

BP-20 Rate Proceeding

Final Proposal

# Power and Transmission Risk Study Documentation

BP-20-FS-BPA-05A

July 2019





# POWER AND TRANSMISSION RISK STUDY DOCUMENTATION

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## 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
aMW	average megawatt(s)
ANR	Accumulated Net Revenues
ASC	Average System Cost
BAA	Balancing Authority Area
BiOp	Biological Opinion
BPA	Bonneville Power Administration
Bps	basis points
Btu	British thermal unit
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
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
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
<i>dec</i>	decrease, decrement, or decremental
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

EIM	Energy imbalance market
EIS	Environmental Impact Statement
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
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)
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
IM	Montana Intertie
<i>inc</i>	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
kcfs	thousand cubic feet per second
kW	kilowatt
kWh	kilowatthour
LDD	Low Density Discount
LGIA	Large Generator Interconnection Agreement
LLH	Light Load Hour(s)

LPP	Large Project Program
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)
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NP-15	North of Path 15
NPCC	Pacific Northwest Electric Power and Conservation Planning 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	operation and maintenance
OATI	Open Access Technology International, Inc.
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

PS	Power Services
PSC	power sales contract
PSW	Pacific Southwest
PTP	Point to Point
PUD	public or people's utility district
PW	WECC and Peak Service
RAM	Rate Analysis Model (computer model)
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
SCD	Scheduling, System Control, and Dispatch Service
SCS	Secondary Crediting Service
SDD	Short Distance Discount
SILS	Southeast Idaho Load Service
Slice	Slice of the System (product)
T1SFCO	Tier 1 System Firm Critical Output
TCMS	Transmission Curtailment Management Service
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
UFT	Use of Facilities Transmission
UIC	Unauthorized Increase Charge
ULS	Unanticipated Load Service
USACE	U.S. Army Corps of Engineers



USBR	U.S. Bureau of Reclamation
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

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 1:</b>													
2	<b>Federal Hydro Generation (aMW) with Hydro Independents</b>													
3	<b>for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	5,500	7,163	6,899	6,976	6,887	6,284	4,428	6,132	9,880	6,126	6,330	6,000	6,545
6	1930	5,577	7,345	6,916	5,947	6,912	6,225	5,383	6,284	7,223	7,406	6,519	5,896	6,467
7	1931	5,582	7,313	7,152	6,056	6,790	6,304	4,694	6,669	6,787	7,324	6,658	5,920	6,439
8	1932	5,260	6,831	7,033	6,870	4,887	8,662	10,467	12,811	11,807	9,171	7,285	6,482	8,140
9	1933	5,516	7,015	9,086	10,687	10,497	8,679	7,153	10,286	14,095	12,392	9,446	6,641	9,290
10	1934	6,298	10,478	13,308	14,349	13,766	11,571	12,018	11,216	10,355	6,714	6,326	5,584	10,152
11	1935	5,434	6,382	7,687	10,637	10,126	8,656	6,628	9,447	8,585	9,281	7,735	5,799	8,034
12	1936	5,411	7,104	6,888	6,134	6,330	6,575	7,725	13,136	11,236	8,149	6,237	5,537	7,541
13	1937	5,605	7,460	7,124	5,799	6,174	5,865	4,503	6,607	8,931	7,019	6,400	6,083	6,463
14	1938	5,483	7,126	8,168	9,642	9,278	10,051	10,937	12,242	10,239	9,633	6,206	6,250	8,770
15	1939	5,525	6,938	6,801	8,479	8,218	7,298	7,528	9,360	7,697	7,589	6,125	5,654	7,266
16	1940	5,671	7,529	8,410	8,854	7,628	9,256	7,709	9,719	7,897	6,079	5,944	5,838	7,547
17	1941	5,359	7,518	7,912	7,476	7,309	7,139	4,606	6,571	7,865	7,199	6,537	6,242	6,811
18	1942	5,274	7,742	9,950	9,720	9,172	6,356	6,123	7,889	11,760	10,385	7,591	6,816	8,228
19	1943	5,581	6,832	7,690	11,145	10,237	9,818	13,080	10,639	13,749	12,266	7,488	6,073	9,542
20	1944	5,453	7,198	6,916	7,659	6,944	5,885	4,059	5,675	7,139	6,426	6,298	5,799	6,287
21	1945	5,343	7,129	7,128	6,476	6,384	6,125	4,352	9,240	11,544	6,648	6,353	5,830	6,878
22	1946	5,406	7,353	8,313	9,367	9,417	8,849	11,809	12,517	10,414	10,465	8,114	6,482	9,040
23	1947	5,381	7,983	11,441	12,196	11,629	10,353	8,817	11,984	11,101	9,972	7,039	6,352	9,519
24	1948	8,536	9,527	9,712	12,148	11,066	8,731	9,403	14,165	13,824	10,680	9,539	6,977	10,360
25	1949	5,880	7,581	8,128	9,358	9,025	10,281	10,321	12,818	10,130	6,836	5,750	5,662	8,478
26	1950	5,392	7,061	8,465	12,028	11,358	11,166	10,380	11,400	13,696	13,297	9,312	6,806	10,028
27	1951	6,770	9,916	11,612	13,708	14,207	12,026	11,243	12,552	10,662	11,642	7,792	6,474	10,710
28	1952	7,851	8,666	9,847	11,871	11,218	8,770	12,203	13,928	11,260	9,733	7,032	5,567	9,826
29	1953	5,512	7,133	6,965	8,199	12,236	7,788	5,278	10,364	14,121	11,961	7,655	6,509	8,628
30	1954	5,794	7,981	9,049	11,467	11,760	9,591	8,238	12,502	12,631	12,940	11,049	8,842	10,153
31	1955	5,968	8,759	9,025	8,110	8,119	5,653	5,099	9,198	13,899	13,078	8,793	6,339	8,506
32	1956	6,163	9,398	11,472	13,394	12,977	12,092	12,214	14,009	13,424	11,160	8,807	6,590	10,970
33	1957	6,106	7,505	9,279	9,733	8,115	9,654	9,624	14,347	13,840	8,474	7,003	5,899	9,136
34	1958	5,508	7,258	8,052	10,701	10,164	8,607	8,344	13,245	12,634	8,077	6,921	6,015	8,789
35	1959	5,795	8,733	10,807	12,818	13,034	9,524	9,215	11,472	12,938	12,153	9,265	9,612	10,436
36	1960	9,552	10,608	10,609	11,231	10,083	8,964	11,126	9,668	11,650	9,177	7,360	6,097	9,673
37	1961	5,719	7,903	8,334	10,467	10,602	10,535	8,467	11,826	12,916	8,397	7,132	5,855	9,006
38	1962	5,377	7,364	8,345	10,412	10,292	7,017	9,972	10,930	10,464	8,233	7,526	6,009	8,486
39	1963	6,417	8,870	10,411	11,321	10,313	7,171	5,659	9,601	11,889	9,092	7,086	6,689	8,706
40	1964	5,401	7,452	8,269	8,990	8,754	6,477	6,999	11,009	14,193	12,692	9,155	7,491	8,906
41	1965	6,655	8,432	11,801	13,993	14,713	11,995	10,169	12,774	12,118	9,880	8,992	6,151	10,632
42	1966	6,008	7,634	8,654	10,056	9,660	7,270	7,716	8,869	10,406	9,001	7,106	6,034	8,196
43	1967	5,382	7,078	9,234	12,299	11,811	10,051	6,534	10,868	13,446	11,338	8,202	6,615	9,402
44	1968	5,874	8,054	8,701	10,687	10,977	10,228	4,965	8,667	12,005	9,493	8,627	8,061	8,856

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2	<b>Federal Hydro Generation (aMW) with Hydro Independents</b>													
3	<b>for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	6,811	9,539	9,858	13,053	12,892	10,244	11,807	13,697	11,945	9,860	6,763	6,114	10,205
46	1970	5,950	7,623	7,720	10,541	10,614	7,815	5,169	10,218	13,146	8,231	6,545	5,707	8,265
47	1971	5,525	7,372	8,466	13,250	14,233	11,860	10,666	14,024	13,995	12,036	9,721	6,842	10,656
48	1972	6,136	7,825	9,094	13,235	12,393	14,310	11,241	13,516	13,483	12,272	10,020	7,095	10,887
49	1973	6,056	7,828	8,592	9,988	9,702	6,934	3,890	6,414	7,893	6,882	6,292	5,795	7,184
50	1974	5,424	7,118	10,074	15,220	14,924	13,067	12,327	12,840	13,851	13,515	10,101	6,946	11,277
51	1975	5,287	7,128	7,882	10,311	10,016	9,877	6,461	11,640	13,535	12,848	8,334	7,208	9,213
52	1976	6,981	9,815	12,696	12,920	12,942	10,990	10,989	13,791	11,898	12,249	11,871	9,509	11,388
53	1977	6,141	7,215	7,124	8,005	7,169	5,653	4,026	5,864	6,367	6,336	6,369	5,263	6,296
54	1978	4,955	7,198	8,670	9,714	9,300	8,435	9,545	11,485	9,786	9,828	7,455	7,879	8,685
55	1979	6,172	7,676	7,282	8,880	7,587	8,490	6,295	11,048	8,296	6,502	6,009	5,987	7,523
56	1980	5,532	7,178	6,742	8,987	6,990	6,547	8,392	13,104	12,094	8,367	6,204	6,274	8,035
57	1981	5,484	7,786	10,419	12,480	11,646	7,438	5,004	11,045	13,507	11,238	9,417	6,610	9,339
58	1982	5,666	8,164	8,671	11,434	13,323	13,895	9,683	12,771	13,601	13,239	9,599	8,019	10,666
59	1983	6,856	8,227	9,333	11,910	12,016	11,836	8,712	11,299	11,455	12,102	9,353	7,118	10,019
60	1984	5,902	10,185	9,753	11,583	11,114	10,913	10,102	11,331	13,274	11,708	8,010	7,092	10,074
61	1985	5,980	8,216	8,558	9,294	8,814	7,320	9,068	10,252	8,218	6,855	5,643	6,030	7,849
62	1986	6,276	8,825	8,814	10,693	11,708	12,720	10,964	10,022	11,241	7,826	6,577	5,810	9,277
63	1987	5,308	7,993	8,668	8,559	7,256	7,977	6,008	10,512	8,104	6,312	5,953	5,720	7,369
64	1988	5,395	7,054	6,617	6,230	6,649	6,276	5,441	6,816	8,113	7,815	6,453	5,910	6,563
65	1989	5,409	7,385	7,979	7,270	5,714	8,292	9,923	10,214	8,510	7,241	6,165	5,929	7,507
66	1990	5,583	7,764	9,337	10,306	10,905	9,196	9,433	10,187	11,787	9,208	8,040	5,951	8,967
67	1991	5,357	10,048	10,030	12,258	11,208	9,529	7,990	10,657	11,451	11,831	8,942	6,070	9,613
68	1992	5,344	7,389	6,700	7,956	7,504	7,031	4,875	9,149	7,336	6,216	6,127	5,573	6,768
69	1993	5,383	7,290	7,277	6,778	5,467	7,357	5,562	11,732	10,225	8,120	6,462	5,973	7,313
70	1994	5,577	7,567	7,417	6,807	7,296	6,237	5,844	8,247	7,716	7,526	6,283	5,866	6,864
71	1995	5,455	6,828	7,350	8,748	9,410	9,550	5,913	10,385	11,935	9,360	6,887	6,625	8,201
72	1996	6,789	10,973	14,365	14,812	14,348	13,672	12,197	12,749	12,575	11,940	8,887	6,611	11,657
73	1997	5,744	8,071	9,943	14,588	14,487	13,737	12,570	13,896	13,662	12,456	9,537	7,938	11,377
74	1998	8,829	9,341	8,555	9,474	10,894	8,283	5,756	13,202	13,224	9,721	8,307	5,977	9,296
75	1999	5,549	7,042	9,661	12,751	12,294	12,620	9,438	11,311	13,149	12,742	10,655	6,750	10,332
76	2000	5,720	10,405	10,475	10,408	10,126	9,306	11,151	10,776	7,864	9,052	7,028	5,863	9,011
77	2001	5,588	7,121	7,023	7,606	6,896	6,283	4,092	6,451	6,164	6,653	6,356	5,269	6,296
78	2002	4,848	7,047	7,911	7,058	7,274	6,956	8,912	9,529	12,780	10,924	6,779	6,013	7,999
79	2003	5,645	7,453	7,091	7,346	8,002	9,213	7,090	8,004	11,803	7,427	5,753	5,362	7,508
80	2004	5,455	7,934	8,573	7,907	6,756	7,161	6,582	8,589	9,746	7,415	6,183	7,009	7,442
81	2005	6,135	7,705	8,997	9,679	9,965	7,177	4,718	8,729	9,171	7,935	6,405	5,647	7,686
82	2006	5,507	7,929	8,586	11,390	11,460	9,029	11,645	12,796	12,762	8,590	6,243	5,261	9,253
83	2007	5,384	7,975	8,679	10,491	9,097	10,694	7,676	11,069	10,198	8,817	5,954	5,001	8,423
84	2008	5,629	7,761	7,653	8,062	7,828	7,359	5,556	11,562	14,076	10,580	7,107	6,032	8,269
85	80 WY Average	5,864	7,929	8,753	10,068	9,841	8,935	8,099	10,670	11,130	9,467	7,519	6,365	8,717
86	Hours	744	721	744	744	696	743	720	744	720	744	744	720	8784

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 2:</b>													
2	<b>Federal Hydro Generation (aMW) with Hydro Independents</b>													
3	<b>for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	5,500	7,163	6,899	6,976	6,887	6,284	4,428	6,139	9,887	6,130	6,360	6,000	6,548
6	1930	5,577	7,345	6,916	5,947	6,912	6,224	5,383	6,291	7,229	7,406	6,519	5,896	6,467
7	1931	5,582	7,313	7,152	6,056	6,790	6,303	4,694	6,676	6,787	7,324	6,676	5,920	6,440
8	1932	5,260	6,831	7,033	6,870	4,887	8,642	10,479	12,933	11,966	9,181	7,293	6,482	8,173
9	1933	5,516	7,015	9,069	10,562	10,596	8,705	7,154	10,289	14,560	12,651	9,462	6,641	9,347
10	1934	6,298	10,150	12,103	13,487	13,745	11,431	11,998	11,300	10,533	6,714	6,326	5,584	9,946
11	1935	5,434	6,382	7,687	10,355	10,158	8,893	6,628	9,450	8,566	9,291	7,738	5,799	8,027
12	1936	5,411	7,104	6,888	6,134	6,330	6,574	7,722	13,199	11,327	8,173	6,237	5,537	7,559
13	1937	5,605	7,460	7,124	5,799	6,174	5,865	4,503	6,614	8,931	7,023	6,428	6,083	6,467
14	1938	5,483	7,126	8,168	9,632	9,269	10,050	10,941	12,332	10,296	9,645	6,206	6,250	8,780
15	1939	5,525	6,938	6,801	8,479	8,218	7,298	7,465	9,349	7,668	7,591	6,125	5,654	7,255
16	1940	5,671	7,529	8,410	8,854	7,628	9,230	7,707	9,725	7,901	6,079	5,944	5,838	7,545
17	1941	5,359	7,518	7,912	7,476	7,309	7,138	4,606	6,575	7,867	7,199	6,540	6,242	6,811
18	1942	5,274	7,742	9,886	9,709	9,156	6,356	6,123	7,895	11,926	10,402	7,616	6,816	8,235
19	1943	5,581	6,832	7,690	11,079	10,162	9,804	13,054	10,618	13,903	12,278	7,507	6,073	9,538
20	1944	5,453	7,198	6,916	7,659	6,944	5,885	4,059	5,676	7,147	6,427	6,298	5,799	6,286
21	1945	5,343	7,129	7,128	6,476	6,384	6,125	4,352	9,247	11,745	6,658	6,357	5,830	6,898
22	1946	5,406	7,363	8,313	9,374	9,391	8,800	11,775	13,154	10,484	10,474	8,123	6,482	9,093
23	1947	5,381	7,983	11,327	12,180	11,618	10,249	8,754	12,095	11,262	9,984	7,053	6,352	9,512
24	1948	8,534	9,555	9,656	12,108	11,000	8,730	9,428	14,729	14,522	10,680	9,546	6,977	10,455
25	1949	5,880	7,581	8,128	9,352	9,022	10,194	10,338	12,912	10,250	6,840	5,750	5,662	8,488
26	1950	5,392	7,061	8,465	11,760	11,535	10,891	10,282	11,429	14,106	13,681	9,341	6,806	10,055
27	1951	6,770	9,963	11,158	13,253	13,991	11,767	11,218	12,615	10,814	11,629	7,814	6,474	10,605
28	1952	7,851	8,666	9,792	11,891	11,135	8,761	12,220	14,085	11,403	9,743	7,032	5,567	9,839
29	1953	5,512	7,133	6,965	7,907	12,354	7,827	5,283	10,369	14,393	11,973	7,662	6,509	8,630
30	1954	5,794	7,981	9,049	11,201	11,751	9,798	8,200	12,813	13,350	13,301	11,073	8,780	10,252
31	1955	5,968	8,759	9,014	8,110	8,119	5,653	5,074	9,204	14,609	13,517	8,803	6,339	8,601
32	1956	6,163	9,427	11,257	13,414	12,938	11,703	12,128	14,656	14,188	11,167	8,814	6,590	11,026
33	1957	6,106	7,505	9,250	9,703	8,140	9,519	9,738	14,554	14,394	8,479	7,003	5,899	9,197
34	1958	5,508	7,258	8,052	10,638	10,098	8,608	8,341	13,405	12,884	8,082	6,921	6,015	8,809
35	1959	5,795	8,733	10,707	12,834	13,059	9,349	9,111	11,838	13,376	12,142	9,301	9,544	10,464
36	1960	9,530	10,420	10,399	11,236	10,013	9,017	11,037	9,672	11,825	9,193	7,370	6,097	9,646
37	1961	5,719	7,903	8,334	10,413	10,536	10,569	8,433	12,051	13,546	8,405	7,132	5,855	9,064
38	1962	5,377	7,364	8,345	10,381	10,242	7,018	9,910	10,931	10,612	8,245	7,534	6,009	8,483
39	1963	6,417	8,870	10,294	11,152	10,247	7,171	5,660	9,605	12,145	9,103	7,086	6,689	8,695
40	1964	5,401	7,452	8,269	8,990	8,754	6,477	7,006	11,006	14,616	12,742	9,179	7,491	8,948
41	1965	6,655	8,432	11,657	13,940	14,554	11,686	10,068	13,309	12,340	9,891	8,992	6,151	10,622
42	1966	6,008	7,634	8,654	10,045	9,649	7,134	7,839	8,873	10,385	9,011	7,110	6,034	8,189
43	1967	5,382	7,078	9,227	12,095	11,845	9,925	6,463	10,869	14,143	11,327	8,210	6,615	9,421
44	1968	5,874	8,054	8,701	10,622	10,911	10,239	4,970	8,678	12,194	9,491	8,665	8,061	8,861

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 2:</b>													
2	<b>Federal Hydro Generation (aMW) with Hydro Independents</b>													
3	<b>for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	6,811	9,564	9,803	13,063	12,897	10,136	11,873	13,973	12,359	9,881	6,775	6,114	10,252
46	1970	5,950	7,623	7,720	10,475	10,548	7,926	5,116	10,167	13,357	8,244	6,551	5,707	8,267
47	1971	5,525	7,372	8,466	13,406	13,578	11,651	10,597	14,544	14,639	12,089	9,736	6,842	10,689
48	1972	6,136	7,825	9,094	12,739	12,416	14,088	11,345	14,128	14,307	12,230	10,040	7,095	10,950
49	1973	6,056	7,828	8,592	9,977	9,691	6,933	3,890	6,420	7,882	6,882	6,318	5,795	7,177
50	1974	5,424	7,118	9,975	14,239	14,713	12,756	12,304	13,435	14,541	13,815	10,108	6,946	11,264
51	1975	5,287	7,128	7,882	10,247	9,977	9,954	6,400	11,644	13,893	12,923	8,365	7,208	9,242
52	1976	6,981	9,861	12,085	12,832	12,963	10,802	10,996	13,973	12,176	12,315	12,001	9,441	11,364
53	1977	6,141	7,215	7,124	8,005	7,169	5,653	4,026	5,864	6,367	6,336	6,381	5,263	6,295
54	1978	4,955	7,198	8,640	9,800	9,342	8,334	9,563	11,495	9,791	9,840	7,481	7,879	8,689
55	1979	6,172	7,676	7,282	8,880	7,587	8,488	6,289	11,078	8,305	6,509	6,009	5,987	7,526
56	1980	5,532	7,178	6,742	8,987	6,990	6,547	8,385	13,242	12,325	8,375	6,207	6,274	8,069
57	1981	5,484	7,786	10,230	11,957	11,539	7,438	5,018	11,082	13,978	11,262	9,424	6,610	9,310
58	1982	5,666	8,164	8,671	11,368	13,197	13,557	9,699	12,954	13,898	13,481	9,615	8,019	10,678
59	1983	6,856	8,227	9,310	11,885	11,871	11,615	8,720	11,377	11,701	12,053	9,368	7,118	10,004
60	1984	5,902	10,195	9,712	11,525	11,009	10,740	10,112	11,349	13,611	11,685	8,020	7,092	10,070
61	1985	5,980	8,216	8,558	9,359	8,841	7,319	9,061	10,223	8,173	6,855	5,658	6,030	7,848
62	1986	6,276	8,826	8,814	10,627	11,760	12,365	10,895	10,024	11,488	7,828	6,577	5,810	9,254
63	1987	5,308	7,993	8,668	8,559	7,256	7,975	6,004	10,499	8,100	6,312	5,975	5,720	7,369
64	1988	5,395	7,054	6,617	6,230	6,649	6,276	5,441	6,824	8,117	7,815	6,467	5,910	6,565
65	1989	5,409	7,385	7,979	7,294	5,712	8,310	9,870	10,186	8,516	7,249	6,180	5,929	7,512
66	1990	5,583	7,765	9,312	10,108	11,130	9,108	9,348	10,181	12,309	9,208	8,054	5,951	8,989
67	1991	5,357	10,005	9,917	11,890	11,223	9,431	7,881	10,656	11,767	11,832	8,960	6,070	9,576
68	1992	5,344	7,389	6,700	7,956	7,504	7,030	4,875	9,157	7,336	6,216	6,156	5,573	6,769
69	1993	5,383	7,290	7,277	6,778	5,467	7,356	5,514	11,822	10,244	8,140	6,489	5,973	7,327
70	1994	5,577	7,567	7,417	6,807	7,296	6,237	5,844	8,253	7,690	7,526	6,300	5,866	6,863
71	1995	5,455	6,828	7,350	8,748	9,355	9,540	5,913	10,392	12,177	9,376	6,896	6,625	8,215
72	1996	6,789	10,709	12,969	13,859	14,227	13,344	12,132	12,850	12,753	11,927	8,906	6,611	11,409
73	1997	5,744	8,071	9,878	14,483	14,390	13,394	12,551	14,471	14,404	12,451	9,562	7,938	11,428
74	1998	8,807	9,341	8,555	9,474	10,828	8,280	5,755	13,333	13,441	9,739	8,308	5,977	9,315
75	1999	5,549	7,042	9,631	12,660	12,185	12,394	9,435	11,352	13,422	12,975	10,668	6,750	10,336
76	2000	5,720	10,043	10,281	10,373	10,058	9,308	11,068	10,815	7,869	9,057	7,028	5,863	8,950
77	2001	5,588	7,121	7,023	7,606	6,896	6,283	4,092	6,459	6,171	6,653	6,366	5,269	6,296
78	2002	4,848	7,047	7,911	7,060	7,271	6,966	8,857	9,532	13,221	10,972	6,788	6,013	8,039
79	2003	5,645	7,453	7,091	7,346	8,002	9,212	7,092	8,010	12,004	7,426	5,753	5,362	7,524
80	2004	5,455	7,934	8,573	7,907	6,756	7,161	6,584	8,595	9,756	7,427	6,238	7,009	7,451
81	2005	6,135	7,705	8,982	9,668	9,936	7,216	4,647	8,788	9,148	7,941	6,434	5,647	7,679
82	2006	5,507	7,929	8,586	11,348	11,394	9,027	11,626	12,882	13,222	8,587	6,243	5,261	9,281
83	2007	5,384	7,977	8,679	10,430	9,095	10,638	7,684	11,072	10,163	8,813	5,954	5,001	8,409
84	2008	5,629	7,761	7,653	8,071	7,818	7,398	5,517	11,592	14,883	10,580	7,132	6,032	8,341
85	80 WY Average	5,863	7,917	8,682	9,977	9,812	8,876	8,082	10,773	11,370	9,501	7,533	6,363	8,723
86	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8760

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 3:</b>													
2	<b>Heavy-Load Hydro Generation</b>													
3	<b>for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	6,303	8,453	8,430	8,447	8,106	7,471	5,007	7,492	11,552	7,520	7,921	7,132	7,813
6	1930	6,443	8,700	8,482	7,112	8,031	7,423	6,033	7,877	9,052	9,616	8,232	7,046	7,830
7	1931	6,427	8,627	8,736	7,241	8,000	7,544	5,269	8,431	8,624	9,546	8,487	7,090	7,825
8	1932	6,014	8,062	8,601	8,248	5,530	10,033	11,556	14,378	12,545	11,659	9,390	7,765	9,481
9	1933	6,353	8,145	11,278	12,756	12,435	10,494	8,188	11,652	14,072	12,973	11,437	7,976	10,638
10	1934	7,389	12,333	14,678	15,215	14,297	13,460	12,702	11,922	10,640	8,608	8,094	6,689	11,312
11	1935	6,260	7,442	9,425	12,411	12,220	10,615	7,556	10,919	10,108	11,566	9,621	6,912	9,580
12	1936	6,210	8,423	8,387	7,328	7,432	7,743	8,773	14,609	11,866	10,537	7,840	6,552	8,795
13	1937	6,466	8,820	8,677	6,920	7,254	6,997	5,088	8,111	10,477	9,058	8,055	7,285	7,759
14	1938	6,316	8,334	9,960	12,116	10,840	11,988	12,008	13,361	11,850	11,937	7,877	7,480	10,331
15	1939	6,332	8,210	8,315	10,508	9,837	8,623	8,671	11,662	9,435	9,800	7,685	6,712	8,806
16	1940	6,528	8,849	10,294	10,986	8,964	11,016	8,946	11,718	9,321	7,706	7,466	6,948	9,049
17	1941	6,124	8,834	9,623	9,066	8,523	8,517	5,208	8,292	9,669	9,244	8,249	7,376	8,215
18	1942	5,981	9,089	12,363	12,047	10,959	7,505	6,994	9,892	12,386	12,542	9,545	8,027	9,760
19	1943	6,432	7,907	9,266	13,246	11,928	11,434	14,262	12,574	14,229	13,860	9,530	7,205	10,994
20	1944	6,252	8,474	8,397	9,268	8,199	7,040	4,472	7,079	8,794	8,141	7,902	6,910	7,569
21	1945	6,091	8,422	8,671	7,761	7,412	7,284	4,931	11,410	12,487	8,257	7,987	6,912	8,122
22	1946	6,168	8,595	10,082	11,451	11,065	10,295	12,823	12,893	11,472	12,403	10,445	7,703	10,442
23	1947	6,126	9,283	13,919	13,960	13,714	12,321	9,954	13,987	11,703	12,057	9,005	7,572	11,108
24	1948	10,083	11,273	12,070	14,425	12,868	10,457	10,382	14,589	13,772	12,790	11,636	8,296	11,882
25	1949	6,844	8,910	9,920	11,326	10,741	12,096	11,332	14,870	11,357	8,697	7,141	6,727	9,983
26	1950	6,184	8,267	10,386	13,620	13,324	13,215	11,463	12,618	13,783	13,758	11,524	8,105	11,350
27	1951	7,832	11,713	13,808	15,045	15,285	13,966	12,224	13,559	11,646	12,882	9,977	7,693	12,117
28	1952	9,218	10,225	12,268	13,591	13,220	10,578	13,188	14,734	12,539	12,097	8,958	6,591	11,427
29	1953	6,312	8,415	8,495	9,881	14,120	9,257	6,061	12,089	14,333	13,468	9,807	7,765	9,985
30	1954	6,715	9,361	11,188	13,234	13,828	11,458	9,294	13,294	12,625	13,390	12,322	10,536	11,419
31	1955	6,951	10,458	11,173	9,991	9,797	6,764	5,819	11,653	13,923	13,558	10,860	7,544	9,861
32	1956	7,204	11,098	13,913	15,266	14,781	13,670	12,752	14,402	13,387	12,761	11,092	7,817	12,328
33	1957	7,099	8,821	11,482	12,061	9,573	11,256	10,712	15,311	13,774	10,889	8,960	7,033	10,572
34	1958	6,278	8,555	9,766	12,775	12,096	10,391	9,497	15,136	13,065	10,427	8,896	7,200	10,324
35	1959	6,706	10,231	13,444	14,936	14,509	11,420	10,378	12,225	13,060	13,330	11,541	11,287	11,899
36	1960	11,122	12,501	12,944	13,199	12,018	10,880	12,395	11,576	12,504	11,542	9,415	7,316	11,453
37	1961	6,627	9,267	10,212	12,416	12,670	12,646	9,659	12,666	12,868	10,845	9,185	6,997	10,495
38	1962	6,182	8,639	10,240	12,809	12,250	8,297	10,901	12,297	11,843	10,583	9,677	7,180	10,061
39	1963	7,458	10,479	12,981	12,954	12,253	8,529	6,544	11,960	12,696	11,600	9,035	7,958	10,349
40	1964	6,152	8,687	10,122	11,273	10,579	7,639	8,010	12,499	14,183	13,727	11,427	8,867	10,252
41	1965	7,804	10,014	14,151	15,512	15,728	13,708	11,161	13,393	13,521	12,381	11,273	7,251	12,145
42	1966	6,929	9,012	10,603	12,588	11,644	8,698	9,070	11,068	11,138	11,374	9,057	7,201	9,855
43	1967	6,141	8,284	11,481	13,786	13,753	11,918	7,555	12,076	13,448	12,867	10,530	7,917	10,800
44	1968	6,763	9,502	10,676	12,836	13,095	12,175	5,577	10,891	12,669	11,807	10,878	9,525	10,517

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 3:</b>													
2	<b>Heavy-Load Hydro Generation</b>													
3	<b>for FY 2020</b>													
4	<b>Water Year</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>	<b>Wtd Avg.</b>
45	1969	7,950	11,304	12,250	15,046	14,338	12,029	12,442	14,490	12,275	11,965	8,668	7,352	11,659
46	1970	6,906	9,005	9,420	13,010	12,521	9,246	5,822	12,214	14,323	10,372	8,260	6,725	9,807
47	1971	6,275	8,584	10,316	15,068	15,173	13,982	11,649	14,658	13,939	13,530	11,807	8,155	11,919
48	1972	7,051	9,113	11,181	14,798	14,450	15,431	12,061	13,923	13,406	13,398	11,964	8,418	12,094
49	1973	6,940	9,172	10,569	12,493	11,577	8,278	4,283	7,887	9,597	8,803	7,920	6,862	8,684
50	1974	6,179	8,190	12,471	15,838	15,163	14,581	13,158	13,234	13,789	13,924	12,030	8,302	12,231
51	1975	6,027	8,401	9,586	12,579	12,002	11,921	7,422	12,837	14,305	14,131	10,593	8,523	10,686
52	1976	8,052	11,712	14,617	15,061	14,549	13,053	12,076	14,766	12,734	13,302	12,810	11,257	12,808
53	1977	7,077	8,465	8,667	9,826	8,477	6,740	4,474	7,483	8,113	8,129	8,052	6,148	7,632
54	1978	5,611	8,409	10,516	11,821	10,827	9,946	10,678	12,547	11,121	12,346	9,556	9,388	10,214
55	1979	7,188	9,082	8,914	11,024	9,036	10,311	7,293	13,413	10,112	8,235	7,521	7,159	9,094
56	1980	6,359	8,470	8,232	11,132	8,089	7,742	9,547	14,259	12,841	10,736	7,831	7,451	9,382
57	1981	6,279	9,156	12,855	13,721	13,430	8,926	5,742	12,484	13,572	12,583	11,473	7,916	10,656
58	1982	6,551	9,694	10,634	13,553	15,032	15,632	10,782	14,016	14,211	14,149	11,870	9,533	12,126
59	1983	7,944	9,709	11,579	13,941	13,854	13,568	9,803	13,520	13,112	13,493	11,676	8,446	11,713
60	1984	6,743	12,089	12,098	13,957	13,048	12,556	11,130	13,694	14,446	13,464	10,210	8,369	11,800
61	1985	6,823	9,531	10,461	11,481	10,536	8,667	10,039	12,478	9,954	8,862	7,015	7,059	9,391
62	1986	7,267	10,390	10,822	12,876	13,260	14,386	12,384	12,283	12,358	10,085	8,334	6,846	10,933
63	1987	6,017	9,315	10,599	10,593	8,584	9,668	7,160	11,854	9,337	7,938	7,434	6,768	8,753
64	1988	6,174	8,316	8,080	7,484	7,757	7,476	6,337	8,578	9,844	10,181	8,186	7,048	7,949
65	1989	6,230	8,654	9,689	8,769	6,615	9,569	10,774	12,139	10,320	9,342	7,692	7,034	8,895
66	1990	6,414	9,111	11,524	12,601	12,720	11,067	10,697	11,358	11,961	11,617	10,261	7,071	10,523
67	1991	6,150	11,937	12,411	13,577	13,256	11,564	9,070	12,095	11,994	12,979	11,076	7,210	11,089
68	1992	6,110	8,637	8,107	9,651	8,898	8,401	5,590	10,946	9,126	7,838	7,665	6,555	8,112
69	1993	6,206	8,638	8,932	8,153	6,327	8,759	6,214	14,223	12,146	10,175	8,044	7,043	8,725
70	1994	6,424	8,943	9,063	8,244	8,585	7,429	6,954	10,592	9,314	9,709	7,876	6,969	8,328
71	1995	6,284	8,068	8,946	10,631	10,963	11,685	6,731	12,781	13,082	11,746	8,764	7,861	9,785
72	1996	7,935	12,780	15,301	15,670	15,453	15,268	13,070	13,802	13,787	13,159	11,203	7,861	12,923
73	1997	6,651	9,405	12,362	15,645	15,292	15,162	13,144	14,244	13,573	13,573	11,818	9,439	12,513
74	1998	10,429	11,122	10,465	11,765	12,622	9,969	6,726	15,305	13,916	12,222	10,580	7,032	11,006
75	1999	6,320	8,167	12,017	14,538	14,237	14,276	10,432	13,069	13,770	13,395	12,258	8,033	11,702
76	2000	6,569	12,267	12,891	12,688	12,161	11,192	12,138	12,282	9,423	11,336	8,914	6,968	10,713
77	2001	6,393	8,385	8,559	9,215	8,145	7,487	4,573	8,125	7,801	8,547	7,990	6,174	7,608
78	2002	5,418	8,317	9,585	8,496	8,360	8,142	9,981	11,429	12,971	12,540	8,684	7,185	9,251
79	2003	6,510	8,821	8,675	8,874	9,491	11,119	8,296	10,040	12,540	9,566	7,131	6,294	8,943
80	2004	6,288	9,391	10,488	9,619	7,822	8,478	7,808	10,813	11,076	9,504	7,665	8,244	8,918
81	2005	7,147	9,136	11,160	12,059	11,868	8,615	5,362	10,819	10,324	10,233	8,023	6,561	9,259
82	2006	6,363	9,376	10,454	13,331	13,445	10,827	12,597	14,913	12,884	11,085	7,940	6,108	10,761
83	2007	6,147	9,288	10,652	12,705	11,024	12,838	9,185	12,565	10,863	11,260	7,433	5,751	9,966
84	2008	6,493	9,132	9,292	9,870	9,305	8,658	6,421	13,720	14,039	12,786	9,146	7,180	9,659
85	80 WY Average	6,759	9,330	10,667	11,888	11,390	10,518	9,031	12,213	12,009	11,301	9,392	7,555	10,159
86	Hours	432	400	400	416	400	416	416	400	416	416	416	400	4928



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 3a:</b>													
2	<b>Light-Load Hydro Generation</b>													
3	<b>for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	4,388	5,556	5,119	5,111	5,240	4,774	3,636	4,551	7,591	4,359	4,313	4,585	4,925
6	1930	4,378	5,657	5,095	4,470	5,400	4,701	4,494	4,433	4,720	4,604	4,348	4,458	4,726
7	1931	4,413	5,677	5,311	4,553	5,155	4,727	3,906	4,621	4,272	4,507	4,339	4,457	4,667
8	1932	4,216	5,297	5,211	5,123	4,018	6,917	8,978	10,990	10,798	6,015	4,614	4,878	6,426
9	1933	4,357	5,608	6,537	8,063	7,878	6,370	5,735	8,699	14,127	11,655	6,920	4,971	7,568
10	1934	4,788	8,165	11,715	13,250	13,050	9,168	11,082	10,394	9,964	4,313	4,084	4,203	8,668
11	1935	4,291	5,060	5,665	8,388	7,297	6,164	5,359	7,735	6,502	6,382	5,344	4,406	6,058
12	1936	4,304	5,460	5,145	4,621	4,840	5,088	6,291	11,424	10,375	5,121	4,203	4,268	5,938
13	1937	4,412	5,765	5,318	4,376	4,714	4,425	3,702	4,859	6,817	4,432	4,300	4,581	4,806
14	1938	4,330	5,620	6,084	6,505	7,167	7,587	9,472	10,942	8,036	6,709	4,087	4,712	6,774
15	1939	4,407	5,351	5,041	5,905	6,029	5,613	5,964	6,683	5,318	4,785	4,145	4,330	5,298
16	1940	4,483	5,884	6,220	6,150	5,823	7,017	6,016	7,395	5,948	4,015	4,014	4,451	5,628
17	1941	4,298	5,879	5,923	5,459	5,669	5,386	3,782	4,570	5,397	4,607	4,366	4,824	5,017
18	1942	4,295	6,063	7,145	6,768	6,756	4,896	4,931	5,560	10,905	7,648	5,114	5,303	6,269
19	1943	4,402	5,494	5,858	8,479	7,951	7,763	11,462	8,390	13,092	10,243	4,897	4,659	7,685
20	1944	4,346	5,607	5,194	5,619	5,247	4,415	3,495	4,041	4,874	4,251	4,264	4,411	4,648
21	1945	4,308	5,517	5,335	4,846	4,994	4,651	3,559	6,716	10,253	4,608	4,281	4,477	5,289
22	1946	4,352	5,806	6,256	6,723	7,191	7,010	10,422	12,080	8,965	8,007	5,158	4,956	7,249
23	1947	4,350	6,363	8,560	9,959	8,811	7,849	7,262	9,655	10,276	7,328	4,546	4,826	7,489
24	1948	6,393	7,351	6,970	9,260	8,631	6,535	8,064	13,672	13,896	8,003	6,880	5,328	8,415
25	1949	4,544	5,924	6,045	6,861	6,706	7,973	8,939	10,432	8,450	4,475	3,985	4,330	6,555
26	1950	4,295	5,557	6,231	10,009	8,700	8,558	8,898	9,985	13,576	12,713	6,507	5,182	8,339
27	1951	5,299	7,676	9,059	12,013	12,751	9,559	9,899	11,380	9,315	10,070	5,021	4,950	8,912
28	1952	5,959	6,723	7,032	9,690	8,512	6,470	10,855	12,990	9,510	6,736	4,589	4,287	7,779
29	1953	4,405	5,536	5,187	6,066	9,690	5,919	4,206	8,359	13,830	10,050	4,924	4,940	6,893
30	1954	4,520	6,261	6,561	9,227	8,964	7,217	6,793	11,582	12,638	12,369	9,435	6,724	8,535
31	1955	4,607	6,642	6,527	5,724	5,853	4,240	4,114	6,344	13,868	12,470	6,172	4,833	6,774
32	1956	4,721	7,280	8,634	11,021	10,538	10,085	11,477	13,551	13,473	9,131	5,908	5,057	9,235
33	1957	4,730	5,866	6,716	6,781	6,146	7,617	8,134	13,225	13,930	5,412	4,521	4,481	7,301
34	1958	4,443	5,641	6,058	8,071	7,551	6,339	6,766	11,046	12,044	5,095	4,418	4,535	6,827
35	1959	4,534	6,868	7,740	10,133	11,040	7,112	7,624	10,596	12,771	10,660	6,377	7,518	8,568
36	1960	7,379	8,250	7,893	8,735	7,468	6,527	9,390	7,449	10,480	6,176	4,754	4,574	7,398
37	1961	4,462	6,204	6,150	7,995	7,807	7,849	6,836	10,849	12,981	5,291	4,529	4,427	7,104
38	1962	4,263	5,775	6,142	7,373	7,647	5,390	8,702	9,340	8,576	5,253	4,797	4,545	6,472
39	1963	4,976	6,866	7,423	9,250	7,691	5,444	4,448	6,858	10,785	5,911	4,614	5,104	6,607
40	1964	4,363	5,913	6,115	6,093	6,289	4,999	5,615	9,278	14,205	11,378	6,274	5,771	7,187
41	1965	5,063	6,462	9,068	12,067	13,342	9,817	8,810	12,055	10,199	6,707	6,100	4,775	8,699
42	1966	4,734	5,917	6,389	6,846	6,978	5,455	5,864	6,311	9,405	5,991	4,632	4,576	6,076
43	1967	4,330	5,574	6,622	10,412	9,186	7,677	5,135	9,463	13,443	9,400	5,250	4,989	7,616
44	1968	4,643	6,250	6,404	7,962	8,114	7,751	4,128	6,080	11,097	6,559	5,773	6,232	6,733

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 3a:</b>													
2	<b>Light-Load Hydro Generation</b>													
3	<b>for FY 2020</b>													
4	<b>Water Year</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>	<b>Wtd Avg.</b>
45	1969	5,235	7,339	7,077	10,525	10,937	7,973	10,939	12,774	11,493	7,190	4,347	4,566	8,345
46	1970	4,626	5,901	5,744	7,410	8,036	5,995	4,276	7,896	11,537	5,517	4,369	4,436	6,294
47	1971	4,487	5,862	6,315	10,944	12,962	9,160	9,322	13,287	14,071	10,142	7,074	5,200	9,043
48	1972	4,869	6,220	6,667	11,252	9,612	12,885	10,119	13,043	13,588	10,843	7,554	5,442	9,343
49	1973	4,831	6,154	6,294	6,811	7,167	5,224	3,353	4,702	5,560	4,444	4,228	4,463	5,267
50	1974	4,378	5,782	7,288	14,437	14,602	11,141	11,190	12,381	13,935	12,995	7,654	5,251	10,057
51	1975	4,263	5,543	5,900	7,434	7,331	7,277	5,146	10,247	12,481	11,221	5,469	5,564	7,330
52	1976	5,498	7,452	10,463	10,205	10,770	8,366	9,501	12,658	10,754	10,912	10,681	7,323	9,574
53	1977	4,845	5,658	5,329	5,695	5,401	4,271	3,412	3,982	3,979	4,061	4,236	4,156	4,588
54	1978	4,046	5,688	6,524	7,043	7,237	6,512	7,995	10,249	7,958	6,634	4,789	5,993	6,731
55	1979	4,766	5,925	5,383	6,162	5,629	6,173	4,928	8,298	5,810	4,305	4,091	4,522	5,515
56	1980	4,386	5,567	5,010	6,267	5,505	5,026	6,812	11,762	11,072	5,363	4,141	4,802	6,313
57	1981	4,383	6,078	7,587	10,906	9,234	5,545	3,994	9,371	13,417	9,533	6,808	4,977	7,656
58	1982	4,440	6,258	6,390	8,746	11,015	11,686	8,180	11,323	12,767	12,085	6,719	6,127	8,800
59	1983	5,350	6,381	6,721	9,333	9,533	9,633	7,219	8,716	9,188	10,339	6,406	5,458	7,855
60	1984	4,739	7,813	7,026	8,572	8,500	8,823	8,695	8,583	11,672	9,481	5,220	5,494	7,868
61	1985	4,812	6,579	6,345	6,520	6,488	5,606	7,739	7,665	5,842	4,310	3,902	4,745	5,878
62	1986	4,903	6,874	6,479	7,924	9,611	10,601	9,022	7,392	9,713	4,961	4,349	4,515	7,161
63	1987	4,327	6,346	6,422	5,980	5,462	5,827	4,433	8,951	6,416	4,251	4,074	4,409	5,601
64	1988	4,315	5,481	4,915	4,640	5,153	4,749	4,215	4,768	5,744	4,816	4,254	4,488	4,791
65	1989	4,272	5,805	5,990	5,368	4,496	6,666	8,758	7,976	6,032	4,577	4,227	4,547	5,734
66	1990	4,432	6,085	6,794	7,395	8,452	6,816	7,702	8,826	11,549	6,152	5,222	4,551	6,977
67	1991	4,258	7,693	7,262	10,585	8,441	6,941	6,512	8,986	10,708	10,374	6,236	4,645	7,727
68	1992	4,284	5,833	5,063	5,805	5,619	5,287	3,897	7,061	4,886	4,160	4,175	4,345	5,049
69	1993	4,245	5,609	5,352	5,033	4,305	5,574	4,669	8,837	7,597	5,513	4,455	4,634	5,507
70	1994	4,405	5,851	5,503	4,984	5,554	4,721	4,325	5,520	5,530	4,758	4,264	4,487	4,994
71	1995	4,307	5,283	5,494	6,359	7,311	6,834	4,792	7,599	10,365	6,334	4,508	5,079	6,177
72	1996	5,202	8,721	13,277	13,724	12,856	11,641	11,003	11,524	10,916	10,394	5,949	5,049	10,038
73	1997	4,488	6,408	7,130	13,247	13,400	11,923	11,783	13,490	13,783	11,041	6,643	6,062	9,926
74	1998	6,614	7,123	6,335	6,569	8,558	6,138	4,429	10,756	12,278	6,549	5,425	4,658	7,111
75	1999	4,483	5,641	6,921	10,485	9,667	10,514	8,077	9,267	12,301	11,914	8,621	5,147	8,582
76	2000	4,543	8,084	7,665	7,517	7,376	6,908	9,800	9,026	5,731	6,155	4,635	4,482	6,835
77	2001	4,473	5,546	5,238	5,566	5,209	4,751	3,435	4,505	3,925	4,251	4,283	4,138	4,618
78	2002	4,060	5,465	5,964	5,233	5,806	5,447	7,449	7,318	12,518	8,875	4,364	4,549	6,399
79	2003	4,449	5,749	5,249	5,408	5,989	6,788	5,441	5,637	10,794	4,713	4,004	4,196	5,675
80	2004	4,301	6,117	6,347	5,737	5,316	5,486	4,905	6,003	7,925	4,765	4,302	5,467	5,557
81	2005	4,733	5,921	6,482	6,660	7,393	5,349	3,838	6,298	7,593	5,019	4,353	4,505	5,676
82	2006	4,322	6,125	6,414	8,928	8,777	6,742	10,343	10,335	12,595	5,424	4,091	4,204	7,325
83	2007	4,328	6,339	6,384	7,684	6,492	7,966	5,611	9,329	9,286	5,718	4,077	4,063	6,452
84	2008	4,433	6,051	5,747	5,770	5,832	5,706	4,374	9,052	14,128	7,781	4,522	4,597	6,492
85	80 WY Average	4,624	6,184	6,527	7,760	7,748	6,921	6,823	8,875	9,927	7,141	5,144	4,878	6,875
86	Hours	312	321	344	328	296	327	304	344	304	328	328	320	3856

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 4:</b>													
2	<b>Heavy-Load Hydro Generation</b>													
3	<b>for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	6,393	8,816	8,019	8,738	8,084	7,110	4,970	7,664	11,468	7,284	7,922	7,096	7,781
6	1930	6,516	9,069	8,087	7,358	8,029	7,071	5,983	8,102	8,763	9,362	8,194	7,010	7,782
7	1931	6,498	8,964	8,289	7,499	7,965	7,186	5,235	8,656	8,295	9,278	8,465	7,058	7,768
8	1932	6,092	8,397	8,173	8,558	5,462	9,525	11,580	15,447	12,675	11,482	9,363	7,766	9,556
9	1933	6,426	8,489	9,991	12,433	12,514	10,078	8,168	12,552	14,354	12,866	11,718	7,990	10,614
10	1934	7,464	11,116	12,312	14,888	14,430	12,822	12,715	13,073	10,870	8,361	8,043	6,647	11,029
11	1935	6,329	7,775	8,995	12,078	12,311	10,449	7,538	11,713	9,816	11,546	9,762	6,869	9,579
12	1936	6,287	8,796	7,970	7,594	7,390	7,391	8,732	15,762	11,908	10,318	7,811	6,510	8,859
13	1937	6,535	9,170	8,250	7,164	7,198	6,660	5,059	8,289	10,488	8,808	8,051	7,252	7,732
14	1938	6,391	8,668	9,486	12,286	10,821	11,453	11,983	14,445	11,534	11,906	7,824	7,465	10,344
15	1939	6,416	8,564	7,936	10,846	9,808	8,275	8,610	12,140	9,325	9,566	7,657	6,669	8,793
16	1940	6,601	9,199	9,659	11,347	8,955	10,459	8,912	12,454	9,354	7,445	7,419	6,916	9,045
17	1941	6,203	9,189	9,162	9,387	8,514	8,158	5,194	8,514	9,508	8,993	8,219	7,370	8,184
18	1942	6,062	9,434	10,916	12,418	10,937	7,153	6,973	10,150	12,555	12,522	9,551	8,045	9,695
19	1943	6,510	8,245	8,789	13,435	11,834	10,957	14,259	13,358	14,226	13,719	9,543	7,188	11,000
20	1944	6,343	8,836	8,004	9,575	8,175	6,698	4,427	7,159	8,532	7,893	7,854	6,866	7,508
21	1945	6,173	8,772	8,223	8,049	7,393	6,939	4,888	11,749	12,693	8,019	7,950	6,868	8,126
22	1946	6,255	8,947	9,590	11,997	11,061	9,764	12,793	14,464	11,322	12,374	10,486	7,698	10,545
23	1947	6,215	9,613	12,079	13,883	13,732	11,710	9,861	14,862	11,873	12,048	8,987	7,561	11,003
24	1948	9,927	11,107	10,554	14,124	12,847	10,019	10,359	16,099	13,893	12,747	11,901	8,314	11,800
25	1949	6,920	9,270	9,465	11,663	10,750	11,522	11,324	15,433	11,508	8,445	7,092	6,685	9,989
26	1950	6,271	8,627	9,770	13,210	13,584	12,443	11,370	13,691	14,032	13,634	11,757	8,113	11,363
27	1951	7,902	11,518	11,491	14,616	15,292	13,142	12,156	14,658	11,724	12,645	10,020	7,690	11,872
28	1952	9,276	10,504	10,746	13,640	13,180	10,101	13,230	15,955	12,571	12,040	8,948	6,548	11,372
29	1953	6,398	8,795	8,084	9,910	14,279	8,947	6,039	12,931	14,443	13,379	9,805	7,756	10,028
30	1954	6,796	9,721	10,193	13,002	13,942	11,207	9,237	14,804	12,834	13,265	12,728	10,582	11,493
31	1955	7,027	10,478	9,952	10,302	9,800	6,437	5,773	11,913	14,311	13,517	11,077	7,527	9,818
32	1956	7,278	11,036	11,782	15,164	14,815	12,806	12,671	16,089	13,581	12,665	11,242	7,816	12,215
33	1957	7,173	9,182	10,401	12,041	9,595	10,637	10,822	16,533	14,047	10,639	8,945	6,997	10,577
34	1958	6,364	8,900	9,278	12,589	12,024	9,946	9,464	16,146	13,242	10,180	8,867	7,169	10,316
35	1959	6,779	10,512	11,481	14,766	14,617	10,776	10,265	13,619	13,366	13,025	11,831	11,488	11,834
36	1960	10,695	11,481	10,901	12,983	11,957	10,444	12,292	12,310	12,568	11,485	9,422	7,292	11,144
37	1961	6,697	9,605	9,632	12,140	12,621	12,210	9,611	13,916	12,928	10,604	9,147	6,951	10,486
38	1962	6,263	8,975	9,681	12,434	12,250	7,938	10,833	13,216	11,768	10,348	9,668	7,142	10,008
39	1963	7,520	10,650	11,043	12,569	12,174	8,187	6,516	12,307	12,936	11,354	9,009	7,958	10,147
40	1964	6,239	9,032	9,580	11,629	10,570	7,284	7,987	13,406	14,228	13,514	11,651	8,900	10,309
41	1965	7,871	10,265	12,289	15,572	15,709	12,890	11,015	15,126	13,119	12,134	11,467	7,240	12,029
42	1966	7,002	9,373	9,867	12,423	11,647	8,189	9,162	11,621	11,146	11,258	9,043	7,166	9,796
43	1967	6,220	8,633	10,260	13,563	13,913	11,323	7,462	12,960	13,603	12,704	10,546	7,918	10,732
44	1968	6,840	9,869	10,002	12,514	13,069	11,738	5,532	11,404	12,760	11,729	10,980	9,569	10,474

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 4:</b>													
2	<b>Heavy-Load Hydro Generation</b>													
3	<b>for FY 2021</b>													
4	<b>Water Year</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>	<b>Wtd Avg.</b>
45	1969	8,005	11,139	10,637	14,957	14,434	11,420	12,522	15,947	12,686	11,970	8,639	7,307	11,600
46	1970	6,978	9,367	8,965	13,131	12,514	9,006	5,744	12,779	14,258	10,123	8,231	6,687	9,778
47	1971	6,348	8,913	9,761	14,990	15,139	13,242	11,567	16,370	14,198	13,423	12,107	8,156	11,992
48	1972	7,115	9,449	10,407	14,221	14,544	14,518	12,133	15,562	13,695	13,082	12,340	8,431	12,112
49	1973	7,017	9,527	9,998	12,590	11,538	7,910	4,224	8,145	9,463	8,535	7,913	6,825	8,603
50	1974	6,257	8,502	11,057	15,322	15,166	13,751	13,209	14,832	14,194	13,675	12,388	8,314	12,207
51	1975	6,108	8,752	9,135	12,415	11,995	11,477	7,397	13,945	14,220	14,025	10,649	8,553	10,705
52	1976	8,088	11,275	12,378	14,829	14,665	12,329	12,043	16,001	12,872	13,082	13,247	11,425	12,652
53	1977	7,142	8,809	8,221	10,146	8,465	6,414	4,424	7,598	7,701	7,851	8,022	6,123	7,554
54	1978	5,689	8,745	10,037	12,489	10,920	9,397	10,644	13,595	10,803	12,095	9,574	9,427	10,258
55	1979	7,249	9,447	8,481	11,373	9,028	9,871	7,276	14,008	10,035	7,999	7,485	7,115	9,092
56	1980	6,434	8,817	7,850	11,523	8,086	7,391	9,513	15,407	13,024	10,491	7,796	7,436	9,458
57	1981	6,359	9,515	10,838	13,133	13,449	8,522	5,717	13,465	13,747	12,482	11,777	7,915	10,535
58	1982	6,631	10,014	10,041	13,523	15,052	14,681	10,754	15,221	14,162	14,068	12,134	9,578	12,134
59	1983	7,993	10,062	10,573	13,710	13,766	12,824	9,790	14,162	12,890	13,312	11,868	8,461	11,601
60	1984	6,811	11,533	10,823	13,618	12,981	11,852	11,108	14,016	14,455	13,317	10,210	8,383	11,565
61	1985	6,891	9,860	9,914	11,991	10,559	8,330	10,009	12,979	9,636	8,593	6,970	7,044	9,363
62	1986	7,336	10,670	10,073	12,880	13,338	13,489	12,306	12,776	12,537	9,846	8,293	6,819	10,846
63	1987	6,106	9,666	9,978	10,960	8,564	9,261	7,107	12,734	9,445	7,707	7,418	6,731	8,782
64	1988	6,250	8,670	7,713	7,757	7,727	7,125	6,300	8,825	9,849	9,941	8,161	7,004	7,933
65	1989	6,306	9,012	9,233	9,095	6,552	9,176	10,680	12,875	10,092	9,109	7,673	7,001	8,900
66	1990	6,499	9,491	10,168	12,150	12,888	10,493	10,623	12,211	12,444	11,373	10,290	7,041	10,450
67	1991	6,235	11,180	10,553	13,049	13,306	11,001	8,943	12,981	12,268	12,693	11,306	7,217	10,860
68	1992	6,199	9,006	7,719	10,009	8,864	8,019	5,546	11,772	8,974	7,584	7,656	6,525	8,126
69	1993	6,276	8,981	8,475	8,454	6,259	8,396	6,137	14,904	11,823	9,931	8,037	7,015	8,716
70	1994	6,510	9,296	8,610	8,534	8,561	7,085	6,903	10,878	9,296	9,473	7,859	6,932	8,306
71	1995	6,359	8,406	8,505	11,104	10,883	11,211	6,684	13,029	13,158	11,486	8,759	7,872	9,775
72	1996	7,999	11,635	13,149	15,267	15,469	14,355	13,068	14,957	13,484	12,916	11,419	7,855	12,609
73	1997	6,732	9,758	10,902	15,653	15,289	14,274	13,194	15,732	13,738	13,283	11,936	9,478	12,473
74	1998	10,204	10,984	9,873	12,224	12,590	9,542	6,703	16,276	14,007	11,961	10,597	7,008	10,972
75	1999	6,408	8,494	10,643	14,420	14,194	13,492	10,418	13,935	13,780	13,447	12,664	8,045	11,650
76	2000	6,648	10,965	10,875	12,452	12,125	10,709	12,071	13,189	9,175	11,315	8,897	6,923	10,415
77	2001	6,478	8,730	8,115	9,523	8,112	7,130	4,519	8,323	7,371	8,291	7,959	6,151	7,538
78	2002	5,504	8,666	9,123	8,786	8,358	7,795	9,884	12,181	13,314	12,504	8,649	7,157	9,319
79	2003	6,583	9,177	8,236	9,179	9,481	10,662	8,237	10,290	12,746	9,323	7,087	6,270	8,936
80	2004	6,365	9,714	9,792	9,954	7,805	8,149	7,790	11,125	11,042	9,273	7,696	8,266	8,897
81	2005	7,217	9,492	9,980	11,868	11,845	8,266	5,239	11,211	10,377	9,998	8,022	6,538	9,135
82	2006	6,445	9,727	9,861	13,176	13,432	10,347	12,569	15,496	13,196	10,831	7,882	6,086	10,720
83	2007	6,231	9,643	10,022	12,409	11,006	12,304	9,192	13,500	10,889	11,111	7,385	5,732	9,937
84	2008	6,572	9,483	8,837	10,247	9,267	8,360	6,349	14,183	14,409	12,741	9,148	7,150	9,711
85	80 WY Average	6,822	9,527	9,749	11,919	11,393	10,020	8,994	13,026	12,045	11,117	9,451	7,546	10,112
86	Hours	432	384	416	400	384	432	416	400	416	416	416	400	4912

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 4a:</b>													
2	<b>Light-Load Hydro Generation</b>													
3	<b>for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	4,263	5,280	5,479	4,928	5,291	5,135	3,687	4,366	7,724	4,667	4,379	4,630	4,975
6	1930	4,278	5,382	5,431	4,307	5,423	5,048	4,562	4,186	5,129	4,925	4,396	4,502	4,789
7	1931	4,314	5,432	5,711	4,378	5,224	5,078	3,953	4,374	4,723	4,847	4,407	4,498	4,744
8	1932	4,109	5,046	5,588	4,908	4,121	7,415	8,972	10,009	10,995	6,264	4,668	4,877	6,407
9	1933	4,255	5,336	7,900	8,385	8,038	6,798	5,765	7,657	14,843	12,378	6,600	4,954	7,729
10	1934	4,685	9,048	11,838	11,859	12,832	9,498	11,017	9,239	10,073	4,626	4,149	4,256	8,563
11	1935	4,195	4,795	6,027	8,351	7,287	6,732	5,383	6,819	6,855	6,430	5,170	4,460	6,046
12	1936	4,198	5,175	5,516	4,437	4,916	5,439	6,341	10,218	10,533	5,452	4,241	4,319	5,900
13	1937	4,316	5,510	5,696	4,210	4,809	4,760	3,743	4,667	6,801	4,758	4,371	4,623	4,852
14	1938	4,227	5,369	6,496	6,545	7,200	8,102	9,515	9,874	8,601	6,777	4,154	4,730	6,784
15	1939	4,290	5,084	5,362	5,726	6,098	5,942	5,898	6,105	5,401	5,086	4,181	4,385	5,292
16	1940	4,383	5,625	6,827	5,956	5,860	7,523	6,057	6,552	5,912	4,346	4,073	4,490	5,631
17	1941	4,189	5,615	6,327	5,254	5,702	5,723	3,802	4,320	5,623	4,924	4,410	4,831	5,058
18	1942	4,182	5,815	8,580	6,558	6,781	5,250	4,960	5,273	11,066	7,713	5,162	5,280	6,372
19	1943	4,295	5,223	6,296	8,339	7,932	8,201	11,405	7,433	13,461	10,449	4,925	4,680	7,673
20	1944	4,220	5,331	5,536	5,432	5,302	4,755	3,555	3,953	5,252	4,567	4,325	4,465	4,726
21	1945	4,194	5,256	5,740	4,645	5,038	4,994	3,618	6,336	10,448	4,933	4,336	4,532	5,330
22	1946	4,231	5,557	6,693	6,325	7,165	7,460	10,383	11,631	9,338	8,065	5,126	4,962	7,240
23	1947	4,225	6,125	10,372	10,200	8,799	8,220	7,239	8,877	10,427	7,365	4,600	4,841	7,610
24	1948	6,606	7,788	8,516	9,764	8,537	6,940	8,154	13,136	15,383	8,059	6,559	5,306	8,737
25	1949	4,439	5,655	6,434	6,664	6,718	8,349	8,989	9,980	8,529	4,805	4,047	4,382	6,572
26	1950	4,175	5,276	6,809	10,074	8,802	8,735	8,794	8,799	14,208	13,741	6,277	5,173	8,387
27	1951	5,202	8,191	10,735	11,667	12,257	9,855	9,934	10,240	9,569	10,342	5,018	4,954	8,988
28	1952	5,878	6,572	8,581	9,857	8,407	6,899	10,838	11,910	9,803	6,830	4,602	4,341	7,882
29	1953	4,286	5,240	5,547	5,578	9,788	6,270	4,248	7,390	14,325	10,189	4,944	4,951	6,847
30	1954	4,407	5,998	7,597	9,107	8,829	7,839	6,782	10,498	14,056	13,346	8,973	6,527	8,669
31	1955	4,501	6,801	7,825	5,562	5,878	4,564	4,118	6,054	15,016	13,516	5,920	4,854	7,047
32	1956	4,619	7,594	10,592	11,379	10,436	10,171	11,386	12,990	15,018	9,268	5,735	5,058	9,509
33	1957	4,628	5,595	7,791	6,985	6,200	7,966	8,253	12,252	14,870	5,740	4,539	4,527	7,436
34	1958	4,324	5,387	6,497	8,370	7,530	6,749	6,804	10,218	12,394	5,422	4,454	4,572	6,886
35	1959	4,433	6,707	9,726	10,586	10,982	7,367	7,531	9,767	13,389	11,022	6,091	7,115	8,716
36	1960	7,917	9,210	9,763	9,203	7,421	7,036	9,318	6,605	10,809	6,286	4,768	4,604	7,733
37	1961	4,365	5,964	6,688	8,405	7,757	8,290	6,821	9,882	14,391	5,616	4,578	4,484	7,249
38	1962	4,151	5,527	6,651	7,995	7,565	5,740	8,647	8,274	9,030	5,578	4,827	4,592	6,537
39	1963	4,891	6,842	9,343	9,504	7,679	5,760	4,489	6,463	11,063	6,248	4,647	5,104	6,842
40	1964	4,241	5,651	6,606	5,920	6,333	5,355	5,664	8,215	15,146	11,763	6,044	5,730	7,211
41	1965	4,971	6,344	10,857	12,043	13,013	10,013	8,772	11,196	11,274	7,045	5,854	4,789	8,826
42	1966	4,632	5,652	7,117	7,280	6,985	5,667	6,028	5,677	9,344	6,161	4,658	4,620	6,137
43	1967	4,221	5,305	7,917	10,389	9,087	7,983	5,098	8,437	14,883	9,581	5,246	4,988	7,747
44	1968	4,536	5,986	7,050	8,421	8,034	8,156	4,202	5,509	11,418	6,653	5,728	6,178	6,802

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 4a:</b>													
2	<b>Light-Load Hydro Generation</b>													
3	<b>for FY 2021</b>													
4	<b>Water Year</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>	<b>Wtd Avg.</b>
45	1969	5,159	7,768	8,746	10,862	10,847	8,352	10,985	11,678	11,912	7,231	4,410	4,623	8,532
46	1970	4,528	5,636	6,142	7,388	7,927	6,425	4,258	7,128	12,124	5,861	4,420	4,482	6,338
47	1971	4,385	5,616	6,823	11,563	11,497	9,442	9,269	12,421	15,242	10,399	6,729	5,199	9,025
48	1972	4,781	5,976	7,428	11,015	9,580	13,491	10,267	12,460	15,145	11,150	7,124	5,426	9,467
49	1973	4,725	5,892	6,809	6,938	7,227	5,576	3,433	4,414	5,719	4,785	4,295	4,508	5,358
50	1974	4,269	5,540	8,603	12,981	14,109	11,375	11,067	11,810	15,016	13,992	7,217	5,237	10,060
51	1975	4,151	5,279	6,292	7,726	7,286	7,840	5,034	8,968	13,446	11,524	5,468	5,527	7,375
52	1976	5,448	8,249	11,712	10,510	10,694	8,682	9,563	11,615	11,224	11,342	10,422	6,961	9,719
53	1977	4,755	5,399	5,731	5,515	5,441	4,596	3,481	3,847	4,542	4,414	4,300	4,188	4,687
54	1978	3,938	5,434	6,868	6,674	7,237	6,856	8,084	9,054	8,406	6,981	4,827	5,945	6,686
55	1979	4,682	5,659	5,761	5,982	5,666	6,568	4,939	7,672	5,939	4,619	4,138	4,578	5,528
56	1980	4,282	5,310	5,338	6,038	5,529	5,374	6,841	10,724	11,369	5,692	4,193	4,821	6,296
57	1981	4,272	5,815	9,458	10,591	8,992	5,931	4,062	8,311	14,295	9,715	6,441	4,979	7,745
58	1982	4,329	6,056	6,934	8,863	10,723	11,996	8,256	10,317	13,537	12,737	6,419	6,071	8,818
59	1983	5,283	6,137	7,708	9,763	9,345	9,934	7,255	8,138	10,075	10,455	6,198	5,439	7,967
60	1984	4,644	8,670	8,303	9,090	8,381	9,196	8,749	8,247	12,456	9,616	5,241	5,477	8,161
61	1985	4,719	6,343	6,839	6,298	6,550	5,915	7,764	7,018	6,170	4,650	3,995	4,764	5,914
62	1986	4,808	6,726	7,218	8,008	9,656	10,803	8,964	6,824	10,052	5,268	4,402	4,550	7,221
63	1987	4,203	6,087	7,005	5,768	5,512	6,190	4,494	7,900	6,259	4,544	4,144	4,456	5,566
64	1988	4,210	5,212	5,227	4,455	5,213	5,097	4,266	4,497	5,747	5,120	4,318	4,542	4,819
65	1989	4,167	5,531	6,388	5,199	4,593	7,107	8,762	7,059	6,360	4,890	4,287	4,589	5,739
66	1990	4,314	5,797	8,225	7,733	8,785	7,185	7,603	7,822	12,123	6,463	5,217	4,589	7,123
67	1991	4,140	8,666	9,111	10,542	8,446	7,250	6,429	7,953	11,082	10,739	5,984	4,636	7,937
68	1992	4,162	5,546	5,408	5,568	5,690	5,656	3,957	6,116	5,094	4,481	4,254	4,383	5,036
69	1993	4,148	5,363	5,756	4,828	4,411	5,912	4,661	8,238	8,083	5,867	4,525	4,669	5,554
70	1994	4,286	5,595	5,904	4,798	5,609	5,060	4,396	5,202	5,493	5,057	4,324	4,533	5,021
71	1995	4,203	5,031	5,886	6,008	7,317	7,219	4,857	7,326	10,834	6,701	4,534	5,065	6,225
72	1996	5,113	9,655	12,741	12,221	12,570	11,941	10,851	10,401	11,753	10,672	5,720	5,056	9,878
73	1997	4,376	6,148	8,579	13,123	13,191	12,173	11,672	13,005	15,317	11,395	6,552	6,014	10,093
74	1998	6,872	7,469	6,883	6,277	8,479	6,526	4,457	9,912	12,668	6,921	5,404	4,687	7,201
75	1999	4,360	5,388	8,347	10,614	9,506	10,870	8,091	8,349	12,932	12,377	8,136	5,131	8,658
76	2000	4,435	8,992	9,528	7,955	7,302	7,361	9,696	8,054	6,081	6,194	4,657	4,539	7,081
77	2001	4,356	5,287	5,638	5,377	5,275	5,106	3,508	4,291	4,528	4,576	4,346	4,166	4,710
78	2002	3,940	5,202	6,373	5,053	5,821	5,814	7,452	6,453	13,094	9,029	4,429	4,585	6,404
79	2003	4,348	5,489	5,639	5,215	6,029	7,197	5,525	5,359	10,990	5,020	4,060	4,227	5,722
80	2004	4,193	5,905	7,027	5,528	5,357	5,789	4,933	5,654	7,996	5,086	4,389	5,439	5,606
81	2005	4,637	5,668	7,715	7,109	7,392	5,759	3,837	5,970	7,466	5,332	4,418	4,534	5,819
82	2006	4,209	5,879	6,969	9,221	8,678	7,193	10,335	9,842	13,258	5,741	4,164	4,230	7,445
83	2007	4,211	6,077	6,976	8,129	6,545	8,323	5,621	8,250	9,170	5,899	4,138	4,087	6,459
84	2008	4,323	5,798	6,151	5,541	5,886	6,062	4,377	8,578	15,532	7,838	4,575	4,634	6,592
85	80 WY Average	4,535	6,082	7,328	7,720	7,704	7,287	6,835	8,153	10,446	7,452	5,100	4,884	6,951
86	Hours	312	337	328	344	288	311	304	344	304	328	328	320	3848

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 5:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Light-Load-Hours for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	74	207	200	173	181	41	-12	-14	179	17	15	17	89
6	1930	74	166	173	108	117	23	-3	89	294	14	13	8	89
7	1931	74	178	170	119	171	65	1	144	284	85	16	4	109
8	1932	74	206	203	185	-5	-2	120	-10	-21	467	49	-3	107
9	1933	75	134	27	134	45	144	167	-3	124	-22	3	-6	67
10	1934	123	145	-24	-135	-115	-11	-68	-20	-20	15	12	19	-6
11	1935	74	110	138	-3	158	132	129	6	305	247	408	7	142
12	1936	74	193	193	49	138	33	89	-9	-19	163	9	4	76
13	1937	74	166	182	103	154	-12	-11	5	153	12	17	4	70
14	1938	73	214	147	73	88	151	227	-8	202	238	7	0	116
15	1939	74	216	159	95	130	29	162	189	244	13	16	4	111
16	1940	74	169	87	86	201	112	94	142	190	8	15	21	99
17	1941	74	168	135	164	197	148	1	182	278	11	16	11	115
18	1942	75	169	75	60	83	27	1	228	-21	99	94	-6	75
19	1943	75	145	71	62	135	86	8	92	-23	-10	8	3	55
20	1944	75	217	140	135	164	1	-10	-11	158	19	17	25	76
21	1945	74	193	183	87	17	-4	-9	242	-10	18	14	3	70
22	1946	74	208	148	104	131	4	7	-8	-16	-10	515	11	98
23	1947	73	183	14	-17	66	124	274	70	-19	78	9	7	71
24	1948	285	34	32	147	128	162	246	-14	73	106	-2	-12	96
25	1949	74	195	132	72	138	149	317	146	147	18	13	2	116
26	1950	74	174	101	-7	70	133	319	-8	125	-22	120	-5	88
27	1951	93	36	140	-20	-10	38	20	-15	-15	-17	278	5	46
28	1952	269	104	38	-3	148	143	199	-10	127	275	10	8	107
29	1953	74	197	193	142	-1	96	-11	-4	132	-16	149	5	81
30	1954	75	158	78	-7	63	138	188	-9	-23	-21	-50	-37	45
31	1955	74	58	35	113	98	0	-2	176	81	-21	198	4	68
32	1956	81	51	34	-14	-6	192	62	-9	-28	-10	274	11	54
33	1957	73	199	80	66	173	55	298	-7	29	90	8	4	87
34	1958	75	209	163	144	107	163	249	128	-29	65	8	8	108
35	1959	74	110	12	121	-7	135	176	-10	-22	-22	2	417	82
36	1960	158	107	34	108	111	169	-16	114	-21	153	60	8	83
37	1961	74	160	99	0	71	98	312	-9	-21	358	69	5	101
38	1962	72	213	112	64	73	44	219	-10	163	40	170	7	96
39	1963	72	84	16	-15	96	124	-3	216	-25	394	15	-2	83
40	1964	74	211	111	78	86	1	57	-10	147	-27	69	-7	65
41	1965	151	104	22	73	-11	178	262	-9	254	434	203	0	137
42	1966	74	177	83	59	76	134	246	189	-5	263	34	18	113
43	1967	74	207	50	-11	-5	109	168	-8	-21	-8	258	-1	68
44	1968	74	138	89	136	74	147	-11	213	-24	215	175	224	123

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 5:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Light-Load-Hours for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	146	37	16	32	-8	131	-15	-11	-32	93	10	19	35
46	1970	74	174	158	49	72	88	-8	185	134	10	13	12	81
47	1971	74	185	126	118	-8	74	144	-16	76	-10	3	-2	63
48	1972	73	187	77	-14	80	-20	-11	-9	74	-20	0	-7	33
49	1973	73	190	111	58	103	165	-13	25	252	13	17	5	83
50	1974	74	64	77	-137	-113	-20	17	3	77	-21	-3	3	2
51	1975	69	217	164	59	59	140	81	-8	155	-8	290	-8	101
52	1976	74	-2	139	145	-9	86	239	-9	-22	-21	-77	327	72
53	1977	74	211	195	117	145	21	-14	212	231	10	15	2	102
54	1978	66	219	86	107	152	20	296	-8	256	423	60	261	159
55	1979	116	168	197	93	199	175	69	96	245	8	15	11	115
56	1980	73	207	158	58	130	34	251	-8	-24	40	7	15	77
57	1981	75	170	24	-19	-8	137	-14	-14	-48	-8	4	-2	25
58	1982	75	127	111	123	178	-16	307	-10	88	-15	-2	199	95
59	1983	68	143	85	-3	108	183	215	189	260	-8	111	-9	111
60	1984	74	6	68	60	64	144	208	203	76	-10	142	-10	86
61	1985	75	160	113	75	124	73	84	208	279	21	6	6	102
62	1986	74	107	80	60	130	113	280	167	54	13	8	9	91
63	1987	74	182	98	96	191	174	134	-5	163	14	13	7	93
64	1988	75	195	123	61	184	27	2	118	193	123	16	10	93
65	1989	74	199	125	186	-5	7	263	12	299	19	16	4	98
66	1990	74	186	31	147	-11	156	278	1	-23	159	492	4	125
67	1991	74	44	11	-16	150	114	348	-10	-21	-22	26	-6	55
68	1992	74	196	74	132	177	157	-9	52	257	12	14	4	94
69	1993	79	176	177	193	-7	31	1	114	245	8	17	7	88
70	1994	74	171	161	192	160	2	75	188	186	11	14	9	104
71	1995	74	214	194	124	133	141	-6	172	51	27	17	-2	96
72	1996	133	140	-22	-71	-16	-82	-14	-8	-13	-18	126	3	13
73	1997	74	172	78	-15	-12	-23	-13	65	31	-22	-3	78	35
74	1998	265	40	98	83	157	138	-6	114	-21	393	172	9	121
75	1999	74	144	70	-17	99	199	346	20	111	-21	-17	-5	81
76	2000	74	143	26	64	93	151	15	-11	214	281	9	3	88
77	2001	74	216	178	140	174	21	-11	110	111	12	16	4	87
78	2002	67	203	138	207	140	37	272	84	-29	-9	7	6	93
79	2003	74	176	190	192	152	161	42	208	-22	14	6	6	102
80	2004	75	124	77	136	142	33	38	239	188	13	18	-10	89
81	2005	91	152	32	58	7	189	-10	242	157	16	15	3	80
82	2006	75	148	87	134	153	160	114	176	-66	352	8	10	114
83	2007	73	167	102	93	94	97	269	-9	-4	518	12	10	118
84	2008	75	161	172	128	152	30	2	161	-43	117	10	4	82
85	80 WY Average	87	155	104	76	90	87	109	70	93	78	62	22	86
86	Hours	312	321	344	328	296	327	304	344	304	328	328	320	3856



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 6:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Heavy-Load-Hours for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	-61	-174	-192	-149	-154	-49	-16	-6	-168	-39	-18	-35	-88
6	1930	-63	-139	-169	-99	-96	-35	-19	-94	-235	-24	-29	-35	-86
7	1931	-57	-154	-159	-107	-143	-74	-29	-145	-227	-82	-30	-33	-103
8	1932	-58	-173	-190	-162	-26	-20	-73	34	40	-354	-58	-25	-89
9	1933	-58	-113	-35	-107	-12	-129	-146	24	-108	57	24	-24	-53
10	1934	-100	-102	77	-107	-111	32	-50	29	48	-36	-29	-35	-32
11	1935	-62	-94	-132	22	-101	-115	-117	21	-238	-178	-330	-38	-114
12	1936	-57	-160	-178	-51	-110	-42	-81	30	57	-147	-17	-28	-65
13	1937	-58	-138	-169	-103	-120	-14	-14	-18	-140	-38	-31	-32	-72
14	1938	-58	-179	-151	-71	-74	-140	-146	23	-166	-162	-20	-30	-98
15	1939	-61	-179	-156	-85	-100	-43	-144	-179	-196	-33	-17	-15	-100
16	1940	-62	-146	-86	-83	-157	-101	-92	-113	-170	-25	-14	-36	-90
17	1941	-62	-144	-135	-146	-159	-131	-19	-174	-222	-31	-33	-32	-107
18	1942	-67	-145	-78	-61	-73	-40	-17	-219	36	-49	-92	-23	-68
19	1943	-58	-122	-75	-75	-114	-82	12	-50	59	30	-28	-33	-44
20	1944	-65	-179	-139	-121	-134	-20	-24	-11	-144	-20	-36	-39	-77
21	1945	-63	-160	-176	-84	-21	-13	-21	-224	35	-33	-15	-26	-66
22	1946	-63	-173	-152	-104	-104	-18	11	20	30	29	-391	-30	-79
23	1947	-74	-156	-22	23	-63	-118	-221	-32	43	-29	-28	-34	-59
24	1948	-175	-41	-45	-128	-106	-141	-163	32	-61	-55	19	-19	-75
25	1949	-59	-169	-126	-81	-118	-129	-217	-144	-105	-29	-28	-33	-103
26	1950	-64	-147	-103	23	-69	-115	-232	30	-87	44	-76	-25	-69
27	1951	-75	-43	-126	66	36	-19	-5	34	37	39	-232	-31	-27
28	1952	-201	-88	-49	21	-120	-126	-120	30	-78	-196	-31	-39	-84
29	1953	-65	-162	-186	-122	20	-94	-14	29	-76	33	-139	-32	-67
30	1954	-60	-141	-76	19	-21	-124	-162	35	58	56	-17	-10	-37
31	1955	-56	-53	-43	-100	-84	-19	-17	-188	-32	56	-122	-36	-58
32	1956	-67	-50	-46	18	25	-147	-28	34	73	36	-192	-33	-32
33	1957	-58	-171	-76	-80	-140	-67	-239	35	-32	-90	-28	-17	-80
34	1958	-64	-176	-164	-114	-94	-148	-207	-81	71	-66	-27	-39	-92
35	1959	-62	-94	-24	-80	30	-123	-110	20	53	37	21	-313	-53
36	1960	-82	-78	-46	-68	-94	-146	33	-70	36	-91	-65	-37	-59
37	1961	-57	-145	-96	12	-68	-91	-247	34	64	-292	-74	-21	-82
38	1962	-61	-179	-115	-74	-63	-52	-175	34	-102	-40	-149	-39	-85
39	1963	-55	-72	-22	17	-80	-110	-11	-218	28	-312	-33	-26	-74
40	1964	-61	-180	-106	-75	-74	-15	-63	34	-106	43	-33	-17	-54
41	1965	-122	-89	-35	-23	30	-131	-213	30	-185	-330	-130	-26	-103
42	1966	-57	-146	-78	-76	-67	-119	-202	-167	26	-170	-47	-38	-95
43	1967	-62	-175	-52	23	28	-99	-142	29	50	28	-165	-30	-47
44	1968	-59	-126	-88	-120	-66	-122	-21	-203	30	-145	-107	-213	-103

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 6:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Heavy-Load-Hours for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	-118	-44	-29	-5	24	-125	30	35	66	-46	-27	-40	-24
46	1970	-64	-153	-157	-58	-64	-90	-14	-176	-102	-28	-19	-40	-80
47	1971	-67	-157	-124	-79	35	-67	-85	28	-7	36	23	-28	-41
48	1972	-59	-156	-78	33	-73	36	36	29	-80	39	28	-20	-22
49	1973	-64	-166	-107	-67	-87	-150	-25	-36	-201	-31	-21	-18	-81
50	1974	-60	-53	-83	-110	-112	14	3	22	-73	56	31	-24	-32
51	1975	-63	-184	-163	-69	-53	-124	-79	30	-126	37	-240	-21	-88
52	1976	-63	-7	-102	-104	30	-85	-168	33	35	45	-66	-257	-59
53	1977	-63	-177	-195	-101	-113	-33	-20	-199	-190	-27	-36	-24	-98
54	1978	-59	-183	-94	-104	-126	-34	-192	29	-208	-320	-62	-242	-133
55	1979	-91	-143	-197	-88	-159	-149	-73	-103	-195	-17	-17	-33	-105
56	1980	-58	-171	-153	-58	-104	-44	-210	36	48	-41	-19	-32	-67
57	1981	-60	-141	-41	58	26	-118	-12	28	42	37	23	-29	-16
58	1982	-60	-108	-108	-111	-106	42	-243	29	-41	36	18	-193	-70
59	1983	-57	-127	-89	15	-55	-173	-175	-201	-209	29	-67	-21	-94
60	1984	-65	-15	-68	-74	-60	-118	-176	-199	-78	27	-140	-22	-82
61	1985	-66	-141	-110	-73	-97	-67	-83	-201	-223	-39	-23	-34	-96
62	1986	-61	-91	-80	-82	-111	-111	-226	-175	-9	-25	-28	-36	-86
63	1987	-67	-155	-95	-93	-152	-149	-119	33	-117	-23	-27	-19	-82
64	1988	-59	-163	-124	-61	-141	-38	-21	-117	-168	-110	-37	-36	-89
65	1989	-59	-167	-119	-161	-6	-23	-212	17	-237	-31	-20	-21	-87
66	1990	-62	-162	-47	-121	24	-139	-203	15	57	-80	-375	-21	-94
67	1991	-64	-38	-27	33	-107	-99	-267	35	34	40	-4	-12	-40
68	1992	-65	-166	-81	-117	-145	-139	-14	-22	-205	-26	-24	-17	-85
69	1993	-66	-157	-170	-169	-7	-41	-20	-115	-198	-29	-27	-31	-86
70	1994	-64	-146	-152	-166	-129	-18	-74	-186	-164	-36	-18	-36	-98
71	1995	-57	-183	-182	-113	-105	-122	-16	-179	-6	-47	-23	-29	-88
72	1996	-106	-101	85	5	27	-53	30	26	34	38	-69	-32	-10
73	1997	-61	-144	-73	17	39	34	33	-35	17	40	24	-94	-16
74	1998	-160	-46	-101	-80	-98	-121	-10	-76	42	-305	-86	-30	-90
75	1999	-66	-122	-69	20	-49	-152	-268	10	-52	56	37	-25	-57
76	2000	-63	-101	-40	-73	-82	-132	5	28	-184	-201	-27	-24	-75
77	2001	-63	-179	-175	-131	-140	-33	-16	-118	-107	-35	-31	-29	-87
78	2002	-61	-173	-133	-178	-110	-51	-220	-45	76	36	-28	-20	-75
79	2003	-56	-156	-177	-169	-127	-138	-47	-202	40	-29	-22	-35	-92
80	2004	-57	-106	-72	-124	-117	-42	-46	-222	-152	-29	-21	-24	-84
81	2005	-73	-137	-45	-80	15	-160	-10	-230	-108	-33	-20	-29	-76
82	2006	-59	-124	-86	-85	-99	-139	-60	-157	1	-277	-16	-37	-95
83	2007	-62	-141	-104	-92	-79	-87	-213	34	27	-383	-23	-37	-97
84	2008	-58	-137	-165	-117	-124	-42	-17	-172	23	-69	-31	-14	-76
85	80 WY Average	-69	-132	-102	-72	-74	-82	-91	-55	-61	-55	-54	-43	-74
86	Hours	432	400	400	416	400	416	416	400	416	416	416	400	4928

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 7:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Flat Energy for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	-4	-4	-11	-7	-12	-9	-14	-10	-22	-14	-4	-12	-10
6	1930	-5	-3	-11	-8	-6	-9	-12	-10	-12	-7	-10	-16	-9
7	1931	-2	-6	-7	-7	-9	-13	-17	-11	-11	-9	-10	-17	-10
8	1932	-3	-4	-8	-9	-17	-12	8	14	14	8	-11	-15	-3
9	1933	-2	-3	-6	-1	12	-9	-14	11	-10	22	15	-16	0
10	1934	-7	8	31	-119	-113	13	-58	7	19	-13	-11	-11	-21
11	1935	-5	-3	-7	11	9	-6	-13	14	-8	9	-4	-18	-2
12	1936	-2	-3	-7	-7	-5	-9	-9	12	25	-10	-6	-14	-3
13	1937	-2	-3	-7	-12	-4	-13	-13	-7	-16	-16	-10	-16	-10
14	1938	-3	-4	-13	-8	-5	-12	11	9	-11	14	-8	-17	-4
15	1939	-4	-3	-10	-5	-2	-11	-15	-9	-10	-13	-2	-6	-8
16	1940	-5	-6	-6	-8	-5	-7	-14	5	-18	-11	-1	-10	-7
17	1941	-5	-5	-10	-10	-8	-8	-11	-9	-11	-13	-11	-13	-9
18	1942	-8	-5	-7	-7	-7	-11	-9	-12	12	16	-10	-15	-5
19	1943	-2	-3	-8	-15	-8	-8	11	16	24	12	-12	-17	-1
20	1944	-6	-3	-10	-8	-7	-11	-18	-11	-17	-3	-13	-10	-10
21	1945	-6	-3	-10	-9	-5	-9	-16	-9	16	-10	-2	-13	-6
22	1946	-6	-4	-13	-12	-4	-9	10	7	10	12	9	-12	-1
23	1947	-12	-5	-5	5	-8	-11	-12	15	17	18	-11	-16	-2
24	1948	18	-8	-9	-7	-6	-8	10	11	-4	16	9	-16	1
25	1949	-3	-7	-6	-13	-9	-7	8	-10	1	-8	-10	-17	-7
26	1950	-6	-4	-9	10	-10	-6	1	12	2	15	11	-16	0
27	1951	-5	-7	-3	28	17	6	5	12	15	14	-7	-15	5
28	1952	-4	-2	-9	10	-6	-8	15	12	9	12	-13	-18	0
29	1953	-7	-2	-11	-6	11	-10	-13	14	12	12	-12	-16	-2
30	1954	-3	-8	-4	8	15	-8	-14	15	24	22	-32	-22	-1
31	1955	-2	-4	-7	-6	-7	-10	-11	-20	16	22	19	-19	-2
32	1956	-5	-5	-9	4	12	2	10	14	30	16	13	-13	6
33	1957	-3	-6	-4	-16	-7	-13	-12	15	-6	-10	-12	-8	-7
34	1958	-6	-5	-13	0	-9	-11	-14	15	29	-9	-12	-18	-4
35	1959	-5	-3	-7	9	14	-9	11	7	21	11	12	12	6
36	1960	19	4	-9	10	-7	-7	13	15	12	16	-10	-17	3
37	1961	-2	-9	-6	7	-9	-8	-11	14	28	-5	-11	-10	-2
38	1962	-5	-5	-10	-13	-5	-10	-9	14	10	-5	-9	-18	-5
39	1963	-2	-3	-4	3	-5	-7	-8	-17	6	-1	-12	-15	-5
40	1964	-4	-6	-6	-7	-6	-8	-13	13	1	12	12	-12	-2
41	1965	-8	-3	-9	19	13	5	-12	12	0	7	17	-15	2
42	1966	-2	-2	-3	-16	-7	-8	-13	-3	13	21	-11	-13	-4
43	1967	-5	-5	-5	8	14	-7	-11	12	20	12	22	-17	3
44	1968	-3	-9	-6	-7	-6	-4	-17	-11	8	14	17	-18	-4

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 7:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Flat Energy for FY 2020</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	-8	-8	-9	12	11	-12	11	14	25	16	-11	-14	2
46	1970	-6	-8	-11	-11	-6	-12	-11	-9	-2	-11	-5	-17	-9
47	1971	-8	-5	-8	8	17	-5	12	8	28	16	14	-17	5
48	1972	-4	-4	-6	12	-8	11	16	11	-15	13	15	-14	3
49	1973	-6	-7	-6	-12	-6	-11	-20	-8	-10	-11	-4	-8	-9
50	1974	-4	-1	-9	-122	-112	-1	9	13	-10	22	16	-12	-17
51	1975	-7	-5	-12	-12	-6	-8	-12	12	-7	17	-7	-15	-5
52	1976	-6	-4	9	6	14	-10	4	14	11	16	-71	3	-1
53	1977	-6	-4	-15	-5	-4	-9	-18	-9	-12	-11	-13	-13	-10
54	1978	-7	-4	-11	-11	-7	-10	14	12	-12	7	-8	-19	-5
55	1979	-4	-4	-15	-8	-7	-7	-13	-11	-9	-6	-3	-14	-8
56	1980	-3	-3	-10	-7	-5	-10	-15	16	18	-5	-8	-11	-4
57	1981	-4	-3	-11	24	12	-6	-13	9	4	17	14	-17	2
58	1982	-3	-3	-7	-8	15	17	-11	11	14	13	9	-19	2
59	1983	-5	-7	-8	7	15	-16	-11	-21	-11	12	12	-16	-4
60	1984	-6	-6	-5	-15	-7	-3	-14	-13	-13	11	-16	-17	-9
61	1985	-7	-7	-7	-8	-3	-5	-12	-12	-11	-12	-10	-16	-9
62	1986	-5	-3	-6	-19	-8	-12	-12	-17	18	-8	-12	-16	-8
63	1987	-8	-5	-6	-10	-6	-6	-13	16	1	-6	-9	-8	-5
64	1988	-3	-3	-10	-7	-3	-9	-11	-8	-16	-7	-13	-16	-9
65	1989	-3	-4	-7	-8	-6	-10	-12	15	-11	-9	-4	-10	-6
66	1990	-5	-7	-11	-3	9	-10	0	8	23	26	7	-10	2
67	1991	-6	-1	-10	11	3	-6	-7	14	11	12	9	-9	2
68	1992	-6	-5	-9	-7	-8	-8	-12	12	-10	-9	-7	-8	-6
69	1993	-5	-8	-10	-10	-7	-9	-11	-9	-11	-13	-8	-14	-10
70	1994	-6	-5	-7	-8	-6	-9	-11	-13	-16	-15	-4	-16	-10
71	1995	-3	-6	-8	-9	-4	-6	-12	-17	18	-15	-6	-17	-7
72	1996	-6	6	36	-28	9	-65	12	10	14	13	17	-17	0
73	1997	-4	-3	-3	3	17	9	14	11	23	12	12	-17	6
74	1998	18	-8	-9	-8	11	-7	-9	12	15	3	28	-12	3
75	1999	-7	-4	-4	4	14	3	-9	14	17	22	13	-16	4
76	2000	-6	8	-10	-13	-7	-7	9	10	-16	11	-11	-12	-4
77	2001	-5	-3	-12	-11	-6	-9	-14	-13	-15	-14	-10	-14	-11
78	2002	-7	-5	-8	-9	-4	-12	-13	15	32	17	-12	-8	-1
79	2003	-1	-8	-7	-10	-8	-6	-10	-13	14	-10	-9	-17	-7
80	2004	-2	-4	-3	-9	-7	-9	-10	-9	-9	-10	-4	-18	-8
81	2005	-4	-8	-9	-19	12	-7	-10	-12	4	-11	-5	-15	-7
82	2006	-3	-3	-6	12	8	-7	13	-3	-27	0	-5	-16	-3
83	2007	-6	-4	-9	-11	-5	-6	-9	14	14	14	-7	-16	-3
84	2008	-2	-4	-9	-9	-6	-10	-9	-18	-5	13	-13	-6	-7
85	80 WY Average	-4	-4	-7	-7	-4	-8	-6	3	4	4	-3	-14	-4
86	Hours	744	721	744	744	696	743	720	744	720	744	744	720	8784

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 8:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Light-Load-Hours for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	52	334	358	183	205	27	-17	-24	202	25	21	31	117
6	1930	53	268	313	88	111	5	-9	60	300	17	16	25	104
7	1931	53	276	299	98	195	49	-2	112	295	72	23	20	124
8	1932	53	329	363	195	-7	-10	229	-20	-12	522	40	14	144
9	1933	53	112	-78	145	106	152	141	-2	167	-82	-1	10	59
10	1934	106	-233	-405	-189	-102	-78	-10	-65	-43	18	20	32	-81
11	1935	53	87	265	-63	159	126	107	6	294	280	312	19	135
12	1936	53	306	348	31	132	30	64	-11	-11	213	16	15	100
13	1937	53	268	324	81	146	-23	-16	-24	225	17	19	23	91
14	1938	53	336	293	64	102	160	262	-17	261	247	21	19	149
15	1939	52	338	253	127	141	26	146	226	274	15	22	16	137
16	1940	53	267	14	70	206	96	80	159	262	17	20	35	106
17	1941	52	266	264	174	220	139	-5	149	297	17	22	25	135
18	1942	53	300	-20	47	92	23	-2	197	-21	119	76	10	75
19	1943	54	121	65	69	150	78	199	118	-13	-5	15	15	72
20	1944	53	341	163	138	187	-23	-16	-25	133	20	23	39	86
21	1945	52	307	327	73	22	-11	-15	241	-16	26	16	15	90
22	1946	52	328	296	106	143	-4	121	-36	-16	-13	449	24	122
23	1947	52	307	-203	-227	76	125	295	77	-19	91	16	25	49
24	1948	141	-33	-57	145	75	150	255	-9	78	130	-7	4	71
25	1949	52	324	263	76	151	159	229	197	159	24	20	16	139
26	1950	52	186	217	-295	74	143	251	-10	-19	-83	238	12	61
27	1951	73	-25	-367	-166	-42	-78	129	-11	-14	-10	181	23	-27
28	1952	358	201	-46	-184	75	134	291	-10	153	292	16	29	105
29	1953	52	313	349	98	-12	90	-10	-6	85	-10	75	22	89
30	1954	53	259	-21	-99	157	137	166	-27	-27	-82	-16	-26	37
31	1955	53	-13	-57	118	112	-24	-12	201	-12	-82	92	16	34
32	1956	61	-8	-356	-272	-163	230	165	-10	-19	-10	169	25	-18
33	1957	52	330	-18	69	193	35	227	-10	-17	79	16	16	80
34	1958	53	339	313	141	116	154	225	7	-11	51	18	19	119
35	1959	52	214	-137	-68	-7	147	277	-60	-14	-25	119	497	81
36	1960	-26	-234	-289	-31	74	166	8	142	-12	163	52	26	2
37	1961	53	262	105	-104	77	128	268	-64	-82	396	61	17	92
38	1962	50	341	167	71	67	35	238	-21	190	25	96	19	106
39	1963	51	24	-174	-255	105	110	-5	227	-13	450	15	15	45
40	1964	52	340	220	66	98	-5	34	-11	147	-84	190	2	88
41	1965	135	63	-312	-37	-22	161	280	-24	291	487	289	14	108
42	1966	53	291	2	72	85	127	223	220	5	271	25	30	118
43	1967	52	317	-11	-311	41	194	136	-9	-25	-9	203	10	47
44	1968	52	240	131	131	81	172	-16	249	-13	255	288	-8	134

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 8:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Light-Load-Hours for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	130	-23	-129	-230	-64	138	-15	-10	-38	112	16	31	-8
46	1970	53	273	287	35	77	86	-14	225	161	10	22	33	106
47	1971	52	244	257	-365	69	89	266	-10	64	-10	-1	15	53
48	1972	51	306	-21	-362	19	-15	-13	-12	158	-14	1	3	7
49	1973	51	314	238	50	85	157	-17	-8	282	17	23	17	100
50	1974	52	44	-26	-190	-100	-15	35	-56	86	-81	-2	13	-21
51	1975	47	346	312	62	78	148	54	-10	157	-15	208	3	116
52	1976	53	-138	-447	-18	-40	92	204	-12	-14	-70	-66	219	-22
53	1977	53	334	345	142	166	0	-18	184	204	12	20	12	123
54	1978	44	342	125	111	164	8	224	-10	235	473	53	-7	147
55	1979	97	275	348	83	224	178	52	117	268	24	15	28	141
56	1980	52	325	231	92	123	32	172	-9	-16	26	16	27	90
57	1981	53	268	-251	-266	43	125	-16	-13	-16	-14	-2	11	-8
58	1982	53	226	241	141	84	-26	253	-11	-16	-18	62	-15	82
59	1983	48	244	110	-186	167	188	195	238	282	-15	229	4	123
60	1984	52	-152	-16	66	73	159	183	222	94	-12	134	7	67
61	1985	53	290	239	90	133	61	60	247	251	23	12	34	125
62	1986	52	206	-10	64	130	219	224	192	30	17	16	30	97
63	1987	52	307	205	132	217	178	113	-5	178	17	13	19	118
64	1988	53	313	121	45	181	11	0	85	221	147	16	28	102
65	1989	53	327	247	193	-9	0	273	56	303	24	21	16	126
66	1990	52	310	-92	138	-16	161	199	3	-62	177	420	16	111
67	1991	52	-210	-209	-356	137	194	285	-10	-19	-39	148	5	-8
68	1992	52	317	67	135	198	150	-12	68	284	20	21	18	109
69	1993	59	278	319	202	-9	28	-2	135	270	14	21	27	114
70	1994	52	269	290	181	178	-4	50	212	212	15	20	28	127
71	1995	53	344	351	125	122	141	-2	185	26	11	22	15	118
72	1996	112	-234	-286	-144	-28	-55	-8	-18	88	-11	237	21	-30
73	1997	52	286	-19	-382	-22	-43	-13	-11	-21	-34	65	-16	-14
74	1998	122	-10	220	115	173	125	-2	131	-21	447	498	28	154
75	1999	53	120	-23	-288	147	198	275	30	27	-80	-10	12	34
76	2000	52	-234	-231	103	103	148	198	-11	193	292	17	15	50
77	2001	52	340	325	144	193	2	-16	80	90	15	21	17	107
78	2002	44	331	265	195	134	35	282	104	-13	-10	16	18	118
79	2003	53	277	345	198	172	173	19	178	-20	22	13	25	123
80	2004	53	222	-19	139	137	27	13	238	215	21	18	8	90
81	2005	71	253	-57	71	96	202	-15	240	174	17	21	15	91
82	2006	54	252	47	57	163	149	250	208	-17	375	15	29	132
83	2007	52	290	218	117	106	179	281	-19	-4	573	13	30	154
84	2008	53	263	326	133	174	27	0	184	-23	141	16	16	112
85	80 WY Average	62	207	93	12	95	86	111	68	96	81	71	26	84
86	Hours	312	337	328	344	288	311	304	344	304	328	328	320	3848

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 9:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Heavy-Load-Hours for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	-66	-312	-312	-169	-169	-42	-15	-7	-188	-37	-30	-34	-113
6	1930	-58	-225	-275	-96	-99	-25	-16	-84	-239	-30	-21	-33	-99
7	1931	-61	-252	-250	-106	-163	-61	-34	-122	-241	-71	-33	-26	-117
8	1932	-62	-306	-313	-182	-20	-21	-194	36	38	-402	-51	-21	-125
9	1933	-63	-121	-83	-100	-60	-137	-132	25	-129	-70	20	-16	-73
10	1934	-104	-375	-629	-649	-73	83	36	-73	-42	-34	-22	-33	-157
11	1935	-58	-103	-225	-105	-130	-113	-108	23	-236	-189	-252	-37	-128
12	1936	-63	-280	-296	-47	-109	-46	-65	33	38	-186	-27	-36	-90
13	1937	-61	-224	-270	-88	-120	-15	-19	-5	-196	-21	-24	-32	-89
14	1938	-62	-320	-250	-68	-91	-136	-218	32	-215	-155	-31	-28	-128
15	1939	-66	-318	-227	-130	-113	-45	-131	-209	-223	-36	-32	-32	-129
16	1940	-57	-242	-10	-77	-166	-87	-79	-124	-219	-33	-31	-32	-95
17	1941	-63	-255	-229	-177	-183	-121	-18	-161	-232	-29	-26	-31	-126
18	1942	-64	-280	17	-59	-78	-39	-16	-198	28	-65	-76	-18	-69
19	1943	-63	-130	-80	-47	-125	-77	-134	-68	37	33	-29	-38	-59
20	1944	-68	-320	-156	-135	-151	-15	-23	-6	-120	-32	-24	-38	-89
21	1945	-66	-283	-276	-84	-27	-16	-18	-231	34	-33	-28	-33	-87
22	1946	-64	-312	-250	-111	-113	-20	-73	-1	30	23	-350	-28	-105
23	1947	-72	-291	-307	-323	-71	-104	-237	-37	31	-43	-31	-32	-126
24	1948	-84	-18	-45	-105	-69	-127	-213	34	-37	-72	22	-10	-61
25	1949	-63	-307	-204	-68	-139	-132	-186	-186	-111	-38	-28	-39	-124
26	1950	-66	-188	-161	-439	-69	-121	-198	33	27	-84	-163	-23	-120
27	1951	-78	-6	-566	-600	63	78	-87	37	28	39	-156	-29	-107
28	1952	-274	-158	-24	-244	-75	-121	-233	33	-88	-196	-30	-38	-122
29	1953	-65	-289	-306	-102	10	-86	-15	31	-34	33	-76	-31	-77
30	1954	-65	-241	20	-89	-100	-116	-150	22	31	-71	34	-4	-60
31	1955	-62	24	-45	-114	-94	-5	-21	-195	40	-70	-29	-35	-50
32	1956	-63	24	-549	-405	159	-149	-103	37	38	39	-95	-28	-93
33	1957	-63	-310	21	-69	-156	-48	-182	32	38	-74	-34	-32	-71
34	1958	-66	-313	-272	-78	-96	-132	-194	23	38	-54	-31	-33	-100
35	1959	-64	-177	-180	-306	25	-130	-231	-56	35	23	-67	-412	-127
36	1960	27	-375	-444	-171	-69	-139	13	-92	37	-82	-58	-33	-114
37	1961	-62	-246	-73	-105	-78	-104	-216	-68	-71	-310	-66	-39	-119
38	1962	-61	-318	-121	-59	-64	-48	-189	36	-117	-35	-93	-35	-91
39	1963	-58	-5	-263	-366	-92	-99	-15	-221	33	-353	-31	-23	-124
40	1964	-63	-320	-158	-75	-84	-20	-50	30	-93	-78	-123	-21	-87
41	1965	-121	-38	-473	-525	41	-103	-227	22	-200	-369	-200	-39	-188
42	1966	-61	-266	5	-63	-77	-113	-188	-195	23	-168	-39	-32	-97
43	1967	-63	-307	24	-473	-12	-145	-123	32	36	39	-119	-17	-93
44	1968	-65	-227	-93	-105	-74	-104	-18	-223	31	-165	-200	-18	-104

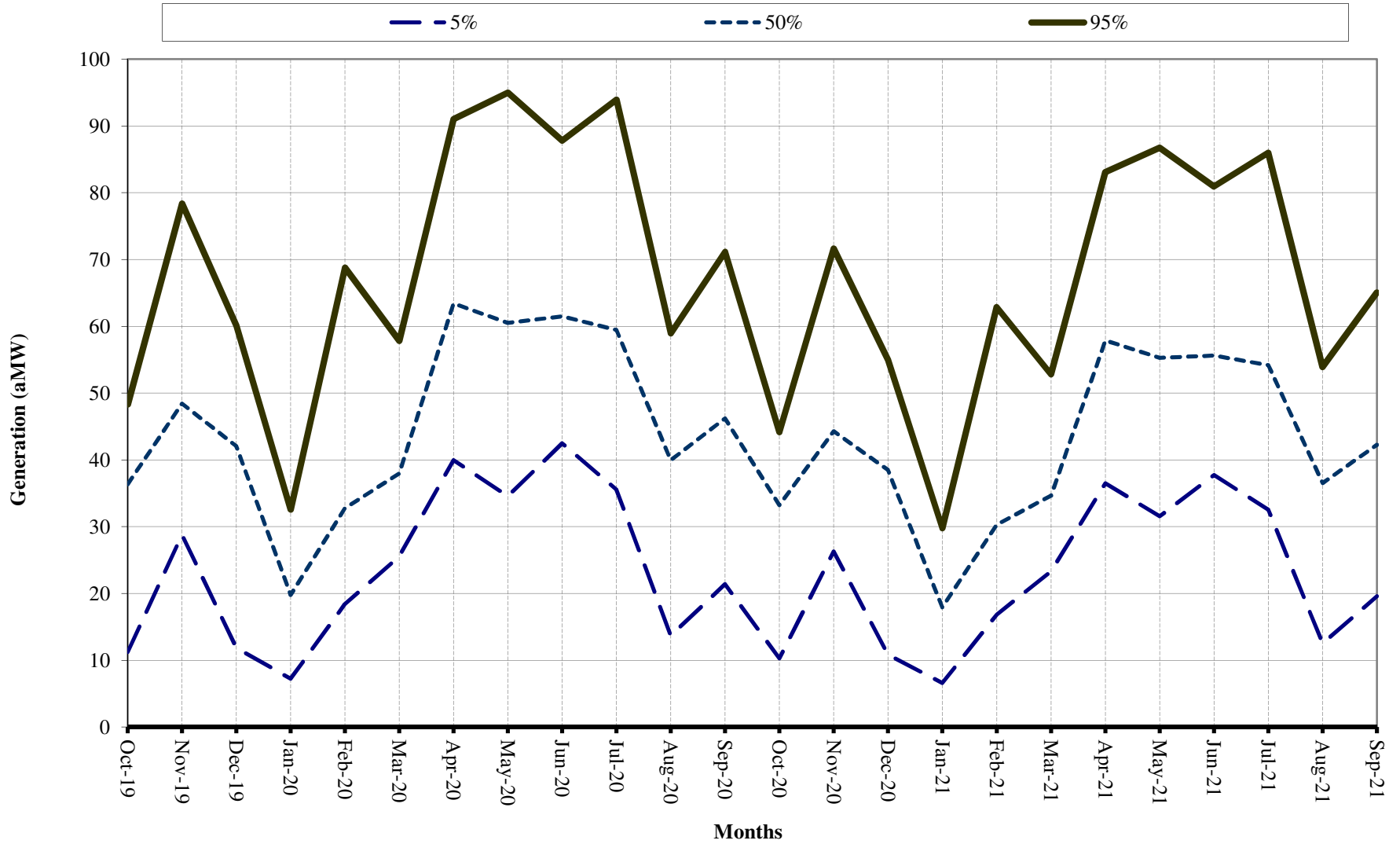
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 9:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Heavy-Load-Hours for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	-117	1	-178	-322	70	-118	29	37	3	-62	-21	-34	-61
46	1970	-60	-254	-244	-51	-70	-86	-20	-207	-116	-24	-25	-32	-98
47	1971	-67	-240	-225	-554	-15	-81	-209	37	-20	39	20	-25	-111
48	1972	-62	-284	16	-555	-26	28	33	31	-110	40	24	-10	-70
49	1973	-66	-299	-182	-60	-83	-138	-30	-17	-223	-18	-29	-37	-98
50	1974	-64	-73	20	-652	-74	28	-12	-41	-83	-71	27	-15	-82
51	1975	-64	-325	-265	-51	-62	-127	-61	33	-119	39	-176	-9	-99
52	1976	-57	-196	-675	-354	54	-87	-190	37	37	-36	-72	-198	-145
53	1977	-60	-312	-300	-132	-134	-29	-22	-187	-172	-36	-36	-28	-119
54	1978	-58	-322	-123	-116	-134	-30	-190	33	-194	-361	-55	-17	-130
55	1979	-94	-235	-296	-91	-186	-148	-60	-117	-213	-40	-25	-32	-128
56	1980	-62	-301	-210	-104	-105	-47	-169	39	37	-36	-36	-31	-84
57	1981	-64	-253	-384	-614	-22	-109	-12	26	39	39	20	-16	-111
58	1982	-65	-183	-192	-110	-43	45	-204	33	35	39	-30	-15	-57
59	1983	-56	-225	-75	-244	-116	-157	-161	-232	-224	39	-153	-10	-134
60	1984	-67	-234	20	-44	-71	-133	-163	-217	-97	39	-119	-19	-91
61	1985	-63	-277	-194	-100	-106	-67	-66	-227	-202	-28	-28	-20	-114
62	1986	-62	-167	12	-54	-108	-172	-184	-186	4	-30	-19	-40	-83
63	1987	-72	-287	-147	-134	-170	-149	-107	33	-129	-28	-30	-34	-103
64	1988	-65	-286	-120	-69	-143	-37	-23	-103	-198	-126	-20	-36	-101
65	1989	-65	-307	-194	-180	-8	-27	-218	-20	-242	-39	-29	-33	-113
66	1990	-63	-287	-117	-108	17	-141	-175	19	-26	-93	-329	-37	-112
67	1991	-70	-334	-315	-541	-113	-134	-224	37	30	5	-89	-26	-146
68	1992	-66	-304	-85	-127	-165	-125	-15	-30	-236	-32	-31	-34	-103
69	1993	-62	-258	-264	-193	-6	-43	-22	-132	-214	-16	-30	-39	-106
70	1994	-65	-241	-244	-175	-141	-22	-60	-212	-182	-38	-27	-34	-118
71	1995	-61	-325	-302	-121	-98	-125	-24	-193	5	-33	-32	-25	-110
72	1996	-107	-376	-555	-557	36	-182	25	34	-40	40	-160	-31	-156
73	1997	-64	-264	20	-588	43	56	32	32	29	14	-26	-18	-59
74	1998	-71	21	-168	-112	-134	-110	-13	-80	29	-343	-380	-33	-117
75	1999	-68	-128	24	-430	-102	-125	-216	1	6	-74	34	-22	-91
76	2000	-64	-374	-352	-74	-91	-127	-136	35	-164	-191	-30	-33	-133
77	2001	-64	-318	-284	-137	-158	-29	-18	-102	-93	-20	-22	-30	-104
78	2002	-66	-314	-217	-185	-116	-53	-227	-61	38	39	-20	-32	-99
79	2003	-60	-258	-293	-185	-143	-145	-33	-186	30	-44	-27	-43	-114
80	2004	-64	-177	23	-138	-112	-42	-30	-228	-178	-34	-30	-15	-84
81	2005	-79	-238	-45	-50	-53	-171	-11	-233	-120	-30	-32	-33	-91
82	2006	-64	-212	-24	-113	-138	-127	-193	-180	38	-298	-27	-27	-113
83	2007	-68	-277	-162	-94	-89	-145	-220	29	15	-423	-31	-27	-124
84	2008	-64	-249	-280	-132	-140	-46	-19	-186	42	-83	-31	-38	-100
85	80 WY Average	-69	-237	-199	-200	-80	-81	-99	-61	-69	-72	-60	-35	-104
86	Hours	432	384	416	400	384	432	416	400	416	416	416	400	4912



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 10:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Flat Energy for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
5	1929	-17	-10	-16	-7	-9	-13	-16	-15	-23	-10	-8	-5	-12
6	1930	-11	5	-16	-11	-9	-13	-13	-17	-11	-9	-4	-7	-10
7	1931	-13	-5	-8	-11	-10	-15	-20	-14	-15	-8	-9	-6	-11
8	1932	-14	-9	-15	-8	-15	-17	-15	10	16	5	-11	-5	-6
9	1933	-14	-12	-81	13	11	-16	-17	12	-4	-75	11	-5	-15
10	1934	-16	-309	-531	-436	-86	16	17	-69	-43	-11	-4	-4	-124
11	1935	-11	-14	-9	-85	-6	-13	-17	15	-12	18	-3	-12	-13
12	1936	-15	-6	-12	-11	-6	-14	-11	13	17	-10	-8	-13	-6
13	1937	-13	6	-8	-10	-6	-19	-18	-14	-19	-4	-5	-8	-10
14	1938	-14	-13	-10	-7	-8	-12	-15	9	-14	22	-8	-7	-6
15	1939	-16	-11	-15	-11	-4	-15	-14	-8	-13	-14	-8	-11	-12
16	1940	-11	-4	1	-9	-6	-10	-12	7	-16	-11	-8	-2	-7
17	1941	-15	-12	-11	-15	-10	-12	-12	-18	-9	-9	-5	-6	-11
18	1942	-15	-9	1	-10	-5	-13	-10	-15	7	16	-9	-5	-6
19	1943	-14	-12	-16	7	-7	-12	7	18	16	16	-10	-14	-2
20	1944	-17	-11	-15	-8	-6	-18	-20	-15	-13	-9	-3	-4	-12
21	1945	-16	-7	-10	-11	-6	-14	-17	-13	13	-7	-9	-12	-9
22	1946	-16	-13	-10	-11	-4	-13	9	-17	11	8	3	-5	-5
23	1947	-20	-11	-261	-279	-8	-8	-12	16	10	16	-11	-7	-49
24	1948	10	-25	-50	11	-7	-11	-15	14	12	17	9	-4	-3
25	1949	-15	-12	2	-1	-15	-10	-11	-9	3	-11	-7	-14	-8
26	1950	-17	-13	6	-372	-8	-11	-9	13	8	-83	14	-7	-41
27	1951	-15	-15	-478	-399	18	13	4	15	10	18	-7	-6	-72
28	1952	-9	10	-34	-217	-11	-15	-12	13	14	19	-10	-8	-22
29	1953	-16	-8	-17	-9	1	-12	-13	14	16	14	-9	-7	-4
30	1954	-16	-8	2	-94	10	-10	-17	-1	7	-75	12	-14	-17
31	1955	-13	7	-50	-6	-6	-13	-17	-12	18	-76	25	-12	-13
32	1956	-11	9	-464	-344	21	9	10	15	14	17	22	-4	-60
33	1957	-15	-11	4	-5	-7	-13	-9	13	15	-7	-12	-11	-5
34	1958	-16	-8	-14	24	-5	-12	-17	16	18	-7	-9	-10	-3
35	1959	-15	6	-161	-196	11	-14	-17	-58	14	2	15	-8	-36
36	1960	5	-309	-376	-107	-8	-11	11	17	16	26	-10	-7	-63
37	1961	-13	-8	6	-105	-12	-7	-11	-66	-76	1	-10	-14	-26
38	1962	-14	-10	6	1	-8	-14	-9	10	13	-8	-9	-11	-5
39	1963	-12	9	-224	-315	-8	-11	-11	-14	13	1	-11	-6	-50
40	1964	-15	-11	9	-10	-6	-14	-15	11	8	-81	15	-10	-10
41	1965	-14	9	-402	-300	14	8	-13	1	8	9	16	-15	-58
42	1966	-13	-6	4	-1	-8	-12	-15	-3	15	26	-11	-4	-2
43	1967	-15	-15	8	-398	11	-3	-13	13	10	18	23	-5	-31
44	1968	-16	-9	6	4	-8	12	-17	-5	12	20	15	-13	0

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 10:</b>													
2	<b>Federal Hydro Generation Adjustment for</b>													
3	<b>Stand Ready &amp; Deployment Losses, Flat Energy for FY 2021</b>													
4	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
45	1969	-14	-10	-157	-280	12	-11	11	15	-15	15	-5	-5	-38
46	1970	-12	-7	-10	-11	-7	-14	-17	-8	1	-9	-4	-3	-9
47	1971	-17	-14	-13	-467	21	-10	-8	15	16	18	11	-7	-39
48	1972	-14	-9	0	-466	-6	10	14	11	3	16	14	-4	-37
49	1973	-17	-13	3	-9	-11	-15	-25	-13	-10	-2	-6	-13	-11
50	1974	-15	-18	0	-439	-85	10	8	-48	-11	-75	14	-2	-56
51	1975	-17	-11	-11	1	-2	-12	-12	13	-3	15	-7	-4	-4
52	1976	-11	-169	-574	-199	13	-12	-23	14	16	-51	-70	-13	-91
53	1977	-13	-10	-16	-6	-5	-17	-20	-15	-13	-15	-12	-10	-13
54	1978	-15	-12	-14	-11	-6	-14	-15	13	-13	7	-7	-13	-8
55	1979	-14	3	-12	-11	-11	-12	-13	-9	-10	-12	-8	-5	-9
56	1980	-14	-8	-15	-14	-7	-14	-25	17	15	-9	-13	-5	-8
57	1981	-15	-10	-326	-453	6	-11	-14	8	16	16	10	-4	-66
58	1982	-16	8	-1	6	11	15	-11	12	13	14	10	-15	4
59	1983	-13	-6	6	-217	5	-13	-11	-14	-10	15	16	-4	-21
60	1984	-17	-196	4	7	-9	-11	-17	-14	-16	16	-7	-7	-22
61	1985	-14	-12	-3	-12	-4	-13	-12	-8	-11	-6	-10	4	-9
62	1986	-14	7	2	1	-6	-8	-12	-11	15	-9	-4	-9	-4
63	1987	-20	-10	8	-11	-4	-12	-14	15	1	-8	-11	-10	-6
64	1988	-15	-6	-14	-16	-4	-17	-13	-16	-21	-6	-4	-7	-12
65	1989	-16	-10	0	-8	-9	-16	-11	15	-12	-11	-7	-11	-8
66	1990	-15	-8	-106	6	3	-14	-17	12	-41	26	1	-14	-14
67	1991	-19	-276	-268	-455	-6	3	-9	15	9	-14	15	-12	-86
68	1992	-17	-14	-18	-6	-9	-10	-13	15	-16	-9	-8	-11	-10
69	1993	-11	-7	-7	-10	-7	-13	-13	-8	-10	-3	-7	-10	-9
70	1994	-16	-2	-9	-10	-5	-15	-13	-16	-15	-15	-6	-6	-11
71	1995	-13	-12	-14	-7	-4	-14	-14	-18	14	-14	-8	-7	-9
72	1996	-15	-310	-436	-366	8	-129	11	10	14	17	15	-8	-100
73	1997	-16	-7	3	-492	15	14	13	12	8	-7	14	-17	-39
74	1998	10	6	3	-7	-2	-12	-9	17	8	5	7	-6	2
75	1999	-17	-12	3	-364	5	10	-9	15	15	-77	14	-7	-36
76	2000	-15	-308	-298	8	-8	-12	5	14	-13	22	-9	-12	-52
77	2001	-15	-10	-16	-7	-8	-16	-17	-18	-16	-4	-3	-9	-12
78	2002	-20	-12	-4	-9	-9	-16	-12	15	16	18	-4	-10	-4
79	2003	-12	-8	-12	-8	-8	-12	-11	-18	9	-15	-9	-13	-10
80	2004	-15	9	4	-10	-5	-13	-11	-13	-12	-10	-9	-5	-7
81	2005	-16	-8	-51	6	11	-15	-13	-15	4	-9	-9	-12	-11
82	2006	-15	5	8	-34	-9	-12	-6	-1	15	-1	-8	-2	-5
83	2007	-18	-12	5	4	-6	-9	-9	6	7	16	-12	-2	-2
84	2008	-15	-9	-13	-9	-6	-15	-11	-15	15	16	-10	-14	-7
85	80 WY Average	-14	-30	-70	-102	-5	-11	-10	-1	0	-5	-2	-8	-22
86	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8760

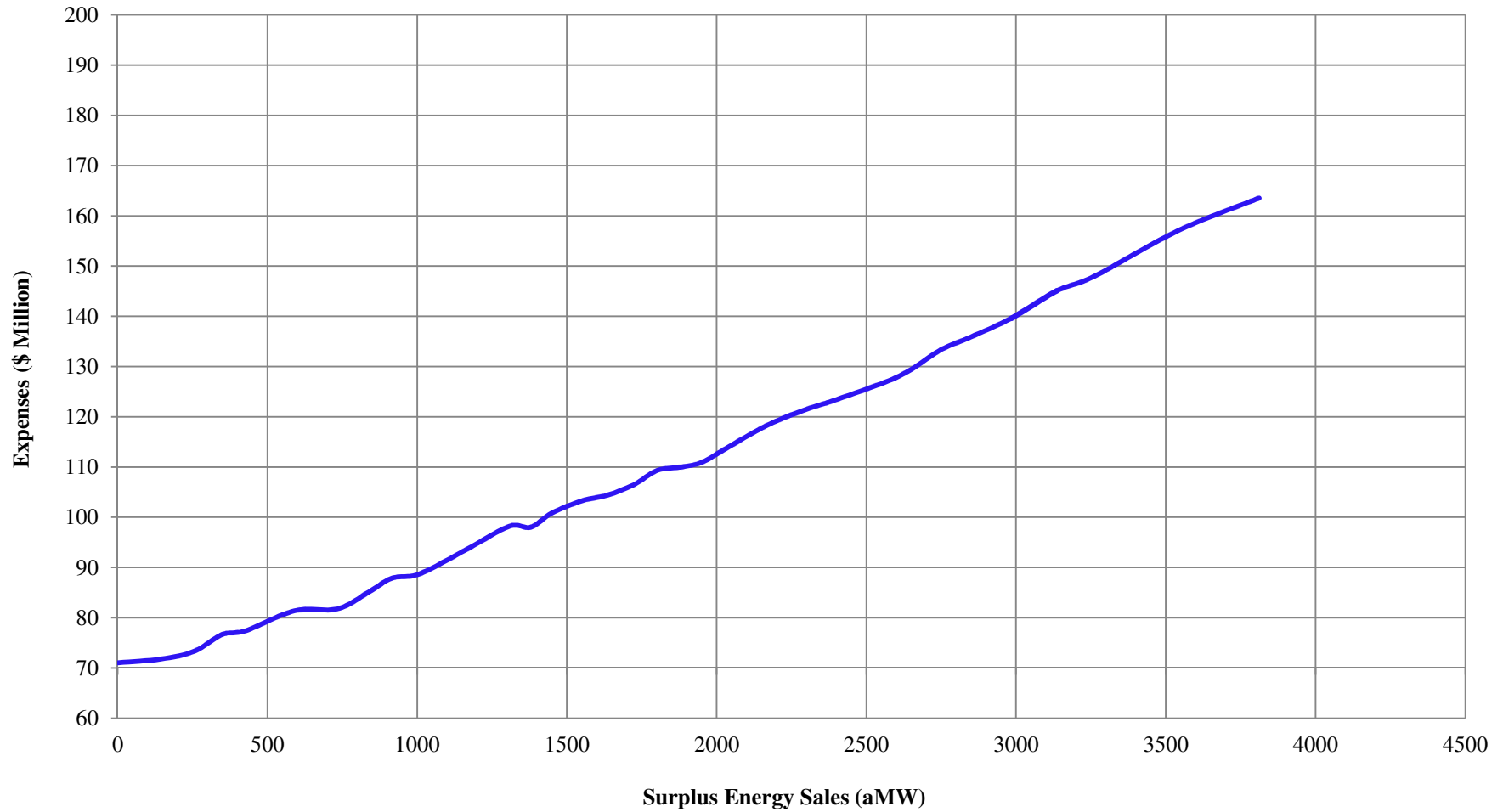
**Figure 1: Simulated Total PS Wind Generation for FY 2020-2021**



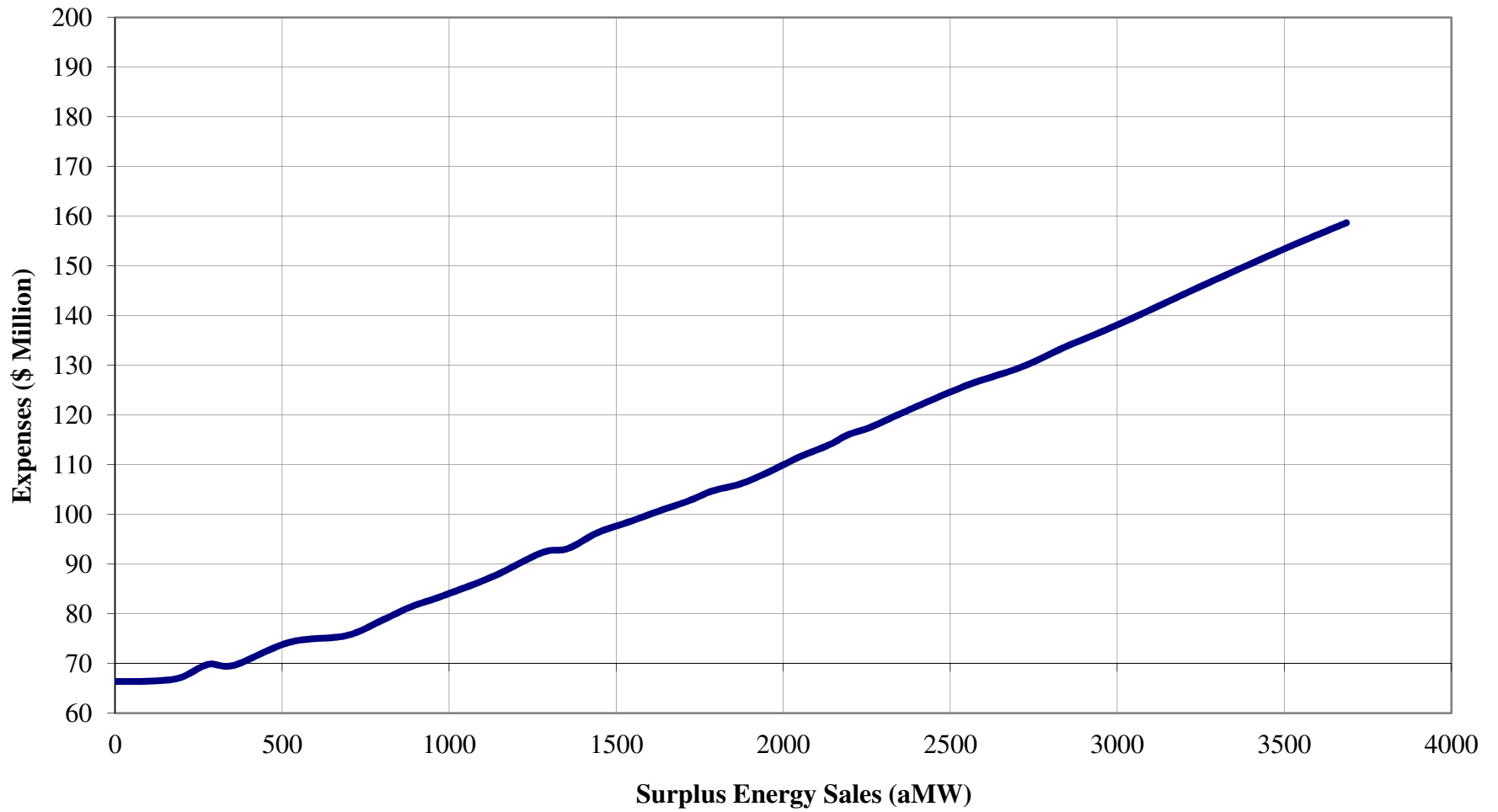
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 11:</b>													
2	<b>Value of PS Wind Generation at Expected Wind Generation for FY 2020</b>													
3														
4														
5		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
6	Expected Generation (aMW)	35	51	39	21	34	39	65	63	63	61	40	44	46
7	Contract Prices (\$/MWh)	\$ 73.69	\$ 68.68	\$ 72.18	\$ 87.11	\$ 74.31	\$ 72.59	\$ 66.56	\$ 66.46	\$ 66.91	\$ 66.80	\$ 72.39	\$ 71.32	\$ 71.60
8														
9	<b>Power Purchase Costs for Expected Wind Generation (\$1,000)</b>													
10														
11		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
12	Expected Wind Generation Cost (\$000)	\$ 1,937	\$ 2,508	\$ 2,073	\$ 1,338	\$ 1,766	\$ 2,118	\$ 3,099	\$ 3,126	\$ 3,011	\$ 3,037	\$ 2,138	\$ 2,258	\$ 24,610
13														
14														
15	<b>Average, Median, 5th Percentile, and 95th Percentile Spot Market Electricity Prices Estimated by AURORA (\$/MWh)</b>													
16														
17		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
18	5%	\$ 14.61	\$ 14.99	\$ 15.66	\$ 12.42	\$ 11.80	\$ 9.41	\$ 7.25	\$ (3.33)	\$ (8.67)	\$ 6.18	\$ 14.81	\$ 15.20	\$ 12.89
19	50%	\$ 21.63	\$ 22.73	\$ 24.36	\$ 21.74	\$ 21.21	\$ 18.70	\$ 17.30	\$ 11.29	\$ 9.37	\$ 18.80	\$ 22.83	\$ 22.58	\$ 19.18
20	Average	\$ 21.54	\$ 22.69	\$ 24.11	\$ 22.00	\$ 21.78	\$ 18.91	\$ 17.98	\$ 10.64	\$ 8.09	\$ 18.31	\$ 22.68	\$ 22.51	\$ 19.27
21	95%	\$ 28.20	\$ 30.49	\$ 32.34	\$ 32.27	\$ 32.76	\$ 29.12	\$ 30.04	\$ 22.17	\$ 21.24	\$ 28.73	\$ 30.28	\$ 29.62	\$ 25.90
22														
23	<b>Revenues from Expected Wind Generation at Various AURORA Price Percentiles (\$1,000)</b>													
24														
25		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
26	5%	\$ 384	\$ 547	\$ 450	\$ 191	\$ 281	\$ 275	\$ 337	\$ (157)	\$ (390)	\$ 281	\$ 437	\$ 481	\$ 5,221
27	50%	\$ 569	\$ 830	\$ 700	\$ 334	\$ 504	\$ 546	\$ 805	\$ 531	\$ 422	\$ 855	\$ 674	\$ 715	\$ 7,771
28	Average	\$ 566	\$ 829	\$ 693	\$ 338	\$ 518	\$ 552	\$ 837	\$ 500	\$ 364	\$ 832	\$ 670	\$ 713	\$ 7,806
29	95%	\$ 742	\$ 1,113	\$ 929	\$ 496	\$ 779	\$ 850	\$ 1,399	\$ 1,043	\$ 956	\$ 1,306	\$ 894	\$ 938	\$ 10,492

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 12:</b>													
2	<b>Value of PS Wind Generation at Expected Wind Generation for FY 2021</b>													
3														
4														
5		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
6	Expected Generation (aMW)	32	46	35	19	31	36	59	58	57	56	36	40	42
7	Contract Prices (\$/MWh)	\$ 61.38	\$ 59.80	\$ 60.91	\$ 66.10	\$ 62.90	\$ 61.52	\$ 59.63	\$ 59.60	\$ 59.74	\$ 59.70	\$ 61.46	\$ 61.13	\$ 61.15
8														
9	<b>Power Purchase Costs for Expected Wind Generation (\$1,000)</b>													
10														
11		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
12	Expected Wind Generation Cost (\$000)	\$ 1,475	\$ 1,996	\$ 1,599	\$ 928	\$ 1,320	\$ 1,641	\$ 2,538	\$ 2,563	\$ 2,458	\$ 2,481	\$ 1,659	\$ 1,770	\$ 24,977
13														
14														
15	<b>Average, Median, 5th Percentile, and 95th Percentile Spot Market Electricity Prices Estimated by AURORA (\$/MWh)</b>													
16														
17		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
18	5%	\$ 14.67	\$ 15.57	\$ 16.05	\$ 12.93	\$ 13.06	\$ 9.91	\$ 7.14	\$ (2.03)	\$ (8.40)	\$ 6.60	\$ 14.91	\$ 15.85	\$ 13.36
19	50%	\$ 22.15	\$ 23.83	\$ 25.21	\$ 22.75	\$ 23.08	\$ 19.43	\$ 17.90	\$ 12.34	\$ 10.31	\$ 19.19	\$ 23.18	\$ 23.23	\$ 20.12
20	Average	\$ 22.11	\$ 23.78	\$ 25.15	\$ 23.16	\$ 23.84	\$ 19.84	\$ 18.59	\$ 12.00	\$ 9.02	\$ 18.95	\$ 23.26	\$ 23.49	\$ 20.25
21	95%	\$ 29.61	\$ 31.78	\$ 34.23	\$ 34.83	\$ 37.10	\$ 30.35	\$ 31.32	\$ 24.12	\$ 22.48	\$ 30.31	\$ 32.19	\$ 31.83	\$ 27.53
22														
23	<b>Revenues from Expected Wind Generation at Various AURORA Price Percentiles (\$1,000)</b>													
24														
25		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
26	5%	\$ 353	\$ 520	\$ 421	\$ 182	\$ 274	\$ 264	\$ 304	\$ (87)	\$ (346)	\$ 274	\$ 403	\$ 459	\$ 4,938
27	50%	\$ 533	\$ 796	\$ 662	\$ 320	\$ 484	\$ 518	\$ 762	\$ 531	\$ 424	\$ 798	\$ 626	\$ 672	\$ 7,438
28	Average	\$ 532	\$ 794	\$ 660	\$ 325	\$ 500	\$ 529	\$ 791	\$ 516	\$ 371	\$ 787	\$ 628	\$ 680	\$ 7,486
29	95%	\$ 712	\$ 1,061	\$ 899	\$ 489	\$ 779	\$ 810	\$ 1,333	\$ 1,037	\$ 925	\$ 1,260	\$ 869	\$ 922	\$ 10,175

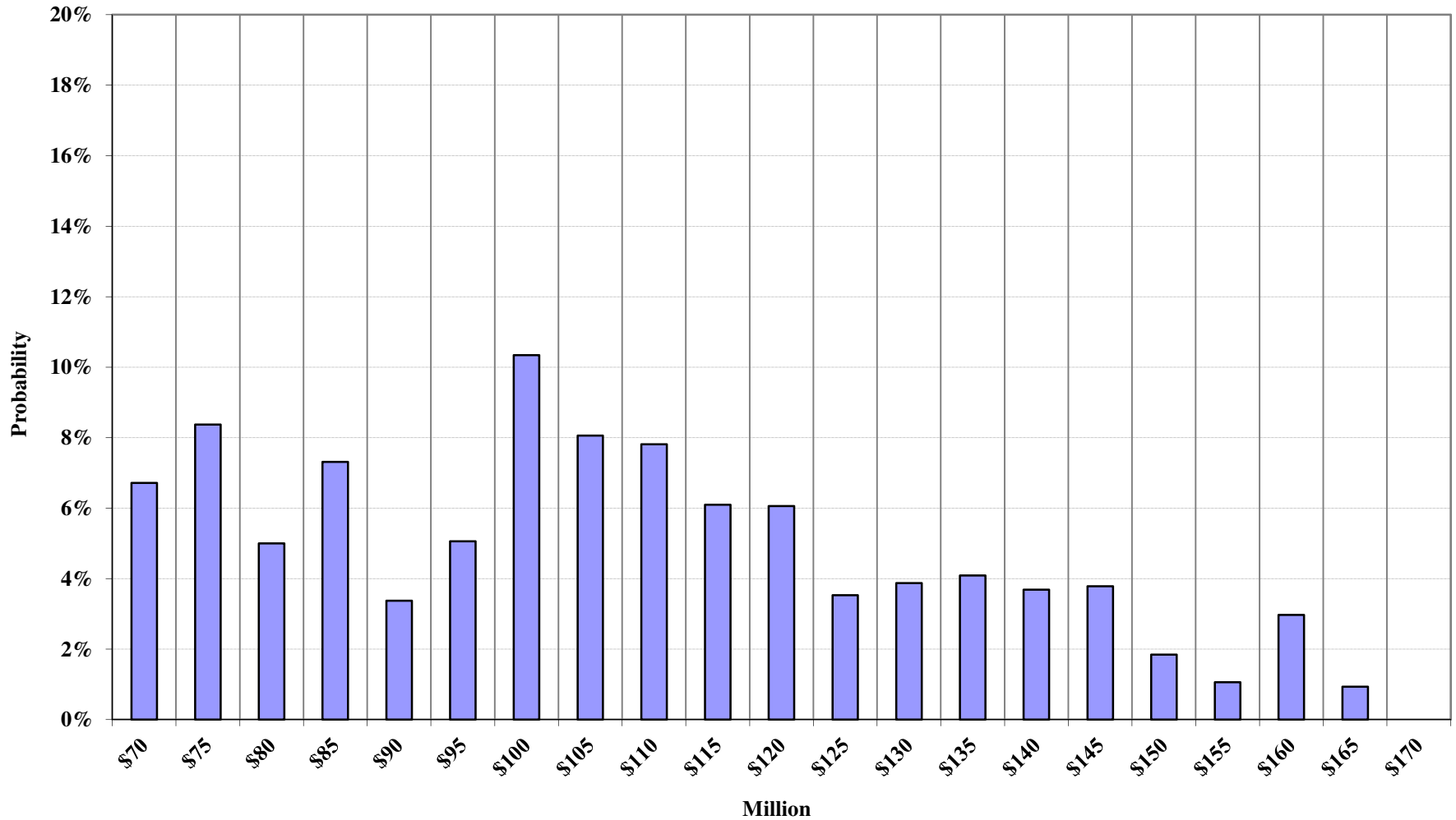
**Figure 2: PS Transmission & Ancillary Services Expenses by Amount of Surplus Energy Sales for FY 2020**



**Figure 3: PS Transmission & Ancillary Services Expenses by Amount of Surplus Energy Sales for FY 2021**

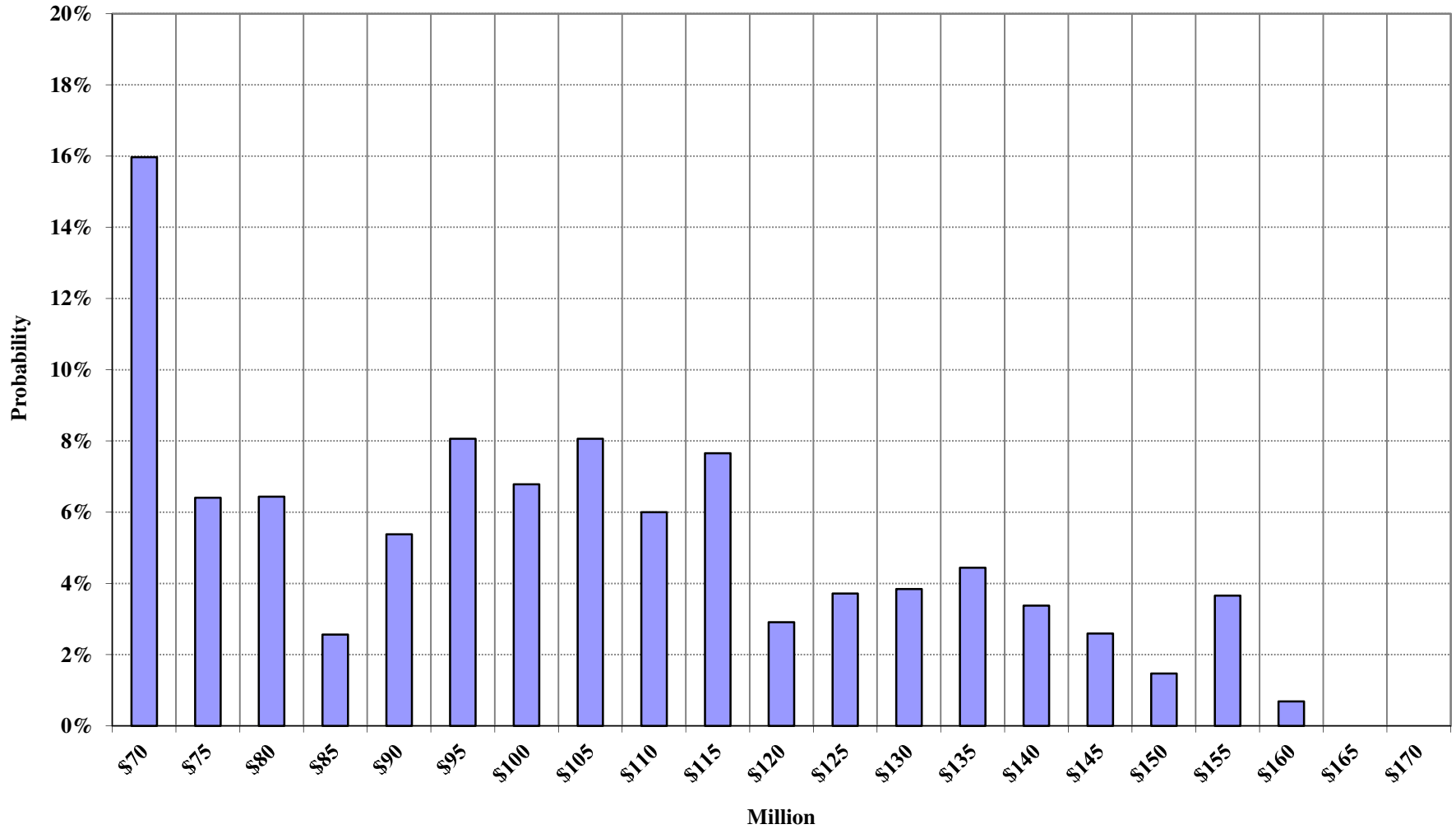


**Figure 4: PS Transmission and Ancillary Service Expense Distribution for FY 2020**



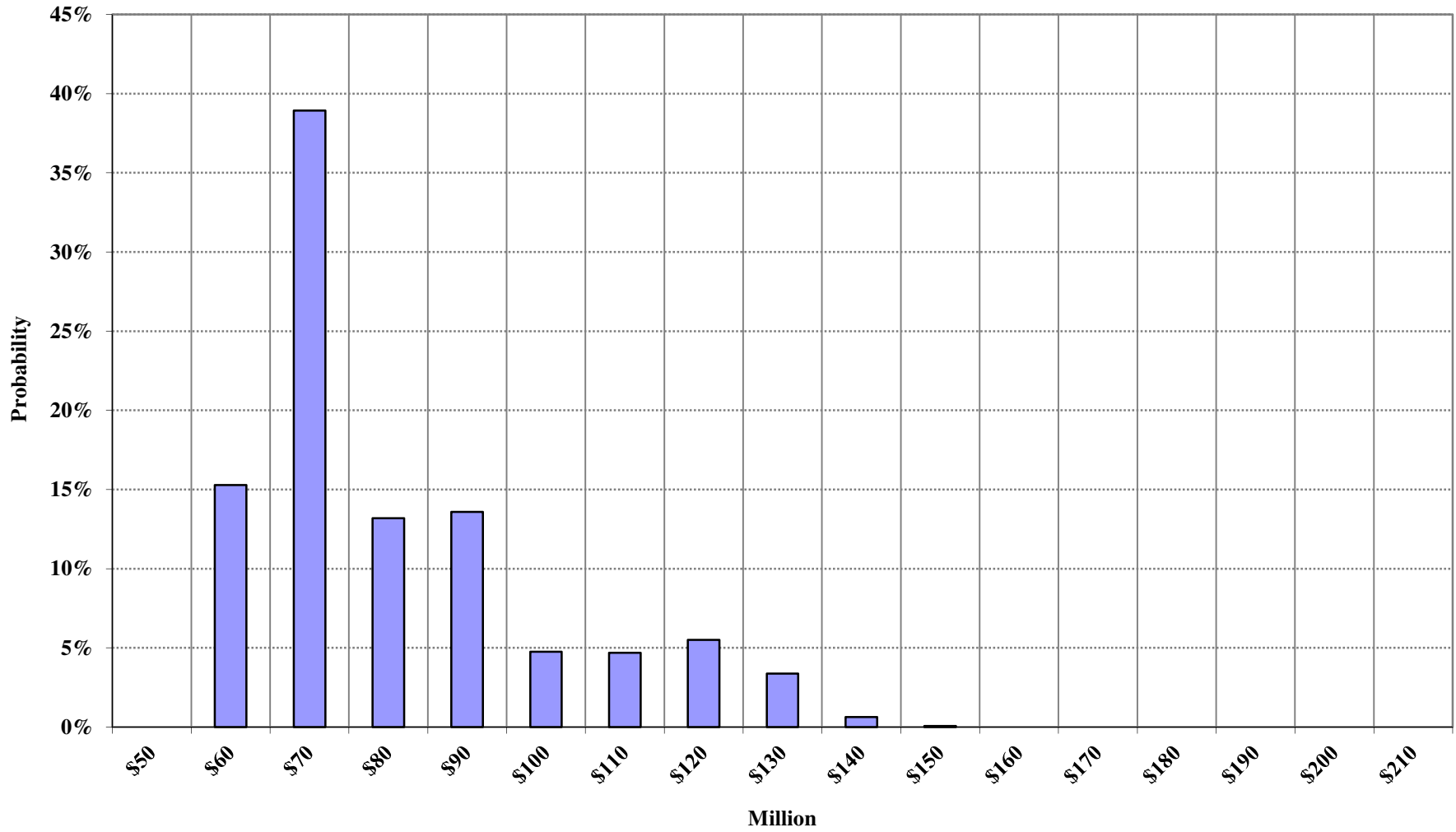


**Figure 5: PS Transmission and Ancillary Service Expense Distribution for FY 2021**

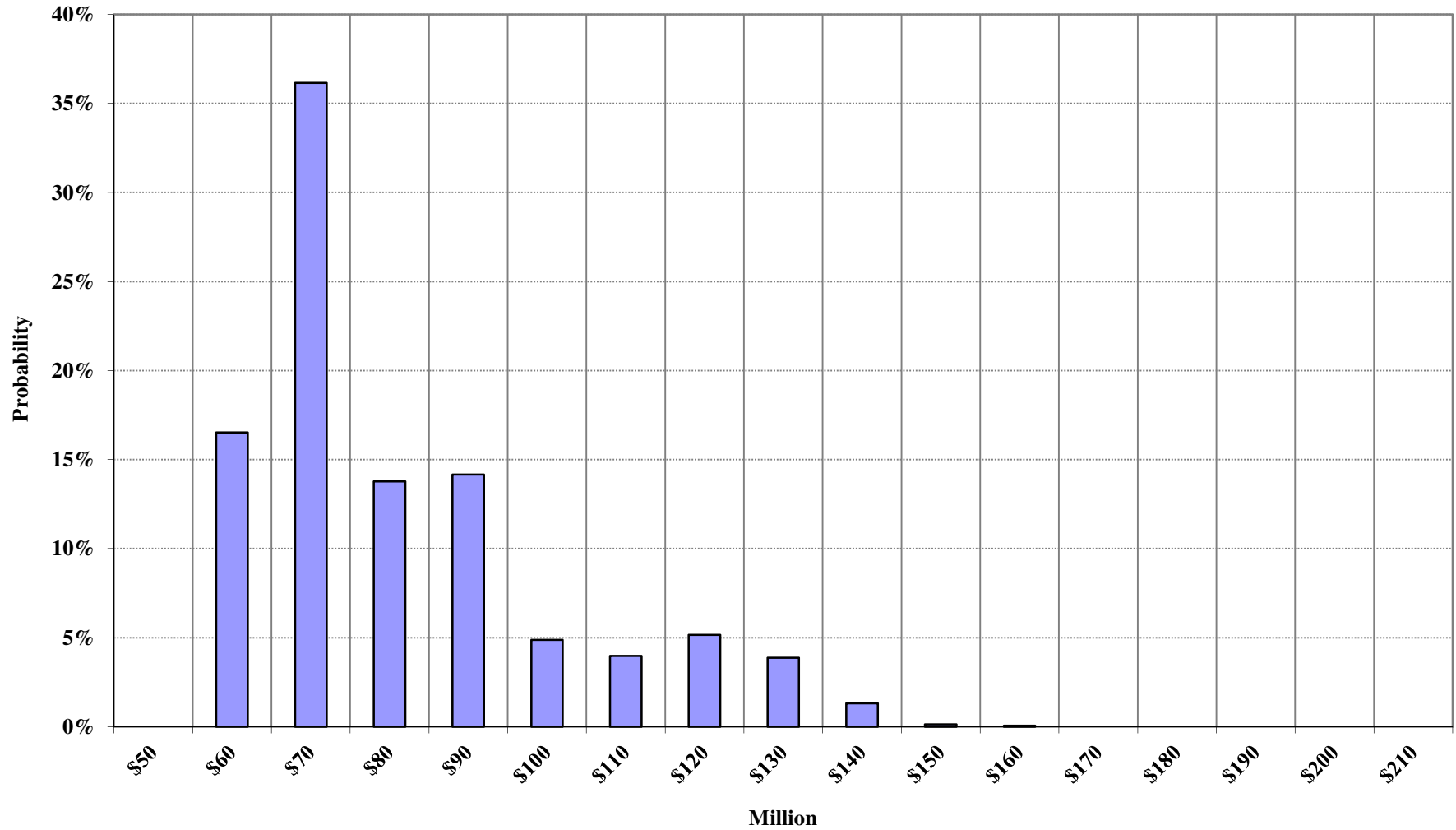


	A	B	C	D	E	F	G
1	<b>Table 13:</b>						
2	<b>4(h)(10)(C) Credits (\$ Million) for FY 2020 and FY 2021</b>						
3	<b>Fiscal Year</b>	<b>Purchase Expense</b>	<b>Direct Expense</b>	<b>Pisces</b>	<b>Capital</b>	<b>%</b>	<b>Credit</b>
4	<b>2020</b>	\$ <b>90</b>	\$ 250	\$ -	47.3	22.3%	\$ <b>86.2</b>
5	<b>2021</b>	\$ <b>92</b>	\$ 250	\$ -	47.3	22.3%	\$ <b>86.9</b>

**Figure 6: 4(h)(10)(C) Credits Distribution for FY 2020**



**Figure 7: 4(h)(10)(C) Credits Distribution for FY 2021**



	A	B	C	D	E
1	<b>Table 14:</b>				
2	<b>Augmentation Power Purchases for FY 2020 and FY 2021</b>				
3	<b>Average Annual Price for WY 1937 from Risk Analysis</b>				
4	<b>Used for Rate Calculations</b>				
5					
6	<b>FY</b>	<b>MW</b>	<b>Hours</b>	<b>\$/MWh</b>	<b>Exp. (\$ 000)</b>
7	<b>2020</b>	0	8,784	0.00	\$ -
8	<b>2021</b>	0	8,760	0.00	\$ -

	A	B	C	D	E
1	<b>Table 15:</b>				
2	<b>Firm Surplus Power Sale</b>				
3	<b>Tier 2 Remarketing Value</b>				
4	<b>Used for Rate Calculations</b>				
5					
6	<b>FY</b>	<b>MW</b>	<b>Hours</b>	<b>\$/MWh</b>	<b>Exp. (\$ 000)</b>
7	<b>2020</b>	212	8,784	28.27	\$ 52,743
8	<b>2021</b>	154	8,760	30.84	\$ 41,686

**Table 16 Is Not Being Used**

**Table 17 Is Not Being Used**



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	<b>Table 18: Monthly Secondary Energy Sales and Revenues for FY 2020 and FY2021</b>													
1														
2														
3														
4	<b>Secondary Energy Sales and Revenues for FY 2020</b>													
5		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual Stats
6	Hours	744	721	744	744	696	743	720	744	720	744	744	720	8,784
7	Surplus Energy Sales (aMW)	294	753	873	1,892	2,261	1,886	1,833	3,987	4,248	2,527	1,138	527	1,849
8	<b>Secondary Energy Sales Revenues</b>	<b>\$ 4,262</b>	<b>\$ 12,387</b>	<b>\$ 15,371</b>	<b>\$ 29,035</b>	<b>\$ 29,743</b>	<b>\$ 19,816</b>	<b>\$ 13,987</b>	<b>\$ 24,597</b>	<b>\$ 21,197</b>	<b>\$ 31,869</b>	<b>\$ 18,565</b>	<b>\$ 8,170</b>	<b>\$ 228,998</b>
9														
10	Forward Sales (aMW)	245	244	243	141	136	136	111	112	111	136	136	136	157
11	Forward Sales Revenue (\$000)	\$5,436	\$5,251	\$5,407	\$3,224	\$2,885	\$3,084	\$2,327	\$2,422	\$2,327	\$3,338	\$3,338	\$3,226	\$42,265
12														
13	DSI TF Sales Revenue (\$000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14														
15	Extra Regional Sales Revenue Delta (\$000)	\$447	\$1,017	\$1,031	\$1,850	\$1,873	\$1,913	\$1,837	\$3,156	\$3,596	\$3,071	\$1,916	\$1,149	\$22,856
16														
17	<b>Total Net Secondary Sales</b>	<b>\$ 10,145</b>	<b>\$ 18,655</b>	<b>\$ 21,808</b>	<b>\$ 34,108</b>	<b>\$ 34,501</b>	<b>\$ 24,814</b>	<b>\$ 18,151</b>	<b>\$ 30,175</b>	<b>\$ 27,120</b>	<b>\$ 38,278</b>	<b>\$ 23,819</b>	<b>\$ 12,545</b>	<b>\$ 294,119</b>
18														
19	<b>Secondary Energy Sales and Revenues for FY 2021</b>													
20														
21		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual Stats
22	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8760
23	Surplus Energy Sales (aMW)	384	815	785	1,852	2,245	1,955	1,988	3,481	3,922	2,545	1,168	542	1,803
24	<b>Secondary Energy Sales Revenues</b>	<b>\$ 5,135</b>	<b>\$ 12,164</b>	<b>\$ 12,810</b>	<b>\$ 26,811</b>	<b>\$ 28,718</b>	<b>\$ 21,762</b>	<b>\$ 16,754</b>	<b>\$ 21,690</b>	<b>\$ 18,312</b>	<b>\$ 29,546</b>	<b>\$ 18,954</b>	<b>\$ 8,613</b>	<b>\$ 221,267</b>
25														
26	Forward Sales (aMW)	135	137	136	0	0	0	0	0	0	0	0	0	34
27	Forward Sales Revenue (\$000)	\$2,955	\$2,882	\$2,963	\$780	\$780	\$780	\$780	\$780	\$780	\$780	\$780	\$780	\$15,817
28														
29	DSI TF Sales Revenue (\$000)													
30														
31	Extra Regional Sales Revenue Delta (\$000)	\$636	\$1,226	\$1,339	\$2,098	\$1,886	\$2,417	\$2,278	\$3,593	\$4,059	\$3,717	\$2,101	\$1,113	\$26,464
32														
33	<b>Total Net Secondary Sales</b>	<b>\$ 8,727</b>	<b>\$ 16,271</b>	<b>\$ 17,113</b>	<b>\$ 29,689</b>	<b>\$ 31,384</b>	<b>\$ 24,959</b>	<b>\$ 19,811</b>	<b>\$ 26,062</b>	<b>\$ 23,151</b>	<b>\$ 34,043</b>	<b>\$ 21,834</b>	<b>\$ 10,505</b>	<b>\$ 263,548</b>

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 19:</b>													
2	<b>Monthly Power Purchases and Expenses for FY 2020 and FY 2021</b>													
3	<b>Power Purchases and Expenses for FY 2020</b>													
4														
5		<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Annual Stats</b>
6	Monthly Hours	744	721	744	744	696	743	720	744	720	744	744	720	8,784
7	Balancing Power Purchases (aMW)	137	70	285	252	123	87	248	6	8	121	249	173	147
8	<b>Balancing Power Purchases Expenses (\$000)</b>	<b>\$ 2,302</b>	<b>\$ 1,265</b>	<b>\$ 5,960</b>	<b>\$ 5,076</b>	<b>\$ 2,335</b>	<b>\$ 1,317</b>	<b>\$ 4,213</b>	<b>\$ 80</b>	<b>\$ 93</b>	<b>\$ 1,954</b>	<b>\$ 3,986</b>	<b>\$ 2,555</b>	<b>\$ 31,137</b>
9														
10														
11	Transmission re-dispatch for Gen Inputs adjustment	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 250
12														
13		111	110	110	111	111	111	91	88	91	89	89	89	100
14	<b>SILS Forward Power Purchases Expenses (\$000)</b>	<b>\$ 3,485</b>	<b>\$ 3,358</b>	<b>\$ 3,452</b>	<b>\$ 3,468</b>	<b>\$ 3,256</b>	<b>\$ 3,464</b>	<b>\$ 3,007</b>	<b>\$ 2,997</b>	<b>\$ 3,007</b>	<b>\$ 3,056</b>	<b>\$ 3,056</b>	<b>\$ 2,948</b>	<b>\$ 38,555</b>
15														
16	Total Power Purchases (aMW)	248	180	396	362	234	197	339	94	99	210	338	262	247
17	<b>Total Power Purchases Expenses (\$000)</b>	<b>\$ 5,807</b>	<b>\$ 4,643</b>	<b>\$ 9,433</b>	<b>\$ 8,565</b>	<b>\$ 5,612</b>	<b>\$ 4,802</b>	<b>\$ 7,241</b>	<b>\$ 3,098</b>	<b>\$ 3,122</b>	<b>\$ 5,031</b>	<b>\$ 7,063</b>	<b>\$ 5,524</b>	<b>\$ 69,942</b>
18														
19														
20	<b>Power Purchases and Expenses for FY 2021</b>													
21														
22														
23		<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Annual Stats</b>
24	Monthly Hours	744	721	744	744	672	743	720	744	720	744	744	720	8,760
25	Balancing Power Purchases (aMW)	129	49	178	215	113	45	183	47	13	64	200	119	113
26	<b>Balancing Power Purchases Expenses (\$000)</b>	<b>\$ 1,862</b>	<b>\$ 864</b>	<b>\$ 3,950</b>	<b>\$ 4,301</b>	<b>\$ 2,283</b>	<b>\$ 777</b>	<b>\$ 3,497</b>	<b>\$ 649</b>	<b>\$ 164</b>	<b>\$ 995</b>	<b>\$ 3,215</b>	<b>\$ 1,833</b>	<b>\$ 24,393</b>
27														
28														
29	Transmission re-dispatch for Gen Inputs adjustment	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 21	\$ 250
30														
31	SILS Forward Power Purchases (aMW)	111	110	111	110	111	111	91	88	91	-	-	-	77
32	<b>SILS Forward Power Purchases Expenses (\$000)</b>	<b>\$ 3,485</b>	<b>\$ 3,342</b>	<b>\$ 3,468</b>	<b>\$ 3,452</b>	<b>\$ 3,141</b>	<b>\$ 3,481</b>	<b>\$ 3,007</b>	<b>\$ 2,997</b>	<b>\$ 3,007</b>	<b>\$ (0)</b>	<b>\$ (0)</b>	<b>\$ (0)</b>	<b>\$ 29,380</b>
33														
34	Total Power Purchases (aMW)	240	159	289	325	223	156	274	135	104	64	200	119	191
35	<b>Total Power Purchases Expenses (\$000)</b>	<b>\$ 5,368</b>	<b>\$ 4,227</b>	<b>\$ 7,439</b>	<b>\$ 7,774</b>	<b>\$ 5,445</b>	<b>\$ 4,279</b>	<b>\$ 6,525</b>	<b>\$ 3,667</b>	<b>\$ 3,192</b>	<b>\$ 1,016</b>	<b>\$ 3,236</b>	<b>\$ 1,854</b>	<b>\$ 54,023</b>

	A	B	C
1	<b>Table 20:</b>		
	<b>Annual Secondary Energy Sales/Revenues and Power Purchases/Expenses for FY 2018 and FY 2019</b>		
2		<b>FY 2018</b>	<b>FY 2019</b>
3	<b>Annual Hours</b>	8,784	8,760
4	<b>Secondary Energy Sales (aMW)</b>	1,849	1,803
5	<b>Secondary Energy Revenues (\$000)</b>	\$ 228,998	\$ 221,267
6	<b>Forward Power Sales (aMW)</b>	157	34
7	<b>Forward Sales Revenue (\$000)</b>	\$ 42,265	\$ 15,817
8			
9	<b>DSI TF Sales Revenue (\$000)</b>	\$ -	
10			
11	<b>Extra Regional Sales Revenue Delta (\$000)</b>	\$ 22,856	\$ 26,464
12			
13	<b>Total Power Sales (aMW)</b>	1,849	1,803
14	<b>Total Power Sales Revenue (\$000)</b>	\$ 294,119	\$ 263,548
15			
16	Balancing Power Purchases (aMW)	147	113
17	<b>Balancing Power Purchases Expenses (\$000)</b>	\$ 31,137	\$ 24,393
18	<b>Transmission Re-dispatch for Gen Inputs Adjustment (\$000)</b>	\$ 250	\$ 250
19	<b>SILS Power Purchases (aMW)</b>	100	77
20	<b>SILS Power Purchases Expenses (\$000)</b>	\$ 38,555	\$ 29,380
21			
22	Total Power Purchases (aMW)	247	191
23	<b>Total Power Purchases Expenses (\$000)</b>	\$ 69,942	\$ 54,023

	A	B	C	D	E	F
1	<b>Table 21: Planned Borrowings and Variable Rate Debt for Power (\$000)</b>					
2	<b>Project</b>	<b>In Service Date</b>	<b>Due Date</b>	<b>Rate</b>	<b>Variable</b>	<b>Principal</b>
3	Bureau Direct	08/2018	08/2048	0.920%	Yes	60,000
4	Bureau Direct	09/2018	09/2048	0.920%	Yes	27,000
5	Bureau Direct	07/2019	07/2035	1.380%	Yes	12,000
6	Bureau Direct	08/2019	08/2036	1.380%	Yes	11,000
7	Bureau Direct	09/2019	09/2037	1.380%	Yes	11,000
8	Bureau Direct	07/2020	07/2038	1.600%	Yes	40,000
9	Bureau Direct	08/2020	08/2039	1.600%	Yes	16,000
10	Bureau Direct	08/2020	08/2039	4.610%	No	24,000
11	Bureau Direct	09/2020	09/2040	4.650%	No	41,000
12	Bureau Direct	07/2021	07/2041	4.710%	No	37,000
13	Bureau Direct	08/2021	08/2042	4.750%	No	37,000
14	Bureau Direct	09/2021	09/2043	4.790%	No	75,000
15	Columbia River Fish Mitigation	09/2018	09/2068	2.750%	No	63,551
16	Columbia River Fish Mitigation	09/2019	09/2069	3.890%	No	89,061
17	Columbia River Fish Mitigation	09/2020	09/2070	4.400%	No	58,193
18	Columbia River Fish Mitigation	09/2021	09/2071	4.660%	No	14,801
19	Construction (AS)	09/2018	09/2022	2.290%	No	4,200
20	Construction (AS)	09/2019	09/2025	3.340%	No	6,650
21	Construction (AS)	09/2020	09/2022	3.260%	No	6,300
22	Construction (AS)	09/2021	09/2027	3.840%	No	11,200
23	Corps	08/2018	08/2040	0.920%	Yes	160,000
24	Corps	09/2018	09/2048	0.920%	Yes	64,000
25	Corps	07/2019	07/2049	1.380%	Yes	39,000
26	Corps	08/2019	08/2049	1.380%	Yes	39,000
27	Corps	09/2019	09/2049	1.380%	Yes	38,000
28	Corps	07/2020	07/2050	1.600%	Yes	43,000
29	Corps	08/2020	08/2050	5.004%	No	43,000
30	Corps	09/2020	09/2050	5.004%	No	45,000
31	Corps	07/2021	09/2021	1.640%	No	20,000
32	Corps	07/2021	07/2051	5.074%	No	51,000
33	Corps	08/2021	08/2051	5.074%	No	71,000
34	Corps	09/2021	09/2051	5.074%	No	143,000
35	Fish and Wildlife	09/2018	09/2033	0.920%	Yes	51,000
36	Fish and Wildlife	09/2019	09/2034	1.380%	Yes	44,000
37	Fish and Wildlife	09/2020	09/2035	4.470%	No	47,000
38	Fish and Wildlife	09/2021	09/2036	4.535%	No	51,000
39	Technology (G)	09/2018	09/2023	0.920%	Yes	6,000
40	Technology (G)	09/2019	09/2022	1.380%	Yes	7,000
41	Technology (G)	09/2020	09/2022	3.260%	No	4,000
42	Technology (G)	09/2021	09/2026	3.840%	No	13,000
43	Columbia Generating Station	04/2019	07/2030	3.656%	No	13,753
44	Columbia Generating Station	04/2019	07/2030	3.660%	No	3,464
45	Columbia Generating Station	04/2019	07/2031	3.707%	No	13,753
46	Columbia Generating Station	04/2019	07/2031	3.710%	No	3,590
47	Columbia Generating Station	04/2019	07/2032	3.759%	No	13,753
48	Columbia Generating Station	04/2019	07/2032	3.760%	No	3,724
49	Columbia Generating Station	04/2019	07/2033	3.810%	No	3,864
50	Columbia Generating Station	04/2019	07/2033	3.811%	No	13,753
51	Columbia Generating Station	04/2019	07/2034	3.860%	No	4,011
52	Columbia Generating Station	04/2019	07/2034	3.862%	No	13,753
53	Columbia Generating Station	04/2019	07/2035	3.910%	No	4,166
54	Columbia Generating Station	04/2019	07/2035	3.914%	No	13,753
55	Columbia Generating Station	04/2019	07/2036	3.966%	No	13,753
56	Columbia Generating Station	04/2019	07/2036	3.970%	No	4,328
57	Columbia Generating Station	04/2019	07/2037	4.017%	No	13,753
58	Columbia Generating Station	04/2019	07/2037	4.020%	No	4,500
59	Columbia Generating Station	04/2019	07/2038	4.069%	No	13,753
60	Columbia Generating Station	04/2019	07/2038	4.070%	No	4,681
61	Columbia Generating Station	04/2019	07/2039	4.120%	No	4,872
62	Columbia Generating Station	04/2019	07/2039	4.120%	No	13,753
63	Columbia Generating Station	04/2019	07/2040	4.170%	No	5,072
64	Columbia Generating Station	04/2019	07/2040	4.172%	No	13,753

	A	B	C	D	E	F
	<b>Table 21:</b>					
1	<b>Planned Borrowings and Variable Rate Debt for Power (\$000)</b>					
2	<b>Project</b>	<b>In Service Date</b>	<b>Due Date</b>	<b>Rate</b>	<b>Variable</b>	<b>Principal</b>
65	Columbia Generating Station	04/2019	07/2041	4.220%	No	5,284
66	Columbia Generating Station	04/2019	07/2041	4.224%	No	13,753
67	Columbia Generating Station	04/2019	07/2042	4.275%	No	13,753
68	Columbia Generating Station	04/2019	07/2042	4.280%	No	5,507
69	Columbia Generating Station	04/2019	07/2043	4.327%	No	13,753
70	Columbia Generating Station	04/2019	07/2043	4.330%	No	5,743
71	Columbia Generating Station	04/2019	07/2044	4.378%	No	13,753
72	Columbia Generating Station	04/2019	07/2044	4.380%	No	5,991
73	Columbia Generating Station	04/2019	07/2030	4.681%	No	1,138
74	Columbia Generating Station	04/2019	07/2030	4.681%	No	104
75	Columbia Generating Station	04/2019	07/2031	4.733%	No	1,138
76	Columbia Generating Station	04/2019	07/2031	4.733%	No	104
77	Columbia Generating Station	04/2019	07/2032	4.785%	No	1,138
78	Columbia Generating Station	04/2019	07/2032	4.785%	No	104
79	Columbia Generating Station	04/2019	07/2033	4.837%	No	1,138
80	Columbia Generating Station	04/2019	07/2033	4.837%	No	104
81	Columbia Generating Station	04/2019	07/2034	4.889%	No	1,138
82	Columbia Generating Station	04/2019	07/2034	4.889%	No	104
83	Columbia Generating Station	04/2019	07/2035	4.941%	No	1,138
84	Columbia Generating Station	04/2019	07/2035	4.941%	No	104
85	Columbia Generating Station	04/2019	07/2036	4.993%	No	1,138
86	Columbia Generating Station	04/2019	07/2036	4.993%	No	104
87	Columbia Generating Station	04/2019	07/2037	5.045%	No	1,138
88	Columbia Generating Station	04/2019	07/2037	5.045%	No	104
89	Columbia Generating Station	04/2019	07/2038	5.097%	No	1,138
90	Columbia Generating Station	04/2019	07/2038	5.097%	No	104
91	Columbia Generating Station	04/2019	07/2039	5.149%	No	1,138
92	Columbia Generating Station	04/2019	07/2039	5.149%	No	104
93	Columbia Generating Station	04/2019	07/2040	5.201%	No	1,138
94	Columbia Generating Station	04/2019	07/2040	5.201%	No	104
95	Columbia Generating Station	04/2019	07/2041	5.253%	No	1,138
96	Columbia Generating Station	04/2019	07/2041	5.253%	No	104
97	Columbia Generating Station	04/2019	07/2042	5.305%	No	1,138
98	Columbia Generating Station	04/2019	07/2042	5.305%	No	104
99	Columbia Generating Station	04/2019	07/2043	5.357%	No	1,138
100	Columbia Generating Station	04/2019	07/2043	5.357%	No	104
101	Columbia Generating Station	04/2019	07/2044	5.409%	No	1,138
102	Columbia Generating Station	04/2019	07/2044	5.409%	No	104
103	Columbia Generating Station	04/2020	07/2030	3.960%	No	4,929
104	Columbia Generating Station	04/2020	07/2030	3.965%	No	12,856
105	Columbia Generating Station	04/2020	07/2030	3.965%	No	222
106	Columbia Generating Station	04/2020	07/2031	4.010%	No	5,124
107	Columbia Generating Station	04/2020	07/2031	4.013%	No	12,856
108	Columbia Generating Station	04/2020	07/2031	4.013%	No	222
109	Columbia Generating Station	04/2020	07/2032	4.060%	No	5,330
110	Columbia Generating Station	04/2020	07/2032	4.062%	No	12,856
111	Columbia Generating Station	04/2020	07/2032	4.062%	No	222
112	Columbia Generating Station	04/2020	07/2033	4.110%	No	12,856
113	Columbia Generating Station	04/2020	07/2033	4.110%	No	222
114	Columbia Generating Station	04/2020	07/2033	4.110%	No	5,546
115	Columbia Generating Station	04/2020	07/2034	4.158%	No	12,856
116	Columbia Generating Station	04/2020	07/2034	4.158%	No	222
117	Columbia Generating Station	04/2020	07/2034	4.160%	No	5,774
118	Columbia Generating Station	04/2020	07/2035	4.207%	No	12,856
119	Columbia Generating Station	04/2020	07/2035	4.207%	No	222
120	Columbia Generating Station	04/2020	07/2035	4.210%	No	6,014
121	Columbia Generating Station	04/2020	07/2036	4.255%	No	12,856
122	Columbia Generating Station	04/2020	07/2036	4.255%	No	222
123	Columbia Generating Station	04/2020	07/2036	4.260%	No	6,267
124	Columbia Generating Station	04/2020	07/2037	4.300%	No	6,534
125	Columbia Generating Station	04/2020	07/2037	4.303%	No	12,856
126	Columbia Generating Station	04/2020	07/2037	4.303%	No	222

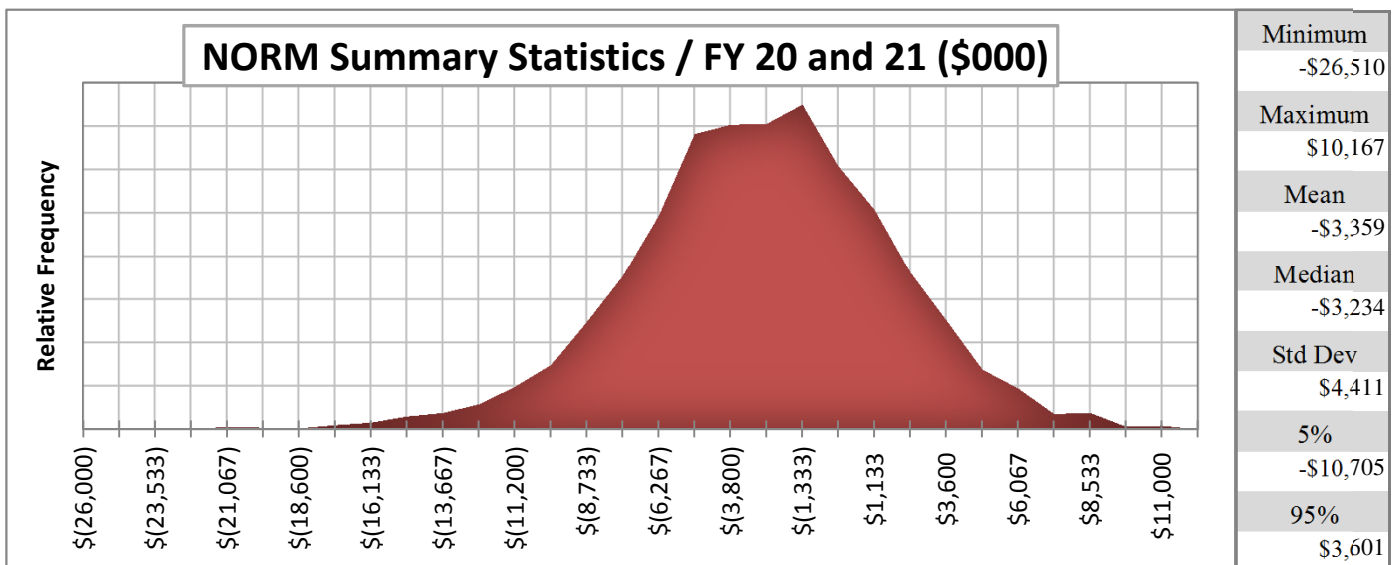
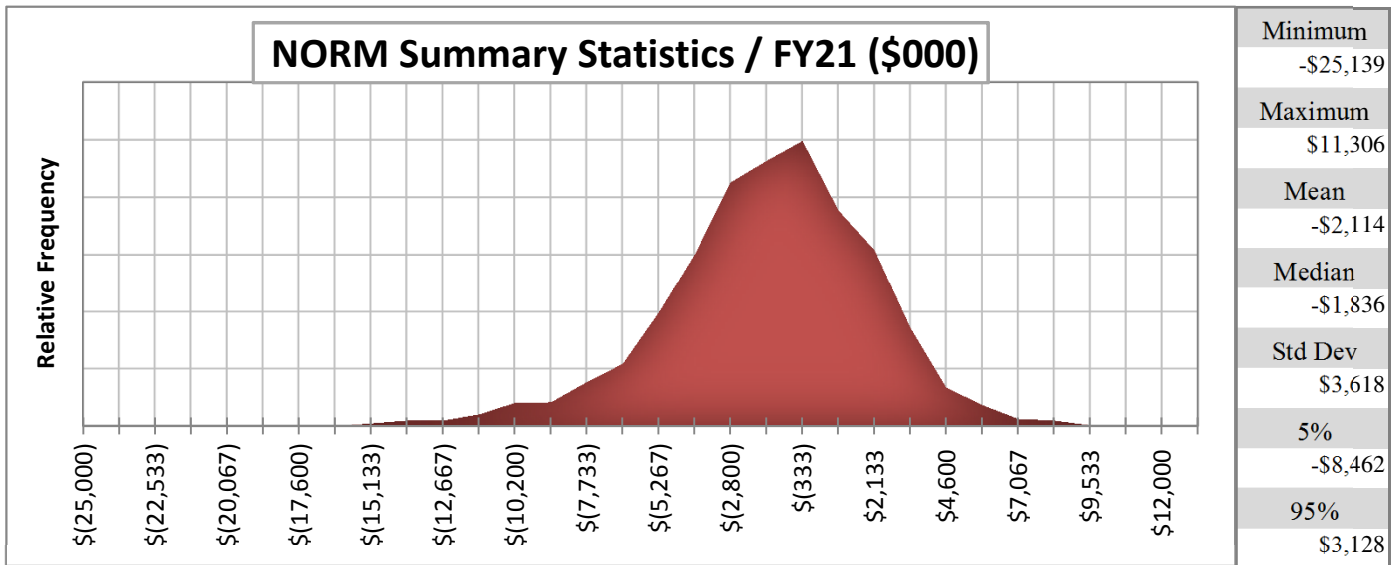
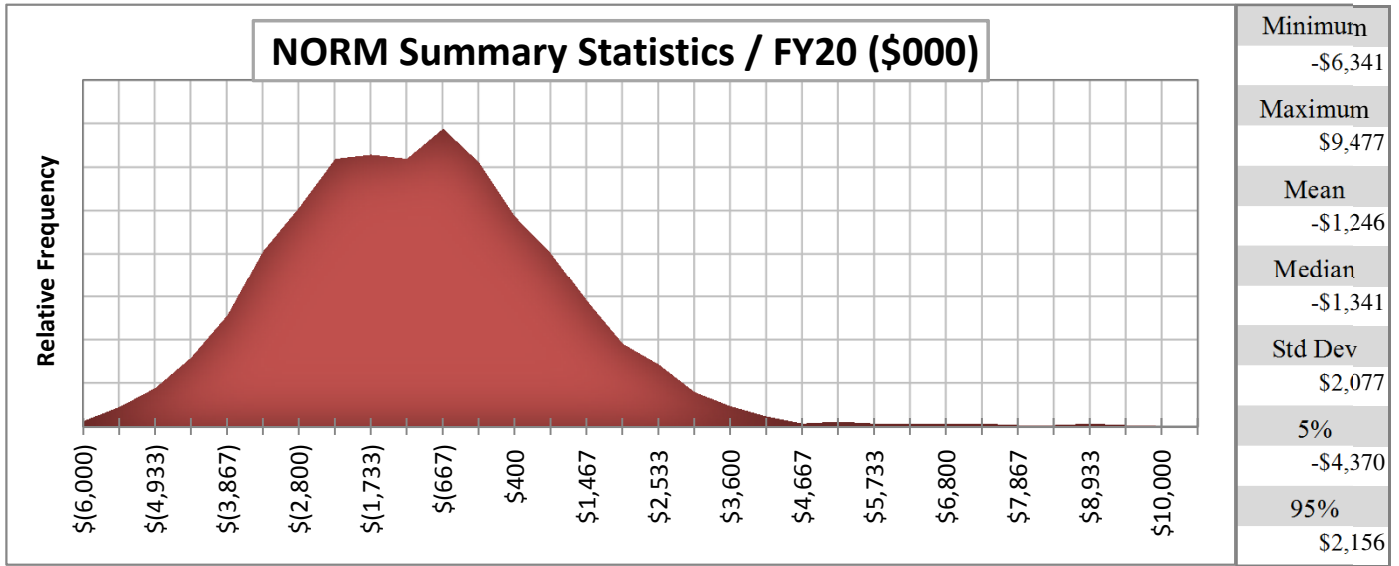
	A	B	C	D	E	F
	<b>Table 21:</b>					
1	<b>Planned Borrowings and Variable Rate Debt for Power (\$000)</b>					
2	<b>Project</b>	<b>In Service Date</b>	<b>Due Date</b>	<b>Rate</b>	<b>Variable</b>	<b>Principal</b>
127	Columbia Generating Station	04/2020	07/2038	4.350%	No	6,815
128	Columbia Generating Station	04/2020	07/2038	4.352%	No	12,856
129	Columbia Generating Station	04/2020	07/2038	4.352%	No	222
130	Columbia Generating Station	04/2020	07/2039	4.400%	No	7,112
131	Columbia Generating Station	04/2020	07/2039	4.400%	No	12,856
132	Columbia Generating Station	04/2020	07/2039	4.400%	No	222
133	Columbia Generating Station	04/2020	07/2040	4.449%	No	12,856
134	Columbia Generating Station	04/2020	07/2040	4.449%	No	222
135	Columbia Generating Station	04/2020	07/2040	4.450%	No	7,425
136	Columbia Generating Station	04/2020	07/2041	4.497%	No	12,856
137	Columbia Generating Station	04/2020	07/2041	4.497%	No	222
138	Columbia Generating Station	04/2020	07/2041	4.500%	No	7,755
139	Columbia Generating Station	04/2020	07/2042	4.545%	No	12,856
140	Columbia Generating Station	04/2020	07/2042	4.545%	No	222
141	Columbia Generating Station	04/2020	07/2042	4.550%	No	8,104
142	Columbia Generating Station	04/2020	07/2043	4.590%	No	8,473
143	Columbia Generating Station	04/2020	07/2043	4.594%	No	12,856
144	Columbia Generating Station	04/2020	07/2043	4.594%	No	222
145	Columbia Generating Station	04/2020	07/2044	4.640%	No	8,862
146	Columbia Generating Station	04/2020	07/2044	4.642%	No	12,856
147	Columbia Generating Station	04/2020	07/2044	4.642%	No	222
148	Columbia Generating Station	04/2020	07/2030	4.967%	No	2,871
149	Columbia Generating Station	04/2020	07/2030	4.967%	No	896
150	Columbia Generating Station	04/2020	07/2031	5.017%	No	2,871
151	Columbia Generating Station	04/2020	07/2031	5.017%	No	896
152	Columbia Generating Station	04/2020	07/2032	5.067%	No	2,871
153	Columbia Generating Station	04/2020	07/2032	5.067%	No	896
154	Columbia Generating Station	04/2020	07/2033	5.117%	No	2,871
155	Columbia Generating Station	04/2020	07/2033	5.117%	No	896
156	Columbia Generating Station	04/2020	07/2034	5.167%	No	2,871
157	Columbia Generating Station	04/2020	07/2034	5.167%	No	896
158	Columbia Generating Station	04/2020	07/2035	5.217%	No	2,871
159	Columbia Generating Station	04/2020	07/2035	5.217%	No	896
160	Columbia Generating Station	04/2020	07/2036	5.267%	No	2,871
161	Columbia Generating Station	04/2020	07/2036	5.267%	No	896
162	Columbia Generating Station	04/2020	07/2037	5.317%	No	2,871
163	Columbia Generating Station	04/2020	07/2037	5.317%	No	896
164	Columbia Generating Station	04/2020	07/2038	5.367%	No	2,871
165	Columbia Generating Station	04/2020	07/2038	5.367%	No	896
166	Columbia Generating Station	04/2020	07/2039	5.417%	No	2,871
167	Columbia Generating Station	04/2020	07/2039	5.417%	No	896
168	Columbia Generating Station	04/2020	07/2040	5.467%	No	2,871
169	Columbia Generating Station	04/2020	07/2040	5.467%	No	896
170	Columbia Generating Station	04/2020	07/2041	5.517%	No	2,871
171	Columbia Generating Station	04/2020	07/2041	5.517%	No	896
172	Columbia Generating Station	04/2020	07/2042	5.567%	No	2,871
173	Columbia Generating Station	04/2020	07/2042	5.567%	No	896
174	Columbia Generating Station	04/2020	07/2043	5.617%	No	2,871
175	Columbia Generating Station	04/2020	07/2043	5.617%	No	896
176	Columbia Generating Station	04/2020	07/2044	5.666%	No	2,871
177	Columbia Generating Station	04/2020	07/2044	5.666%	No	896
178	Columbia Generating Station	04/2021	07/2030	3.880%	No	3,769
179	Columbia Generating Station	04/2021	07/2031	4.030%	No	3,915
180	Columbia Generating Station	04/2021	07/2032	4.080%	No	4,073
181	Columbia Generating Station	04/2021	07/2033	4.130%	No	4,239
182	Columbia Generating Station	04/2021	07/2034	4.170%	No	4,414
183	Columbia Generating Station	04/2021	07/2035	4.220%	No	4,598
184	Columbia Generating Station	04/2021	07/2036	4.270%	No	4,792
185	Columbia Generating Station	04/2021	07/2037	4.310%	No	4,997
186	Columbia Generating Station	04/2021	07/2038	4.360%	No	5,212
187	Columbia Generating Station	04/2021	07/2039	4.410%	No	5,439
188	Columbia Generating Station	04/2021	07/2040	4.460%	No	5,679

	A	B	C	D	E	F
	<b>Table 21:</b>					
1	<b>Planned Borrowings and Variable Rate Debt for Power (\$000)</b>					
2	<b>Project</b>	<b>In Service Date</b>	<b>Due Date</b>	<b>Rate</b>	<b>Variable</b>	<b>Principal</b>
189	Columbia Generating Station	04/2021	07/2041	4.500%	No	5,932
190	Columbia Generating Station	04/2021	07/2042	4.550%	No	6,199
191	Columbia Generating Station	04/2021	07/2043	4.600%	No	6,481
192	Columbia Generating Station	04/2021	07/2044	4.640%	No	6,780
193	Columbia Generating Station Line of Credit	05/2019	06/2020	2.500%	No	12,284
194	Columbia Generating Station Line of Credit	06/2019	06/2020	2.500%	No	214,716
195	Construction (AS)	02/2016	02/2022	1.877%	Yes	3,000
196	Corps	02/2016	02/2045	1.877%	Yes	3,000
197	Fish and Wildlife	10/2015	02/2031	1.877%	Yes	4,000
198	Fish and Wildlife	02/2016	02/2031	1.877%	Yes	4,000
199	Fish and Wildlife	04/2014	02/2029	1.877%	Yes	7,000
200	Bureau Direct	02/2012	02/2034	1.877%	Yes	55,000
201	Construction (AS)	05/2015	05/2021	1.898%	Yes	2,100
202	Conservation	05/2015	05/2021	1.898%	Yes	5,000
203	Fish and Wildlife	01/2015	01/2024	1.908%	Yes	5,000
204	Conservation	01/2015	01/2024	1.908%	Yes	7,000
205	Bureau Direct	01/2014	12/2018	1.943%	Yes	14,000
206	Bureau Direct	01/2014	12/2018	1.943%	Yes	21,000
207	Bureau Direct	01/2014	12/2018	1.943%	Yes	26,000
208	Bureau Direct	01/2014	12/2018	1.943%	Yes	38,000
209	Bureau Direct	01/2014	12/2018	1.943%	Yes	43,000
210	Construction (AS)	04/2014	03/2020	1.976%	Yes	1,400
211	Construction (AS)	04/2014	03/2020	1.976%	Yes	2,000
212	Conservation	08/2014	09/2025	1.976%	Yes	4,000
213	Fish and Wildlife	10/2015	03/2031	1.976%	Yes	5,000
214	Conservation	11/2014	03/2027	1.976%	Yes	6,000
215	Fish and Wildlife	11/2014	03/2030	1.976%	Yes	8,000
216	Construction (AS)	10/2013	10/2019	2.039%	Yes	4,200
217	Construction (AS)	05/2014	04/2020	2.075%	Yes	700
218	Conservation	05/2014	04/2025	2.075%	Yes	3,000
219	Conservation	06/2014	10/2024	2.075%	Yes	5,000
220	Fish and Wildlife	05/2014	04/2027	2.075%	Yes	11,000
221	Conservation	05/2014	04/2024	2.075%	Yes	15,000
222	Conservation	10/2015	10/2027	2.075%	Yes	25,000
223	Fish and Wildlife	11/2013	05/2027	2.087%	Yes	5,000
224	Bureau Direct	09/2014	05/2032	2.087%	Yes	10,000
225	Bureau Direct	09/2014	05/2032	2.087%	Yes	16,000
226	Bureau Direct	07/2016	07/2030	2.145%	Yes	12,000
227	Bureau Direct	07/2016	07/2030	2.145%	Yes	25,000
228	Conservation	10/2014	12/2024	2.155%	Yes	10,000
229	Bureau Direct	09/2014	06/2033	2.155%	Yes	11,000
230	Bureau Direct	09/2014	06/2033	2.155%	Yes	12,000
231	Conservation	04/2014	06/2025	2.155%	Yes	30,000
232	Conservation	12/2013	12/2023	2.155%	Yes	55,000
233	Construction (AS)	01/2014	01/2020	2.183%	Yes	1,750
234	Construction (AS)	01/2014	01/2020	2.183%	Yes	2,000
235	Construction (AS)	07/2014	07/2020	2.234%	Yes	1,050
236	Fish and Wildlife	08/2014	07/2029	2.234%	Yes	5,000
237	Technology (G)	10/2015	07/2022	2.234%	Yes	6,000
238	Conservation	07/2014	07/2025	2.234%	Yes	12,000
239	Fish and Wildlife	10/2014	01/2029	2.234%	Yes	15,000
240	Bureau Direct	09/2014	07/2033	2.234%	Yes	15,000
241	Bureau Direct	06/2013	01/2039	2.234%	Yes	35,000

	A	B	C	D	E	F	G	H	I	J
1	<b>Table 22: Interest Rate adjustment factors by Tenor and Year</b>									
2		<b>Calendar Year 2019</b>			<b>Calendar Year 2020</b>			<b>Calendar Year 2021</b>		
3	<b>Tenor</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
4	1	98.7%	100.0%	100.8%	99.0%	100.0%	100.7%	98.8%	100.0%	102.5%
5	2	98.2%	100.0%	111.5%	98.8%	100.0%	114.3%	98.8%	100.0%	116.7%
6	3	97.6%	100.0%	120.0%	98.8%	100.0%	122.8%	98.9%	100.0%	125.5%
7	4	97.1%	100.0%	128.1%	98.7%	100.0%	130.8%	98.9%	100.0%	133.9%
8	5	96.5%	100.0%	135.6%	98.7%	100.0%	138.3%	99.0%	100.0%	141.7%
9	6	96.4%	100.0%	137.1%	98.7%	100.0%	139.9%	99.0%	100.0%	143.3%
10	7	96.3%	100.0%	138.4%	98.6%	100.0%	141.4%	99.0%	100.0%	144.8%
11	8	96.2%	100.0%	139.7%	98.6%	100.0%	142.8%	99.0%	100.0%	146.3%
12	9	96.1%	100.0%	140.9%	98.6%	100.0%	144.2%	99.0%	100.0%	147.7%
13	10	96.0%	100.0%	142.0%	98.6%	100.0%	145.5%	99.0%	100.0%	149.0%
14	11	96.1%	100.0%	141.4%	98.6%	100.0%	144.9%	98.9%	100.0%	148.4%
15	12	96.1%	100.0%	140.8%	98.5%	100.0%	144.3%	98.9%	100.0%	147.7%
16	13	96.1%	100.0%	140.3%	98.5%	100.0%	143.8%	98.8%	100.0%	147.1%
17	14	96.2%	100.0%	139.7%	98.5%	100.0%	143.2%	98.8%	100.0%	146.5%
18	15	96.2%	100.0%	139.1%	98.5%	100.0%	142.6%	98.7%	100.0%	145.9%
19	16	96.2%	100.0%	138.6%	98.5%	100.0%	142.1%	98.7%	100.0%	145.3%
20	17	96.2%	100.0%	138.1%	98.4%	100.0%	141.5%	98.6%	100.0%	144.7%
21	18	96.3%	100.0%	137.5%	98.4%	100.0%	141.0%	98.6%	100.0%	144.1%
22	19	96.3%	100.0%	137.0%	98.4%	100.0%	140.4%	98.6%	100.0%	143.5%
23	20	96.3%	100.0%	136.5%	98.4%	100.0%	139.9%	98.5%	100.0%	142.9%
24	21	96.4%	100.0%	136.0%	98.4%	100.0%	139.4%	98.5%	100.0%	142.4%
25	22	96.4%	100.0%	135.5%	98.3%	100.0%	138.8%	98.4%	100.0%	141.8%
26	23	96.4%	100.0%	134.9%	98.3%	100.0%	138.3%	98.4%	100.0%	141.2%
27	24	96.4%	100.0%	134.4%	98.3%	100.0%	137.8%	98.3%	100.0%	140.7%
28	25	96.5%	100.0%	134.0%	98.3%	100.0%	137.3%	98.3%	100.0%	140.1%
29	26	96.5%	100.0%	133.5%	98.3%	100.0%	136.8%	98.2%	100.0%	139.6%
30	27	96.5%	100.0%	133.0%	98.2%	100.0%	136.3%	98.2%	100.0%	139.1%
31	28	96.5%	100.0%	132.5%	98.2%	100.0%	135.8%	98.2%	100.0%	138.5%
32	29	96.6%	100.0%	132.1%	98.2%	100.0%	135.4%	98.1%	100.0%	138.0%
33	30	96.6%	100.0%	131.1%	98.2%	100.0%	134.4%	98.0%	100.0%	137.0%



**Figure 8:  
P-NORM Output Summary Distributions**



	A	B	C	D
	<b>Table 23:</b>			
1	<b>Power Net Revenue to Cash Adjustments (\$000)</b>			
2		<b>FY19</b>	<b>FY20</b>	<b>FY21</b>
3	Net Revenue	\$ 197,455	\$ 47,510	\$ 68,968
4				
5	Non-cash Adj.	\$ 156,686	\$ 401,889	\$ 470,833
6	Cash Adj.	\$ (408,803)	\$ (448,583)	\$ (539,131)
7	Other	\$ -	\$ (10,790)	\$ -
8	<b>Accrual to Cash Adj.</b>	<b>\$ (252,117)</b>	<b>\$ (46,694)</b>	<b>\$ (68,298)</b>
9				
10	Cash Flow	\$ (54,662)	\$ 816	\$ 670

	A	B
	<b>Table 24:</b>	
1	<b>Start of FY 2019 PS Reserves and Reserves Not For Risk (\$000)</b>	
2		<b>Actuals 9/30/2018</b>
3	<b>Total Reserves Attributed to Power</b>	<b>\$ 521,438</b>
4		
5	<b>Power Reserves Not For Risk</b>	
6	Energy Efficiency Projects	\$ 21,500
7	Federal Load/F&W Caucus	\$ 4,827
8	Customer Dep for Creditworthiness	\$ 19,400
9	DSR for FY19 EE	\$ 60,500
10	Restricted Funds (AP/AR Carryover from 2018)	\$ 13,187
11	Restricted Funds (NTSA/LIBBY/Slice Carryover from 2018)	\$ 53,695
12	Restricted Funds (Slice Carryover from 2018)	\$ 11,057
13	DSR Balance Net of Carrying Charge Receivable from Transmission	\$ (5,426)
14	<b>Power Reserves Not For Risk Total</b>	<b>\$ 178,740</b>
15		
16	<b>Reserves for Risk Attributed to Power (PS Reserves)</b>	<b>\$ 342,698</b>

**Figure 9:  
Power Services ToolKit Inputs**

**Type of Run**

Business line  
 Agency

Starting Fiscal Year: 2019  
 TPP Start Year: 2020  
 Ending Fiscal Year: 2021  
 Number of games: 3200

[Edit starting month](#)

This information is public and not sourced directly from BPA financial statements.

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Power
Transmission
Agency DDC

Starting Fiscal Year: 2019  
TPP Start Year: 2020  
Ending Fiscal Year: 2021  
Number of games: 3200

<b>Starting balance</b>	<b>Treasury facility</b>	<b>Treasury within year</b>	<b>Net treasury facility</b>	
<input type="text" value="342.7"/>	<input type="text" value="750"/>	<input type="text" value="320"/>	<input type="text" value="430"/>	<input type="checkbox"/> Enable NFB adjustments
<b>Starting ANR</b>	<b>Liquidity reserves</b>	<b>Small deferral size</b>	<b>Slice Percent</b>	<input type="checkbox"/> Use PNRR
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="200"/>	<input type="text" value="0.2236"/>	<b>PNRR Adjustment</b> <input type="text" value="0"/>
				<a href="#">Calculate PNRR Adjustment</a>

FY	IOC Rate	Treasury Special Rate	Treasury Facility Rate	Interest Credit Scheduled	Cash Timing Adjustment	PNRR Shape
2019	0.690%	0.690%	0.690%	3.10	-0.90	0.00
2020	0.800%	0.800%	0.800%	5.60	2.30	1.00
2021	0.820%	0.820%	0.820%	7.30	3.65	1.00

[Adjust revenues](#)

[Adjust cash flows](#)

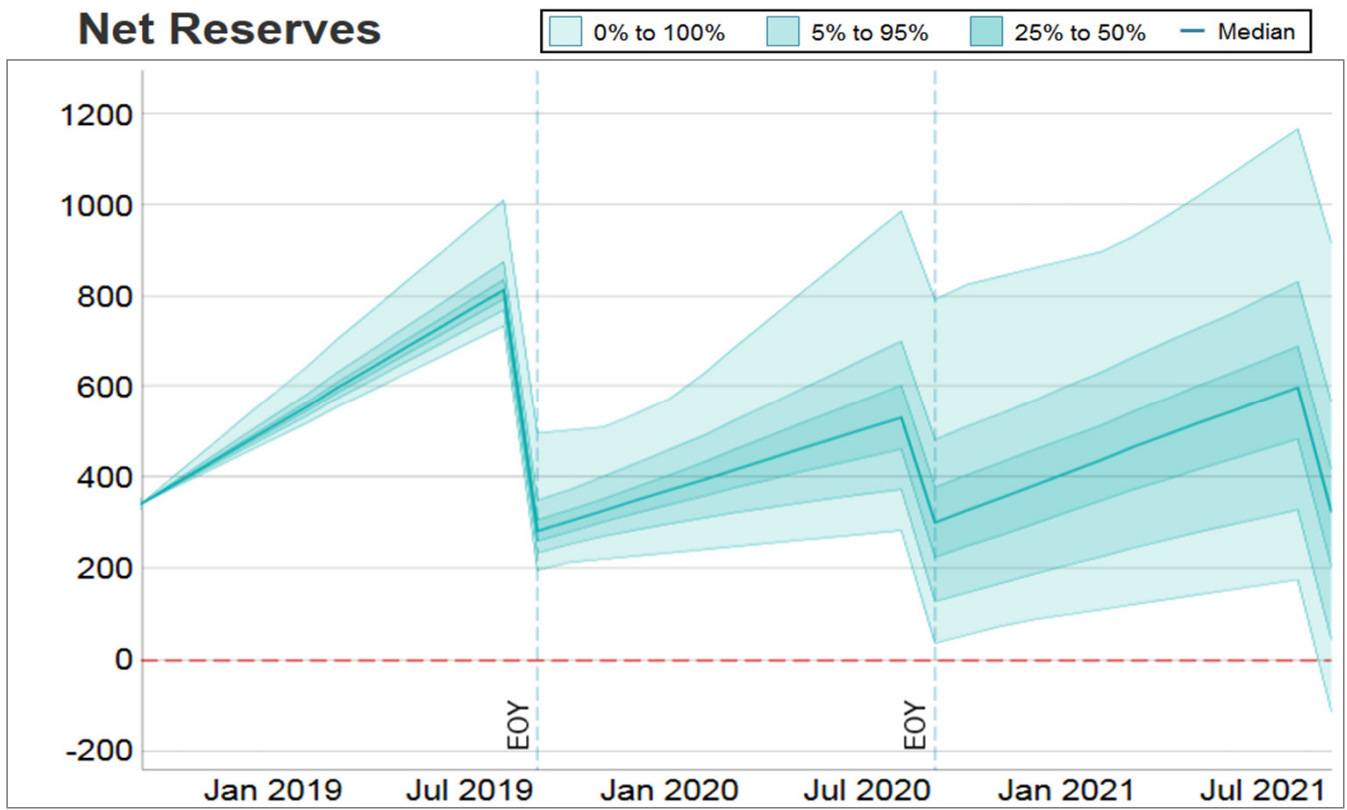
  

FY	Type	DDC Cash Thr	DDC ANR Thr	DDC Cap	FRPS Cash Thr	FRPS ANR Thr	FRPS Amount	CRAC CAP	CF Ty
2019	Reserves ▾	1000.00	1000.00	0.00	0.00	0.00	0.00	0.00	ST
2020	ANR ▾	601.40	513.00	500.00	300.70	212.00	30.00	300.00	ST
2021	ANR ▾	601.40	558.00	500.00	300.70	257.00	30.00	300.00	ST

STEPA Full recovery limit: 100  
 STEPA Full recovery: 100%  
 STEPA Partial recovery: 50%  
 Minimum CRAC: 5

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**Figure 10:**  
**Power Services End of Year Financial Reserves (\$ in Millions)**

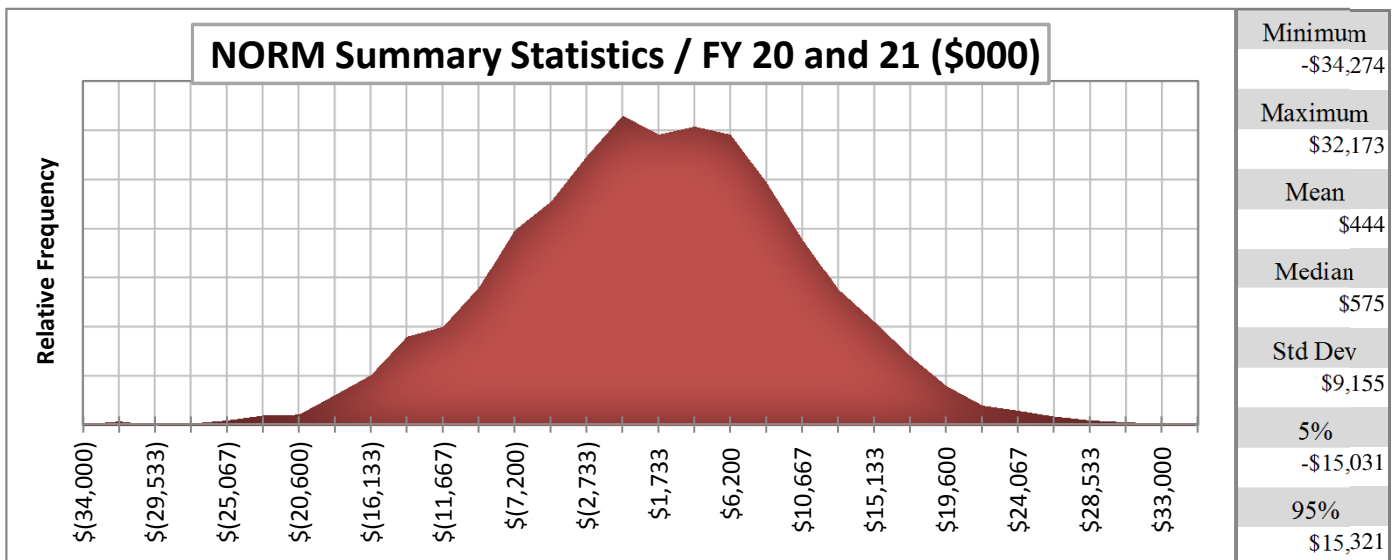
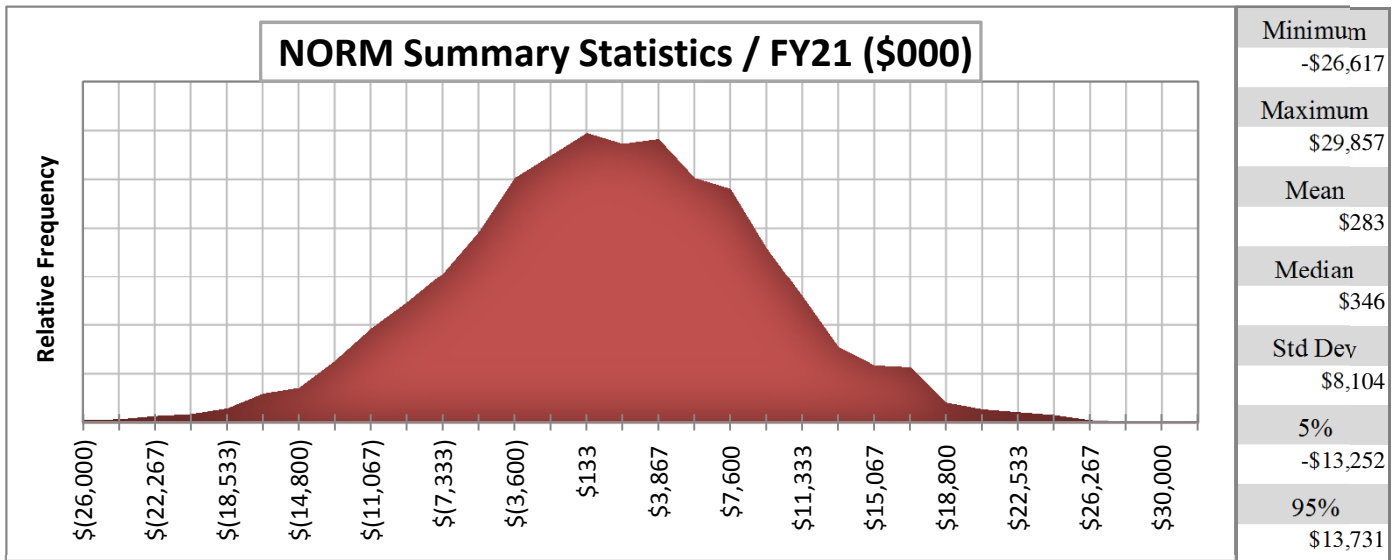
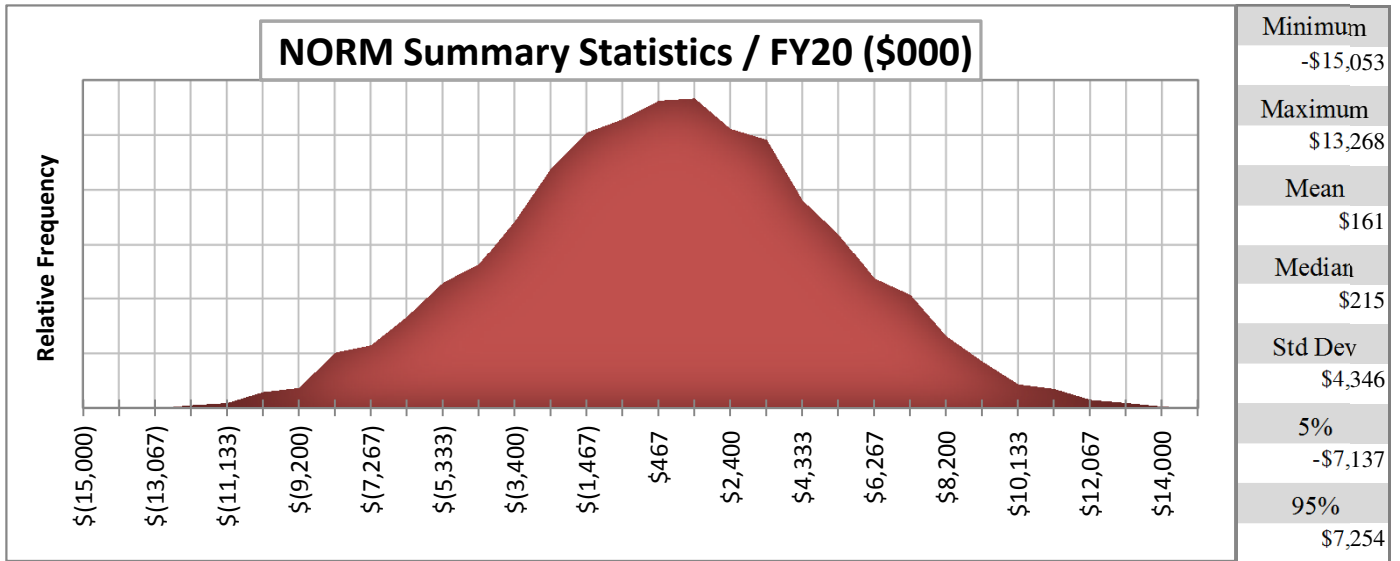


**Table 25:  
Power ToolKit Summary Statistics (\$ in Millions)**

Net Reserves								Accumulated Net Revenue							
Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1	Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1
2019	197.4	235.6	261.4	283.4	308	350.8	498.5	2019	107.7	147	172.4	194.7	219.1	261.6	409.8
2020	37.5	129.1	225.9	301.9	379.3	483.9	793.1	2020	-5.8	84.6	182.5	258.3	335	439.5	748.5
2021	-113	44.9	205.3	324.7	418.9	567.2	917	2021	-85.4	72.7	232.5	350.1	443.6	590.4	937.5
Net Liquidity								Bonneville Fund							
Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1	Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1
2019	627.4	665.6	691.4	713.4	738	780.8	928.5	2019	197.4	235.6	261.4	283.4	308	350.8	498.5
2020	467.5	559.1	655.9	731.9	809.3	913.9	1223.1	2020	37.5	129.1	225.9	301.9	379.3	483.9	793.1
2021	317	474.9	635.3	754.7	848.9	997.2	1347	2021	0	44.9	205.3	324.7	418.9	567.2	917
								Treasury Note							
Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1	Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1
2019	0	0	0	0	0	0	0	2019	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	2020	0	0	0	0	0	0	0
2021	-113	0	0	0	0	0	0	2021	-113	0	0	0	0	0	0

	A	B	C	D	E	F
	<b>Table 26:</b>					
1	<b>Planned Borrowings and Variable Rate Debt for Transmission (\$000)</b>					
2	<b>Project</b>	<b>In Service Date</b>	<b>Due Date</b>	<b>Rate</b>	<b>Variable</b>	<b>Principal</b>
3	Construction	08/2018	02/2048	2.205%	Yes	21,000
4	Construction	08/2018	04/2048	2.205%	Yes	19,000
5	Construction	08/2018	05/2048	2.205%	Yes	12,000
6	Construction	09/2018	04/2044	2.305%	Yes	42,000
7	Construction	09/2018	11/2044	2.305%	Yes	63,800
8	Construction	09/2018	10/2045	2.305%	Yes	4,000
9	Construction	09/2018	06/2046	2.305%	Yes	24,000
10	Construction	09/2018	05/2047	2.305%	Yes	67,000
11	Construction	07/2019	07/2043	1.380%	Yes	155,000
12	Construction	08/2019	08/2044	1.380%	Yes	150,000
13	Construction	09/2019	09/2045	1.380%	Yes	39,200
14	Construction	09/2019	09/2045	4.530%	No	110,800
15	Construction	07/2020	09/2020	1.600%	Yes	45,600
16	Construction	07/2020	07/2046	4.860%	No	91,400
17	Construction	08/2020	08/2047	4.900%	No	134,000
18	Construction	09/2020	09/2048	4.930%	No	127,000
19	Construction	07/2021	09/2021	1.640%	No	96,400
20	Construction	07/2021	07/2049	5.000%	No	48,600
21	Construction	08/2021	08/2050	5.040%	No	140,000
22	Construction	09/2021	09/2051	5.070%	No	133,000
23	Construction (AS)	09/2018	03/2024	3.078%	No	7,800
24	Construction (AS)	09/2019	09/2025	3.270%	No	12,350
25	Construction (AS)	09/2020	09/2026	3.750%	No	11,700
26	Construction (AS)	09/2021	09/2027	3.840%	No	18,200
27	Environment	09/2018	09/2033	0.920%	Yes	7,000
28	Environment	09/2019	09/2034	1.380%	Yes	22,000
29	Environment	09/2020	09/2035	4.470%	No	7,000
30	Environment	09/2021	09/2036	4.535%	No	7,000
31	Master Lease	03/2019	09/2051	3.540%	No	26,072
32	Master Lease	03/2019	09/2051	3.540%	No	3,415
33	Master Lease	03/2019	09/2051	3.540%	No	18,901
34	Master Lease	01/2020	09/2051	4.020%	No	21,602
35	Master Lease	01/2020	09/2051	4.020%	No	21,605
36	Construction	01/2012	01/2040	2.234%	Yes	30,000
37	Construction	03/2012	03/2024	1.976%	Yes	45,000
38	Construction	05/2012	05/2027	2.087%	Yes	17,000
39	Environment	05/2012	05/2027	2.087%	Yes	13,000
40	Construction	04/2014	10/2039	2.075%	Yes	45,000
41	Construction	04/2014	03/2034	1.976%	Yes	45,000
42	Construction	04/2014	02/2034	1.877%	Yes	45,000
43	Construction	05/2014	05/2036	2.087%	Yes	29,000
44	Construction	06/2014	11/2032	2.087%	Yes	21,000
45	Construction (AS)	04/2014	03/2020	1.976%	Yes	2,600
46	Construction (AS)	05/2014	04/2020	2.075%	Yes	1,300
47	Construction	07/2014	04/2032	2.075%	Yes	9,000
48	Environment	07/2014	07/2029	2.234%	Yes	3,000
49	Construction	08/2014	07/2035	2.234%	Yes	10,000
50	Construction	08/2014	08/2035	1.877%	Yes	15,000
51	Construction	09/2014	04/2028	2.075%	Yes	17,000
52	Construction (AS)	07/2014	07/2020	2.234%	Yes	1,950
53	Technology (T)	10/2015	09/2018	1.976%	Yes	5,000
54	Construction	10/2015	06/2034	2.155%	Yes	21,000
55	Construction	10/2015	08/2034	1.877%	Yes	19,000
56	Environment	10/2015	09/2027	1.976%	Yes	5,000
57	Construction	05/2016	05/2025	2.101%	Yes	20,000

**Figure 11:  
T-NORM Output Summary Distributions**





	A	B	C	D
	<b>Table 27:</b>			
1	<b>Transmission Net Revenue to Cash Adjustments (\$000)</b>			
2		<b>FY19</b>	<b>FY20</b>	<b>FY21</b>
3	Net Revenue	\$ (7,493)	\$ 26,460	\$ 26,467
4				
5	Non-cash Adj.	\$ 273,402	\$ 239,911	\$ 251,721
6	Cash Adj.	\$ (267,320)	\$ (325,140)	\$ (331,043)
7	Other	\$ -	\$ -	\$ -
8	<b>Accrual to Cash Adj.</b>	<b>\$ 6,082</b>	<b>\$ (85,229)</b>	<b>\$ (79,322)</b>
9				
10	Cash Flow	\$ (1,411)	\$ (58,769)	\$ (52,855)

	A	B
	<b>Table 28:</b>	
1	<b>Start of FY 2019 TS Reserves and Reserves Not For Risk (\$000)</b>	
2		<b>Actuals 9/30/2018</b>
3	<b>Total Reserves Attributed to Transmission</b>	<b>\$ 318,407</b>
4		
5	<b>Transmission Reserves Not For Risk</b>	
6	Master Lease - 3rd Party Financing	<b>\$ 5,660</b>
7	Non-BPA owned projects - Reimbursables	\$ 7,757
8	Prepaid NOS	\$ 4,673
9	Advances-3rd party (LGIA's)	\$ 47,023
10	BPA owned projects PFIA	\$ 17,377
11	Customer Dep for Creditworthiness	\$ 6,682
12	Funds Held in Escrow	\$ 10,640
13	LT Service Deposits	\$ 10,790
14	Restricted Funds (AP/AR Carryover from FY2018)	\$ (5,566)
15	DSR Balance Net of Carrying Charge Payable to Power	\$ 5,426
16	<b>Transmission Reserves Not For Risk Total</b>	<b>\$ 110,462</b>
17		
18	<b>Reserves for Risk Attributed to Transmission (TS Reserves)</b>	<b>\$ 207,945</b>

**Figure 12:  
Transmission Services ToolKit Inputs**

**Type of Run**

Business line
 Starting Fiscal Year: 2019

Agency
 TPP Start Year: 2020

Ending Fiscal Year: 2021

Number of games: 3200

This information is public and not sourced directly from BPA financial statements.

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Power
Transmission
Agency DDC

Starting Fiscal Year: 2019

TPP Start Year: 2020

Ending Fiscal Year: 2021

Number of games: 3200

**Starting balance**

207.9

**Treasury facility**

0

**Treasury within year**

0

**Net treasury facility**

0

Enable NFB adjustments

Use PNRR

**Starting ANR**

0

**Liquidity reserves**

100

**Small deferral size**

200

**Slice Percent**

0.2236

**PNRR Adjustment**

FY	IOC Rate	Treasury Special Rate	Treasury Facility Rate	Interest Credit Scheduled	Cash Timing Adjustment	PNRR Shape
2019	0.690%	0.690%	0.690%	1.60	-1.00	0.00
2020	0.800%	0.800%	0.800%	3.60	1.20	1.00
2021	0.820%	0.820%	0.820%	3.10	1.10	1.00

FY	Type	DDC Cash Thr	DDC ANR Thr	DDC Cap	FRPS Cash Thr	FRPS ANR Thr	FRPS Amount	CRAC CAP	CF T <sub>y</sub>
2019	Reserves ▾	1000.00	1000.00	0.00	0.00	0.00	0.00	100.00	ST
2020	ANR ▾	194.40	-20.00	200.00	97.20	-117.00	15.00	100.00	ST
2021	ANR ▾	194.40	65.00	200.00	97.20	-33.00	15.00	100.00	ST

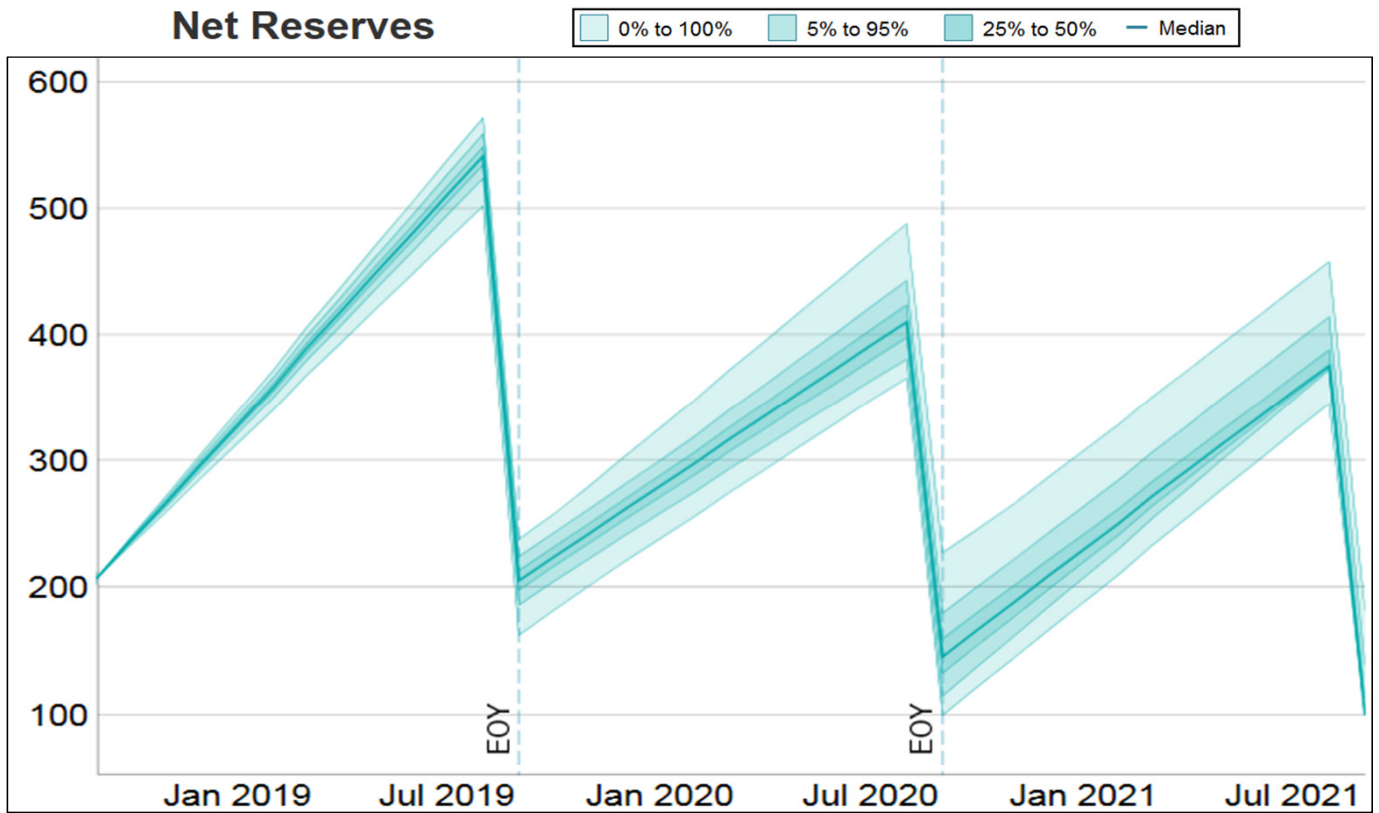
STEPA Full recovery limit: 100

STEPA Full recovery: 100%

STEPA Partial recovery: 50%

Minimum CRAC: 5

**Figure 13:**  
**Transmission Services End of Year Financial Reserves (\$ in Millions)**



**Table 29:  
Transmission ToolKit Summary Statistics (\$ in Millions)**

Net Reserves								Accumulated Net Revenue							
Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1	Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1
2019	163.2	187.1	198.8	206.2	214.1	225.3	239	2019	-50.8	-26.9	-15.2	-7.8	0.1	11.3	25
2020	100	115.2	133.3	146.2	160.4	180.7	228.3	2020	-47.3	-13.6	4.6	17.5	31.6	52	99.5
2021	100	100	100.1	100.1	113.1	139.8	183	2021	-30.7	3.8	29.6	46.3	63.7	90.3	133.6
Net Liquidity								Bonneville Fund							
Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1	Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1
2019	163.2	187.1	198.8	206.2	214.1	225.3	239	2019	163.2	187.1	198.8	206.2	214.1	225.3	239
2020	100	115.2	133.3	146.2	160.4	180.7	228.3	2020	100	115.2	133.3	146.2	160.4	180.7	228.3
2021	100	100	100.1	100.1	113.1	139.8	183	2021	100	100	100.1	100.1	113.1	139.8	183
								Treasury Note							
Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1	Fiscal Year	0	0.05	0.25	0.5	0.75	0.95	1
2019	0	0	0	0	0	0	0	2019	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	2020	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	2021	0	0	0	0	0	0	0

### **Example 1: Calibrated Net Revenue Calculations**

Calibrations and Calibrated Net Revenue are calculated separately for each business line. When this Example uses the term “net revenue,” it is referring to net revenue for a business line. When it uses the term “financial reserves,” it is referring to financial reserves available for risk attributed to that same business line.

The Net Revenue (NR) Calibration is the sum of the amounts of each NR Calibration Event for a business line. A NR Calibration Event is a financial event not forecast in the BP-20 rate case that (1) impacts net revenue differently than it impacts financial reserves, and (2) results in a difference between the amounts of such impacts that is greater than \$5 million (positive or negative). Such events may include, but are not limited to, debt management transactions, contract settlements, and changes in non-cash expenses. The amount of a NR Calibration Event will be calculated as (1) the impact of the event on financial reserves, minus (2) the impact of the event on net revenue. The following is a non-exhaustive list of examples:

**A decrease in Federal asset depreciation of \$X:** this change reduces depreciation expense and therefore increases net revenue by \$X. Depreciation is a non-cash expense. As such, changes in depreciation have an impact of \$0 on financial reserves. Subtracting \$X from \$0 yields -\$X. This is the amount to be added to net revenue (as part of the CNR calculation).

**Cashing out a contract for several years of a product:** a Business Line had previously contracted to sell a product to a counterparty for 10 years at \$Z per year starting in FY 18; the counterparty offers to pay the Business Line up front for the 10 years' of product at BPA's discount rate; the total cash paid in FY 18 is \$8Z. In FY 18, there is no impact of the cash-out on net revenue. The impact on financial reserves is an increase from \$Z to \$8Z, or \$7Z. Therefore, the FY 18 Net Revenue Calibration due to this transaction is \$0 subtracted from \$7Z, or +\$7Z.

In FY 19, net revenue remains unaffected by the cash-out; revenue from the contract for the year is still \$Z. However, in FY 19, there is no cash received for the sale; the change in FY 19 cash flow is -\$Z. Therefore, the FY 19 Net Revenue Calibration due to this transaction is \$0 subtracted from -\$Z, or -\$Z.

