

BP-26 Rate Proceeding

Final Proposal

Generation Inputs Study Documentation

BP-26-FS-BPA-06A

July 2025



GENERATION INPUTS STUDY DOCUMENTATION

TABLE OF CONTENTS

	Page
COMMONLY USED ACRONYMS AND SHORT FORMS	iii
FIGURES AND TABLES.....	1
Table 1: Inter-Business Line Allocations.....	3
Figure 2.1: Map of VER Facilities in FY 2026-2028 Balancing Reserve Capacity Quantity Forecast	4
Table 2.1: Forecast of Installed Generation Capacity for the FY 2026-2028 Balancing Reserve Capacity Quantity Forecast	5
Table 2.2: VER Facilities in FY 2026-2028 Balancing Reserve Capacity Quantity Forecast.....	6
Table 2.3: Solar Day-of-Year and Time-of-Day Data Calculations.....	7
Table 2.4: Total Irradiance Calculations	8
Table 2.5: Irradiance to Power Conversion Calculations	9
Table 2.6: Point-Source Scaling PV Calculations.....	10
Table 2.7: Incremental Standard Deviation Calculation Example	11
Table 2.8: Load Regulation Incremental Reserves Example	12
Table 2.9: Total Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast	13
Table 2.10: Load Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast	14
Table 2.11: Wind Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast	15
Table 2.12: Non-Federal Thermal Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast	16
Table 2.13: Solar Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast	17
Table 2.14: FCRPS Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast	18
Table 2.15: Total Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max.....	19
Table 2.16: Load Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max.....	20
Table 2.17: Wind Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max.....	21
Table 2.18: Non-Federal Thermal Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max	22

Table 2.19: Solar Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max.....	23
Table 2.20: FCRPS Balancing Reserve Capacity Requirement (Values in MW) for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max.....	24
Table 3.1: Balancing Area Net Load and Generation.....	25
Table 3.2: Forecast Operating Reserve Obligation.....	26

COMMONLY USED ACRONYMS AND SHORT FORMS

AAC	Anticipated Accumulation of Cash
ACNR	Accumulated Calibrated Net Revenue
ACS	Ancillary and Control Area Services
AF	Advance Funding
AFUDC	Allowance for Funds Used During Construction
AGC	automatic generation control
aMW	average megawatt(s)
ANR	Accumulated Net Revenues
ASC	Average System Cost
BAA	Balancing Authority Area
BiOp	Biological Opinion
BPA	Bonneville Power Administration
BPAP	Bonneville Power Administration Power
BPAT	Bonneville Power Administration Transmission
Bps	basis points
Btu	British thermal unit
CAISO	California Independent System Operator
CIP	Capital Improvement Plan
CIR	Capital Investment Review
CDQ	Contract Demand Quantity
CGS	Columbia Generating Station
CHWM	Contract High Water Mark
CNR	Calibrated Net Revenue
COB	California-Oregon border
COE	U.S. Army Corps of Engineers
COI	California-Oregon Intertie
Commission	Federal Energy Regulatory Commission
Corps	U.S. Army Corps of Engineers
COSA	Cost of Service Analysis
COU	consumer-owned utility
Council	Northwest Power and Conservation Council (see also “NPCC”)
COVID-19	coronavirus disease 2019
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CRFM	Columbia River Fish Mitigation
CSP	Customer System Peak
CT	combustion turbine
CWIP	Construction Work in Progress
CY	calendar year (January through December)
DD	Dividend Distribution
DDC	Dividend Distribution Clause
dec	decrease, decrement, or decremental
DER	Dispatchable Energy Resource

DERBS	Dispatchable Energy Resource Balancing Service
DFS	Diurnal Flattening Service
DNR	Designated Network Resource
DOE	Department of Energy
DOI	Department of Interior
DSI	direct-service industrial customer or direct-service industry
DSO	Dispatcher Standing Order
EE	Energy Efficiency
EESC	EIM Entity Scheduling Coordinator
EIM	Energy imbalance market
EIS	Environmental Impact Statement
ELMP	Extended Locational Marginal Pricing
EN	Energy Northwest, Inc.
ESA	Endangered Species Act
ESS	Energy Shaping Service
e-Tag	electronic interchange transaction information
FBS	Federal base system
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FELCC	firm energy load carrying capability
FERC	Federal Energy Regulatory Commission
FMM-IIE	Fifteen Minute Market – Instructed Imbalance Energy
FOIA	Freedom of Information Act
FORS	Forced Outage Reserve Service
FPS	Firm Power and Surplus Products and Services
FPT	Formula Power Transmission
FRP	Financial Reserves Policy
F&W	Fish & Wildlife
FY	fiscal year (October through September)
G&A	general and administrative (costs)
GARD	Generation and Reserves Dispatch (computer model)
GDP	Gross Domestic Product
GI	generation imbalance
GMS	Grandfathered Generation Management Service
GSP	Generation System Peak
GSR	Generation Supplied Reactive
GRSPs	General Rate Schedule Provisions
GTA	General Transfer Agreement
GWh	gigawatthour
HLH	Heavy Load Hour(s)
HOSS	Hourly Operating and Scheduling Simulator (computer model)
HYDSIM	Hydrosystem Simulator (computer model)
IE	Eastern Intertie
IIE	Instructed Imbalance Energy
IM	Montana Intertie

inc	increase, increment, or incremental
IOU	investor-owned utility
IP	Industrial Firm Power
IPR	Integrated Program Review
IR	Integration of Resources
IRD	Irrigation Rate Discount
IRM	Irrigation Rate Mitigation
IRPL	Incremental Rate Pressure Limiter
IS	Southern Intertie
ISD	Incremental Standard Deviation
kcfs	thousand cubic feet per second
KSI	key strategic initiative
kW	kilowatt
kWh	kilowatthour
LAP	Load Aggregation Point
LDD	Low Density Discount
LGIA	Large Generator Interconnection Agreement
LLH	Light Load Hour(s)
LMP	Locational Marginal Price
LPP	Large Project Program
LT	long term
LTF	Long-term Firm
Maf	million acre-feet
Mid-C	Mid-Columbia
MMBtu	million British thermal units
MNR	Modified Net Revenue
MRNR	Minimum Required Net Revenue
MW	megawatt
MWh	megawatthour
NCP	Non-Coincidental Peak
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NFB	National Marine Fisheries Service (NMFS) Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp)
NLSL	New Large Single Load
NMFS	National Marine Fisheries Service
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries
NOB	Nevada-Oregon border
NORM	Non-Operating Risk Model (computer model)
NWPA	Northwest Power Act/Pacific Northwest Electric Power Planning and Conservation Act
NP-15	North of Path 15
NPCC	Northwest Power and Conservation Council
NPV	net present value

NR	New Resource Firm Power
NRFS	NR Resource Flattening Service
NRU	Northwest Requirements Utilities
NT	Network Integration
NTSA	Non-Treaty Storage Agreement
NUG	non-utility generation
NWPP	Northwest Power Pool
OATT	Open Access Transmission Tariff
O&M	operations and maintenance
OATI	Open Access Technology International, Inc.
ODE	Over Delivery Event
OS	Oversupply
OY	operating year (August through July)
PDCI	Pacific DC Intertie
PF	Priority Firm Power
PFp	Priority Firm Public
PFx	Priority Firm Exchange
PNCA	Pacific Northwest Coordination Agreement
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
POI	Point of Integration or Point of Interconnection
POR	Point of Receipt
PPC	Public Power Council
PRSC	Participating Resource Scheduling Coordinator
PS	Power Services
PSC	power sales contract
PSW	Pacific Southwest
PTP	Point-to-Point
PUD	public or people's utility district
RAM	Rate Analysis Model (computer model)
RAS	Remedial Action Scheme
RCD	Regional Cooperation Debt
RD	Regional Dialogue
RDC	Reserves Distribution Clause
REC	Renewable Energy Certificate
Reclamation	U.S. Bureau of Reclamation
REP	Residential Exchange Program
REPSIA	REP Settlement Implementation Agreement
RevSim	Revenue Simulation Model
RFA	Revenue Forecast Application (database)
RHWM	Rate Period High Water Mark
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RR	Resource Replacement

RRS	Resource Remarketing Service
RSC	Resource Shaping Charge
RSS	Resource Support Services
RT1SC	RHWM Tier 1 System Capability
RTD-IIE	Real-Time Dispatch – Instructed Imbalance Energy
RTIEO	Real-Time Imbalance Energy Offset
SCD	Scheduling, System Control, and Dispatch Service
SCADA	Supervisory Control and Data Acquisition
SCS	Secondary Crediting Service
SDD	Short Distance Discount
SILS	Southeast Idaho Load Service
Slice	Slice of the System (product)
SMCR	Settlements, Metering, and Client Relations
SP-15	South of Path 15
T1SFCO	Tier 1 System Firm Critical Output
TC	Tariff Terms and Conditions
TCMS	Transmission Curtailment Management Service
TDG	Total Dissolved Gas
TGT	Townsend-Garrison Transmission
TOCA	Tier 1 Cost Allocator
TPP	Treasury Payment Probability
TRAM	Transmission Risk Analysis Model
Transmission System Act	Federal Columbia River Transmission System Act
Treaty	Columbia River Treaty
TRL	Total Retail Load
TRM	Tiered Rate Methodology
TS	Transmission Services
TSS	Transmission Scheduling Service
UAI	Unauthorized Increase
UDE	Under Delivery Event
UFE	unaccounted for energy
UFT	Use of Facilities Transmission
UIC	Unauthorized Increase Charge
UIE	Uninstructed Imbalance Energy
ULS	Unanticipated Load Service
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish & Wildlife Service
VER	Variable Energy Resource
VERBS	Variable Energy Resource Balancing Service
VOR	Value of Reserves
VR1-2014	First Vintage Rate of the BP-14 rate period (PF Tier 2 rate)
VR1-2016	First Vintage Rate of the BP-16 rate period (PF Tier 2 rate)
WECC	Western Electricity Coordinating Council
WSPP	Western Systems Power Pool

This page intentionally left blank.

FIGURES AND TABLES

This page intentionally left blank.

Table 1 Inter-Business Line Allocations			
	A	B	C
	Generation Inputs	Annual Average FY 2026 2028 Reserve Quantity Forecast (MW)	Annual Average FY 2026 2028 Revenue Forecast (\$)
1	Reserve Forecast		
2	Balancing Reserves		\$ 75,712,200
3	Regulation Reserves inc	482	\$ 55,005,840
4	Regulation Reserves dec	503	\$ 1,267,560
5	Non-regulation Reserves inc	334	\$ 19,438,800
6	Non-regulation Reserves dec	466	\$ -
7	Operating Reserves		\$ 43,949,278
8	Operating Reserves - Spinning	252	\$ 29,027,106
9	Operating Reserves - Supplemental	252	\$ 14,922,172
10	Reserves Total (lines 2+7)		\$ 119,661,478
11			
12	Other Forecasts		
13	Synchronous Condensing		\$ 1,636,876
14	Generation Dropping		\$ 714,375
15	Redispatch		\$ 244,883
16	Segmentation of COE/BOR		\$ 7,696,000
17	Station Service		\$ 3,264,936
18	Other Total (lines 13-17)		\$ 13,557,070
19			
20	Total Generation Inputs Credit Forecast (lines 10+18)		\$ 133,218,548

*Federal Generation Balancing Reserves MW and Revenue (Costs) are not included in the Reserves Total because these costs are paid for by Power Customers

Figure 2.1
Map of VER Facilities in FY 2026-2028 Balancing Reserve Capacity Quantity Forecast

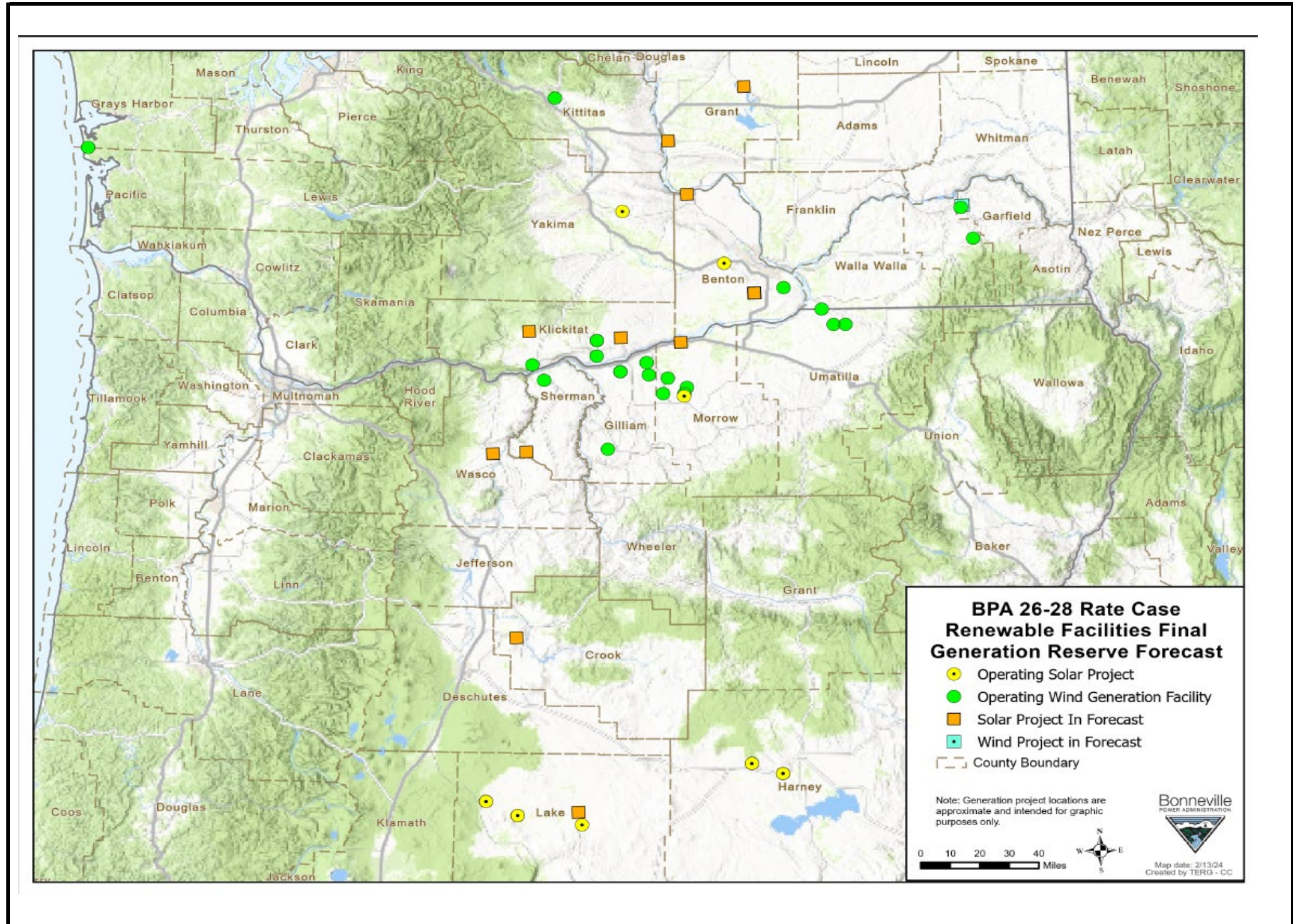


Table 2.1

**Forecast of Installed Generation Capacity for the FY 2026-2028
Balancing Reserve Capacity Quantity Forecast (Values in MW)**

	A	B	C	D	E
		WIND	SOLAR	NON- FEDERAL THERMAL	FCRPS
1	Oct-25	3,034	219	1,583	3,384
2	Nov-25	3,034	219	1,583	3,384
3	Dec-25	3,034	319	1,583	3,384
4	Jan-26	3,034	419	1,583	3,384
5	Feb-26	3,034	419	1,583	3,384
6	Mar-26	3,034	459	1,583	3,384
7	Apr-26	3,034	459	1,583	3,384
8	May-26	3,034	539	1,583	3,384
9	Jun-26	3,034	539	1,583	3,384
10	Jul-26	3,034	539	1,583	3,384
11	Aug-26	3,034	539	1,583	3,384
12	Sep-26	3,034	539	1,583	3,384
13	Oct-26	3,426	739	1,583	3,384
14	Nov-26	3,426	739	1,583	3,384
15	Dec-26	3,426	1,059	1,583	3,384
16	Jan-27	3,426	1,139	1,583	3,384
17	Feb-27	3,426	1,339	1,583	3,384
18	Mar-27	3,426	1,339	1,583	3,384
19	Apr-27	3,426	1,539	1,583	3,384
20	May-27	3,426	1,619	1,583	3,384
21	Jun-27	3,426	1,819	1,583	3,384
22	Jul-27	3,426	1,819	1,583	3,384
23	Aug-27	3,426	1,819	1,583	3,384
24	Sep-27	3,426	1,819	1,583	3,384
25	Oct-27	3,426	2,289	1,583	3,384
26	Nov-27	3,426	2,289	1,583	3,384
27	Dec-27	3,786	2,429	1,583	3,384
28	Jan-28	3,786	2,429	1,583	3,384
29	Feb-28	3,786	2,429	1,583	3,384
30	Mar-28	3,786	2,589	1,583	3,384
31	Apr-28	3,786	2,589	1,583	3,384
32	May-28	3,786	2,629	1,583	3,384
33	Jun-28	3,786	2,629	1,583	3,384
34	Jul-28	3,786	2,629	1,583	3,384
35	Aug-28	3,786	2,629	1,583	3,384
36	Sep-28	3,786	2,629	1,583	3,384
37	BP-26 AVG	3,395	1,450	1,583	3,384

Table 2.2

VER Facilities in FY 2026-2028 Balancing Reserve Capacity Quantity Forecast

	A	B	C	D	E
	Project Name	Nameplate Capacity (MW)	VER Type	County, State	Start Month and Year
1	Vansycle	25	WIND	Umatilla, OR	Oct-98
2	Stateline	90	WIND	Walla Walla, WA	Dec-01
3	Condon	50	WIND	Gilliam, OR	Jun-02
4	Blue Sky/Hopkins Ridge	157	WIND	Columbia, WA	Nov-05
5	White Creek	204	WIND	Klickitat, WA	Oct-07
6	Nine Canyon 1-3	50	WIND	Benton, WA	May-08
7	Arlington Wind	103	WIND	Gilliam, OR	Dec-08
8	Willow Creek	72	WIND	Morrow, OR	Jan-09
9	Wheatfield Wind	97	WIND	Gilliam, OR	Mar-09
10	Windy Flats Dooley	262	WIND	Klickitat, WA	Nov-09
11	Harvest-White Creek III	100	WIND	Klickitat, WA	Dec-09
12	Combine Hills	63	WIND	Umatilla, OR	Jan-10
13	Linden Ranch	50	WIND	Klickitat, WA	Jun-10
14	Coastal Energy Wind	6	WIND	Grays Harbor, WA	Jun-10
15	Kittitas Valley	101	WIND	Kittitas, WA	Nov-10
16	Patu (Oregon Trail Wind)	10	WIND	Sherman, OR	Nov-10
17	North Hurlburt	266	WIND	Gilliam, OR	Aug-11
18	Lower Snake Wind 1	343	WIND	Garfield, WA	Jan-12
19	South Hurlburt	290	WIND	Gilliam, OR	Jun-12
20	HorseShoe Bend	291	WIND	Morrow, OR	Aug-12
21	Outback Solar	5	SOLAR	Lake, OR	Sep-12
22	Starvation Solar	10	SOLAR	Harney, OR	Jan-20
23	West Hines Solar	10	SOLAR	Harney, OR	Jul-20
24	Alkali Solar	10	SOLAR	Lake, OR	Jul-20
25	Fort Rock II Solar	10	SOLAR	Lake, OR	Aug-20
26	Fort Rock Solar	10	SOLAR	Lake, OR	Aug-20
27	Riley Solar	10	SOLAR	Harney, OR	Aug-20
28	Suntex Solar	10	SOLAR	Harney, OR	Aug-20
29	Rock Garden Solar	10	SOLAR	Lake, OR	Aug-20
30	Wheatridge Wind 2	200	WIND	Morrow, OR	Oct-20
31	Horn Rapids Solar	4.2	SOLAR	Benton, WA	Feb-21
32	Wheatridge Solar	50	SOLAR	Morrow, OR	Feb-22
33	Goose Praire Solar	80	SOLAR	Yakima, WA	Dec-24
54	G0362	204	WIND	Morrow, OR	Aug-25
34	G0539 Phase 1	80	SOLAR	Deschutes, OR	Nov-25
36	G0524	20	SOLAR	Wasco, OR	Dec-25
35	G0586	100	SOLAR	Klickitat, WA	Jan-26
39	G0539 Phase 2	40	SOLAR	Deschutes, OR	Mar-26
40	G0539 Phase 3	80	SOLAR	Deschutes, OR	May-26
44	G0285	142	WIND	Garfield, WA	Sep-26
45	G0294	250	WIND	Columbia, OR	Sep-26
46	G0539 Phase 4	200	SOLAR	Deschutes, OR	Oct-26
41	G0532	100	SOLAR	Morrow, OR	Nov-26
42	G0513	20	SOLAR	Morrow, OR	Nov-26
48	G0615 Phase 1	200	SOLAR	Sherman, OR	Dec-26
49	G0596	80	SOLAR	Yakima, WA	Dec-26
50	G0615 Phase 2	200	SOLAR	Sherman, OR	Feb-27
51	G0615 Phase 3	200	SOLAR	Sherman, OR	Apr-27
47	G0539 Phase 5	80	SOLAR	Deschutes, OR	May-27
52	G0615 Phase 4	200	SOLAR	Sherman, OR	Jun-27
37	G0602	300	SOLAR	Grant, WA	Oct-27
38	G0626	90	SOLAR	Grant, WA	Oct-27
53	G0539 Phase 6	80	SOLAR	Deschutes, OR	Oct-27
55	G0558	360	WIND	Benton, WA	Dec-27
56	G0558	140	SOLAR	Benton, WA	Dec-27
43	G0598	160	SOLAR	Klickitat, WA	Mar-28
57	G0539 Phase 7	40	SOLAR	Deschutes, OR	May-28

Table 2.3
Solar Day-of-Year and Time-of-Day Data Calculations

1	Equation of Time	[Equation 2.27 in Reference 1]
2	$ET = 9.87 \sin(2B) - 7.53 \cos(B) - 1.5 \sin(B)$ where $B = \frac{360(n-81)}{364^\circ}$ n = nth day of year	
3	Local Solar Time	[Equation 2.26 in Reference 1]
4	$ST = lst + ET + 4(lon_{std} - lon_{local})$ where lon_{std} is the standard time meridian (120°) lon_{local} is the longitude of the plant 4 is in units of minutes/degree	
5	Degree from Solar Noon	[Equation 2.25 in Reference 1]
6	$h_s = \frac{ST - 12 * 60}{4}$	
7	Declination Angle	[Equation 2.23 in Reference 1]
8	$\delta_s = \sin^{-1} \left(23.45^\circ \cdot \sin \left(\frac{360 \cdot (284 + n)}{365^\circ} \right) \right)$ where n=nth day of year	
9	Solar Altitude Angle	[Equation 2.28 in Reference 1]
10	$\alpha = \sin^{-1} (\sin(lat_{local}) \sin(\delta_s) + \cos(lat_{local}) \cos(\delta_s) \cos(h_s))$ where lat_{local} is the latitude of the plant	
11	Solar Azimuth Angle	[Equation 2.29 in Reference 1]
12	$a_s = \sin^{-1} \left(\frac{\cos(\delta_s) \sin(h_s)}{\cos(\alpha)} \right)$	
13	Tracking Angle	[Equation 4.13 in Reference 2]
14	$\beta = \rho = \tan^{-1} \left(\frac{\sin(a_s)}{\tan(\alpha)} \right)$	
15	Angle of Incidence	[Equation 4.14 in Reference 2]
16	$\theta_i = \cos^{-1} \left(\sqrt{1 - ((\cos(\alpha))^2 \cdot (\cos(a_s))^2)} \right)$	
17	<i>References:</i>	
18	1) Goswami, Dr. Y et al. (2000). Principles of Solar Engineering. New York: Taylor and Francis Group	
19	2) Stine, W and Geyer, M (2001). Power From the Sun. Retrieved from http://www.powerfromthesun.net	

Table 2.4
Total Irradiance Calculations

1	Direct Normal component of Irradiance	[Equation 2.47 in Reference 1]
2	$I_{dn} = \cos(\theta_i) \cdot (Direct\ Normal\ Sensor\ Data)$	
3	Diffuse component of Irradiance	[Equation 2.49 in Reference 1]
4	$I_{df} = \left(\cos\left(\frac{\beta}{2}\right) \right)^2 \cdot (Diffuse\ Sensor\ Data)$	
5	Total Irradiance	
6	$I_t = I_{dn} + I_{df}$	
7		
8	<i>Reference:</i>	
9	1) Goswami, Dr. Y et al. (2000). Principles of Solar Engineering. New York: Taylor and Francis Group	

Table 2.5
Irradiance to Power Conversion Calculations

1	Cell Temperature	[Equation 1 in Reference 4]
2	$cell\ temp = temp + I_t \cdot cell\ temp\ coef$	
3	Temperature Coefficient	[Equation 8 in Reference 3]
4	$temp\ coef = 1 - temp\ coef_{static}(cell\ temp - 28)$	
5	Predicted Power (DC)	[Equation 8 in Reference 3]
6	$PP = NP_{DC} \cdot Efficiency \cdot \frac{I_t}{1000} \cdot temp\ coef$	
7		
8	References:	
9	3) Dobos, A (2013). PVWatts Technical Manual. NREL: https://www.nrel.gov/docs/fy14osti/60272.pdf	
10	4) Alonso Garcia, M.C. and Balenzategui, J.L. (2004). Estimation of photovoltaic module yearly temperature and performance based on Nominal Operation Cell Temperature Calculations.	

Table 2.6
Point-Source Scaling PV Calculations

1	Rolling Average Calculation	[Reference 5]
2	$RollingAvg(t) = average \left(data \left[t - \left(\frac{T}{2} - 1 \right) : t + \frac{T}{2} \right] \right)$	
3	$T = 2 * round(\sqrt{400 \cdot NP_{DC}})$	
4		
5	Inverter Loading Ratio Adjustment	
6	$PP(PP > NP_{AC}) = NP_{AC}$	
7		
8	References:	
9	5) Adapted from “A Wavelet-Based Variability Model (WVM for Solar PV Power Plants” by Matthew Lave, Jan Kleissl, and Joshua Stein, 2013, IEEE Transactions on Sustainable Energy, Volume 4, No. 2	

Table 2.7
Incremental Standard Deviation Calculation Example

1			
2	$Reg\ inc_{Load\ HE1}$	$= Total\ Reg\ inc * R_{Load\ Reg\ HE1,\ Total\ Reg\ HE1} * S_{Load\ Reg\ HE1} / S_{TotalReg\ HE1}$	
3	$Reg\ inc_{Wind\ HE1}$	$= Total\ Reg\ inc * R_{Wind\ Reg\ HE1,\ Total\ Reg\ HE1} * S_{Wind\ Reg\ HE1} / S_{TotalReg\ HE1}$	
4	$Reg\ inc_{Solar\ HE1}$	$= Total\ Reg\ inc * R_{Solar\ Reg\ HE1,\ Total\ Reg\ HE1} * S_{Solar\ Reg\ HE1} / S_{TotalReg\ HE1}$	
5	$Reg\ inc_{FCRPS\ HE1}$	$= Total\ Reg\ inc * R_{FCRPS\ Reg\ HE1,\ Total\ Reg\ HE1} * S_{FCRPS\ Reg\ HE1} / S_{TotalReg\ HE1}$	
6	$Reg\ inc_{Non-Fed\ Thermal\ HE1}$	$= Total\ Reg\ inc * R_{Non-Fed\ Thermal\ Reg\ HE1,\ Total\ Reg\ HE1} * S_{Non-Fed\ Thermal\ Reg\ HE1} / S_{TotalReg\ HE1}$	
7			
8	Where: Reg is Regulating Reserves		
9	HE1 is Hour Ending 1		
10	$R_{Load\ Reg\ HE1,\ Total\ Reg\ HE1}$	$= correlation\ between\ Load\ Reg\ HE1\ and\ Total\ Reg\ HE1$	
11	$S_{Load\ Reg\ HE1}$	$= standard\ deviation\ of\ Load\ Reg\ HE1$	
12	$S_{Total\ Reg\ HE1}$	$= Standard\ deviation\ of\ Total\ Reg\ HE1$	

Table 2.8
Load Regulation Incremental Reserves Example

1

$$2 \quad \text{Reg inc}_{\text{Load}} = \text{Total Reg inc} * \text{Reg inc}_{\text{Load Max24}} / \text{Reg inc}_{\text{Total Max24}}$$

3

4 Where Reg is Regulating Reserves

$$5 \quad \text{Reg inc}_{\text{Load Max24}} = \text{MAX}(\text{Reg inc}_{\text{Load HE1}}, \text{Reg inc}_{\text{Load HE2}}, \dots, \text{Reg inc}_{\text{Load HE24}})$$

$$6 \quad \text{Reg inc}_{\text{Total Max24}} = \text{Reg inc}_{\text{Load Max24}} + \text{Reg inc}_{\text{Wind Max24}} + \text{Reg inc}_{\text{Solar Max24}} + \text{Reg inc}_{\text{FCRPS Max24}} + \text{Reg inc}_{\text{Non-Fed Thermal Max24}}$$

Table 2.9

**Total Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast**

		INSTALLED CAPACITY				TOTAL					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	326	-333	402	-504	728	-837
2	Nov-25	3,034	219	1,583	3,384	326	-333	402	-504	728	-837
3	Dec-25	3,034	319	1,583	3,384	327	-335	403	-505	730	-840
4	Jan-26	3,034	419	1,583	3,384	329	-338	405	-502	734	-840
5	Feb-26	3,034	419	1,583	3,384	329	-338	405	-502	734	-840
6	Mar-26	3,034	459	1,583	3,384	330	-340	405	-502	735	-842
7	Apr-26	3,034	459	1,583	3,384	330	-340	405	-502	735	-842
8	May-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
9	Jun-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
10	Jul-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
11	Aug-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
12	Sep-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
13	Oct-26	3,426	739	1,583	3,384	367	-387	443	-549	810	-936
14	Nov-26	3,426	739	1,583	3,384	367	-387	443	-549	810	-936
15	Dec-26	3,426	1,059	1,583	3,384	406	-422	450	-539	856	-961
16	Jan-27	3,426	1,139	1,583	3,384	424	-441	450	-530	874	-971
17	Feb-27	3,426	1,339	1,583	3,384	461	-482	463	-529	924	-1,011
18	Mar-27	3,426	1,339	1,583	3,384	461	-482	463	-529	924	-1,011
19	Apr-27	3,426	1,539	1,583	3,384	496	-516	489	-549	985	-1,065
20	May-27	3,426	1,619	1,583	3,384	504	-523	509	-564	1,013	-1,087
21	Jun-27	3,426	1,819	1,583	3,384	531	-549	554	-602	1,085	-1,151
22	Jul-27	3,426	1,819	1,583	3,384	531	-549	554	-602	1,085	-1,151
23	Aug-27	3,426	1,819	1,583	3,384	531	-549	554	-602	1,085	-1,151
24	Sep-27	3,426	1,819	1,583	3,384	531	-549	554	-602	1,085	-1,151
25	Oct-27	3,426	2,289	1,583	3,384	638	-668	640	-664	1,278	-1,332
26	Nov-27	3,426	2,289	1,583	3,384	638	-668	640	-664	1,278	-1,332
27	Dec-27	3,786	2,429	1,583	3,384	686	-722	667	-684	1,353	-1,406
28	Jan-28	3,786	2,429	1,583	3,384	686	-722	667	-684	1,353	-1,406
29	Feb-28	3,786	2,429	1,583	3,384	686	-722	667	-684	1,353	-1,406
30	Mar-28	3,786	2,589	1,583	3,384	745	-788	685	-701	1,430	-1,489
31	Apr-28	3,786	2,589	1,583	3,384	745	-788	685	-701	1,430	-1,489
32	May-28	3,786	2,629	1,583	3,384	750	-791	697	-712	1,447	-1,503
33	Jun-28	3,786	2,629	1,583	3,384	750	-791	697	-712	1,447	-1,503
34	Jul-28	3,786	2,629	1,583	3,384	750	-791	697	-712	1,447	-1,503
35	Aug-28	3,786	2,629	1,583	3,384	750	-791	697	-712	1,447	-1,503
36	Sep-28	3,786	2,629	1,583	3,384	750	-791	697	-712	1,447	-1,503
37	BP-26 AVG	3,395	1,450	1,583	3,384	504	-526	526	-587	1,030	-1,113

Table 2.10
Load Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast

		INSTALLED CAPACITY				LOAD*					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	166	-170	182	-229	348	-399
2	Nov-25	3,034	219	1,583	3,384	166	-170	182	-229	348	-399
3	Dec-25	3,034	319	1,583	3,384	159	-162	180	-226	339	-388
4	Jan-26	3,034	419	1,583	3,384	150	-154	178	-220	328	-374
5	Feb-26	3,034	419	1,583	3,384	150	-154	178	-220	328	-374
6	Mar-26	3,034	459	1,583	3,384	146	-150	176	-218	322	-368
7	Apr-26	3,034	459	1,583	3,384	146	-150	176	-218	322	-368
8	May-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
9	Jun-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
10	Jul-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
11	Aug-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
12	Sep-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
13	Oct-26	3,426	739	1,583	3,384	134	-142	168	-208	302	-350
14	Nov-26	3,426	739	1,583	3,384	134	-142	168	-208	302	-350
15	Dec-26	3,426	1,059	1,583	3,384	132	-137	152	-182	284	-319
16	Jan-27	3,426	1,139	1,583	3,384	134	-139	146	-172	280	-311
17	Feb-27	3,426	1,339	1,583	3,384	137	-143	134	-154	271	-297
18	Mar-27	3,426	1,339	1,583	3,384	137	-143	134	-154	271	-297
19	Apr-27	3,426	1,539	1,583	3,384	139	-145	135	-152	274	-297
20	May-27	3,426	1,619	1,583	3,384	139	-144	139	-154	278	-298
21	Jun-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
22	Jul-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
23	Aug-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
24	Sep-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
25	Oct-27	3,426	2,289	1,583	3,384	171	-179	164	-170	335	-349
26	Nov-27	3,426	2,289	1,583	3,384	171	-179	164	-170	335	-349
27	Dec-27	3,786	2,429	1,583	3,384	173	-182	161	-165	334	-347
28	Jan-28	3,786	2,429	1,583	3,384	173	-182	161	-165	334	-347
29	Feb-28	3,786	2,429	1,583	3,384	173	-182	161	-165	334	-347
30	Mar-28	3,786	2,589	1,583	3,384	186	-196	161	-165	347	-361
31	Apr-28	3,786	2,589	1,583	3,384	186	-196	161	-165	347	-361
32	May-28	3,786	2,629	1,583	3,384	186	-197	164	-167	350	-364
33	Jun-28	3,786	2,629	1,583	3,384	186	-197	164	-167	350	-364
34	Jul-28	3,786	2,629	1,583	3,384	186	-197	164	-167	350	-364
35	Aug-28	3,786	2,629	1,583	3,384	186	-197	164	-167	350	-364
36	Sep-28	3,786	2,629	1,583	3,384	186	-197	164	-167	350	-364
37	BP-26 AVG	3,395	1,450	1,583	3,384	156	-162	162	-185	318	-347

NOTES:

* Load includes all Non-Federal Hydro

Table 2.11
Wind Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast

		INSTALLED CAPACITY				WIND					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	113	-115	215	-270	328	-385
2	Nov-25	3,034	219	1,583	3,384	113	-115	215	-270	328	-385
3	Dec-25	3,034	319	1,583	3,384	110	-113	214	-269	324	-382
4	Jan-26	3,034	419	1,583	3,384	107	-110	214	-265	321	-375
5	Feb-26	3,034	419	1,583	3,384	107	-110	214	-265	321	-375
6	Mar-26	3,034	459	1,583	3,384	106	-109	213	-264	319	-373
7	Apr-26	3,034	459	1,583	3,384	106	-109	213	-264	319	-373
8	May-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
9	Jun-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
10	Jul-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
11	Aug-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
12	Sep-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
13	Oct-26	3,426	739	1,583	3,384	123	-130	235	-291	358	-421
14	Nov-26	3,426	739	1,583	3,384	123	-130	235	-291	358	-421
15	Dec-26	3,426	1,059	1,583	3,384	128	-132	235	-281	363	-413
16	Jan-27	3,426	1,139	1,583	3,384	131	-136	233	-274	364	-410
17	Feb-27	3,426	1,339	1,583	3,384	140	-146	234	-268	374	-414
18	Mar-27	3,426	1,339	1,583	3,384	140	-146	234	-268	374	-414
19	Apr-27	3,426	1,539	1,583	3,384	149	-155	237	-266	386	-421
20	May-27	3,426	1,619	1,583	3,384	151	-157	244	-270	395	-427
21	Jun-27	3,426	1,819	1,583	3,384	159	-164	256	-278	415	-442
22	Jul-27	3,426	1,819	1,583	3,384	159	-164	256	-278	415	-442
23	Aug-27	3,426	1,819	1,583	3,384	159	-164	256	-278	415	-442
24	Sep-27	3,426	1,819	1,583	3,384	159	-164	256	-278	415	-442
25	Oct-27	3,426	2,289	1,583	3,384	177	-185	273	-283	450	-468
26	Nov-27	3,426	2,289	1,583	3,384	177	-185	273	-283	450	-468
27	Dec-27	3,786	2,429	1,583	3,384	198	-208	287	-295	485	-503
28	Jan-28	3,786	2,429	1,583	3,384	198	-208	287	-295	485	-503
29	Feb-28	3,786	2,429	1,583	3,384	198	-208	287	-295	485	-503
30	Mar-28	3,786	2,589	1,583	3,384	212	-224	289	-296	501	-520
31	Apr-28	3,786	2,589	1,583	3,384	212	-224	289	-296	501	-520
32	May-28	3,786	2,629	1,583	3,384	213	-225	294	-300	507	-525
33	Jun-28	3,786	2,629	1,583	3,384	213	-225	294	-300	507	-525
34	Jul-28	3,786	2,629	1,583	3,384	213	-225	294	-300	507	-525
35	Aug-28	3,786	2,629	1,583	3,384	213	-225	294	-300	507	-525
36	Sep-28	3,786	2,629	1,583	3,384	213	-225	294	-300	507	-525
37	BP-26 AVG	3,395	1,450	1,583	3,384	151	-158	248	-279	399	-437

Table 2.12
Non-Federal Thermal Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast

		INSTALLED CAPACITY				NON-FEDERAL THERMAL*					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	12	-13	0	0	12	-13
2	Nov-25	3,034	219	1,583	3,384	12	-13	0	0	12	-13
3	Dec-25	3,034	319	1,583	3,384	12	-12	0	0	12	-12
4	Jan-26	3,034	419	1,583	3,384	12	-12	0	0	12	-12
5	Feb-26	3,034	419	1,583	3,384	12	-12	0	0	12	-12
6	Mar-26	3,034	459	1,583	3,384	12	-12	0	0	12	-12
7	Apr-26	3,034	459	1,583	3,384	12	-12	0	0	12	-12
8	May-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
9	Jun-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
10	Jul-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
11	Aug-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
12	Sep-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
13	Oct-26	3,426	739	1,583	3,384	10	-11	0	0	10	-11
14	Nov-26	3,426	739	1,583	3,384	10	-11	0	0	10	-11
15	Dec-26	3,426	1,059	1,583	3,384	10	-11	0	0	10	-11
16	Jan-27	3,426	1,139	1,583	3,384	11	-11	0	0	11	-11
17	Feb-27	3,426	1,339	1,583	3,384	11	-12	0	0	11	-12
18	Mar-27	3,426	1,339	1,583	3,384	11	-12	0	0	11	-12
19	Apr-27	3,426	1,539	1,583	3,384	12	-13	0	0	12	-13
20	May-27	3,426	1,619	1,583	3,384	12	-13	0	0	12	-13
21	Jun-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
22	Jul-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
23	Aug-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
24	Sep-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
25	Oct-27	3,426	2,289	1,583	3,384	14	-15	0	0	14	-15
26	Nov-27	3,426	2,289	1,583	3,384	14	-15	0	0	14	-15
27	Dec-27	3,786	2,429	1,583	3,384	14	-15	0	0	14	-15
28	Jan-28	3,786	2,429	1,583	3,384	14	-15	0	0	14	-15
29	Feb-28	3,786	2,429	1,583	3,384	14	-15	0	0	14	-15
30	Mar-28	3,786	2,589	1,583	3,384	15	-16	0	0	15	-16
31	Apr-28	3,786	2,589	1,583	3,384	15	-16	0	0	15	-16
32	May-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
33	Jun-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
34	Jul-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
35	Aug-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
36	Sep-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
37	BP-26 AVG	3,395	1,450	1,583	3,384	13	-13	0	0	13	-13
NOTES: * Thermal includes new Thermal and Biomass as an allocated amount by nameplate capacity											

Table 2.13
Solar Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast

		INSTALLED CAPACITY				SOLAR					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	14	-14	4	-5	18	-19
2	Nov-25	3,034	219	1,583	3,384	14	-14	4	-5	18	-19
3	Dec-25	3,034	319	1,583	3,384	25	-26	8	-10	33	-36
4	Jan-26	3,034	419	1,583	3,384	40	-41	14	-17	54	-58
5	Feb-26	3,034	419	1,583	3,384	40	-41	14	-17	54	-58
6	Mar-26	3,034	459	1,583	3,384	46	-47	16	-20	62	-67
7	Apr-26	3,034	459	1,583	3,384	46	-47	16	-20	62	-67
8	May-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
9	Jun-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
10	Jul-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
11	Aug-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
12	Sep-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
13	Oct-26	3,426	739	1,583	3,384	83	-87	41	-50	124	-137
14	Nov-26	3,426	739	1,583	3,384	83	-87	41	-50	124	-137
15	Dec-26	3,426	1,059	1,583	3,384	118	-123	64	-76	182	-199
16	Jan-27	3,426	1,139	1,583	3,384	130	-136	71	-83	201	-219
17	Feb-27	3,426	1,339	1,583	3,384	154	-161	94	-107	248	-268
18	Mar-27	3,426	1,339	1,583	3,384	154	-161	94	-107	248	-268
19	Apr-27	3,426	1,539	1,583	3,384	174	-181	117	-131	291	-312
20	May-27	3,426	1,619	1,583	3,384	180	-187	127	-140	307	-327
21	Jun-27	3,426	1,819	1,583	3,384	196	-203	153	-166	349	-369
22	Jul-27	3,426	1,819	1,583	3,384	196	-203	153	-166	349	-369
23	Aug-27	3,426	1,819	1,583	3,384	196	-203	153	-166	349	-369
24	Sep-27	3,426	1,819	1,583	3,384	196	-203	153	-166	349	-369
25	Oct-27	3,426	2,289	1,583	3,384	251	-263	203	-211	454	-474
26	Nov-27	3,426	2,289	1,583	3,384	251	-263	203	-211	454	-474
27	Dec-27	3,786	2,429	1,583	3,384	276	-290	219	-224	495	-514
28	Jan-28	3,786	2,429	1,583	3,384	276	-290	219	-224	495	-514
29	Feb-28	3,786	2,429	1,583	3,384	276	-290	219	-224	495	-514
30	Mar-28	3,786	2,589	1,583	3,384	306	-323	234	-240	540	-563
31	Apr-28	3,786	2,589	1,583	3,384	306	-323	234	-240	540	-563
32	May-28	3,786	2,629	1,583	3,384	308	-325	239	-244	547	-569
33	Jun-28	3,786	2,629	1,583	3,384	308	-325	239	-244	547	-569
34	Jul-28	3,786	2,629	1,583	3,384	308	-325	239	-244	547	-569
35	Aug-28	3,786	2,629	1,583	3,384	308	-325	239	-244	547	-569
36	Sep-28	3,786	2,629	1,583	3,384	308	-325	239	-244	547	-569
37	BP-26 AVG	3,395	1,450	1,583	3,384	163	-170	116	-123	279	-293

Table 2.14
FCRPS Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast

		INSTALLED CAPACITY				FCRPS					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	21	-22	0	0	21	-22
2	Nov-25	3,034	219	1,583	3,384	21	-22	0	0	21	-22
3	Dec-25	3,034	319	1,583	3,384	21	-21	0	0	21	-21
4	Jan-26	3,034	419	1,583	3,384	20	-21	0	0	20	-21
5	Feb-26	3,034	419	1,583	3,384	20	-21	0	0	20	-21
6	Mar-26	3,034	459	1,583	3,384	20	-21	0	0	20	-21
7	Apr-26	3,034	459	1,583	3,384	20	-21	0	0	20	-21
8	May-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
9	Jun-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
10	Jul-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
11	Aug-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
12	Sep-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
13	Oct-26	3,426	739	1,583	3,384	17	-18	0	0	17	-18
14	Nov-26	3,426	739	1,583	3,384	17	-18	0	0	17	-18
15	Dec-26	3,426	1,059	1,583	3,384	18	-19	0	0	18	-19
16	Jan-27	3,426	1,139	1,583	3,384	18	-19	0	0	18	-19
17	Feb-27	3,426	1,339	1,583	3,384	20	-20	0	0	20	-20
18	Mar-27	3,426	1,339	1,583	3,384	20	-20	0	0	20	-20
19	Apr-27	3,426	1,539	1,583	3,384	21	-22	0	0	21	-22
20	May-27	3,426	1,619	1,583	3,384	21	-22	0	0	21	-22
21	Jun-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
22	Jul-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
23	Aug-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
24	Sep-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
25	Oct-27	3,426	2,289	1,583	3,384	25	-26	0	0	25	-26
26	Nov-27	3,426	2,289	1,583	3,384	25	-26	0	0	25	-26
27	Dec-27	3,786	2,429	1,583	3,384	25	-26	0	0	25	-26
28	Jan-28	3,786	2,429	1,583	3,384	25	-26	0	0	25	-26
29	Feb-28	3,786	2,429	1,583	3,384	25	-26	0	0	25	-26
30	Mar-28	3,786	2,589	1,583	3,384	27	-28	0	0	27	-28
31	Apr-28	3,786	2,589	1,583	3,384	27	-28	0	0	27	-28
32	May-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
33	Jun-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
34	Jul-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
35	Aug-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
36	Sep-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
37	BP-26 AVG	3,395	1,450	1,583	3,384	22	-23	0	0	22	-23

Table 2.15
Total Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max*

		INSTALLED CAPACITY				TOTAL					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	326	-333	402	-504	728	-837
2	Nov-25	3,034	219	1,583	3,384	326	-333	402	-504	728	-837
3	Dec-25	3,034	319	1,583	3,384	327	-335	403	-505	730	-840
4	Jan-26	3,034	419	1,583	3,384	329	-338	405	-502	734	-840
5	Feb-26	3,034	419	1,583	3,384	329	-338	405	-502	734	-840
6	Mar-26	3,034	459	1,583	3,384	330	-340	406	-502	736	-842
7	Apr-26	3,034	459	1,583	3,384	330	-340	406	-502	736	-842
8	May-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
9	Jun-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
10	Jul-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
11	Aug-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
12	Sep-26	3,034	539	1,583	3,384	333	-343	408	-503	741	-846
13	Oct-26	3,426	739	1,583	3,384	367	-387	443	-549	810	-936
14	Nov-26	3,426	739	1,583	3,384	367	-387	443	-549	810	-936
15	Dec-26	3,426	1,059	1,583	3,384	406	-422	450	-539	856	-961
16	Jan-27	3,426	1,139	1,583	3,384	424	-441	450	-530	874	-971
17	Feb-27	3,426	1,339	1,583	3,384	461	-482	439	-529	900	-1,011
18	Mar-27	3,426	1,339	1,583	3,384	461	-482	439	-529	900	-1,011
19	Apr-27	3,426	1,539	1,583	3,384	496	-516	404	-549	900	-1,065
20	May-27	3,426	1,619	1,583	3,384	504	-523	396	-564	900	-1,087
21	Jun-27	3,426	1,819	1,583	3,384	531	-549	369	-551	900	-1,100
22	Jul-27	3,426	1,819	1,583	3,384	531	-549	369	-551	900	-1,100
23	Aug-27	3,426	1,819	1,583	3,384	531	-549	369	-551	900	-1,100
24	Sep-27	3,426	1,819	1,583	3,384	531	-549	369	-551	900	-1,100
25	Oct-27	3,426	2,289	1,583	3,384	638	-668	262	-432	900	-1,100
26	Nov-27	3,426	2,289	1,583	3,384	638	-668	262	-432	900	-1,100
27	Dec-27	3,786	2,429	1,583	3,384	686	-722	214	-378	900	-1,100
28	Jan-28	3,786	2,429	1,583	3,384	686	-722	214	-378	900	-1,100
29	Feb-28	3,786	2,429	1,583	3,384	686	-722	214	-378	900	-1,100
30	Mar-28	3,786	2,589	1,583	3,384	745	-788	155	-312	900	-1,100
31	Apr-28	3,786	2,589	1,583	3,384	745	-788	155	-312	900	-1,100
32	May-28	3,786	2,629	1,583	3,384	750	-791	150	-309	900	-1,100
33	Jun-28	3,786	2,629	1,583	3,384	750	-791	150	-309	900	-1,100
34	Jul-28	3,786	2,629	1,583	3,384	750	-791	150	-309	900	-1,100
35	Aug-28	3,786	2,629	1,583	3,384	750	-791	150	-309	900	-1,100
36	Sep-28	3,786	2,629	1,583	3,384	750	-791	150	-309	900	-1,100
37	BP-26 AVG	3,395	1,450	1,583	3,384	504	-526	334	-465	838	-991

NOTES:

* FCRPS Max forecasts does not exceed the FCRPS capabiltiy to supply balancing reserves

Table 2.16
Load Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max**

		INSTALLED CAPACITY				LOAD*					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	166	-170	182	-229	348	-399
2	Nov-25	3,034	219	1,583	3,384	166	-170	182	-229	348	-399
3	Dec-25	3,034	319	1,583	3,384	159	-162	180	-226	339	-388
4	Jan-26	3,034	419	1,583	3,384	150	-154	178	-220	328	-374
5	Feb-26	3,034	419	1,583	3,384	150	-154	178	-220	328	-374
6	Mar-26	3,034	459	1,583	3,384	146	-150	176	-218	322	-368
7	Apr-26	3,034	459	1,583	3,384	146	-150	176	-218	322	-368
8	May-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
9	Jun-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
10	Jul-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
11	Aug-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
12	Sep-26	3,034	539	1,583	3,384	140	-144	173	-214	313	-358
13	Oct-26	3,426	739	1,583	3,384	134	-142	168	-208	302	-350
14	Nov-26	3,426	739	1,583	3,384	134	-142	168	-208	302	-350
15	Dec-26	3,426	1,059	1,583	3,384	132	-137	152	-182	284	-319
16	Jan-27	3,426	1,139	1,583	3,384	134	-139	146	-172	280	-311
17	Feb-27	3,426	1,339	1,583	3,384	137	-143	134	-154	271	-297
18	Mar-27	3,426	1,339	1,583	3,384	137	-143	134	-154	271	-297
19	Apr-27	3,426	1,539	1,583	3,384	139	-145	135	-152	274	-297
20	May-27	3,426	1,619	1,583	3,384	139	-144	139	-154	278	-298
21	Jun-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
22	Jul-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
23	Aug-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
24	Sep-27	3,426	1,819	1,583	3,384	141	-146	146	-158	287	-304
25	Oct-27	3,426	2,289	1,583	3,384	171	-179	164	-170	335	-349
26	Nov-27	3,426	2,289	1,583	3,384	171	-179	164	-170	335	-349
27	Dec-27	3,786	2,429	1,583	3,384	173	-182	161	-165	334	-347
28	Jan-28	3,786	2,429	1,583	3,384	173	-182	161	-165	334	-347
29	Feb-28	3,786	2,429	1,583	3,384	173	-182	161	-165	334	-347
30	Mar-28	3,786	2,589	1,583	3,384	186	-196	155	-165	341	-361
31	Apr-28	3,786	2,589	1,583	3,384	186	-196	155	-165	341	-361
32	May-28	3,786	2,629	1,583	3,384	186	-197	150	-167	336	-364
33	Jun-28	3,786	2,629	1,583	3,384	186	-197	150	-167	336	-364
34	Jul-28	3,786	2,629	1,583	3,384	186	-197	150	-167	336	-364
35	Aug-28	3,786	2,629	1,583	3,384	186	-197	150	-167	336	-364
36	Sep-28	3,786	2,629	1,583	3,384	186	-197	150	-167	336	-364
37	BP-26 AVG	3,395	1,450	1,583	3,384	155	-162	160	-185	315	-347

NOTES:

* Load includes all Non-Federal Hydro

** FCRPS Max forecasts does not exceed the FCRPS capabiltiy to supply balancing reserves

Table 2.17
Wind Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max*

		INSTALLED CAPACITY				WIND					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	113	-115	216	-270	329	-385
2	Nov-25	3,034	219	1,583	3,384	113	-115	216	-270	329	-385
3	Dec-25	3,034	319	1,583	3,384	110	-113	215	-269	325	-382
4	Jan-26	3,034	419	1,583	3,384	107	-110	213	-265	320	-375
5	Feb-26	3,034	419	1,583	3,384	107	-110	213	-265	320	-375
6	Mar-26	3,034	459	1,583	3,384	106	-109	214	-264	320	-373
7	Apr-26	3,034	459	1,583	3,384	106	-109	214	-264	320	-373
8	May-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
9	Jun-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
10	Jul-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
11	Aug-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
12	Sep-26	3,034	539	1,583	3,384	105	-108	213	-262	318	-370
13	Oct-26	3,426	739	1,583	3,384	123	-130	234	-291	357	-421
14	Nov-26	3,426	739	1,583	3,384	123	-130	234	-291	357	-421
15	Dec-26	3,426	1,059	1,583	3,384	128	-132	234	-281	362	-413
16	Jan-27	3,426	1,139	1,583	3,384	131	-136	233	-274	364	-410
17	Feb-27	3,426	1,339	1,583	3,384	140	-146	218	-268	358	-414
18	Mar-27	3,426	1,339	1,583	3,384	140	-146	218	-268	358	-414
19	Apr-27	3,426	1,539	1,583	3,384	149	-155	180	-266	329	-421
20	May-27	3,426	1,619	1,583	3,384	151	-157	169	-270	320	-427
21	Jun-27	3,426	1,819	1,583	3,384	159	-164	140	-246	299	-410
22	Jul-27	3,426	1,819	1,583	3,384	159	-164	140	-246	299	-410
23	Aug-27	3,426	1,819	1,583	3,384	159	-164	140	-246	299	-410
24	Sep-27	3,426	1,819	1,583	3,384	159	-164	140	-246	299	-410
25	Oct-27	3,426	2,289	1,583	3,384	177	-185	56	-150	233	-335
26	Nov-27	3,426	2,289	1,583	3,384	177	-185	56	-150	233	-335
27	Dec-27	3,786	2,429	1,583	3,384	198	-208	30	-121	228	-329
28	Jan-28	3,786	2,429	1,583	3,384	198	-208	30	-121	228	-329
29	Feb-28	3,786	2,429	1,583	3,384	198	-208	30	-121	228	-329
30	Mar-28	3,786	2,589	1,583	3,384	212	-224	0	-81	212	-305
31	Apr-28	3,786	2,589	1,583	3,384	212	-224	0	-81	212	-305
32	May-28	3,786	2,629	1,583	3,384	213	-225	0	-78	213	-303
33	Jun-28	3,786	2,629	1,583	3,384	213	-225	0	-78	213	-303
34	Jul-28	3,786	2,629	1,583	3,384	213	-225	0	-78	213	-303
35	Aug-28	3,786	2,629	1,583	3,384	213	-225	0	-78	213	-303
36	Sep-28	3,786	2,629	1,583	3,384	213	-225	0	-78	213	-303
37	BP-26 AVG	3,395	1,450	1,583	3,384	151	-158	140	-211	291	-369

NOTES:

* FCRPS Max forecasts does not exceed the FCRPS capabiltiy to supply balancing reserves

Table 2.18
Non-Federal Thermal Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max**

		INSTALLED CAPACITY				NON-FEDERAL THERMAL*					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	12	-13	0	0	12	-13
2	Nov-25	3,034	219	1,583	3,384	12	-13	0	0	12	-13
3	Dec-25	3,034	319	1,583	3,384	12	-12	0	0	12	-12
4	Jan-26	3,034	419	1,583	3,384	12	-12	0	0	12	-12
5	Feb-26	3,034	419	1,583	3,384	12	-12	0	0	12	-12
6	Mar-26	3,034	459	1,583	3,384	12	-12	0	0	12	-12
7	Apr-26	3,034	459	1,583	3,384	12	-12	0	0	12	-12
8	May-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
9	Jun-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
10	Jul-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
11	Aug-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
12	Sep-26	3,034	539	1,583	3,384	11	-12	0	0	11	-12
13	Oct-26	3,426	739	1,583	3,384	10	-11	0	0	10	-11
14	Nov-26	3,426	739	1,583	3,384	10	-11	0	0	10	-11
15	Dec-26	3,426	1,059	1,583	3,384	10	-11	0	0	10	-11
16	Jan-27	3,426	1,139	1,583	3,384	11	-11	0	0	11	-11
17	Feb-27	3,426	1,339	1,583	3,384	11	-12	0	0	11	-12
18	Mar-27	3,426	1,339	1,583	3,384	11	-12	0	0	11	-12
19	Apr-27	3,426	1,539	1,583	3,384	12	-13	0	0	12	-13
20	May-27	3,426	1,619	1,583	3,384	12	-13	0	0	12	-13
21	Jun-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
22	Jul-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
23	Aug-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
24	Sep-27	3,426	1,819	1,583	3,384	13	-13	0	0	13	-13
25	Oct-27	3,426	2,289	1,583	3,384	14	-15	0	0	14	-15
26	Nov-27	3,426	2,289	1,583	3,384	14	-15	0	0	14	-15
27	Dec-27	3,786	2,429	1,583	3,384	14	-15	0	0	14	-15
28	Jan-28	3,786	2,429	1,583	3,384	14	-15	0	0	14	-15
29	Feb-28	3,786	2,429	1,583	3,384	14	-15	0	0	14	-15
30	Mar-28	3,786	2,589	1,583	3,384	15	-16	0	0	15	-16
31	Apr-28	3,786	2,589	1,583	3,384	15	-16	0	0	15	-16
32	May-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
33	Jun-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
34	Jul-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
35	Aug-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
36	Sep-28	3,786	2,629	1,583	3,384	16	-16	0	0	16	-16
37	BP-26 AVG	3,395	1,450	1,583	3,384	13	-13	0	0	13	-13

NOTES:
 * Thermal includes new Thermal and Biomass as an allocated amount by nameplate capacity
 ** FCRPS Max forecasts does not exceed the FCRPS capabiltiy to supply balancing reserves

Table 2.19
Solar Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max*

		INSTALLED CAPACITY				SOLAR					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	14	-14	4	-5	18	-19
2	Nov-25	3,034	219	1,583	3,384	14	-14	4	-5	18	-19
3	Dec-25	3,034	319	1,583	3,384	25	-26	8	-10	33	-36
4	Jan-26	3,034	419	1,583	3,384	40	-41	14	-17	54	-58
5	Feb-26	3,034	419	1,583	3,384	40	-41	14	-17	54	-58
6	Mar-26	3,034	459	1,583	3,384	46	-47	16	-20	62	-67
7	Apr-26	3,034	459	1,583	3,384	46	-47	16	-20	62	-67
8	May-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
9	Jun-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
10	Jul-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
11	Aug-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
12	Sep-26	3,034	539	1,583	3,384	57	-58	22	-27	79	-85
13	Oct-26	3,426	739	1,583	3,384	83	-87	40	-50	123	-137
14	Nov-26	3,426	739	1,583	3,384	83	-87	40	-50	123	-137
15	Dec-26	3,426	1,059	1,583	3,384	118	-123	64	-76	182	-199
16	Jan-27	3,426	1,139	1,583	3,384	130	-136	71	-84	201	-220
17	Feb-27	3,426	1,339	1,583	3,384	154	-161	87	-107	241	-268
18	Mar-27	3,426	1,339	1,583	3,384	154	-161	87	-107	241	-268
19	Apr-27	3,426	1,539	1,583	3,384	174	-181	89	-131	263	-312
20	May-27	3,426	1,619	1,583	3,384	180	-187	88	-140	268	-327
21	Jun-27	3,426	1,819	1,583	3,384	196	-203	83	-147	279	-350
22	Jul-27	3,426	1,819	1,583	3,384	196	-203	83	-147	279	-350
23	Aug-27	3,426	1,819	1,583	3,384	196	-203	83	-147	279	-350
24	Sep-27	3,426	1,819	1,583	3,384	196	-203	83	-147	279	-350
25	Oct-27	3,426	2,289	1,583	3,384	251	-263	42	-112	293	-375
26	Nov-27	3,426	2,289	1,583	3,384	251	-263	42	-112	293	-375
27	Dec-27	3,786	2,429	1,583	3,384	276	-290	23	-92	299	-382
28	Jan-28	3,786	2,429	1,583	3,384	276	-290	23	-92	299	-382
29	Feb-28	3,786	2,429	1,583	3,384	276	-290	23	-92	299	-382
30	Mar-28	3,786	2,589	1,583	3,384	306	-323	0	-66	306	-389
31	Apr-28	3,786	2,589	1,583	3,384	306	-323	0	-66	306	-389
32	May-28	3,786	2,629	1,583	3,384	308	-325	0	-64	308	-389
33	Jun-28	3,786	2,629	1,583	3,384	308	-325	0	-64	308	-389
34	Jul-28	3,786	2,629	1,583	3,384	308	-325	0	-64	308	-389
35	Aug-28	3,786	2,629	1,583	3,384	308	-325	0	-64	308	-389
36	Sep-28	3,786	2,629	1,583	3,384	308	-325	0	-64	308	-389
37	BP-26 AVG	3,395	1,450	1,583	3,384	163	-170	34	-70	197	-240

NOTES:

* FCRPS Max forecasts does not exceed the FCRPS capabiltiy to supply balancing reserves

Table 2.20
FCRPS Balancing Reserve Capacity Requirement (Values in MW)
for FY2026-2028 Balancing Reserve Capacity Quantity Forecast - FCRPS Max*

		INSTALLED CAPACITY				FCRPS					
		WIND	SOLAR	NON-FEDERAL THERMAL	FCRPS	REG		NON-REG		TOTAL	
						INC	DEC	INC	DEC	INC	DEC
	A	B	C	D	E	F	G	J	K	L	M
1	Oct-25	3,034	219	1,583	3,384	21	-22	0	0	21	-22
2	Nov-25	3,034	219	1,583	3,384	21	-22	0	0	21	-22
3	Dec-25	3,034	319	1,583	3,384	21	-21	0	0	21	-21
4	Jan-26	3,034	419	1,583	3,384	20	-21	0	0	20	-21
5	Feb-26	3,034	419	1,583	3,384	20	-21	0	0	20	-21
6	Mar-26	3,034	459	1,583	3,384	20	-21	0	0	20	-21
7	Apr-26	3,034	459	1,583	3,384	20	-21	0	0	20	-21
8	May-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
9	Jun-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
10	Jul-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
11	Aug-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
12	Sep-26	3,034	539	1,583	3,384	20	-20	0	0	20	-20
13	Oct-26	3,426	739	1,583	3,384	17	-18	0	0	17	-18
14	Nov-26	3,426	739	1,583	3,384	17	-18	0	0	17	-18
15	Dec-26	3,426	1,059	1,583	3,384	18	-19	0	0	18	-19
16	Jan-27	3,426	1,139	1,583	3,384	18	-19	0	0	18	-19
17	Feb-27	3,426	1,339	1,583	3,384	20	-20	0	0	20	-20
18	Mar-27	3,426	1,339	1,583	3,384	20	-20	0	0	20	-20
19	Apr-27	3,426	1,539	1,583	3,384	21	-22	0	0	21	-22
20	May-27	3,426	1,619	1,583	3,384	21	-22	0	0	21	-22
21	Jun-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
22	Jul-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
23	Aug-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
24	Sep-27	3,426	1,819	1,583	3,384	22	-23	0	0	22	-23
25	Oct-27	3,426	2,289	1,583	3,384	25	-26	0	0	25	-26
26	Nov-27	3,426	2,289	1,583	3,384	25	-26	0	0	25	-26
27	Dec-27	3,786	2,429	1,583	3,384	25	-26	0	0	25	-26
28	Jan-28	3,786	2,429	1,583	3,384	25	-26	0	0	25	-26
29	Feb-28	3,786	2,429	1,583	3,384	25	-26	0	0	25	-26
30	Mar-28	3,786	2,589	1,583	3,384	27	-28	0	0	27	-28
31	Apr-28	3,786	2,589	1,583	3,384	27	-28	0	0	27	-28
32	May-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
33	Jun-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
34	Jul-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
35	Aug-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
36	Sep-28	3,786	2,629	1,583	3,384	27	-28	0	0	27	-28
37	BP-26 AVG	3,395	1,450	1,583	3,384	22	-23	0	0	22	-23

NOTES:

* FCRPS Max forecasts does not exceed the FCRPS capabiltiy to supply balancing reserves

Table 3.1
Balancing Area Net Load and Generation
MegaWatts

	A	B	C	D	E	F	G
	BPA BALANCING AREA NET LOAD						
	Month	2023	2024	2025	2026	2027	2028
1	OCT	5,577	5,895	5,966	6,204	6,503	6,794
2	NOV	7,211	6,865	6,839	6,965	7,301	7,628
3	DEC	7,939	7,096	7,487	7,908	8,289	8,661
4	JAN	7,279	7,802	8,017	7,701	8,072	8,434
5	FEB	7,492	7,214	7,985	7,693	8,064	8,425
6	MAR	6,988	6,735	6,808	7,141	7,486	7,822
7	APR	6,282	6,350	6,395	6,641	6,961	7,273
8	MAY	5,983	6,078	6,190	6,428	6,738	7,040
9	JUN	6,001	6,143	6,460	6,709	7,032	7,347
10	JUL	6,354	6,698	6,659	6,915	7,249	7,574
11	AUG	6,268	6,332	6,458	6,706	7,030	7,345
12	SEP	5,646	5,902	5,899	6,125	6,421	6,708
13	AVG	6,585	6,593	6,672	6,928	7,262	7,588
14	BPA BALANCING AREA NET GENERATION						
15	Month	2023	2024	2025	2026	2027	2028
16	OCT	7,630	7,068	7,166	9,272	9,242	9,481
17	NOV	10,234	9,327	9,450	12,497	11,295	11,575
18	DEC	10,404	8,956	9,894	13,267	12,120	12,392
19	JAN	9,949	9,040	10,352	13,039	11,860	12,169
20	FEB	10,156	9,159	9,435	12,975	11,330	12,052
21	MAR	8,981	9,553	9,927	13,146	12,448	12,552
22	APR	7,335	8,400	10,861	13,875	13,046	13,622
23	MAY	11,603	8,957	12,009	13,216	14,604	15,249
24	JUN	8,457	9,965	12,859	12,723	15,898	16,603
25	JUL	9,643	10,295	11,784	12,395	14,097	14,654
26	AUG	9,703	9,615	10,323	11,039	10,222	10,653
27	SEP	7,472	7,794	9,046	9,331	10,207	10,600
28	AVG	9,297	9,011	10,259	12,231	12,198	12,633

Table 3.2
Forecst Operating Reserve Obligation
MegaWatts

	A	B	C	D	E
1	Total Balancing Area Obligation				
2	Month	2026	2027	2028	AVG
3	Oct	464.3	472.4	488.3	475.0
4	Nov	583.9	557.9	576.1	572.6
5	Dec	635.2	612.3	631.6	626.4
6	Jan	622.2	598.0	618.1	612.8
7	Feb	620.0	581.8	614.3	605.4
8	Mar	608.6	598.0	611.2	605.9
9	Apr	615.5	600.2	626.9	614.2
10	May	589.3	640.3	668.7	632.7
11	Jun	583.0	687.9	718.5	663.1
12	Jul	579.3	640.4	666.8	628.8
13	Aug	532.4	517.5	539.9	530.0
14	Sep	463.7	498.8	519.2	493.9
15	AVG	574.8	583.8	606.6	588.4
16					
17	Self- and Third Party Supply				
18	Month	2026	2027	2028	AVG
19	Oct	68.4	68.4	68.4	68.4
20	Nov	95.5	95.5	95.5	95.5
21	Dec	101.5	101.5	101.5	101.5
22	Jan	102.0	102.0	102.0	102.0
23	Feb	95.8	95.8	95.8	95.8
24	Mar	91.7	91.7	91.7	91.7
25	Apr	71.4	71.4	71.4	71.4
26	May	68.7	68.7	68.7	68.7
27	Jun	60.5	60.5	60.5	60.5
28	Jul	69.1	69.1	69.1	69.1
29	Aug	71.1	71.1	71.1	71.1
30	Sep	71.9	71.9	71.9	71.9
31	AVG	82.6	82.6	82.6	82.6
32					
33	BPA Obligaiton				
34	Month	2026	2027	2028	AVG
35	Oct	395.9	404.0	419.9	406.6
36	Nov	488.4	462.4	480.6	477.2
37	Dec	533.7	510.8	530.1	524.9
38	Jan	520.2	496.0	516.1	510.8
39	Feb	524.3	486.0	518.5	509.6
40	Mar	516.9	506.3	519.5	514.2
41	Apr	544.1	528.8	555.4	542.8
42	May	520.6	571.6	600.0	564.0
43	Jun	522.5	627.4	658.0	602.6
44	Jul	510.2	571.2	597.7	559.7
45	Aug	461.3	446.5	468.9	458.9
46	Sep	391.7	426.9	447.3	422.0
47	AVG	494.1	503.2	526.0	507.8

