.000	0.50	1.53	0.00	6.84	0.00	8.27	9.14	104.29	0.00
May-2029	0.00	13.166	0.90	1.21	0.00	0.34	0.00	0.00	0.00	2.23	118.63
Jun-2029	0.00	0.000	1.07	1.59	0.00	8.38	0.00	0.00	0.00	55.24	0.00
Jul-2029	0.00	0.000	1.35	1.47	0.00	9.33	0.08	0.00	0.00	60.64	0.00
Aug-2029	0.00	0.000	1.00	1.06	0.00	5.27	0.00	0.00	0.00	32.68	0.00
Sep-2029	0.00	0.000	0.26	0.38	0.00	1.07	0.00	0.00	0.00	6.55	108.38
Oct-2029	0.00	0.000	0.09	0.43	0.00	2.16	0.00	0.00	0.00	13.14	0.00
Nov-2029	19.36	47.533	2.44	2.01	176.39	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2029	5.61	0.000	0.88	0.83	41.50	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2030	0.00	0.000	0.00	0.12	0.00	0.01	0.00	0.35	0.00	0.89	123.44
Feb-2030	0.21	0.000	0.00	0.09	0.71	0.00	0.00	0.00	0.00	0.00	123.98
Mar-2030	0.00	0.000	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02	123.97
Apr-2030	0.00	1.238	0.27	1.30	0.00	5.15	0.00	0.00	0.00	34.82	0.00
May-2030	0.00	0.000	1.00	1.22	0.00	6.05	0.00	7.75	0.00	58.61	0.00
Jun-2030	0.00	0.000	1.23	1.48	0.00	7.98	0.00	0.57	0.00	53.81	0.00
Jul-2030	0.00	0.000	1.34	1.23	0.00	9.33	1.09	3.38	0.00	73.21	0.00
Aug-2030	0.00	0.000	1.06	0.90	0.00	6.02	0.00	3.00	0.00	43.59	0.00
Sep-2030	0.00	0.000	0.34	0.38	0.00	0.54	0.00	8.27	0.85	22.93	0.00
Oct-2030	0.00	0.000	0.18	0.45	0.00	2.29	0.00	8.27	8.27	67.51	0.00
Nov-2030	0.00	0.000	0.00	0.36	0.00	0.00	0.00	8.27	8.27	52.90	0.00
Dec-2030	4.98	0.000	1.69	0.74	52.68	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2031	1.91	19.874	2.44	0.28	98.31	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2031	4.15	47.533	2.44	0.50	136.23	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2031	0.54	0.000	1.39	0.08	37.96	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2031	0.01	0.012	0.29	2.04	0.00	0.50	0.00	0.00	0.00	3.36	121.96
May-2031	0.00	0.571	0.75	1.20	0.00	6.31	0.00	0.00	0.00	42.70	0.00
Jun-2031	0.00	0.000	1.09	1.61	0.00	9.33	0.00	0.00	0.00	62.89	0.00
Jul-2031	0.00	0.000	1.14	1.47	0.00	9.33	4.03	4.86	0.00	93.04	0.00

Table B3 (Cont.)- NODOS Project- CALSIM Model – Low Case, 30-year Planning Period

Aug-2031	0.00	0.000	0.91	1.11	0.00	5.75	0.00	8.27	8.45	92.36	0.00
Sep-2031	2.21	0.000	0.08	0.75	6.60	0.00	0.00	0.00	0.00	0.00	0.00
Oct-2031	0.00	4.740	0.19	0.46	0.00	0.27	0.00	0.00	0.00	1.64	109.32
Nov-2031	0.00	0.000	0.01	0.38	0.00	1.19	0.00	8.27	6.22	38.57	0.00
Dec-2031	5.99	0.000	1.17	0.88	45.33	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2032	1.91	13.530	2.44	0.28	92.51	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2032	1.57	0.000	1.25	0.23	36.56	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2032	0.54	5.158	2.44	0.08	77.10	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2032	0.00	0.000	0.48	1.29	0.00	6.97	0.00	8.27	8.27	107.67	0.00
May-2032	0.00	0.000	0.66	1.20	0.00	8.08	0.00	0.00	0.00	53.06	0.00
Jun-2032	0.00	0.000	0.78	1.49	0.00	9.01	0.00	0.47	0.00	59.27	0.00
Jul-2032	0.00	0.000	0.85	1.23	0.00	6.12	0.00	8.27	9.30	80.70	0.00
Aug-2032	0.00	0.000	0.68	0.90	0.00	4.69	0.00	6.44	0.00	41.15	0.00
Sep-2032	0.01	0.000	0.31	0.51	0.00	0.00	0.00	8.27	8.27	53.37	0.00
Oct-2032	0.00	0.000	0.11	0.44	0.00	2.27	0.00	8.27	8.27	65.26	0.00
Nov-2032	0.00	0.000	0.00	0.42	0.00	0.00	0.00	8.27	8.27	49.48	0.00
Dec-2032	3.75	0.000	1.84	0.55	49.61	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2033	1.91	0.000	0.91	0.28	25.33	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2033	0.00	0.000	0.00	0.06	0.00	0.01	0.00	8.27	8.10	33.64	0.00
Mar-2033	0.00	0.000	0.07	0.03	0.00	0.52	0.00	8.27	8.27	52.79	0.00
Apr-2033	0.00	0.000	0.35	1.30	0.00	7.34	0.00	7.10	0.00	51.75	0.00
May-2033	0.00	12.282	0.09	1.07	0.00	1.86	0.00	0.00	0.00	9.48	0.00
Jun-2033	0.00	0.000	0.12	1.40	0.00	6.79	0.00	8.27	1.33	50.25	0.00
Jul-2033	0.01	0.389	0.15	2.25	0.00	0.00	0.00	2.39	0.00	3.08	86.83
Aug-2033	0.00	0.000	0.12	0.87	0.00	4.32	0.00	8.27	8.27	61.54	0.00
Sep-2033	0.01	0.000	0.05	0.50	0.00	0.00	0.00	8.27	8.27	40.03	0.00
Oct-2033	0.00	0.000	0.08	0.79	0.00	0.00	0.00	8.27	5.19	20.11	0.00
Nov-2033	0.00	0.000	2.34	0.42	39.88	0.00	0.00	0.00	0.00	0.00	0.00
Dec-2033	4.86	7.545	1.06	0.71	42.63	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2034	1.46	0.000	0.97	0.29	21.93	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2034	1.68	0.000	0.00	0.26	4.11	0.00	0.00	0.00	0.00	0.00	90.17
Mar-2034	0.57	0.000	0.51	0.08	11.17	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2034	0.01	47.533	0.33	2.18	47.10	0.00	0.00	0.00	0.00	0.00	0.00
May-2034	0.00	0.000	0.39	1.21	0.00	8.95	0.00	7.75	0.00	60.09	0.00
Jun-2034	0.00	0.000	0.62	1.43	0.00	8.93	0.00	1.22	0.00	45.96	0.00
Jul-2034	0.00	0.000	0.72	1.23	0.00	6.36	0.00	3.51	0.00	35.09	0.00
Aug-2034	0.00	0.000	0.57	0.90	0.00	4.48	0.00	3.00	0.00	24.57	0.00
Sep-2034	0.00	0.000	0.03	0.30	3.22	0.00	0.00	0.00	0.00	0.00	81.18
Oct-2034	0.00	4.515	0.06	0.43	0.00	0.03	0.00	0.00	0.00	0.13	81.06
Nov-2034	0.00	0.000	0.00	0.38	0.00	0.85	0.00	8.27	8.27	42.91	0.00
Dec-2034	0.00	0.000	0.00	0.30	0.00	0.02	0.00	8.27	8.27	38.47	0.00
Jan-2035	2.02	19.413	2.44	0.29	70.74	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2035	1.57	0.000	0.00	0.23	3.56	0.00	0.00	0.00	0.00	0.00	82.93
Mar-2035	0.00	0.000	0.05	0.02	0.00	0.69	0.00	0.00	0.00	3.14	80.84
Apr-2035	0.00	0.000	0.06	1.24	0.00	7.57	0.00	8.27	8.27	71.80	0.00
May-2035	0.01	47.533	0.04	1.34	39.57	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2035	0.00	0.000	0.08	1.13	0.00	5.54	0.00	5.23	0.00	31.51	0.00
Jul-2035	0.00	0.000	0.08	0.86	0.00	5.78	0.00	8.27	8.27	59.36	0.00
Aug-2035	0.01	0.747	0.06	1.17	0.00	0.60	0.00	0.00	0.00	2.27	68.08
Sep-2035	0.01	0.000	0.03	0.08	0.00	0.00	0.00	8.27	5.21	17.91	0.00
Oct-2035	0.01	0.244	0.01	0.80	0.31	0.00	0.00	0.00	0.00	0.00	67.01
Nov-2035	0.00	0.000	0.00	0.38	0.00	0.76	0.00	1.88	0.00	5.16	0.00
Dec-2035	0.00	0.000	0.00	0.26	0.00	0.00	0.00	8.27	8.64	23.51	0.00

Table B3 (Cont.)- NODOS Project- CALSIM Model – Low Case, 30-year Planning Period

Jan-2036	0.00	0.000	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	63.17
Feb-2036	0.00	0.000	0.01	0.07	0.00	0.09	0.00	0.00	0.00	0.29	62.96
Mar-2036	0.43	0.000	0.52	0.06	7.93	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2036	0.00	0.000	0.17	0.84	0.00	4.20	0.00	0.00	0.00	14.51	0.00
May-2036	0.00	1.111	0.24	0.91	0.00	3.56	0.00	0.00	0.00	11.91	0.00
Jun-2036	0.00	0.000	0.33	0.97	0.00	4.95	0.00	2.37	0.00	18.41	0.00
Jul-2036	0.01	0.897	0.38	1.46	0.98	0.00	0.00	0.00	0.00	0.00	57.80
Aug-2036	0.01	0.498	0.31	0.87	0.55	0.00	0.00	0.00	0.00	0.00	57.80
Sep-2036	0.00	0.343	0.14	0.00	0.38	0.00	0.00	0.00	0.00	0.00	57.80
Oct-2036	0.00	3.710	0.09	0.32	0.00	0.00	0.00	0.00	0.00	0.00	57.77
Nov-2036	0.00	1.525	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	57.82
Dec-2036	0.00	0.000	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	57.90
Jan-2037	0.00	0.000	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	57.90
Feb-2037	1.22	0.000	1.00	0.18	14.96	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2037	0.43	0.000	0.00	0.06	0.72	0.00	0.00	0.00	0.00	0.00	61.12
Apr-2037	0.00	0.000	0.23	0.90	0.00	4.09	0.00	0.00	0.00	13.34	0.00
May-2037	0.01	0.305	0.44	1.72	0.34	0.00	0.00	0.00	0.00	0.00	59.03
Jun-2037	0.01	0.394	0.70	1.93	0.44	0.00	0.00	0.00	0.00	0.00	59.01
Jul-2037	0.01	0.534	0.88	1.70	0.60	0.00	0.00	0.00	0.00	0.00	58.99
Aug-2037	0.01	0.458	0.70	1.24	0.51	0.00	0.00	0.00	0.00	0.00	58.96
Sep-2037	0.01	0.316	0.10	0.00	0.35	0.00	0.00	0.00	0.00	0.00	58.95
Oct-2037	0.00	0.000	0.00	0.29	0.00	1.71	0.00	1.34	0.00	6.89	0.00
Nov-2037	0.00	1.515	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	57.82
Dec-2037	0.00	0.000	0.00	0.11	0.01	0.00	0.00	0.00	0.00	0.00	57.91
Jan-2038	1.52	0.000	0.96	0.22	15.01	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2038	3.12	47.533	2.44	0.38	80.75	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2038	1.17	47.533	2.44	0.14	89.14	0.00	0.00	0.00	0.00	0.00	0.00
Apr-2038	0.01	47.533	0.52	2.17	44.45	0.00	0.00	0.00	0.00	0.00	0.00
May-2038	0.01	47.533	0.60	1.75	46.81	0.00	0.00	0.00	0.00	0.00	0.00
Jun-2038	0.01	47.533	1.16	2.46	48.95	0.00	0.00	0.00	0.00	0.00	0.00
Jul-2038	0.00	0.000	1.58	1.23	0.00	6.13	0.00	8.27	5.87	58.52	0.00
Aug-2038	0.00	0.000	1.26	0.91	0.00	5.89	0.00	3.12	0.00	35.65	0.00
Sep-2038	0.00	0.000	0.34	0.51	0.00	0.13	0.00	8.27	8.27	46.00	0.00
Oct-2038	0.00	0.000	0.18	0.44	0.00	2.21	0.00	8.27	8.24	40.26	0.00
Nov-2038	0.00	0.000	0.00	0.38	0.00	0.44	0.00	8.27	1.18	17.33	0.00
Dec-2038	5.56	0.000	2.28	0.83	57.00	0.00	0.00	0.00	0.00	0.00	0.00
Jan-2039	1.91	0.000	0.61	0.28	16.57	0.00	0.00	0.00	0.00	0.00	0.00
Feb-2039	1.57	0.000	1.25	0.23	29.06	0.00	0.00	0.00	0.00	0.00	0.00
Mar-2039	0.00	0.000	0.03	0.04	0.00	0.00	0.00	8.27	8.27	46.59	0.00
Apr-2039	0.00	0.000	0.60	1.12	0.00	6.18	0.00	8.27	8.27	72.58	0.00
May-2039	0.00	0.557	0.68	0.71	0.00	4.30	0.00	0.00	0.00	19.61	0.00
Jun-2039	0.00	0.000	1.01	1.16	0.00	6.94	0.00	8.27	0.82	44.17	0.00
Jul-2039	0.00	0.000	0.99	0.81	0.00	7.53	0.00	8.27	8.27	66.49	0.00
Aug-2039	0.00	9.708	1.18	0.44	0.00	0.00	0.00	8.27	2.65	14.24	0.00
Sep-2039	0.00	1.033	0.39	0.29	0.00	0.00	0.00	3.15	0.00	4.04	64.95
Oct-2039	0.00	4.217	0.05	0.29	0.00	0.37	0.00	0.00	0.00	1.35	66.28
Nov-2039	0.00	0.000	0.02	0.24	0.00	0.00	0.00	8.27	8.07	21.59	0.00
Dec-2039	3.06	0.000	1.93	0.47	34.55	0.00	0.00	0.00	0.00	0.00	0.00

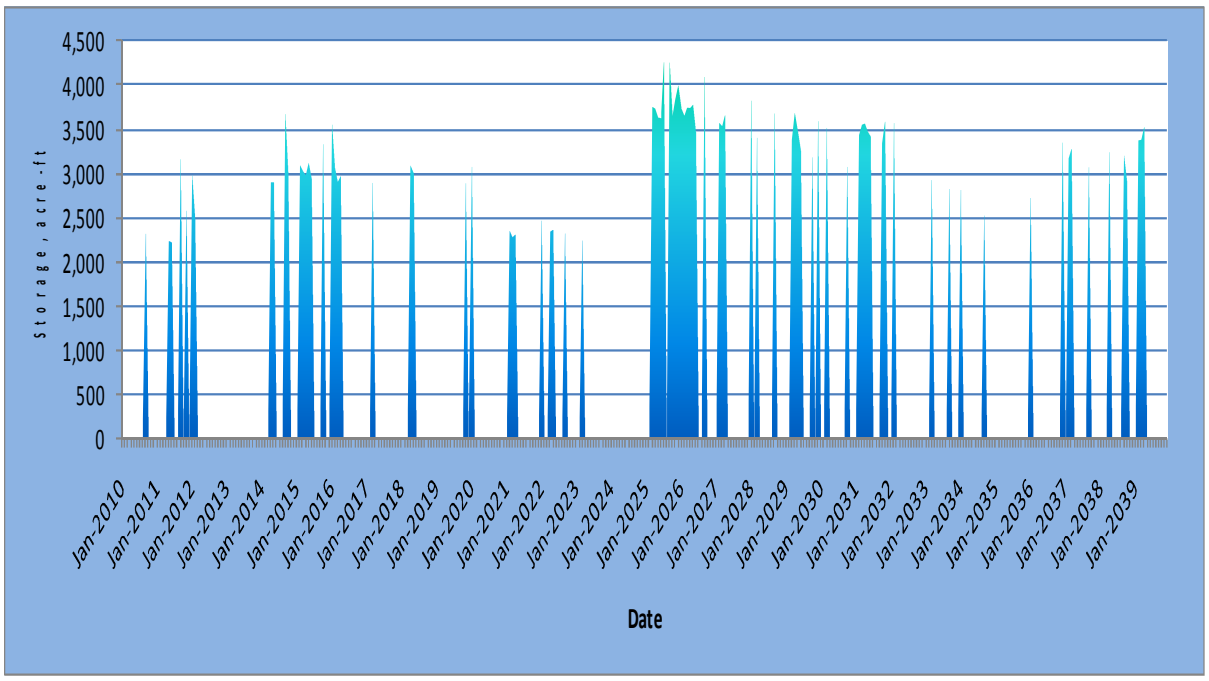

Figure B11- NODOS Project, Funks Reservoir Pump-Back Operations- High Case

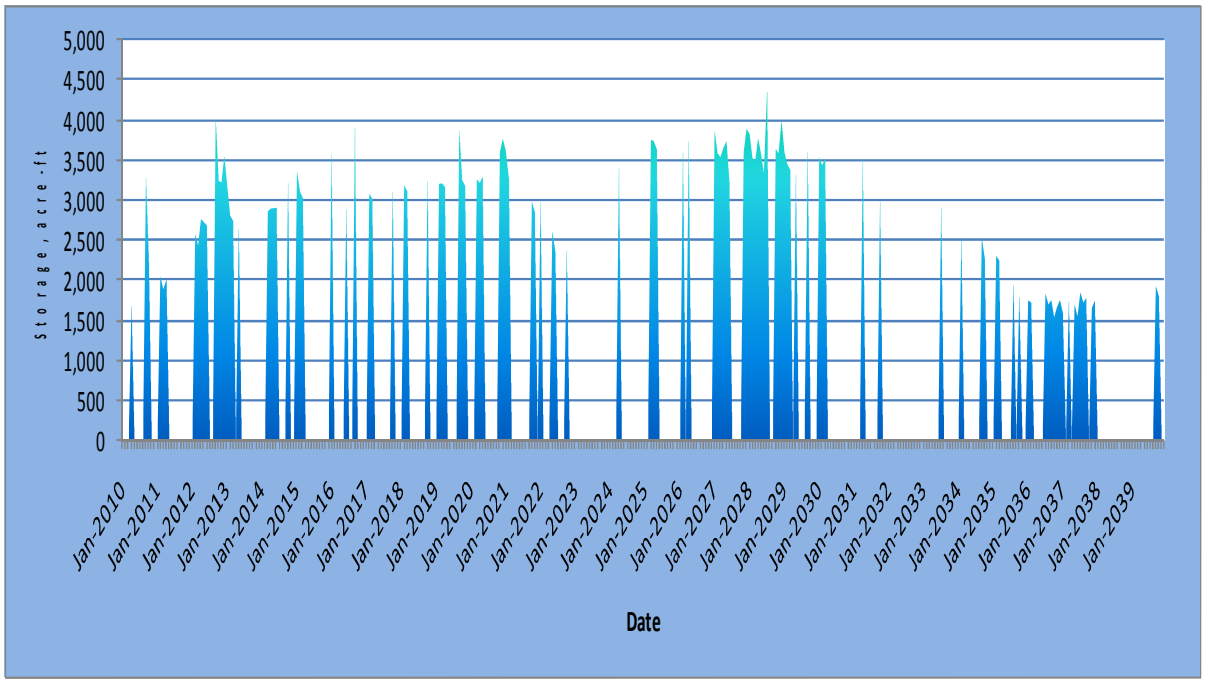

Figure B12- NODOS Project, Funks Reservoir Pump-Back Operations- Low Case

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Appendix C- NODOS Project Modeling Results

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Table C1- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, High Deliveries Case

Pumping-Generation Site	NPV	Year Project in Service							
		1	2	3	4	5	6	7	8
NODOS Pumping	**Period Total**								
TC Canal Pumping	**-7,292**	-427	-430	-123	-487	-466	-279	-194	-283
GCID Pumping	**-7,571**	-377	-424	-305	-339	-356	-413	-298	-297
Sac River Pumping	**-57,370**	-5,239	-7,613	0	-6,500	-4,032	-610	0	-1,064
TRR Pumping	**-9,673**	-751	-509	-165	-644	-669	-509	-193	-475
Sites Pumping	**-180,853**	-13,077	-16,211	-453	-15,550	-14,529	-4,759	-742	-7,381
Subtotal	**-262,758**	**-19,871**	**-25,187**	**-1,047**	**-23,519**	**-20,052**	**-6,571**	**-1,428**	**-9,499**
NODOS Generation	**Period Total**								
Sites Genereration On-Peak	**136,857**	3,948	3,760	12,855	8,001	5,408	2,292	7,406	7,589
TRR Generation On-Peak	**18,362**	990	523	1,575	960	793	359	1,031	1,057
TRR Genenration Off-Peak	**220**	0	0	33	0	40	0	46	18
Sac River Generation On-Peak	**21,306**	807	328	1,965	1,479	440	440	957	979
Sac River Genenration Off-Peak	**8,692**	330	194	1,004	596	178	55	316	498
Subtotal	**185,437**	**6,076**	**4,805**	**17,432**	**11,036**	**6,859**	**3,146**	**9,756**	**10,140**
PumpBack Operations	**53,575**	336	1,663	896	0	2,402	3,542	2,404	579
NODOS Project Total	**-23,746**	**-13,459**	**-18,719**	**17,281**	**-12,484**	**-10,791**	**116**	**10,732**	**1,219**

Notes

Cash Flow reported pre-tax in PV($000).

Evaluation performed 10/23/2009 2:12:27 PM.

Report updated at 02:28:53 PM.

Table C1 (Cont.)- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, High Deliveries Case

9	10	11	12	13	14	15	16	17	18	19
-387	-343	-205	-183	-144	-252	-400	-237	-162	-282	-103
-286	-268	-227	-241	-265	-322	-273	-341	-282	-228	-199
-2,690	-1,693	-183	-2,239	-13	-2,763	-6,083	-2,123	-112	-1,362	-9
-442	-407	-113	-162	-172	-463	-640	-154	-275	-586	-166
-10,644	-7,597	-2,770	-3,380	-1,026	-6,440	-14,802	-5,252	-1,689	-7,808	-1,558
-14,449	**-10,308**	**-3,497**	**-6,206**	**-1,620**	**-10,240**	**-22,198**	**-8,106**	**-2,520**	**-10,267**	**-2,035**
5,955	7,705	7,820	4,441	3,114	1,560	5,820	92	2,594	5,220	4,707
782	1,002	1,045	441	674	464	636	4	343	543	691
0	6	10	0	0	0	0	0	0	0	11
988	1,104	1,288	1,004	684	274	962	389	278	836	468
270	417	577	524	216	0	395	14	131	324	228
7,995	**10,234**	**10,741**	**6,410**	**4,688**	**2,298**	**7,812**	**499**	**3,346**	**6,924**	**6,105**
1,113	629	694	1,328	1,955	485	0	7,484	5,377	2,047	2,263
-5,340	**554**	**7,938**	**1,532**	**5,023**	**-7,457**	**-14,386**	**-123**	**6,202**	**-1,297**	**6,333**

Table C1 (Cont.)- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, High Deliveries Case

20	21	22	23	24	25	26	27	28	29	30
-208	-250	-133	-137	-132	-158	-236	-157	-132	-187	-174
-229	-193	-207	-145	-175	-134	-154	-168	-137	-149	-138
-858	-2,101	-854	0	-887	-301	-2,861	-2,796	-760	-1,238	-386
-69	-376	-41	-37	-274	-126	-248	-356	-230	-259	-162
-4,132	-7,566	-1,618	-1,106	-3,865	-2,335	-6,300	-5,801	-3,725	-5,214	-3,521
-5,496	**-10,486**	**-2,853**	**-1,425**	**-5,335**	**-3,053**	**-9,798**	**-9,278**	**-4,985**	**-7,048**	**-4,381**
3,349	3,979	1,330	6,129	3,414	3,729	2,794	3,026	3,654	2,340	2,826
282	494	90	557	531	494	443	339	564	320	335
0	5	0	0	21	27	0	0	3	0	0
535	511	353	1,007	447	622	513	533	388	280	445
237	190	129	462	265	294	260	235	147	91	117
4,402	**5,179**	**1,902**	**8,155**	**4,679**	**5,166**	**4,010**	**4,132**	**4,757**	**3,032**	**3,722**
3,867	1,295	4,489	635	1,094	1,055	0	1,124	1,648	1,572	1,600
2,774	**-4,013**	**3,539**	**7,365**	**438**	**3,167**	**-5,787**	**-4,022**	**1,421**	**-2,444**	**940**

Table C2- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, Median Deliveries Case

Pumping-Generation Site	NPV	Year Project in Service							
		1	2	3	4	5	6	7	8
NODOS Pumping	**Period Total**								
TC Canal Pumping	**-6,971**	-283	-211	-327	-448	-396	-239	-216	-168
GCID Pumping	**-7,545**	-426	-322	-344	-332	-310	-266	-282	-307
Sac River Pumping	**-45,386**	-642	0	-1,209	-3,076	-1,952	-212	-2,593	-15
TRR Pumping	**-9,069**	-515	-210	-548	-520	-473	-130	-190	-200
Sites Pumping	**-158,002**	-4,685	-807	-8,475	-12,290	-8,794	-3,206	-3,934	-1,187
Subtotal	**-226,974**	**-6,551**	**-1,551**	**-10,904**	**-16,666**	**-11,925**	**-4,053**	**-7,215**	**-1,878**
NODOS Generation	**Period Total**								
Sites Genereration On-Peak	**133,478**	2,377	8,056	8,804	6,920	8,886	9,194	5,277	3,652
TRR Generation On-Peak	**17,743**	403	1,192	1,276	943	1,201	1,269	536	815
TRR Genenration Off-Peak	**204**	403	1,192	1,276	943	1,201	1,269	536	815
Sac River Generation On-Peak	**21,461**	494	1,105	1,180	1,203	1,328	1,563	1,215	832
Sac River Genenration Off-Peak	**8,402**	59	362	607	318	500	695	643	258
Subtotal	**181,288**	**3,736**	**11,908**	**13,142**	**10,327**	**13,117**	**13,991**	**8,207**	**6,371**
PumpBack Operations	**59,838**	1,347	1,103	383	883	581	628	1,174	1,704
NODOS Project Total	**14,151**	**-1,468**	**11,459**	**2,622**	**-5,455**	**1,772**	**10,565**	**2,167**	**6,197**

Notes

Cash Flow reported pre-tax in PV($000).

Evaluation performed 10/23/2009 2:12:27 PM.

Report updated at 02:28:53 PM.

Table C2 (Cont.)- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, Median Deliveries Case

9	10	11	12	13	14	15	16	17	18	19
-293	-459	-277	-189	-340	-126	-265	-316	-167	-169	-162
-374	-314	-394	-327	-274	-243	-289	-244	-259	-178	-214
-3,197	-6,937	-2,499	-129	-1,653	-11	-1,105	-2,659	-1,070	0	-1,074
-542	-735	-181	-327	-708	-204	-89	-476	-51	-45	-335
-7,503	-16,896	-6,194	-2,003	-9,442	-1,919	-5,336	-9,581	-2,032	-1,366	-4,718
-11,910	**-25,340**	**-9,545**	**-2,975**	**-12,416**	**-2,503**	**-7,084**	**-13,277**	**-3,579**	**-1,758**	**-6,502**
1,823	6,761	109	3,091	6,268	5,737	4,207	5,000	1,667	7,553	4,162
559	760	5	417	665	855	356	626	114	696	658
559	760	5	417	665	855	356	626	114	696	658
335	1,161	472	332	1,019	576	686	641	448	1,261	550
0	470	17	165	407	291	295	248	163	577	334
3,277	**9,913**	**606**	**4,422**	**9,024**	**8,315**	**5,900**	**7,141**	**2,505**	**10,782**	**6,362**
405	0	6,787	4,759	2,030	2,434	4,590	1,542	5,233	686	1,222
-8,228	**-15,427**	**-2,152**	**6,207**	**-1,362**	**8,246**	**3,407**	**-4,594**	**4,159**	**9,709**	**1,081**

Table C2 (Cont.)- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, Median Deliveries Case

20	21	22	23	24	25	26	27	28	29	30
-188	-281	-187	-160	-227	-212	-127	-115	-155	-134	-134
-159	-183	-202	-165	-181	-167	-179	-126	-182	-150	-152
-357	-3,412	-3,326	-918	-1,503	-469	-1,320	-164	-2,034	-1,495	-354
-150	-296	-425	-278	-315	-197	-35	-126	-295	-355	-115
-2,779	-7,514	-6,893	-4,500	-6,333	-4,280	-2,471	-1,154	-4,792	-4,634	-2,283
-3,634	**-11,686**	**-11,033**	**-6,021**	**-8,560**	**-5,326**	**-4,132**	**-1,685**	**-7,459**	**-6,768**	**-3,039**
4,456	3,338	3,634	4,410	2,840	3,433	375	3,349	1,520	3,765	2,813
603	540	415	694	396	414	3	397	180	514	239
603	540	415	694	396	414	3	397	180	514	239
767	634	655	473	341	550	324	452	117	305	444
354	314	288	186	117	144	46	143	74	134	194
6,783	**5,366**	**5,407**	**6,458**	**4,090**	**4,955**	**752**	**4,737**	**2,070**	**5,231**	**3,929**
1,117	0	1,219	1,821	1,753	1,828	5,615	2,492	2,879	1,823	1,801
4,266	**-6,320**	**-4,407**	**2,258**	**-2,717**	**1,458**	**2,235**	**5,543**	**-2,510**	**286**	**2,691**

Table C3- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, Low Deliveries Case

Pumping-Generation Site	NPV	Year Project in Service							
		1	2	3	4	5	6	7	8
NODOS Pumping	**Period Total**								
TC Canal Pumping	**-6,578**	-429	-436	-284	-261	-352	-312	-310	-372
GCID Pumping	**-7,171**	-350	-341	-398	-283	-411	-346	-347	-297
Sac River Pumping	**-47,780**	-2,800	-942	-3,013	-348	-4,670	-3,503	-805	-1,490
TRR Pumping	**-7,848**	-613	-410	-78	-295	-683	-835	-271	-583
Sites Pumping	**-154,562**	-11,756	-8,796	-5,511	-2,689	-11,035	-10,895	-5,291	-9,251
Subtotal	**-223,939**	**-15,948**	**-10,925**	**-9,284**	**-3,876**	**-17,151**	**-15,891**	**-7,024**	**-11,992**
NODOS Generation	**Period Total**								
Sites Genereration On-Peak	**128,900**	5,414	7,163	861	7,545	3,556	8,671	6,662	6,897
TRR Generation On-Peak	**16,476**	918	990	9	1,001	463	1,315	621	1,037
TRR Genenration Off-Peak	**230**	0	0	0	0	0	70	0	38
Sac River Generation On-Peak	**20,867**	792	1,342	834	1,156	302	801	1,170	866
Sac River Genenration Off-Peak	**7,804**	239	345	118	359	190	332	492	167
Subtotal	**174,277**	**7,363**	**9,841**	**1,822**	**10,061**	**4,510**	**11,188**	**8,946**	**9,005**
PumpBack Operations	**65,437**	961	768	4,879	2,022	2,728	1,848	2,143	1,856
NODOS Project Total	**15,775**	**-7,624**	**-317**	**-2,583**	**8,207**	**-9,913**	**-2,855**	**4,065**	**-1,131**

Notes

Cash Flow reported pre-tax in PV($000).

Evaluation performed 10/23/2009 2:12:27 PM.

Report updated at 02:28:53 PM.

Table C3 (Cont.)- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, Low Deliveries Case

9	10	11	12	13	14	15	16	17	18	19
-304	-213	-254	-52	-70	-286	-382	-316	-343	-113	-113
-298	-265	-320	-245	-181	-235	-289	-236	-234	-239	-242
-1,950	-328	-2,537	-65	-230	-3,846	-4,189	-2,857	-2,444	-2,149	-962
-548	-181	-85	-1	-93	-247	-537	-332	-466	-4	-1
-7,895	-2,032	-6,213	-28	-1,201	-7,954	-13,272	-8,857	-10,313	-2,388	-762
-10,995	**-3,020**	**-9,409**	**-391**	**-1,774**	**-12,569**	**-18,668**	**-12,597**	**-13,800**	**-4,893**	**-2,079**
5,673	4,083	2,519	8,521	4,279	5,379	5,259	6,638	4,865	2,020	406
745	811	324	904	139	787	642	596	650	166	71
0	17	0	7	0	14	17	5	6	0	0
840	214	587	1,287	1,381	992	734	1,105	773	319	213
314	0	91	572	763	359	362	594	120	108	38
7,573	**5,125**	**3,521**	**11,292**	**6,562**	**7,530**	**7,014**	**8,938**	**6,415**	**2,613**	**729**
1,994	4,008	3,361	2,713	2,237	0	617	2,228	1,369	5,801	7,485
-1,429	**6,113**	**-2,527**	**13,614**	**7,025**	**-5,038**	**-11,037**	**-1,431**	**-6,016**	**3,521**	**6,135**

Table C3 (Cont.)- Cash Flow Report for the NODOS Project, CALSIM 30-Year Planning Period, Low Deliveries Case

20	21	22	23	24	25	26	27	28	29	30
-171	-139	-222	-217	-95	-71	-48	-34	-59	-199	-121
-212	-157	-197	-153	-168	-147	-123	-93	-123	-159	-82
-1,175	-22	-1,311	-352	-350	-810	-1,060	-124	-52	-3,178	-218
-503	-109	-284	-148	-128	-62	-59	-7	-24	-169	-94
-4,369	-1,123	-6,056	-4,773	-1,961	-1,427	-1,860	-155	-252	-5,311	-1,136
-6,430	**-1,549**	**-8,070**	**-5,641**	**-2,703**	**-2,517**	**-3,150**	**-414**	**-511**	**-9,016**	**-1,652**
3,512	5,177	4,174	5,941	3,605	2,720	2,217	426	186	1,927	2,605
620	672	564	604	322	454	298	169	74	199	307
1	12	44	0	0	0	0	0	0	0	0
138	707	370	794	921	486	572	31	18	469	650
107	196	167	439	397	167	293	0	0	192	283
4,379	**6,764**	**5,319**	**7,779**	**5,245**	**3,828**	**3,380**	**626**	**278**	**2,788**	**3,846**
3,419	2,025	1,181	0	629	1,374	1,635	2,655	2,840	0	660
1,367	**7,240**	**-1,571**	**2,137**	**3,171**	**2,685**	**1,864**	**2,868**	**2,608**	**-6,228**	**2,854**

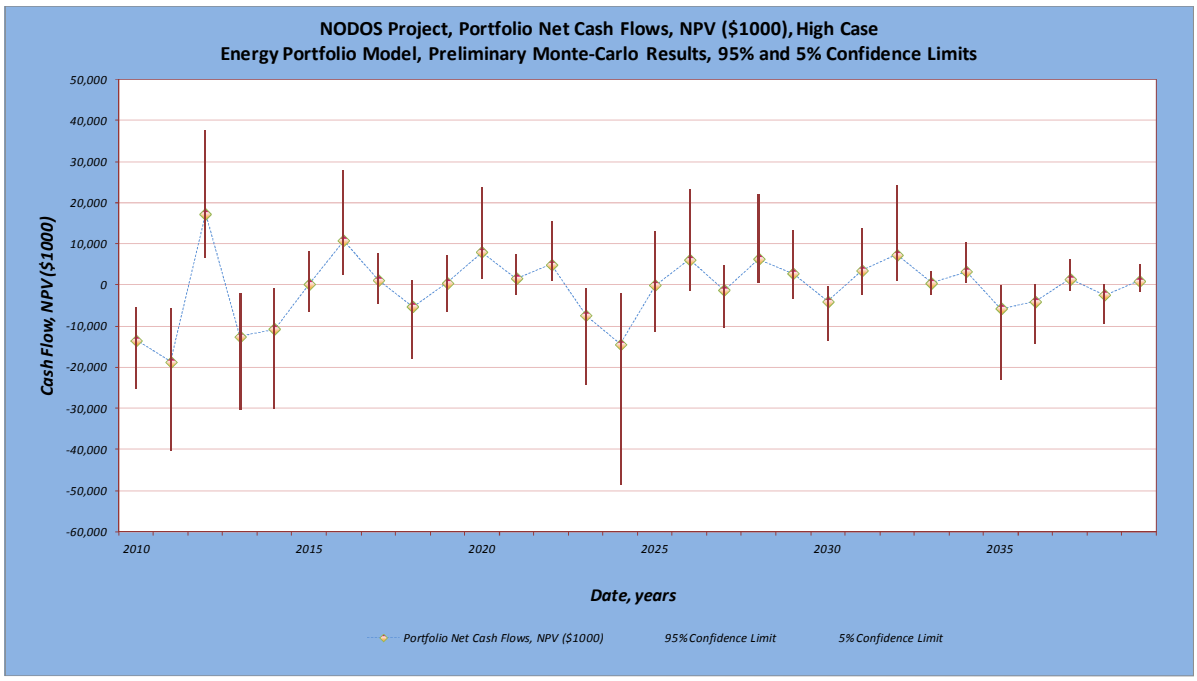

Figure C1- NODOS Project, Portfolio Cash Flow, 2010 through 2039, High Case

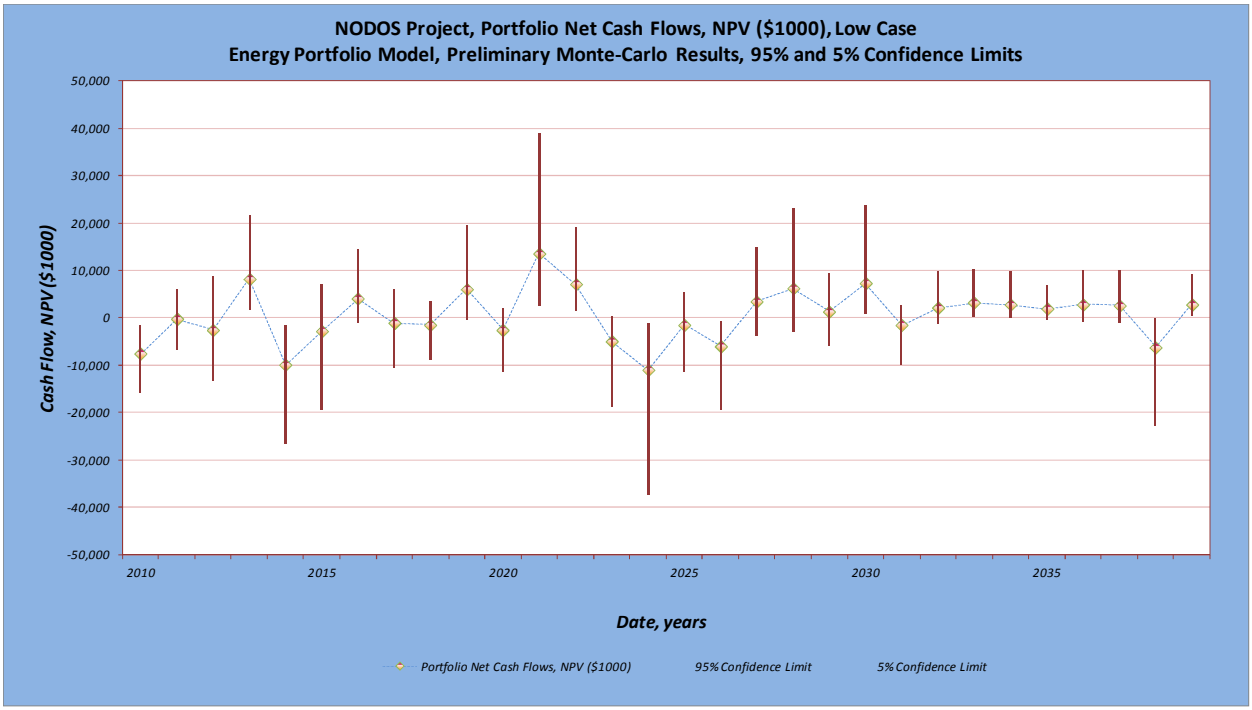

Figure C2- NODOS Project, Portfolio Cash Flow, 2010 through 2039, Low Case

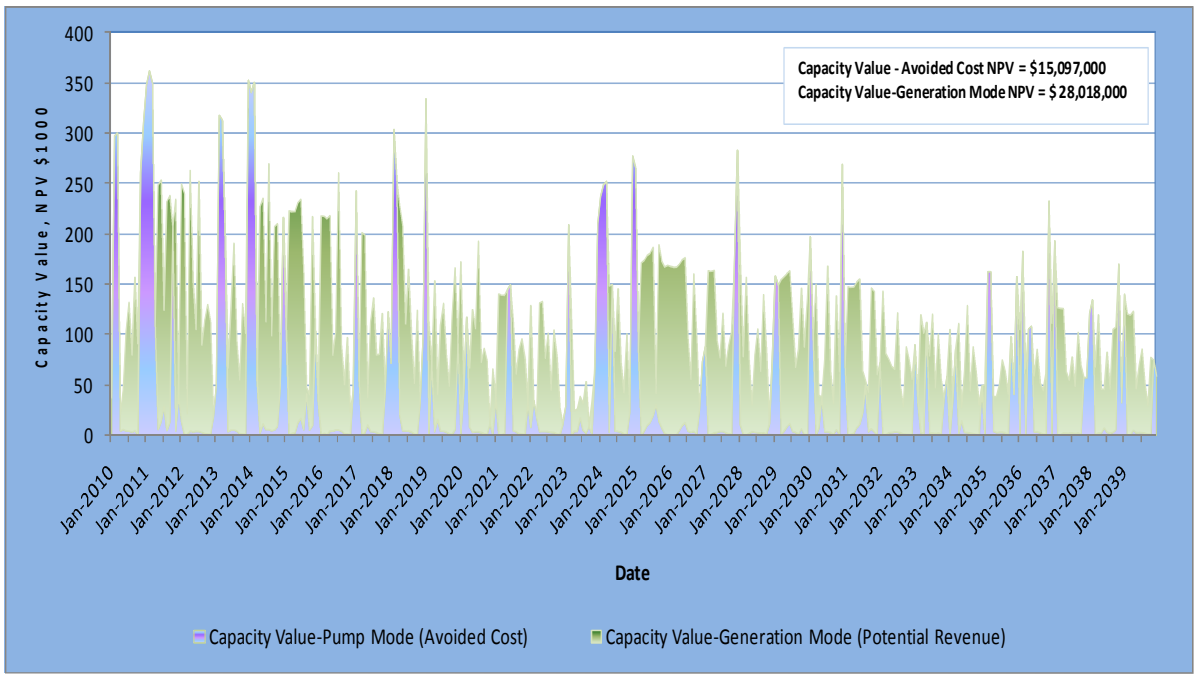

Figure C3- NODOS Project, Capacity Revenues and Obligations, High Case

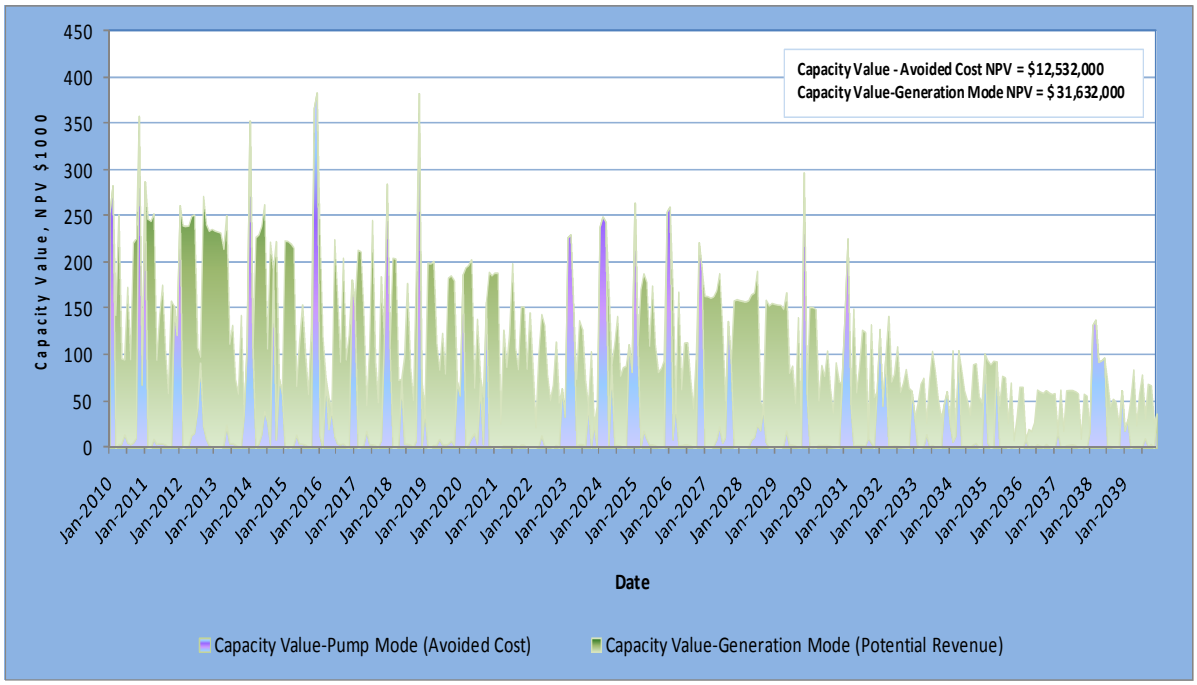

Figure C4- NODOS Project, Capacity Revenues and Obligations, Low Case

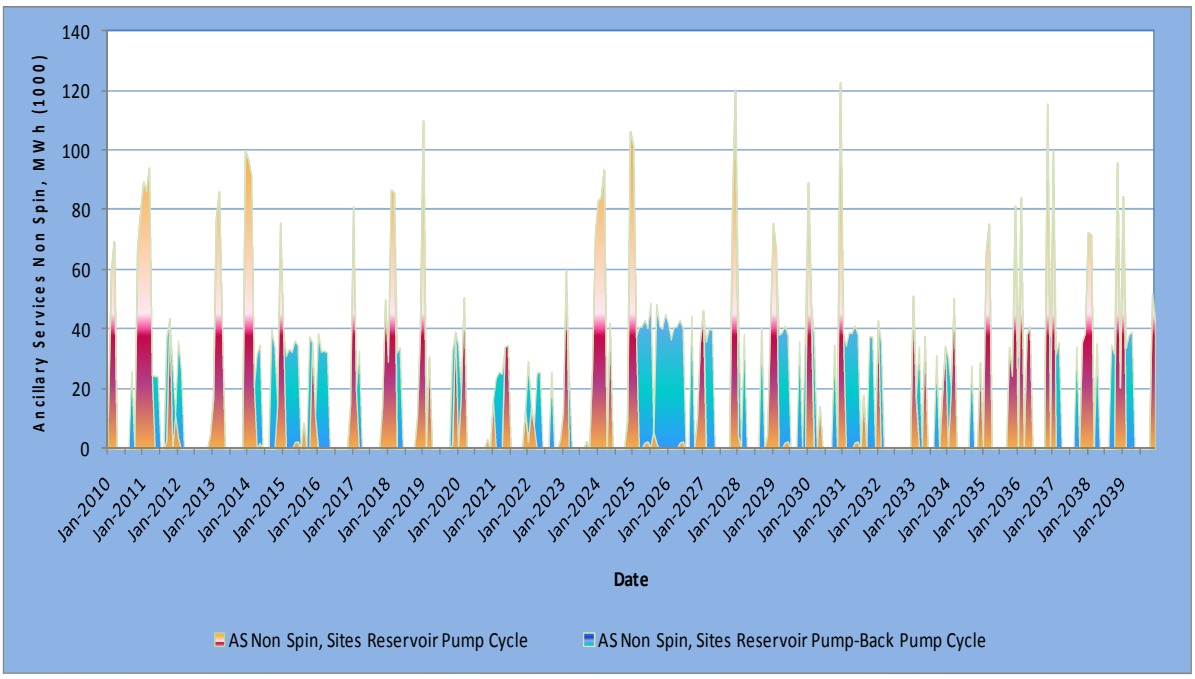

Figure C5- Ancillary Service Potential, Sites Reservoir Pumping Cycle, High Case

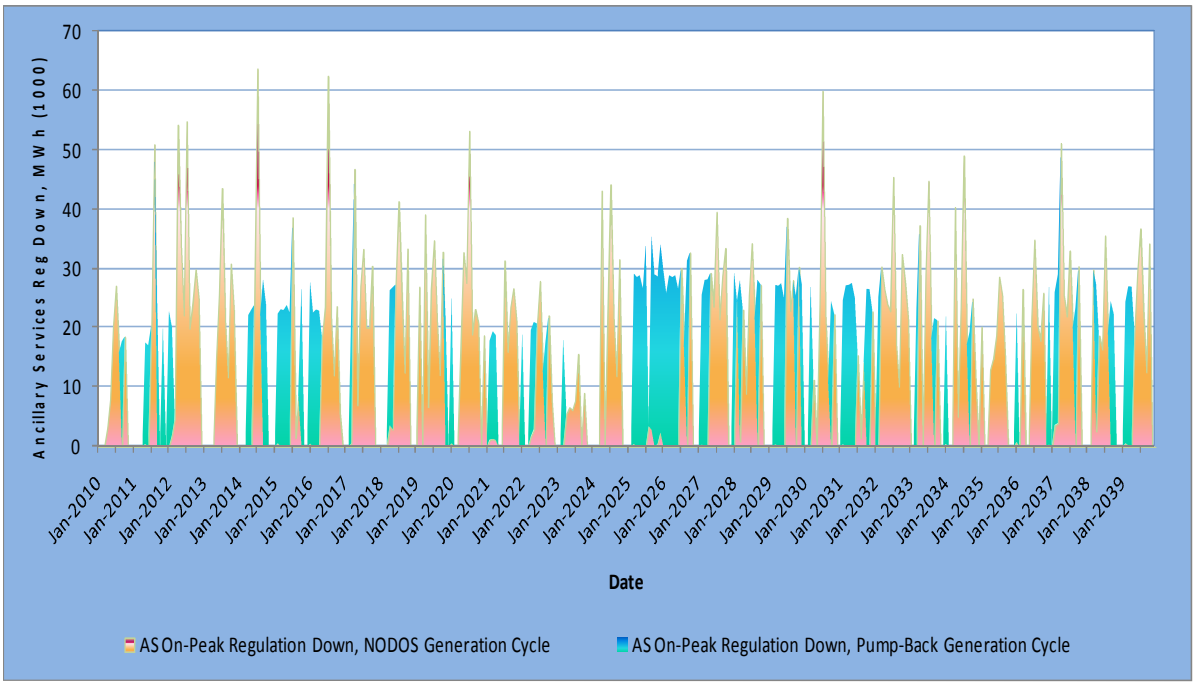

Figure C6- Ancillary Service Potential, NODOS Project Generation Cycle, High Case

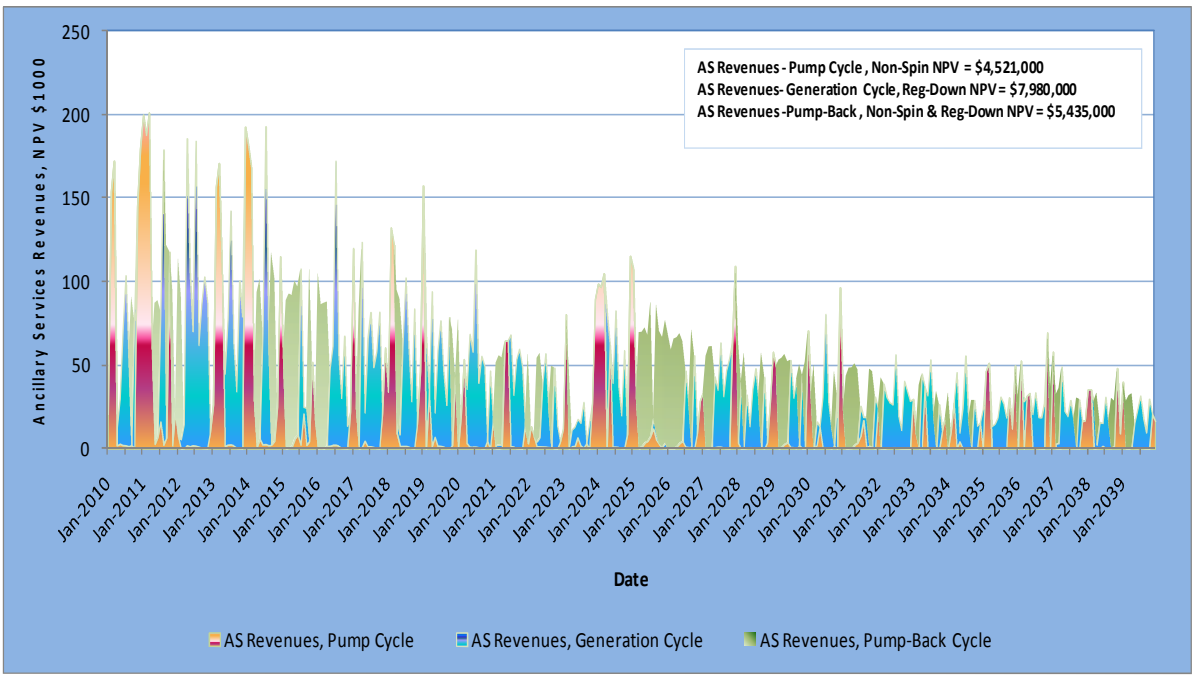

Figure C7- Ancillary Service Potential, Monthly NODOS Project Cash flows, High Case

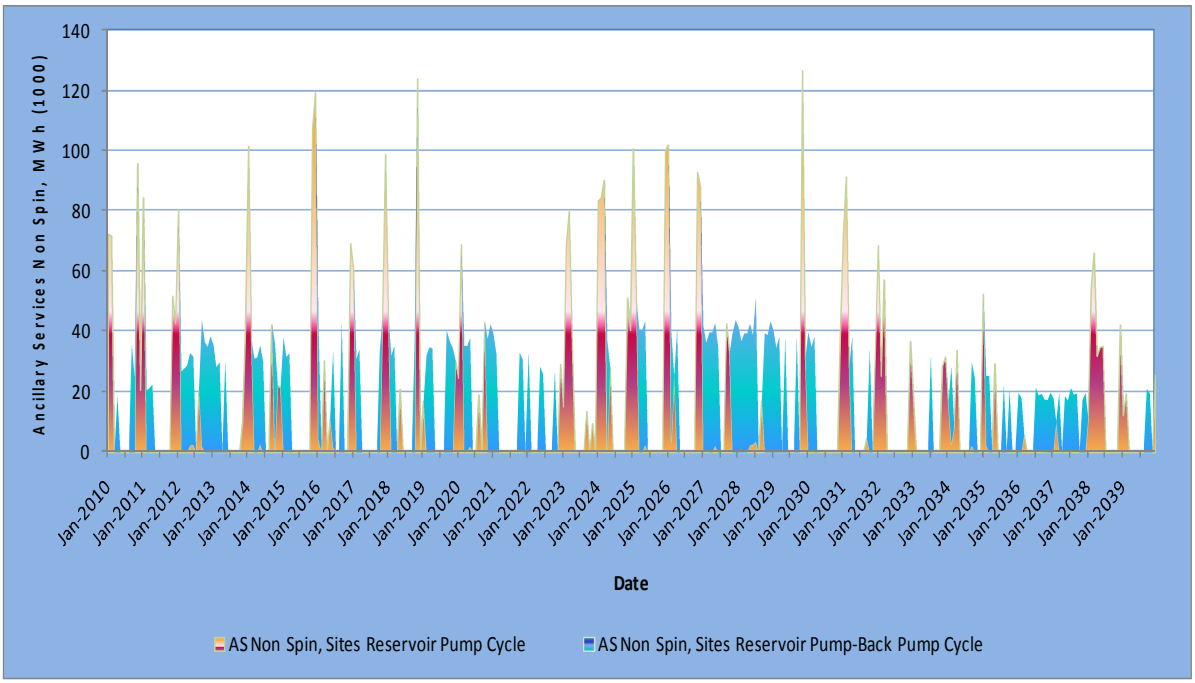

Figure C8- Ancillary Service Potential, Sites Reservoir Pumping Cycle, Low Case

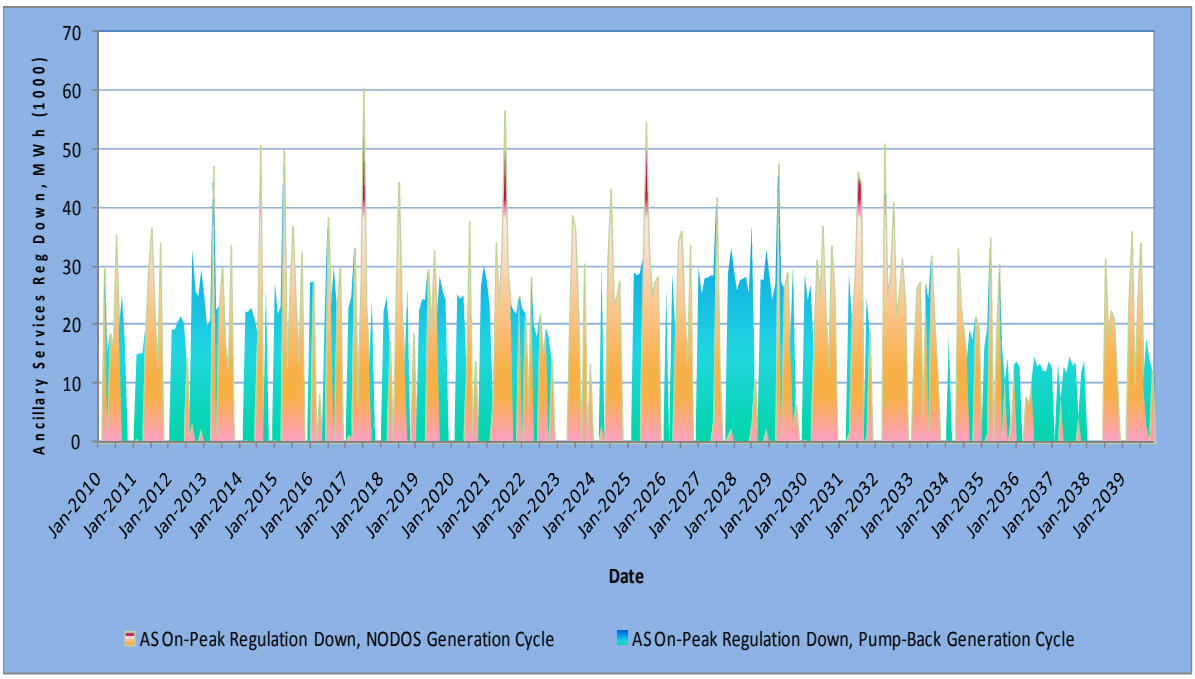

Figure C9- Ancillary Service Potential, NODOS Project Generation Cycle, Low Case

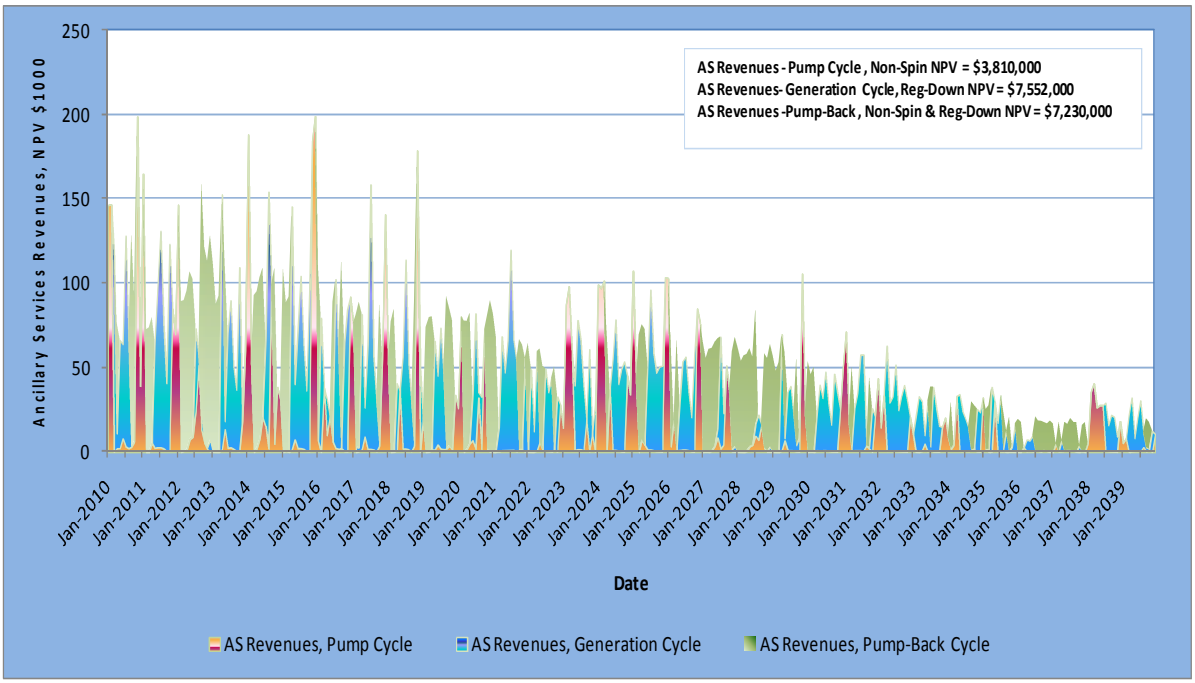

Figure C10- Ancillary Service Potential, Monthly NODOS Project Cash flows, Low Case

Phase 2

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California Department of Water Resources

North of Delta off-stream Storage (NODOS) Project

Power Planning Study (Phase 2)

Power and Risk Office

October, 2011

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TABLE OF CONTENT

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Executive Summary

PARO's Power Planning Branch was tasked by the Division of Statewide Integrated Water Management (DSIWM) to conduct a power planning study on the proposed North-of-Delta Offstream Storage Project (NODOS Project). The NODOS Project is in the planning phase, at a feasibility level stage. The objective of the PARO power planning study is to analyze the proposed action alternatives, from a power planning perspective. The Project's action alternatives were developed pursuant to NEPA and CEQA Notice of Intent and Notice of Preparation (that were filed and published in November 2001 by Reclamation and DWR respectively) to investigate surface storage opportunities north of the Delta. The Study objective includes optimization of the NODOS Project Power operations, and a financial assessment of the NODOS Project obligations and revenues resulting from its exposure to the energy market. Also, the power planning study will provide a roadmap for the transmission interconnection planning process for the Project facilities.

The PARO power planning study is being conducted in multiple phases, as the NODOS Project planning and implementation processes evolve with time. A first phase was completed in 2009, in which the designed capacities and the corresponding operational scenarios for the Project's components were analyzed, and some design modifications were recommended. The current (second) phase of the Study is meant to analyze the three action alternatives identified for the NODOS Project, relative to the "no action" alternative, and to optimize power operations (with sustained water operations) to better capture power market opportunities and utilize the inherent excess capacities (resulting from hydrology swings) for the different components of the project. Also, in this phase of the study, needed design and operational changes, that will add valuable operational flexibilities are identified. Operational flexibilities will be crucial for the NODOS Project to be able to participate in a complex and evolving energy market, yet, sustain intended water diversions and deliveries. A third phase of the power planning study will follow, subject to DSIWM's desire to explore additional market opportunities (such as renewables integration) that may enhance the NODOS Project's viability and value.

The NODOS Project is an off-stream seasonal storage facility, proposed to be built, ten miles west of the town of Maxwell, CA. The NODOS Project is composed of two main reservoirs (Sites and Holthouse/Funks), and a conveyance system that includes a number of physical components (intakes, pumps, canals, pipes, and terminal structures). The NODOS Project is designed to capture the annual seasonal cycle of the Sacramento River, where flood water could be captured, stored, and re-delivered at a later time. The major storage component of the NODOS Project is Sites Reservoir, ranging from 1.27 (Alt A) to a 1.81(Alt B & Alt C) million acre-ft reservoir. Water would be delivered to and out of Sites Reservoir through a network of pumping/generating plants and conveyances. Three diversion points (Alt B will have two diversion points) along the Sacramento River will be used to capture and divert/pump water to the NODOS Project.

DSIWM supplied PARO's Power Planning Branch with the most recent CALSIM II model runs, available to them, that describes the intended operations of the NODOS Project, based on the 82 years of historical hydrology record. The CALSIM II results are used to identify a Median Case, 30-year time-series, for the NODOS Project diversions from the Sacramento River which is the basis for the study analysis. Project operations, constraints, and assumptions, as envisioned by the NODOS Project team, are maintained and further optimized to maximize the value of the Project's assets.

Daily pumpback operations are superimposed (where and when possible) to better utilize excess capacities of Project facilities (resulting from hydrology swings), and to capture energy market opportunities. The intent is to generate an additional revenue stream that would enhance the Project's viability and value. A dispatch profile for the daily pumpback operations is generated based on market opportunities, efficiency of Sites Reservoir pumping/generating plant, and available storage at Holthouse Reservoir.

NODOS Energy Portfolio Value

Two operational scenarios are used to model each of the three action alternatives considered for the Project, one is labeled as "Incidental," and a second one is labeled as "Optimized." For the "Incidental" scenario, pumping and generating at the different NODOS Project facilities are driven by water diversions and releases (i.e. "Incidental"). For the "Optimized" scenario, pumping and generating at the Sites Reservoir pumping-generating plant are reshaped to minimize pumping costs obligations (Pumping in Off-Peak hours) and to maximize energy generation revenues (Generating in Super-Peak hours) for the Project. Also, optimizing operations allowed for the project's excess capacity to be used to superimpose pumpback operations on the NODOS Project operational modes.

For the 30-year planning period, optimizing the NODOS Project operations resulted in additional revenues for the project in NPV totaling $72,503,000 for Alternative A, $76,343,000 for Alternative B, and $77,003,000 for Alternative C. For all three action alternatives considered for the NODOS Project, optimizing operations resulted in changing the net project cash flow from a negative to a positive cash flow – an improvement that would significantly enhance the economics of the project. For the NODOS Project "Incidental" operations, the net total Project's Power Portfolio value (generation revenues minus pumping costs) (for the Median Case of Project Diversions) in NPV is $-50,363,000, $-65,077,000, and $-54,206,000 for Alternatives A, B, and C, respectively. Whereas, for the NODOS Project "Optimized" operations, the net Project's Power Portfolio value in NPV is $22,140,000, $11,269,000, and $22,797,000 for Alternatives A, B, and C, respectively.

Capacity, Ancillary Services, and Renewable Integration

A crucial element of reliable grid operations, and relevant to the NODOS Project operations, is Resource Adequacy (RA). For the NODOS Project, RA obligations are a pseudo financial obligation in pumping/diversion cycle, and a revenue opportunity in generation/release cycle. For the NODOS Project, RA obligations for the pumping cycle are met through the "Self-Provided" provisions of current CAISO Tariff- provided that the Project meets CAISO participating load requirements. For a generation asset, there are two different levels of participation in CAISO's capacity market- local RA, and system RA based on the relative location of that specific asset to pre-identified congested local areas within the CAISO managed grid. Monetizing potential revenues for the NODOS Project from participation in the Capacity market is a difficult task. The uncertainty in projecting where and when RA products are needed will render any estimate worthless, at this time. So, a range of values is offered to describe potential revenues for the NODOS Project form RA offerings, and was based on a $2/ KW-year (for System RA) to $25.40/KW-year (for local RA products).

The CAISO procures Ancillary Services (AS) to ensure that it has adequate reserve generation capacity to maintain the electric system reliability and system frequency, by matching generation and load at all times under both normal and abnormal operating conditions. For the NODOS

Project pumping/generating facilities, if interconnected to CAISO grid, AS would be a significant operations and costs/revenues concern. A preliminary assessment for AS opportunities for the NODOS Project is conducted using the Median Case CALSIM II deliveries, for the 30-year planning period. For the pumping cycle, the NODOS Project will have the opportunity, as a participating load (meeting CAISO Tariff definition), to sell Non Spin AS into the CAISO market. For the generation cycle, the NODOS Project will have the opportunity to sell Regulation Down AS into the CAISO market. The average values for the Off-Peak Non-Spin, and On-Peak Regulation Down are calculated using, as basis, published clearing prices for the CAISO AS markets. For Alternative C of the NODOS Project, the total AS revenues from Non Spin (the pump mode) for the 30-year planning period in NPV is $4,925,000. The corresponding total AS revenues from Regulation Down (in the generation mode) for the Project in NPV is $9,198,000. The total AS revenues from the pumpback operations in NPV is $11,595,000. The NODOS Project total potential AS revenues in NPV is $25,718,000 for the 30-year planning period. It should be noted that the aforementioned AS revenues are only a measure of potential revenues based on current market trends- granted that the CAISO market will evolve overtime to accommodate load growth, renewable integration, regulatory changes, etc.

The California Renewable Energy Resources Act (CRERA), signed by California Governor Brown on April 12th, 2011, significantly increased the State's renewable portfolio standard (RPS) targets from 20% to 33% by 2020. CRERA also expanded the compliance obligations to include virtually all retail sales of electricity in California. In September 2010, CAISO undertook a multi phase stakeholder process (Renewable Integration Market and Product Review Initiative (RIMPR)), aimed at identifying changes to the energy market structure and at introducing new market products to reliably mitigate the impact of Renewable generation (Intermittent generation) as it penetrates the market. Other game changers in the power sector are energy storage technologies- among which and a very promising technology is pump-storage hydroelectric facilities. New role for energy storage includes making intermittent renewable energy facilities into dispatchable resources and enhancing grid reliability and power quality. Other forces driving the need for energy storage technologies are climate change policies, smart grid initiatives, and the desire to improve utilization of generation and transmission capacities.

For the NODOS Project, there is great potential for the project's generation and pumping assets to participate in providing renewable integration services as the market needs evolve. Although, the NODOS Project potential in renewable energy integration is certain, it is difficult to monetize that potential at this time because of the absence of a clear tradable market for these services. CAISO RIMPR may introduce new market products that the NODOS Project can provide, yet sustain its primary water storage and delivery objectives.

Conclusions-Second Phase

Under the Median Case deliveries of the NODOS Project, the estimated NPV of the Project's power portfolio (Energy only) for the 30-year planning period in NPV is estimated to be $22,140,000, $11,269,000, and $22,797,000 for Alternatives A, B, and C, respectively. Additional revenues are expected for the project's Power Portfolio from participation in the Capacity, Resource Adequacy, and energy storage markets. However, monetary values for these services are not included in project economics to avoid speculation. More work is needed to improve on the findings of the current phase of the study.

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1- Background

This report summarizes the second phase of PARO's Power Planning Study (Study) on the proposed NODOS Project, and recommends additional analyses that need to be performed in the next phase of the Study. This document reports the assumptions, the modeling approach, and the results of the second phase of the Study. Additional analyses and modeling will be needed to further explore operational scenarios and design adjustments for the different Project components that would enhance its viability and value. Changes in design parameters and optimization of operational scenarios, will add valuable operational flexibilities that will be needed for the Project to participate in a complex energy market, yet, maintain water, flood, fish, environmental, and power objectives.

NODOS Project is an off-stream seasonal storage facility, proposed to be built, ten miles west of the town of Maxwell. The project is in the planning, feasibility level, stage. NODOS Project is composed of two main reservoirs, Sites and Holthouse (currently known as Funks Reservoir), and a conveyance system that includes a number of physical components (intakes, pumps, canals, pipes, and terminal structures). The project is designed to capture the annual seasonal cycle of the Sacramento River, where flood water could be stored during the high flow season and would be released during the low flow season.

Three alternatives are proposed for the NODOS Project in terms of the configurations, size, and operations of the different project components. The alternatives were formulated to satisfy a set of water and environmental objectives. The assumptions for the three NODOS Project alternatives are summarized in a January 5, 2011 document, and titled as "Definition of proposed alternatives for Evaluation in the North-of-the-Delta Off-stream Storage Administrative Draft Environmental Impact Report and Statement."

The major storage component of the NODOS Project, and common to all three alternatives, is Sites Reservoir, (a 1.2 million acre-ft for Alternative A, and a 1.8 million acre-ft for Alternative B, and C) that has up to 14,000 acre inundation footprint. For example, in Alternative C, Sites Reservoir storage capacity is generated through the construction of two main dams, Golden Gate Dam (310 ft Tall) and Sites Dam (290 ft Tall), and 9 saddle dams (ranging from 40 to 130 ft Tall), as shown in Figure-1. Two lower reservoirs (Holthouse and the Terminal Regulating Reservoir) are configured to complement the project complex, and to add the needed operational flexibility to the project operations. The existing Funks Reservoir complex would be enlarged to 6,500 acre-ft storage capacity by the addition of Holhouse Reservoir and integrated with the rest of the project components. A second reservoir would be a newly constructed, 2,000 acre-ft capacity, Terminal Regulating Reservoir (TRR) for the Glenn-Colusa Irrigation District (GCID) canal, to the east of Holthouse reservoir.

Water would be delivered to and out of Sites Reservoir through a network of pumping-generating plants and conveyances. Under Alternatives A and C, three pumping plants along the Sacramento River will be used to capture and divert water to the NODOS Project. The pumping plants are either existing/modified or new. The Tehama Colusa pumping plant, and Canal, a 2,100 cfs capacity, would be the project's upper most diversion point on the Sacramento River, near the city of Red Bluff. The project's second diversion point from the Sacramento River is the GCID pumping plant and canal, a 3,000 cfs capacity plant, and a 3,000 cfs to 1,800 cfs capacity canal. And the third diversion point is a newly constructed Sacramento River pumping-generating plant and pipeline, a 2,000 cfs pump; 1,500 cfs release capacity plant. Under Alt B,

the Sacramento River diversion pumps are eliminated, however, releases into the Sacramento River are assumed to occur with no power generation facilities.

Figure-2 depicts the relative location of the three diversion points, along the Sacramento River, to Sites Reservoir. Holthouse reservoir will be the lower elevation collection point for the project water diversions from the Sacramento River, and a distribution point for water releases from Sites Reservoir. The hydraulic capacities of Sites Reservoir pumping-generating plant are 5,900 cfs in pumping mode and 5,100 cfs in generation mode. The TRR would have a 1,800 cfs pump; 1,500 cfs release capacity pumping-generating plant and pipeline to convey flows from the GCID canal to Holhouse Reservoir.

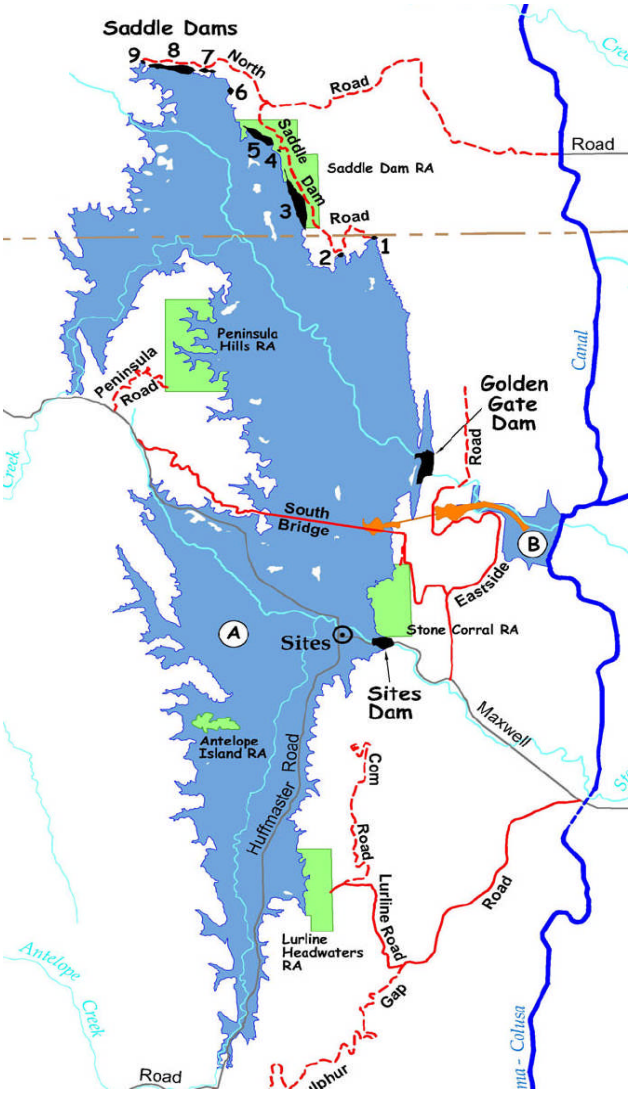


Figure 1- Sites Reservoir Vicinity Map

2- Study Objective

The objective of the PARO Power Planning Study is to analyze the current/designed components, and operational scenarios of the NODOS Project that resulted from the most recent CALSIM model studies, from a power planning perspective. The study is aimed at optimizing the NODOS Project operations to maximize its power portfolio's value (revenues-obligations). Also, the Study will provide a transmission planning roadmap for the NODOS Project interconnection with available power grid systems (CAISO, WAPA, and SMUD) in the area. The Study results are meant to complement the work done by the DSIWM and their Consultants. The Study is implemented using current power market information and regulations, and available power portfolio models/tools to better evaluate energy costs and revenues of the project.

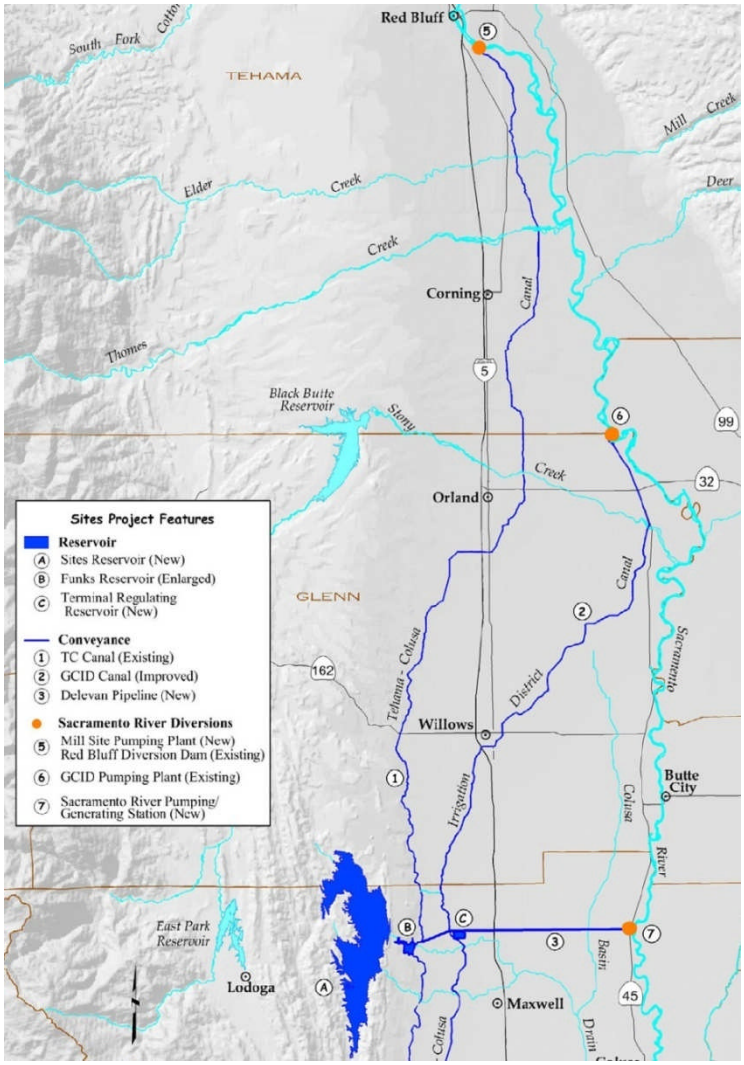


Figure 2- NODOS Project Components and Interconnection

In light of the modeling results, the Study will make recommendations for modifications in the design parameters and in the operational scenarios/assumptions that may enhance the project's value, and allow for better utilization of the project pumping-generating, and storage facilities.

Also, the study will recommend further analysis needed to study the modified/optimized operational scenarios and design parameters of the NODOS Project.

3-Modeling Approach

DSIWM supplied PARO's Power Planning Branch with the most recent CALSIM II runs. The CalSim II model runs include the No Action Alternative and the three NODOS Project action alternatives. The CalSim II model for the No Action Alternative is dated July 5, 2010 with assumptions developed on the basis of the April 1, 2010 BDCP No Action Alternative without climate change. CALSIM II runs describe the intended operations of the NODOS Project, based on the 82 years of historical hydrology record, for each of the three action Alternatives contemplated for the project. PARO used the supplied CALSIM II model results to generate a Median 30-year outlook for the NODOS Project operations. The corresponding High and Low cases (30-year outlook) for the NODOS Project diversions from the Sacramento River were also developed, to reflect the uncertainty or "bookends" in water deliveries resulting from natural hydrology swings. For each of the three action alternatives considered in this Study, the resulting 30-year operational time-series for all project components are the basis for the project's Power Portfolio value and risk.

In the current Study, project operations, constraints, and assumptions, as envisioned by the NODOS Project team, are maintained and further optimized to maximize the Power Portfolio's value. Optimizing project operations is done to capture market opportunities and price differentials between On-Peak and Off-Peak energy. Current and future power market structure and opportunities are focused on efficient and reliable market design. Optimization of the NODOS Project operations is important to more efficiently and economically use different project assets. A pumpback operation could only be superimposed on the NODOS Project operational modes (Diversion and Release modes) if pumping and generation for water delivery purpose are optimized (synced with market On-Peak and Off-Peak cycles). Also, optimization of project operations will translate the inherent excess design capacities of the project's components (resulting from hydrology swings) to operational flexibility, and minimize operations and maintenance net costs of the project.

One of the challenges in modeling a proposed project (i.e. future construction of an energy market participating project) is in choosing an appropriate project operations start date, or when the project's assets will be online. The start date will determine the window of time for a price forecast (power and fuel) and the corresponding volatility term structure that the analysis will be based on. The further out the anticipated project operations start date is, the further the price basis used for the analysis would separate from actual market dynamics and current market trends. An alternative approach to overcome this problem is to assume that the project will be operational in the near future and to accordingly value all assets and power needs. Similarly, operational, maintenance, and construction costs would be valued on the same start date basis. Then, costs and revenues would be discounted to a present value consistent with the analysis date. Planned and anticipated future changes to the regulatory environment, power market structure, and market evolution can be reflected in the analysis, on a potential scenario basis. This approach will provide a good comparative framework, and minimize the inherent forecast errors (i.e. speculation) in both projects' power portfolio value and in its construction costs.

Figure-3 is a Flowchart depicting a summary of the different steps/tracks (roadmap) taken in translating CALSIM II model runs to an Energy Portfolio set of assets and contract instruments (time series of monthly pumping and/or generation for each project component). Also, Figure-3 describes the general modeling approach that was adapted in performing the Power Planning Study on the three proposed action alternatives for the NODOS Project.

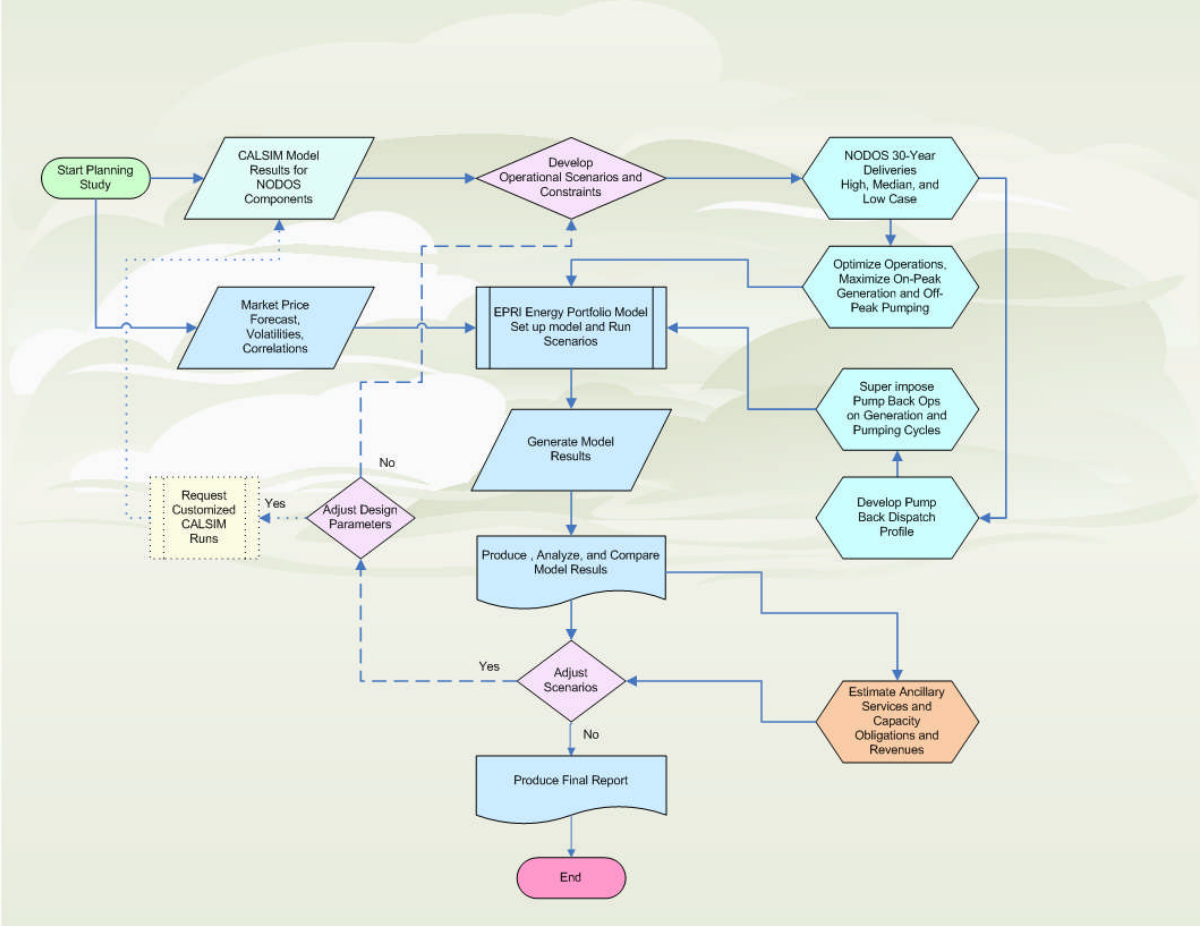


Figure 3- NODOS Project Power Planning Study Flowchart

3.1- EPRI ENERGY PORTFOLIO MODEL

Current Power Portfolio models available to PARO are used to execute the analysis for the NODOS Project. The Electric Power Research Institute (EPRI) Energy Portfolio Model (EPM), version 5, is used for this purpose. EPRI Fast Fit model, version 2.5, is used to describe the needed power and fuel price volatilities term structures, and the correlations between the different energy markets the project will be participating in, or exposed to.

The EPM is a computer software/model that is designed to help businesses manage value and risk in the energy markets. The EPM is used in the current study to value the different NODOS Project assets and energy needs. The EPM is a module of a larger suite of individual modules, called the Energy Book System (EBS). Other modules within EBS are EPRI Contract Evaluator, EPRI Risk Manager, EPRI Retail Product Mix, and EPRI Fossil Asset & Project Evaluator.

These modules were designed to meet the valuation and risk management needs of a targeted segment of the energy industry. Specifically, businesses with exposure to the energy market with corresponding exposure to a variety of financial risks. Financial risks, among other things, result from the extraordinary volatility in wholesale energy markets, especially price risk and uncertainty in the underlying fuel markets.

The EPM provides a set of templates that facilitates the description and evaluation of common types of power and fuel contracts, including supply contracts, standard and customized forward, and option contracts. It has the capabilities to model a number of physical assets, including full requirements contracts, power and fuel storage facilities, and generation assets. Many other assets can be modeled by combining two or more standard templates. The EPM requires the user to describe prices in the underlying commodity markets. The model characterizes each commodity market by a forward price curve and a term volatility structure. A correlation matrix characterizes the behavior of pairs of commodity markets is also needed by the model. The correlation matrix is an important concept in evaluating portfolio risk, and assets with two underlying markets, such as spread options or generating units. The model can also be used to assess the value and risk implications arising from uncertainty regarding the future level of load and stochastic generation (e.g., "run-of-river" hydro electric generation).

The EPM calculates the current market value of any number of user specified assets. The EPM can also calculate and report portfolio value, cash flows, and risk exposures. This includes assessing portfolio's exposure to both underlying commodity markets and customer loads. EPM allows users to manage price and load risk by applying methods that reflect the volatility and correlations between load and price. The market value of a resource depends on the cash flows it is expected to generate over its remaining life. Therefore, the market value of a generating unit depends on the difference between the value of the energy it is expected to produce and the value of the resources required for production. Market values fluctuate over time as conditions in the underlying markets fluctuate. EPM reports the market value of a resource or asset as the value of what it is worth today. One of the benefits of the EPM is that it will allow users to "mark-to-market" periodically each position in their book and thereby track gains and losses as they arise. EPM can report value and risk exposures on a weekly, monthly, quarterly, or annual basis over a user-specified time horizon.

3.2- Energy Forward and REC Price Curves

Three sources of data are used to generate the energy price forecast that would be the basis for energy values for the Power Planning Study. The three sources are: forward energy "broker" quotations provided by Tullet Liberty ("Tullet")[1]; natural gas futures and natural gas futures basis as reported by the New York Mercantile Exchange ("NYMEX"); and forecasted spot electricity and natural gas prices as provided by Ventyx semi-annual structural forecast (formerly Global Energy Decisions, GED).[2]

The derived natural gas price curve is made up of Henry Hub ("HH") futures prices, adjusted for a specific local Hub through using basis prices (for HH to SoCal, or HH to PG&E Citygate, in

[1] Tullet is among other things an energy brokerage company that matches buyers and sellers.

[2] Ventyx is forecasting the actual day-ahead cash price that will occur in the sport markets in the future, not the price at which futures or forward contracts should be priced.

this case). Basis prices represent the mark-up or discount in natural gas prices (due to transmission fees, congestion, etc.) at a specific hub, relative to prices at HH. For HH futures, prices are obtained from the NYMEX website, and are current market closing prices for the date when the forward curve is being generated. There are 12 to 13 years of HH futures prices that are available through the NYMEX. These prices are extrapolated to cover the 25 year period that matches the Ventyx structural forecast period. The extrapolation is done through computing the growth/escalation rate of the last 4 years of the current market price quotations, and using the computed growth/escalation rate to extend the last year's available market prices.

For basis prices, there are two data sources: one is market basis prices; and the other is a structural forecast of basis prices provided by Ventyx. Ventyx provides monthly basis prices for 25 years to match its structural forecast period, reflecting potential changes in the energy market and their impacts on a specific local Hub prices (relative to HH prices). Market basis are available from the NYMEX website, with basis prices available for three to five years (depending on the Hub location, whether it is SoCal or PG&E Citygate). The basis price forward curve is extrapolated to generate prices for a 25-year period by taking the last year's monthly quoted basis prices and repeating those prices for every month out to 25 years.

For SWP natural gas price forecast process, the average of the extended market basis and the structural basis (from Ventyx) is then taken and added to the Henry Hub extrapolated forward curve. The resulting natural gas forward curves for either SoCal or PG&E Citygate Hubs will be used in the study, where appropriate. The resulting natural gas forward curve for PG&E Citygate is shown in Figure-4, and is used for the NODOS Project Power Planning Study.

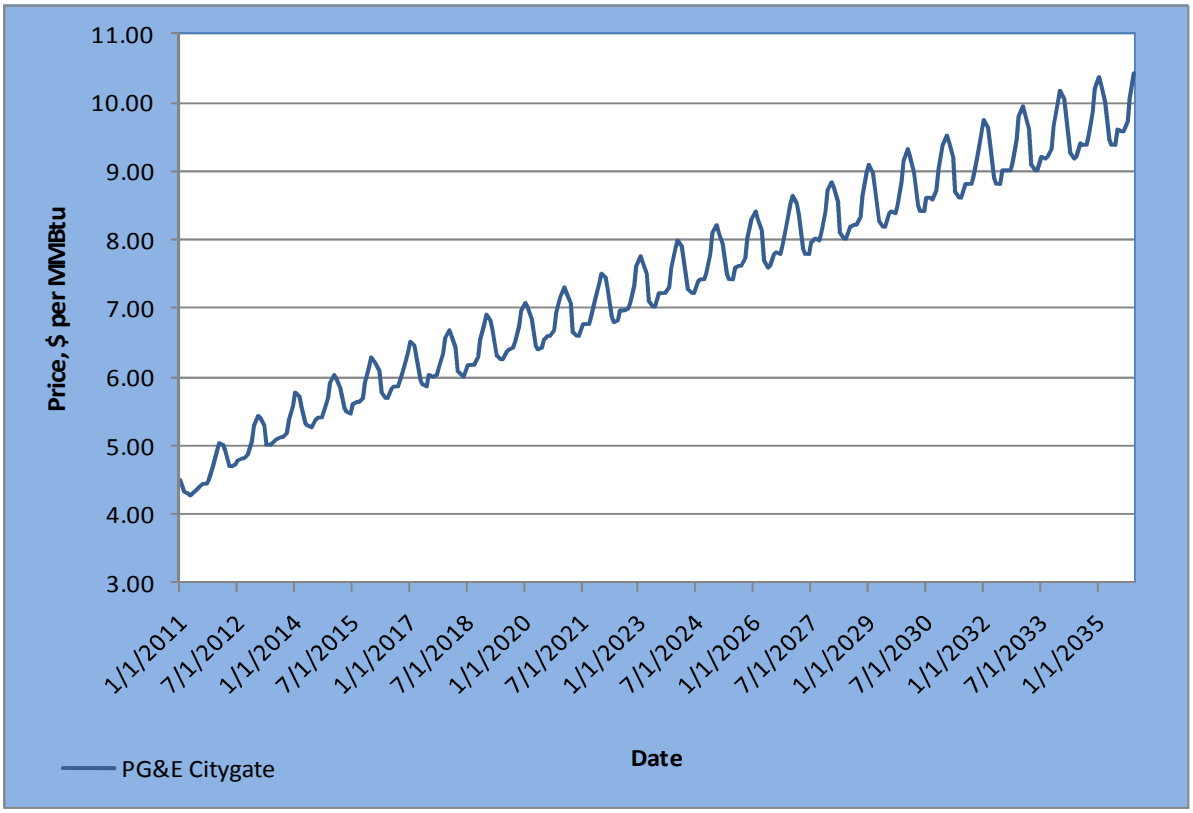


Figure 4- Natural Gas Price Forecast, Forward Curve for 2011 through 2040

For the power price forecast, the derived power forward price curve is comprised of two segments: market forwards; and synthetic forwards. The first segment uses the most current Tullet energy forwards quotations, for NP-15 and SP-15 market's different products (On-Peak, Off-Peak). This segment runs anywhere from 12 to 24 months (data availability is dependent on time of year that the power forecast is being generated).

The second segment of the price curve is the "synthetic" portion. The "synthetic" segment continues where the first segment stops, to complete the 25 year period to match the natural gas forecast period. There are two approaches that are being used to derive the "synthetic" portion of the forward curve. One approach is to calculate power prices using the natural gas forecasted prices (as described above) multiplied by historical implied heat rates.[3] The other approach is to multiply the forecasted natural gas prices by a forecasted heat rate, reported as part of the structural forecast, by Ventyx. The average of those two generated power forward price curves yields the resulting "synthetic" forward curve, that make up the second segment of the power price forward curve. The same process is repeated for each of the CAISO markets and its specific products (On-Peak and Off-Peak), with the appropriate underlying fuel markets. The resulting power forward curve for NP-15 is shown in Figure-5, and is used for the NODOS Project Power Planning Study.

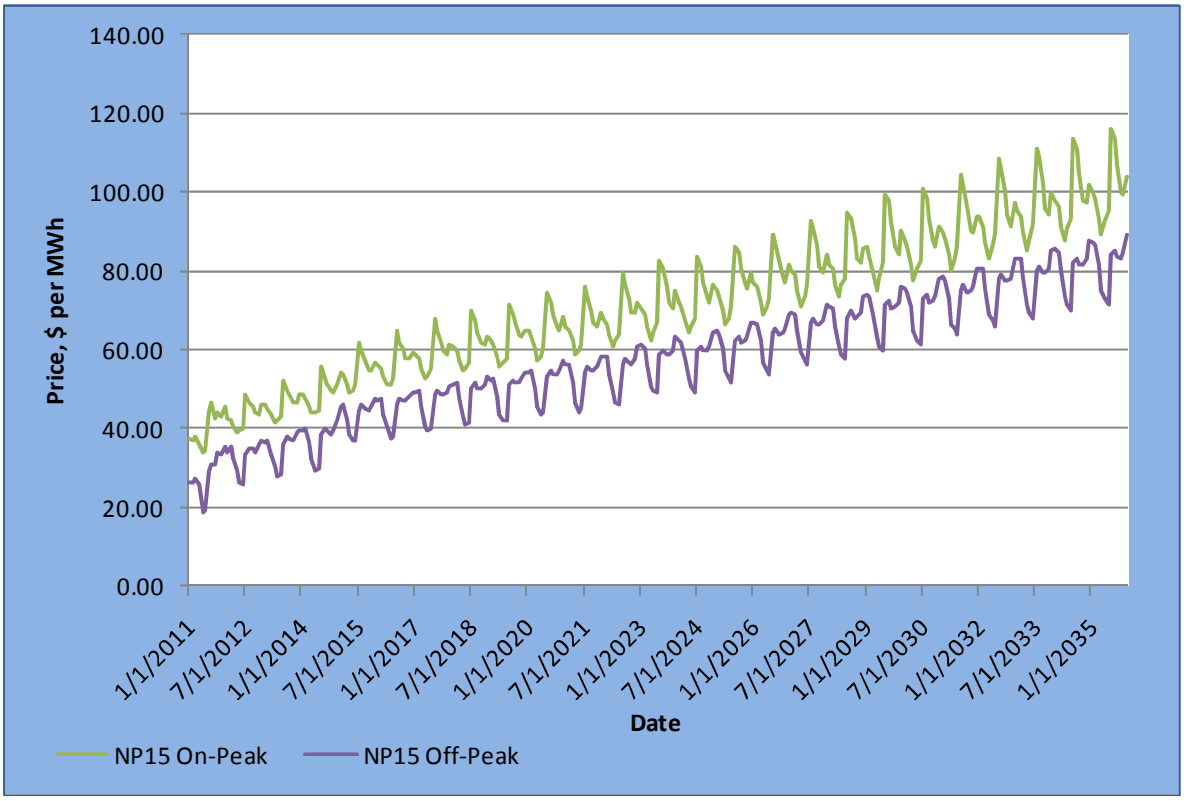


Figure 5- Power Price Forecast, Forward Curve for 2010 through 2039

[3] Historical implied heat rates were calculated from 2004 - 2008 historical price data (5 years). Daily prices were averaged into monthly prices. The heat rate is calculated as the respective period's power price divided by the respective period's gas price.

For the Sacramento River (Alt A, and Alt C) and TRR Generation Plant future planned capacity (less than 30 MW) qualify both plants to meet the RPS certification requirements, and allow both plants to participate in the Renewable Energy Credit market (REC), a product of the RPS and the AB32 GHG mandates. For the purpose of this Study, power generation for the two plants mentioned above was valued based on the forecasted energy prices for the CAISO markets that the plant will participate in or has indirect exposure to (NP-15 market for power and PG&E Citygate market for natural gas), and the additional value that would be realized from the RECs that the two plants will produce. Hence, the power price forecast was adjusted to reflect the forecasted value of the RECs in WECC region as reported by Ventyx Spring 2011 forecast. The reported REC values are used to generate a power curve adjusted to reflect the total value of a MWh (energy+REC) generated at the TRR and Sacramento River generating plant. Figure 6 shows the REC values as reported in the Ventyx Spring 2011 forecast, and compared to the forecasted values from two previous Ventyx forecasts.

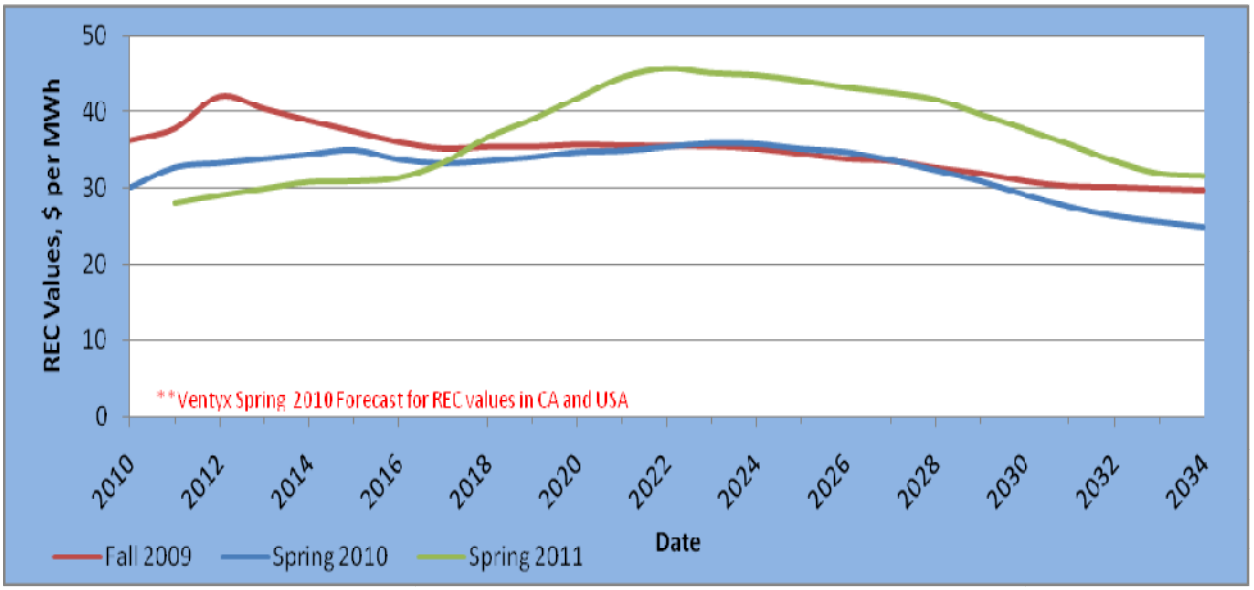


Figure 6 – Renewable Energy Credit Forecast for the WECC region for 2011 through 2034

4- NODOS Project formulation, Alternatives, and Operations

4.1- NODOS Project Alternatives

This section is a synopsis describing the NODOS Project development process, and is extracted from the main report titled "Definition of proposed alternatives for Evaluation in the North-of-the-Delta Offstream Storage Adminstrative Draft Environmental Impact Report and Statement, Date." More details on the evolution of the NODOS Project are discussed in the aforementioned Report.

Pursuant to NEPA and CEQA, a Notice of Intent and Notice of Preparation were filed and published in November 2001 by Reclamation and DWR respectively, to investigate surface storage opportunities north of the Delta. NEPA and CEQA require that EIS and EIRs consider a

reasonable range of feasible alternatives that could meet the project objectives and accomplish the project purpose and need while avoiding or minimizing environmental impacts. NEPA and CEQA also require that a No Action (NEPA) and No Project (CEQA) alternative be analyzed. The purpose of including a reasonable range of alternatives in EIS and/or EIR is to offer a clear basis for choice by the decision makers and the public as to whether to proceed with a proposed action or project. NEPA and CEQA requirements are discussed in greater detail in Chapter 1 of the NODOS EIR/S.

Three different configurations for the NODOS Project were combined with the anadromous fish measures and new hydropower facilities to develop the action alternatives summarized in Table 1 (Table 2-8). The alternatives include a No-Action Alternative Plan and three Action Alternative Plans. It was anticipated that these alternative plans and the No Action Alternative would provide a reasonable range of alternatives for further refinement and detailed analysis in the Feasibility Report and EIS/EIR, to meet the requirements of NEPA; CEQA; other pertinent federal, State, and local laws, regulations, and policies; and the Principles and Guidelines (P&Gs) presented in the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (U.S. Water Resources Council [WRC],1983).

The following sections provide further details on the components of the alternatives:

- No Action/No Project Alternative—The No Action/No Project Alternative assumes that no actions would be taken to provide storage north-of-the-Delta to improve water supply reliability, to enhance the survivability of anadromous fish or drinking water quality in the Delta, or to improve flexible generation.

- Alternative A: 1.27 MAF Sites Reservoir with Delevan Pipeline—Alternative A includes a 1.27 MAF Sites Reservoir with conveyance to and from the reservoir provided by the existing TC and GCID canals and a new Delevan Pipeline (2,000-cfs diversion/1,500-cfs release). This alternative also includes new hydropower facilities and a program to address the three anadromous fish measures.

- Alternative B: 1.81 MAF Sites Reservoir with Release-only Delevan Pipeline—Alternative B includes a 1.81 MAF Sites Reservoir with conveyance to and from the reservoir provided by the existing TC and GCID canals, and a new release–only Delevan Pipeline (1,500-cfs release). This alternative also includes new hydropower facilities and a program to address the three anadromous fish measures.

- Alternative C: 1.81 MAF Sites Reservoir with Delevan Pipeline—Alternative C includes a 1.81 MAF Sites Reservoir with conveyance to and from the reservoir provided by the existing TC and GCID canals and a new Delevan Pipeline (2,000-cfs diversion/1,500-cfs release). This alternative also includes new hydropower facilities and a program to address the three anadromous fish measures.

Major features of the various action alternatives are illustrated on Figure 2-4.

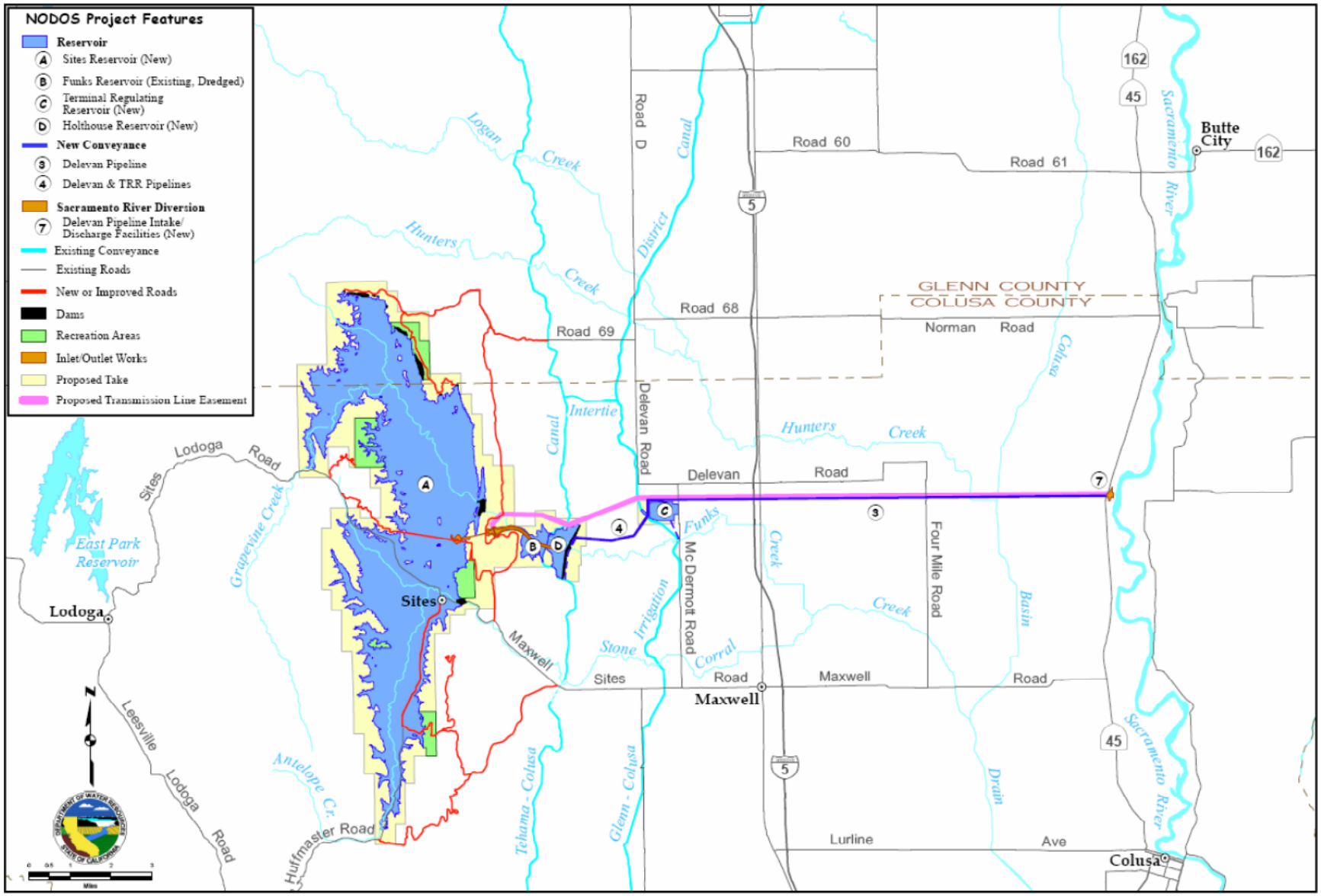


Figure 7- Major Features of the Actions Alternatives

Table 2-8. Project Features Included in the Alternatives

Alternative	A	B	C
Storage Capacity			
Sites Reservoir	1.27 MAF	1.81 MAF	1.81 MAF
Conveyance Capacities *(to Sites Reservoir)*[1]			
Tehama-Colusa Canal	2,100 cfs	2,100 cfs	2,100 cfs
Glenn Colusa Irrigation District Canal	1,800 cfs	1,800 cfs	1,800 cfs
New Delevan Pipeline[2] Diversion Release	 2,000 cfs 1,500 cfs	 0 cfs [3] 1,500 cfs	 2,000 cfs 1,500 cfs
Operations Priorities *(Primary Planning Objectives)*			
Long Term *(all years)*	EESA[4] Power[5]	EESA[4] Power[5]	EESA[4] Power[5]
Driest Periods *(drought years)*	M&I	M&I	M&I
Average to Wet Periods *(non-drought years)*	Water Quality Level 4 Refuge Agricultural	Water Quality Level 4 Refuge Agricultural	Water Quality Level 4 Refuge Agricultural
Nonoperational Actions			
Ecosystem Enhancement Fund	✔	✔	✔
Physical Features			
Golden Gate and Sites Dams	✔	✔	✔
Number of Saddle Dams	6	9	9
Recreation Areas	Up to 5	Up to 5	Up to 5
Road Relocations and South Bridge	✔	✔	✔
Sites PG Plant Capacities	5,900-cfs pumping capacity 5,100-cfs generating capacity	3,900-cfs pumping capacity 5,100-cfs generating capacity	5,900-cfs pumping capacity 5,100-cfs generating capacity
Sites Electrical Swtichyard	✔	✔	✔
Tunnel from Sites PG Plant to Sites Inlet/Outlet Structure	✔	✔	✔
Sites Reservoir Inlet/Outlet Structure	✔	✔	✔
Field Office Maintenance Yard	✔	✔	✔
Holthouse Reservoir Complex	✔	✔	✔
Pump Installation at the Red Bluff Pumping Plant	✔	✔	✔
GCID Canal Facilities Modifications	✔	✔	✔
GCID Connection to the TRR	✔	✔	✔
TRR	✔	✔	✔
TRR PG Plant	✔	✔	✔
TRR Pipeline	✔	✔	✔
Delevan Transmission Line	Sites Power Plant to PG&E line plus PG&E line to Sacramento River	Sites Power Plant to PG&E line	Sites Power Plant to PG&E line plus PG&E line to Sacramento River
Delevan Pipeline	✔	✔	✔
Delevan Pipeline Intake Facilities (Fish Screen and PG Plant)	2,000-cfs diversion capacity; 1,500-cfs release capacity		2,000-cfs diversion capacity; 1,500-cfs release capacity
Delevan Pipeline Discharge Facility		1,500-cfs release capacity	

Notes:
1. Diversions through the TC Canal, GCID Canal, and Delevan Pipeline are allowed in any month of the year; however, November through March is generally the season that Sites Reservoir will be filled.
2. New Delevan Pipeline can be operated June through March (April and May are reserved for maintenance).
3. A pump station, intake, and fish screens are not included for the Delevan Pipeline for Alternative B. For Alternative B, the Delevan Pipeline will be operated for releases only from Sites Reservoir to the Sacramento River year round.
4. Ecosystem Enhancement Storage Account (EESA) related operations are a function of specific conditions, and operating criteria that are defined uniquely for each action.
5. Includes dedicated pump/generation facilities with an additional dedicated after-bay/fore-bay of 6.5 TAF in Holthouse Reservoir (enlarged Funks Reservoir) used for managing conveyance of water between Sites Reservoir and river diversion locations.

Key:

cfs	=	cubic feet per second
CVP	=	Central Valley Project
EESA	=	ecosystem enhancement storage account
MAF	=	million acre-feet
M&I	=	municipal and industrial
SWP	=	State Water Project
TAF	=	thousand acre-feet

Table 1- NODOS Project Action Alternatives, Priorities, and Objectives

4.2- NODOS Project Operations – Water Operations

For the evaluation of NODOS Project action alternatives, the project team used a generally consistent operations strategy for each alternative. The operations strategy is reflected in the operations simulation modeling that is the primary planning tool to determine many of the project benefits and impacts. The ability of each action alternative to implement the strategy

effectively is subject to the conveyance options included and the coordinated operation of Sites Reservoir with other existing facilities.

The strategy has four components: (1) operating criteria for diversion of flows from the Sacramento River to fill Sites Reservoir; (2) operating criteria to achieve benefits associated with the primary objectives in drought (driest periods) and other hydrologic conditions; (3) integration and (4) coordination of Sites Reservoir releases with releases from Trinity Lake, Shasta Lake, Lake Oroville and Folsom Lake.

Each action alternative would be operated to divert Sacramento River flows to maximize the filling of Sites Reservoir as long as those flows were not needed to meet (1) existing CVP and SWP and other water rights diversions, (2) existing regulatory requirements including SWRCB D-1641, CVPIA 3406(b)(2), 2008 USFWS BO and 2009 NMFS BO and other instream flow requirements, and (3) flow conditions to minimize the impact of diversion operations on achieving the primary objectives for anadromous fish survival and Delta water quality. A schedule of flow criteria for Sacramento River flows at Red Bluff, Hamilton City, Wilkens Slough and Freeport are used to limit the impact of diversion operations. An additional set of criteria are used to identify and restrict diversions during potential pulse flow conditions to protect out-migrating anadromous fish.

Each action alternative would be operated to achieve benefits associated with the primary objectives in drought (driest periods) and other hydrologic conditions. For purposes of Sites Reservoir operation, drought (driest periods) hydrologic conditions are identified as the sequence of years in which the Sacramento River 40-30-30 year type classification (SWRCB D-1641) in two consecutive years is Critical following Critical, Dry or Above Normal, or Dry following Critical or Dry, or Above Normal following Critical year types. In drought (driest periods) hydrologic conditions, the priority operation is cold water pool conservation in Trinity Lake, Shasta Lake, Lake Oroville and Folsom Lake and regulation of summer flows for best use of cold water for control of temperature conditions adverse to anadromous fish and increasing Delta export and SWP project allocations to improve water supply reliability to South-of-the-Delta M&I water users. During these times, Sites Reservoir stored water is released into the system as rapidly as possible to meet these needs.

In other hydrologic conditions (non-drought), approximately one third of Sites Reservoir stored water is used each summer and fall to manage Delta water quality to improve Delta water quality at M&I intakes, to improve flows for Delta fisheries habitat based on X2 position, and to stabilize fall flows for improving spawning and rearing success of anadromous fish. Water quality for M&I users is improved both by improving Delta water quality at M&I intakes in non-drought conditions as well as increasing Delta exports in drought conditions (TDS levels in exports from the Delta are often lower than other supplies such as from the Colorado River; so there is a blending improvement by increase flows from the Delta).

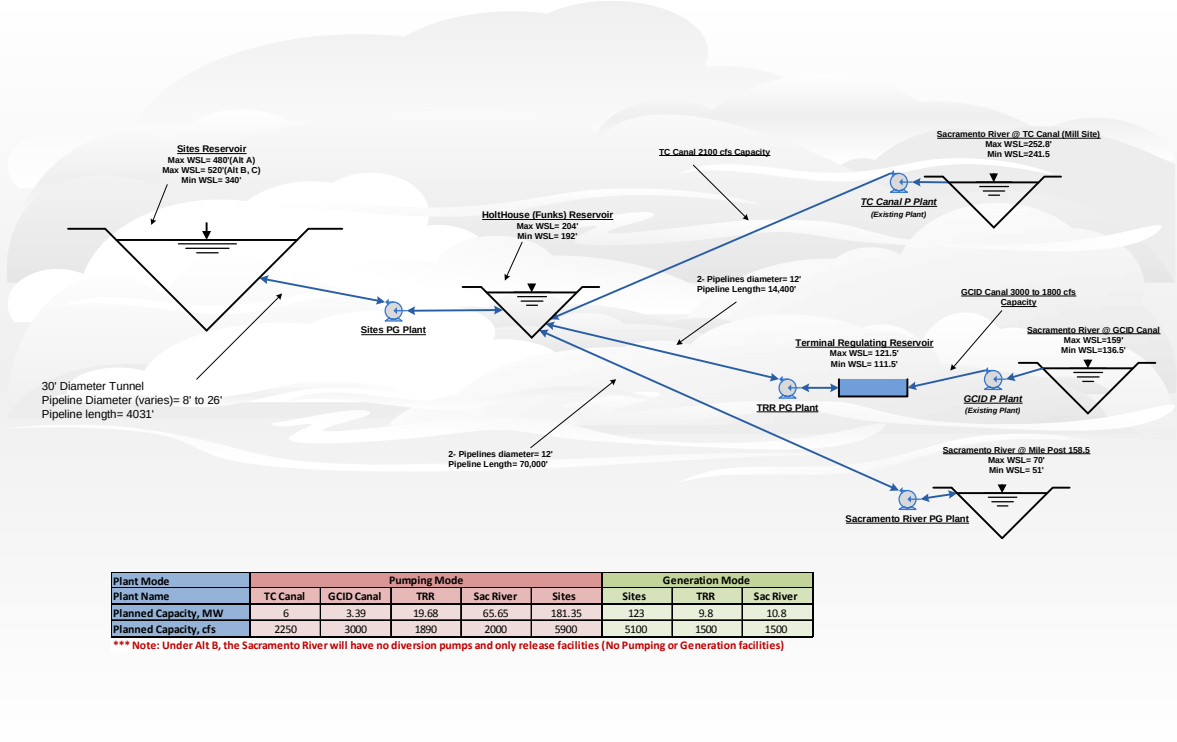
Each action alternative would be operated to integrate and coordinate the releases from Sites Reservoir with releases from Trinity Lake, Shasta Lake, Lake Oroville and Folsom Lake. Often, and especially in drought (driest periods) hydrologic conditions, releasing from Sites Reservoir, allows releases from other reservoirs to be reduced while still meeting requirements for minimum instream flow objectives and Delta salinity control objectives. Through this reduction in releases, storage can be conserved in Lake, Shasta Lake, Lake Oroville and Folsom Lake for later use for and management of releases. This improvement in storage conditions throughout

the system of reservoirs adds significantly to the operational flexibility to meet the primary objectives in the most effective way possible.

4.3- NODOS Project Operations - Power Operations

The NODOS Project team supplied PARO with the physical and operational attributes of the Project components which are the basis for this Study. The schematic drawing in Figure 8 shows the different NODOS Project components and the relative location and interconnection of the different components to each other and to the Sacramento River.

For the NODOS Project operations and for the purpose of this Study, the base assumptions and scenarios used in developing the CALSIM II model are maintained for the different project components. The CALSIM II model was used to simulate the operations of the NODOS Project, as a component of the integrated SWP and CVP operations. More details on the CALSIM II model formulation are available inNODOS EIR/S Appendix. The CALSIM II model is a tool that was setup to emulate the operations strategy setforth for the project, and to help determine many of the project benefits and impacts.



Plant Mode	Pumping Mode					Generation Mode		
Plant Name	TC Canal	GCID Canal	TRR	Sac River	Sites	Sites	TRR	Sac River
Planned Capacity, MW	6	3.39	19.68	65.65	181.35	123	9.8	10.8
Planned Capacity, cfs	2250	3000	1890	2000	5900	5100	1500	1500

*** Note: Under Alt B, the Sacramento River will have no diversion pumps and only release facilities (No Pumping or Generation facilities)

Figure 8- NODOS Project, Schematic of Conveyance and Storage Interconnection

For the purpose of modeling the power operations of the NODOS Project, three modes for project operations are identified: Diversion mode (pumping from the Sacramento River to fill up Sites Reservoir); Release mode (generation incidental to water releases from Sites Reservoir to meet the NODOS Project water release objectives); and a Pumpback mode (to better utilize residual capacities of the different project components). The NODOS Project pumpback

operations is meant to enhance the project economics by capturing opportunities offered by the energy market (energy price differentials between On-Peak and Off-Peak hours, and Ancillary Services), and to provide the support/products needed to integrate renewable energy (Wind, solar, etc).

In modeling the power needs for the diversion mode, an optimization strategy is developed to minimize the energy costs of pumping operations, yet, maintain NODOS Project water operations objectives. Hence, flat monthly pumping operations are maintained (where/when applicable, 24 hrs a day, 7 days a week), for all three diversion points along the Sacramento River. Once water is diverted from the Sacramento River into Holthouse Reservoir, the rest of the diversion operations (i.e. pumping into Sites Reservoir) could be optimized to better utilize Sites pumping plant capacity, and the available storage in Holthouse Reservoir. It would be more economical to retain the On-Peak diversions from the Sacramento River in Holthouse Reservoir (as scheduled) and to pump that water into Sites Reservoir in the Off-Peak hours (on a daily basis). The intent of reshaping the diversion mode is to avoid high On-Peak (and Super Peak) electricity prices. Therefore, all pumping operations into Sites Reservoir are optimized to occur (if possible) during the Off-Peak hours (including shoulder hours). Moreover, this shift in operations will provide an opportunity to superimpose pumpback operations cycle on the NODOS Project diversion mode. In an optimized mode and in the On-Peak (or Super Peak) hours, Sites pumping-generating plant will be available for generation. In the Off-Peak hours, the residual pumping capacity will be available to pump the water back into Sites Reservoir.

For the water Release mode (Generation mode) of the NODOS Project, an optimization strategy is developed to maximize generation revenues from the project's generation assets. For this strategy and to the extent physically possible, all intended daily water releases from Sites Reservoir into Holthouse Reservoir will occur during the On-Peak (or Super Peak) hours, to capture the most value the energy market offers for the NODOS Project generation. Incidental to the On-Peak releases from Sites Reservoir into Holthouse Reservoir, water will be released into the Terminal Regulating Reservoir, TC Canal, and the Sacramento River up to the capacities of these facilities (and within the planned limits for the water release). The residual water in Holthouse Reservoir (from the On-Peak Sites Reservoir releases) would be released during the Off-Peak hours to satisfy water delivery obligations of the NODOS Project. A key requirement for this strategy to be effective is that Holthouse Reservoir active storage would be made available before the beginning of the next On-Peak cycle (i.e. next day's cycle). Optimizing the Release (generation) mode will better utilize Sites Reservoir generation capacity (maximize revenues), and provide an opportunity to superimpose a Pumpback mode on the Release mode.

A third component of the NODOS Project power operations is a daily pumpback operations cycle. For periods when the NODOS Project is in neither Diversion nor in Release modes, Sites Reservoir pumping and generation assets can operate in a pure Pumpback mode to take advantage of energy price differentials between the On-Peak and Off-Peak hours, and Ancillary market needs. Under a pure Pumpback mode, water would be released from Sites Reservoir into Holthouse Reservoir during the On-Peak (or Super Peak) hours to generate energy and would be pumped back into Sites Reservoir in the Off-Peak hours to complete the pumpback cycle. The pumpback operations could be a standalone operation and/or superimposed on the Diversion and Release modes when the energy market economics relative to the Sites Reservoir Plant's efficiency (cycle efficiency) are conducive to do that. At Sites Reservoir, the extent of the pure pumpback operations, and pumpback operations incidental to the NODOS Project Diversion and

Release modes are driven by market economics, pumping-generating cycle efficiency, residual pumping capacity, residual generation capacity, and residual storage capacity in Holthouse Reservoir.

5- Power Portfolio Model

Current Power Portfolio Models available to DWR's Power and Risk Office are used to execute the analysis for the NODOS Project. The operations of the NODOS Project's different assets are translated to a representative set of financial instruments and are input into the EPM model. The model is used to monetize the probabilistic value of the NODOS Project power portfolio for each of the action alternatives and operational scenarios used in the study. EPRI Fast Fit model, version 2.5, is used to describe the needed power and fuel price volatilities term structures, and the correlations between the different energy markets the NODOS Project will be participating in, or exposed to.

Using the most current CALSIM II model runs, a Median Case (seasonal cycle) operational time-series is defined, for each of the three action alternatives considered for the project. The Median Case time-series (sequential) period matches the 30-year planning period for the project. The time-series is derived from the 82-year time-series from the most current CALSIM II runs. The total water diversions (in acre-ft) from the Sacramento River into Sites Reservoir is used as a criteria for isolating the 30-year time-series that represents the Median Case project's operations, for each of the three action alternatives considered for the project. Moving averages and frequency analysis are used to reduce the 82-year record to 53 potential scenarios for the operations of the project. Then, the 53 scenarios are ranked, and the median of these scenarios is identified with the corresponding 30-year time-series that generated its value. The underlying 30-year time-series for all project's components is also identified and grouped, to represent the operations of the NODOS Project.

Time-series representing NODOS Project water diversions and releases are translated into pumping and generation capacities and Energy (MW and MWh) for each of the project components, using the appropriate design parameters and the physical attributes of the system. Figure 9 through Figure 15 show the Median Case time-series, for the 30-year planning period, for the "Optimized" operations of each of the NODOS Project components, in terms of utilized capacity in MW (which is the input to the EPM model), for Alt C.

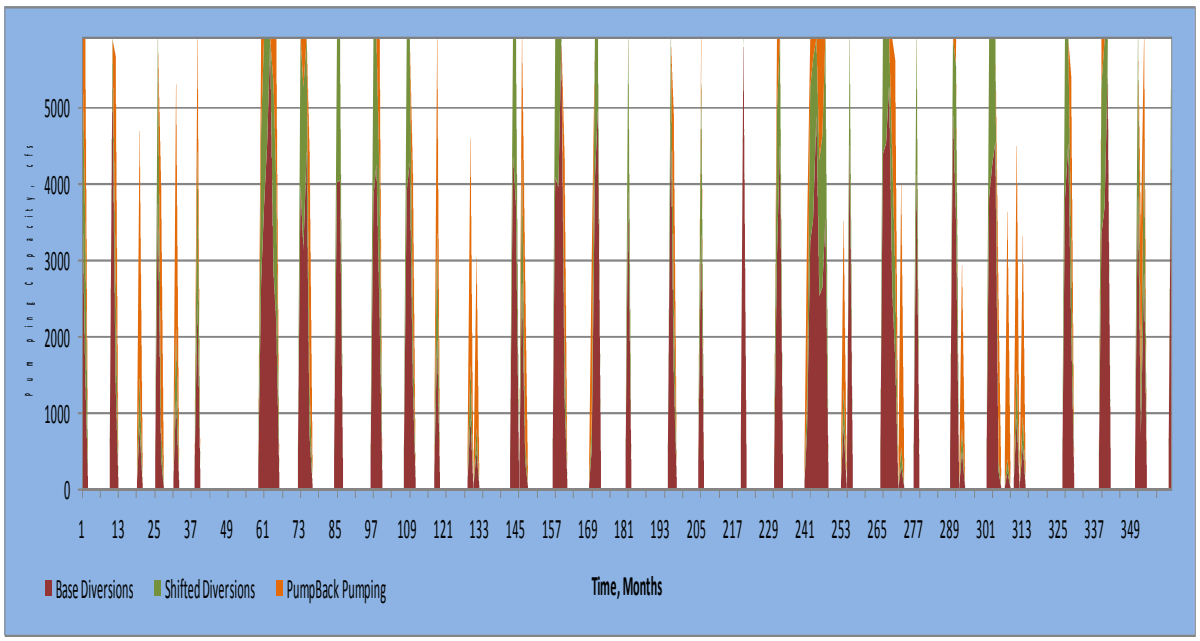


Figure 9- NODOS Project, Sites Reservoir Operations- Diversion Mode, Alt C

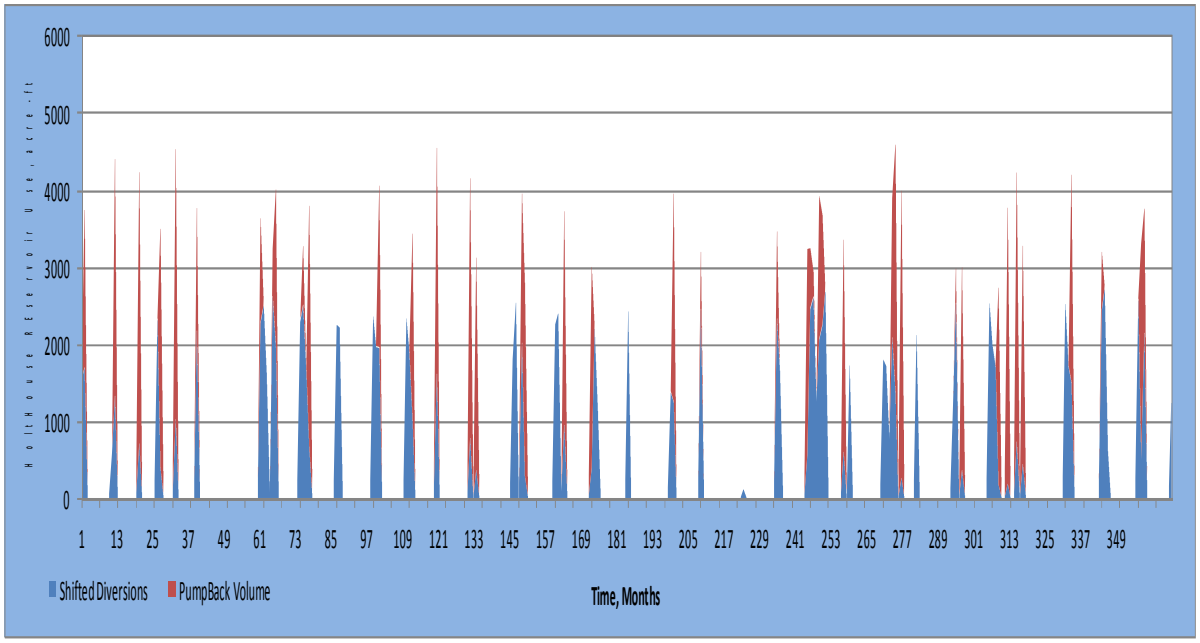


Figure 10- NODOS Project, Holthouse Reservoir Operations-Diversion Mode, Alt C

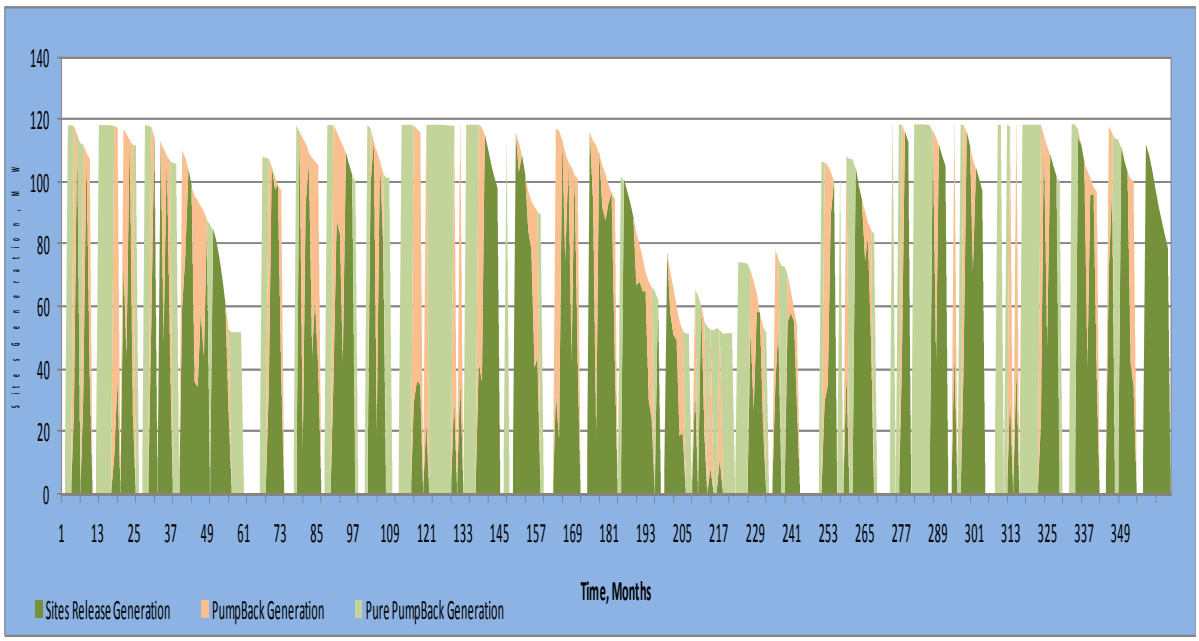


Figure 11- NODOS Project, Sites Reservoir Operations-Release & Pumpback Modes, Alt C

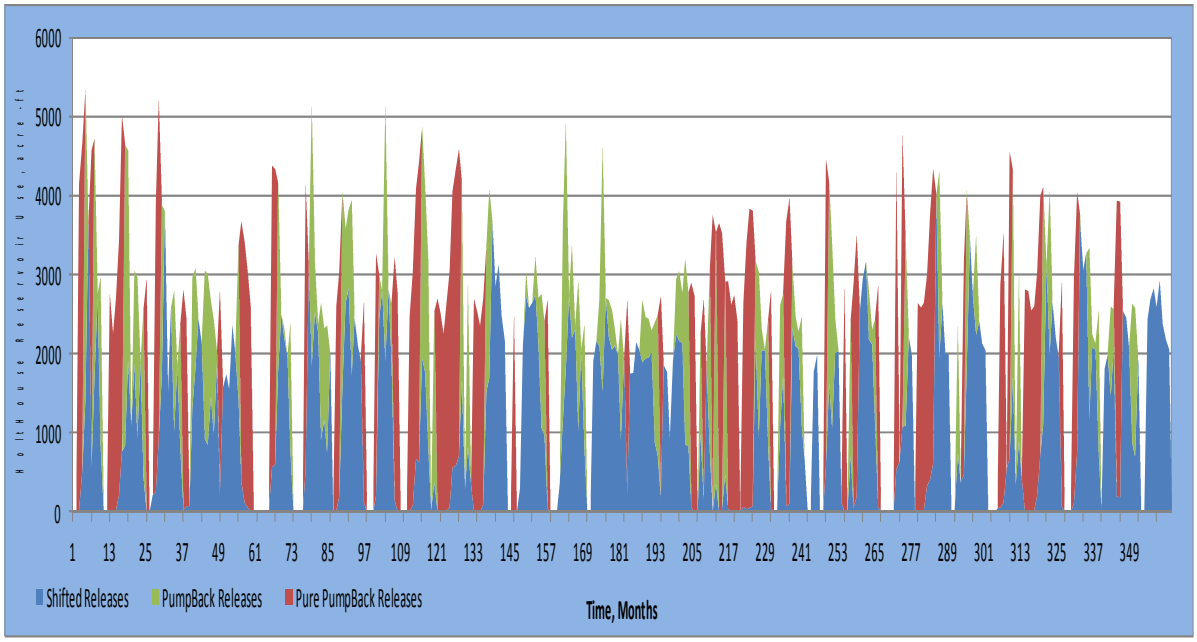


Figure 12- NODOS Project, Holthouse Reservoir Operations-Diversion Mode, Alt C

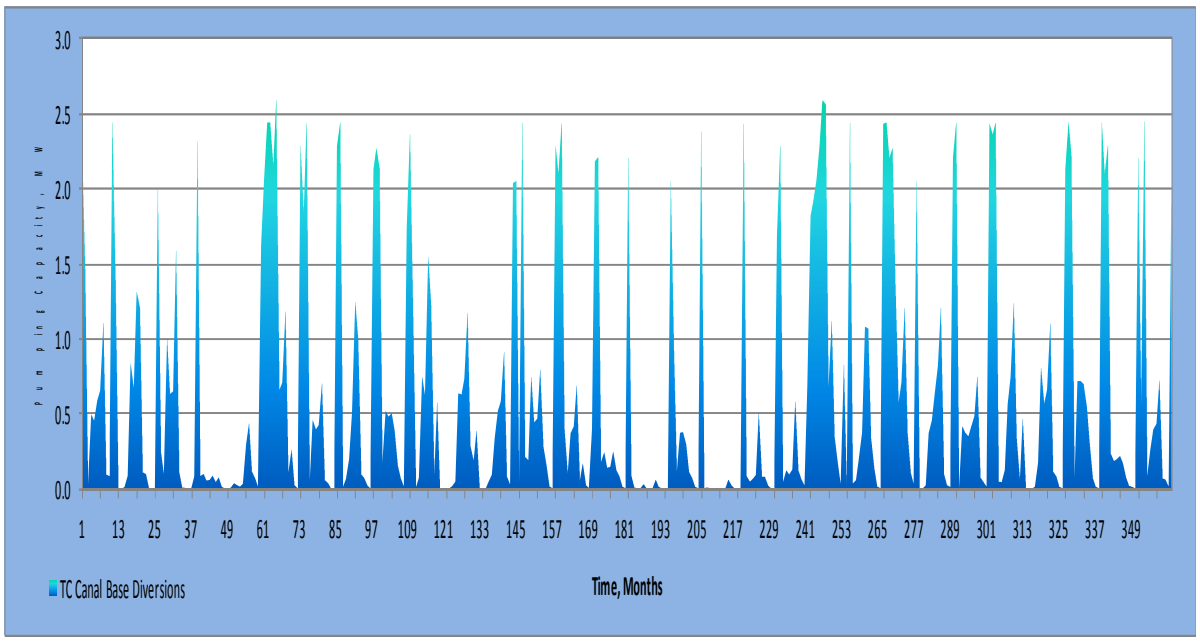


Figure 13- NODOS Project, TC Canal Pumping Plant Operations, Alt C

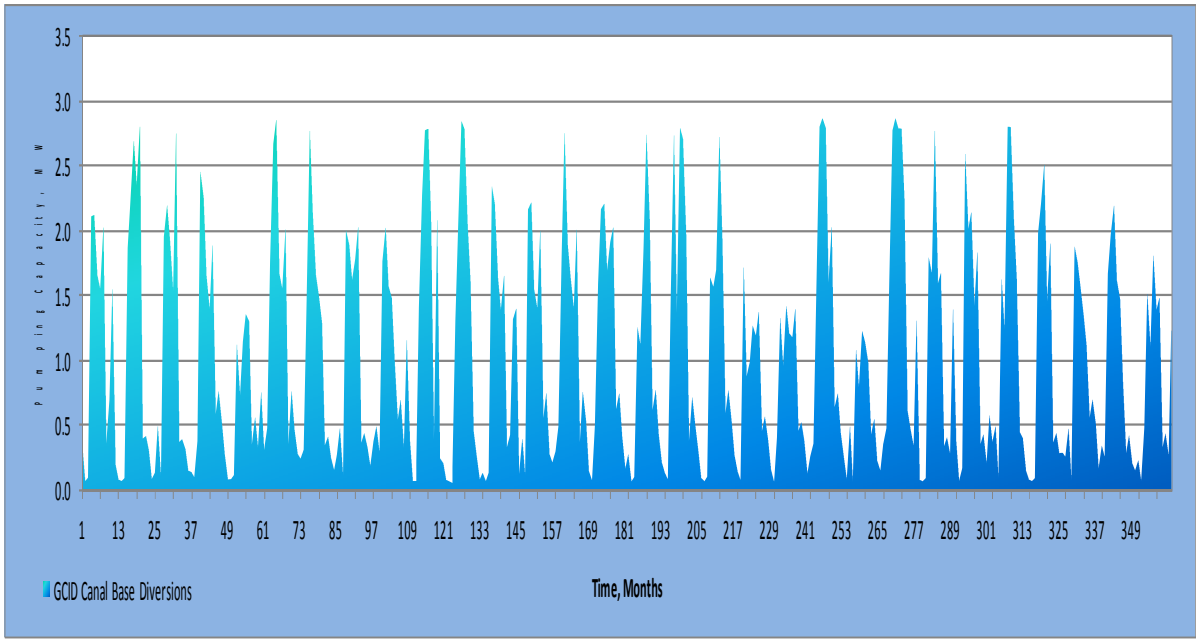


Figure 14- NODOS Project, GCID Canal Pumping Plant Operations, Alt C

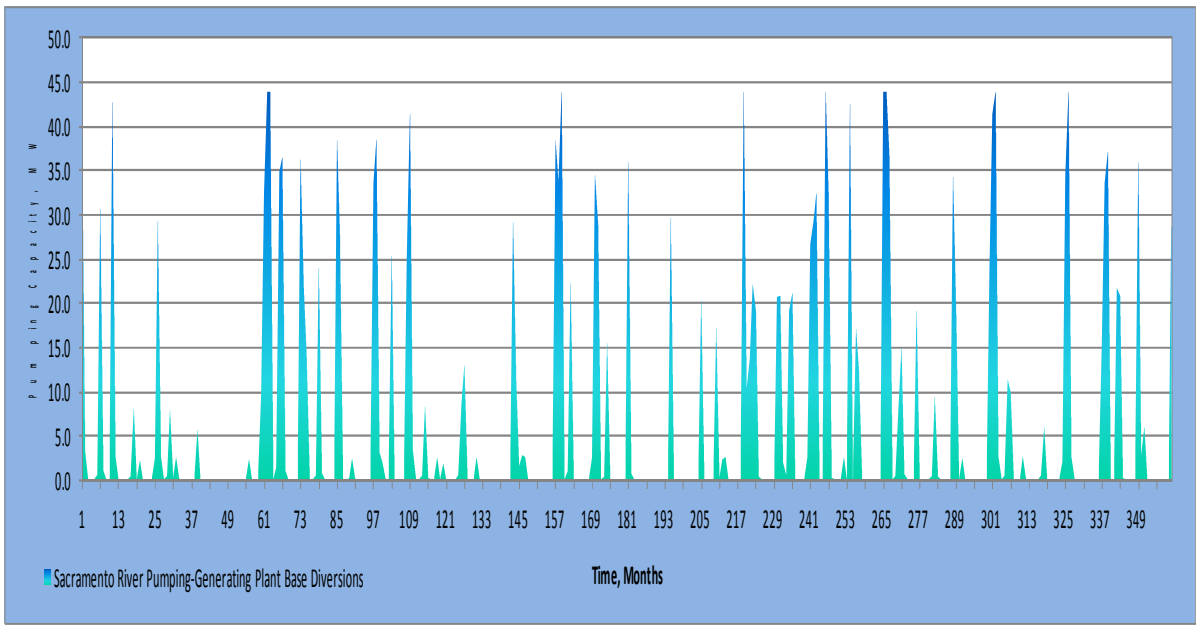


Figure 15- NODOS Project, Sacramento River Pumping Plant Operations, Alt C

Table 2 through Table 5 are summaries of the monthly, 30-year planning period, pumping and generation capacities used to model the Median Case of the NODOS Project operations (See Appendix for complete version of Table 2 through Table 5), For Alternative C of the three action alternatives considered for the NODOS Project. Two operational scenarios are used to model each of the three action alternatives considered for the Project, one is labeled as "Incidental," and a second one is labeled as "Optimized." For the "Incidental" scenario, pumping and generating at the different NODOS Project facilities are driven by water diversions and releases (i.e. "Incidental"). For the "Optimized" scenario, pumping and generating at the Sites Reservoir pumping-generating plant are optimized to minimize pumping costs obligations and maximize energy generation revenues for the Project. The modeling results are presented for both the "Incidental" and the "Optimized" operational scenarios to report the energy portfolio value, and describe the gain (monetary value) from optimizing the NODOS Project operations. The information in the aforementioned tables is the input data needed to run the EPM model. Different financial instruments were used in the EPM model to represent the power portfolio and to estimate the value of energy and risk associated with the operations of the project.