

**2010 BPA Rate Case
Wholesale Power Rate Final Proposal**

**RISK ANALYSIS AND MITIGATION
STUDY DOCUMENTATION
Volume 2**

July 2009

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RISK ANALYSIS AND MITIGATION STUDY DOCUMENTATION VOLUME 2

GRAPHS AND TABLES

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COMMONLY USED ACRONYMS

AC	alternating current
AFUDC	Allowance for Funds Used During Construction
AGC	Automatic Generation Control
ALF	Agency Load Forecast (computer model)
aMW	average megawatt
AMNR	Accumulated Modified Net Revenues
ANR	Accumulated Net Revenues
AOP	Assured Operating Plan
ASC	Average System Cost
ATC	Accrual to Cash
BAA	Balancing Authority Area
BASC	BPA Average System Cost
Bcf	billion cubic feet
BiOp	Biological Opinion
BPA	Bonneville Power Administration
Btu	British thermal unit
CAISO	California Independent System Operator
CBFWA	Columbia Basin Fish & Wildlife Authority
CCCT	combined-cycle combustion turbine
cfs	cubic feet per second
CGS	Columbia Generating Station
CHJ	Chief Joseph
C/M	consumers per mile of line ratio for LDD
COB	California-Oregon Border
COE	U.S. Army Corps of Engineers
COI	California-Oregon Intertie
COSA	Cost of Service Analysis
COU	consumer-owned utility
Council	Northwest Power and Conservation Council
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CRC	Conservation Rate Credit
CRFM	Columbia River Fish Mitigation
CRITFC	Columbia River Inter-Tribal Fish Commission
CSP	Customer System Peak
CT	combustion turbine
CY	calendar year (January through December)
DC	direct current
DDC	Dividend Distribution Clause
dec	decremental (pertains to generation movement)
DJ	Dow Jones
DO	Debt Optimization
DOE	Department of Energy
DOP	Debt Optimization Program

DSI	direct-service industrial customer or direct-service industry
DSO	Dispatcher Standing Order
EAF	energy allocation factor
ECC	Energy Content Curve
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EN	Energy Northwest, Inc. (formerly Washington Public Power Supply System)
EPA	Environmental Protection Agency
EPP	Environmentally Preferred Power
EQR	Electric Quarterly Report
ESA	Endangered Species Act
F&O	financial and operating reports
FBS	Federal base system
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FERC	Federal Energy Regulatory Commission
FELCC	firm energy load carrying capability
FPA	Federal Power Act
FPS	Firm Power Products and Services (rate)
FY	fiscal year (October through September)
GAAP	Generally Accepted Accounting Principles
GARD	Generation and Reserves Dispatch (computer model)
GCL	Grand Coulee
GCPs	General Contract Provisions
GEP	Green Energy Premium
GI	Generation Integration
GRI	Gas Research Institute
GRSPs	General Rate Schedule Provisions
GSP	Generation System Peak
GSU	generator step-up transformers
GTA	General Transfer Agreement
GWh	gigawatthour
HLH	heavy load hour
HOSS	Hourly Operating and Scheduling Simulator (computer model)
HYDSIM	Hydro Simulation (computer model)
IDC	interest during construction
inc	incremental (pertains to generation movement)
IOU	investor-owned utility
IP	Industrial Firm Power (rate)
IPR	Integrated Program Review
IRP	Integrated Resource Plan
ISD	incremental standard deviation
ISO	Independent System Operator
JDA	John Day
kaf	thousand (kilo) acre-feet

kcfs	thousand (kilo) cubic feet per second
K/I	kilowatthour per investment ratio for LDD
ksfd	thousand (kilo) second foot day
kV	kilovolt (1000 volts)
kVA	kilo volt-ampere (1000 volt-amperes)
kVAr	kilo-volt ampere reactive
kW	kilowatt (1000 watts)
kWh	kilowatthour
LDD	Low Density Discount
LGIP	Large Generator Interconnection Procedures
LLH	light load hour
LME	London Metal Exchange
LOLP	loss of load probability
LRA	Load Reduction Agreement
m/kWh	mills per kilowatthour
MAE	mean absolute error
Maf	million acre-feet
MCA	Marginal Cost Analysis
MCN	McNary
Mid-C	Mid-Columbia
MIP	Minimum Irrigation Pool
MMBtu	million British thermal units
MNR	Modified Net Revenues
MOA	Memorandum of Agreement
MOP	Minimum Operating Pool
MORC	Minimum Operating Reliability Criteria
MOU	Memorandum of Understanding
MRNR	Minimum Required Net Revenue
MVA	mega-volt ampere
MVAr	mega-volt ampere reactive
MW	megawatt (1 million watts)
MWh	megawatthour
NCD	non-coincidental demand
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)
NIFC	Northwest Infrastructure Financing Corporation
NLSL	New Large Single Load
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries (officially National Marine Fisheries Service)
NOB	Nevada-Oregon Border
NORM	Non-Operating Risk Model (computer model)
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NPCC	Northwest Power and Conservation Council

NPV	net present value
NR	New Resource Firm Power (rate)
NT	Network Transmission
NTSA	Non-Treaty Storage Agreement
NUG	non-utility generation
NWPP	Northwest Power Pool
OATT	Open Access Transmission Tariff
O&M	operation and maintenance
OMB	Office of Management and Budget
OTC	Operating Transfer Capability
OY	operating year (August through July)
PDP	proportional draft points
PF	Priority Firm Power (rate)
PI	Plant Information
PMA	(Federal) Power Marketing Agency
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
POM	Point of Metering
POR	Point of Receipt
Project Act	Bonneville Project Act
PS	BPA Power Services
PSC	power sales contract
PSW	Pacific Southwest
PTP	Point to Point Transmission (rate)
PUD	public or people's utility district
RAM	Rate Analysis Model (computer model)
RAS	Remedial Action Scheme
Reclamation	U.S. Bureau of Reclamation
RD	Regional Dialogue
REC	Renewable Energy Certificate
REP	Residential Exchange Program
RevSim	Revenue Simulation Model (component of RiskMod)
RFA	Revenue Forecast Application (database)
RFP	Request for Proposal
RiskMod	Risk Analysis Model (computer model)
RiskSim	Risk Simulation Model (component of RiskMod)
RMS	Remote Metering System
RMSE	root-mean squared error
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RTF	Regional Technical Forum
RTO	Regional Transmission Operator
SCADA	Supervisory Control and Data Acquisition

SCCT	single-cycle combustion turbine
Slice	Slice of the System (product)
SME	subject matter expert
TAC	Targeted Adjustment Charge
TDA	The Dalles
Tcf	trillion cubic feet
TPP	Treasury Payment Probability
Transmission System Act	Federal Columbia River Transmission System Act
TRL	Total Retail Load
TRM	Tiered Rate Methodology
TS	BPA Transmission Services
UAI	Unauthorized Increase
UDC	utility distribution company
URC	Upper Rule Curve
USFWS	U.S. Fish and Wildlife Service
VOR	Value of Reserves
WECC	Western Electricity Coordinating Council (formerly WSCC)
WIT	Wind Integration Team
WPRDS	Wholesale Power Rate Development Study
WREGIS	Western Renewable Energy Generation Information System
WSPP	Western Systems Power Pool

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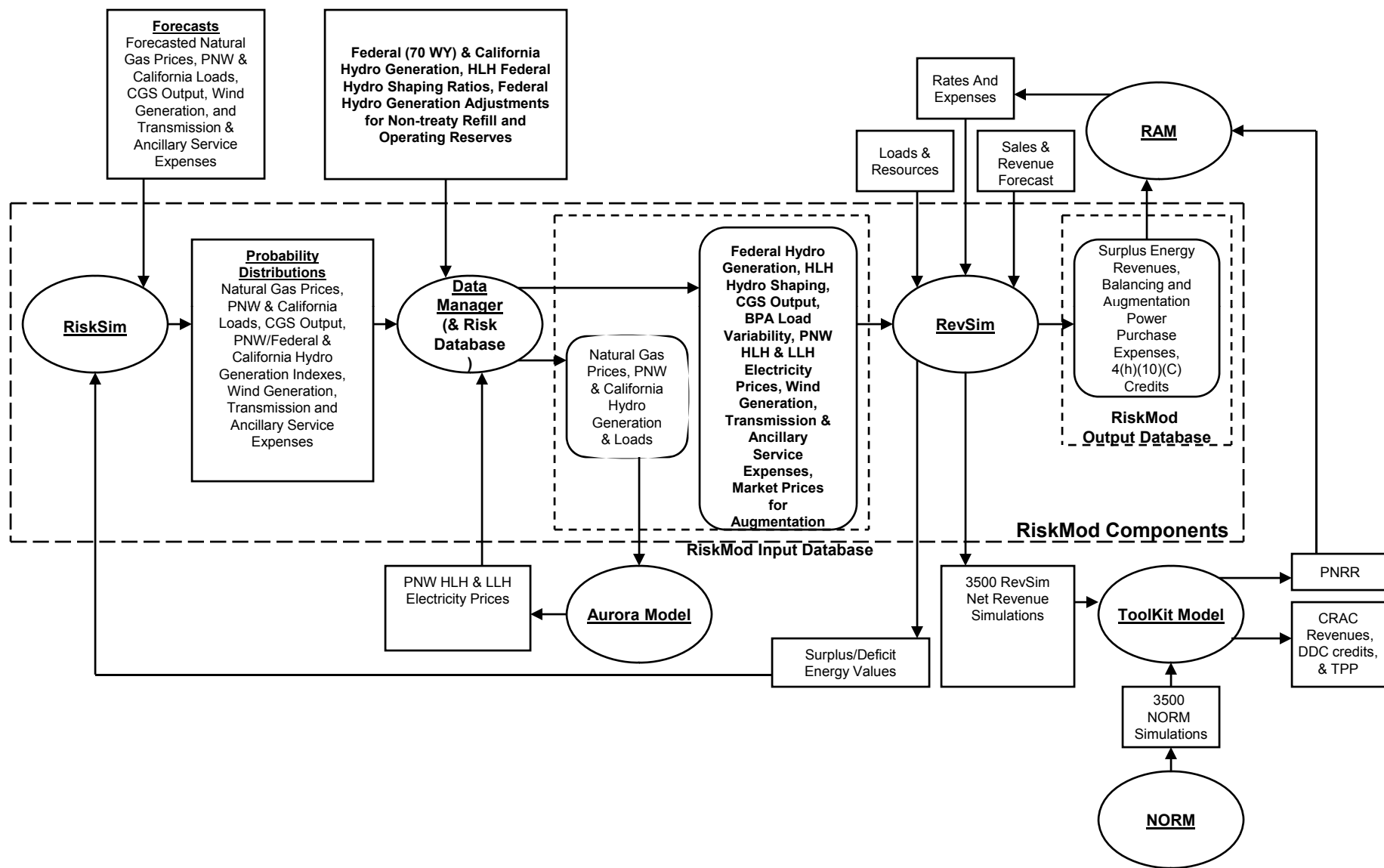
**RISK ANALYSIS AND MITIGATION STUDY
DOCUMENTATION**

OPERATING RISK ANALYSIS GRAPHS

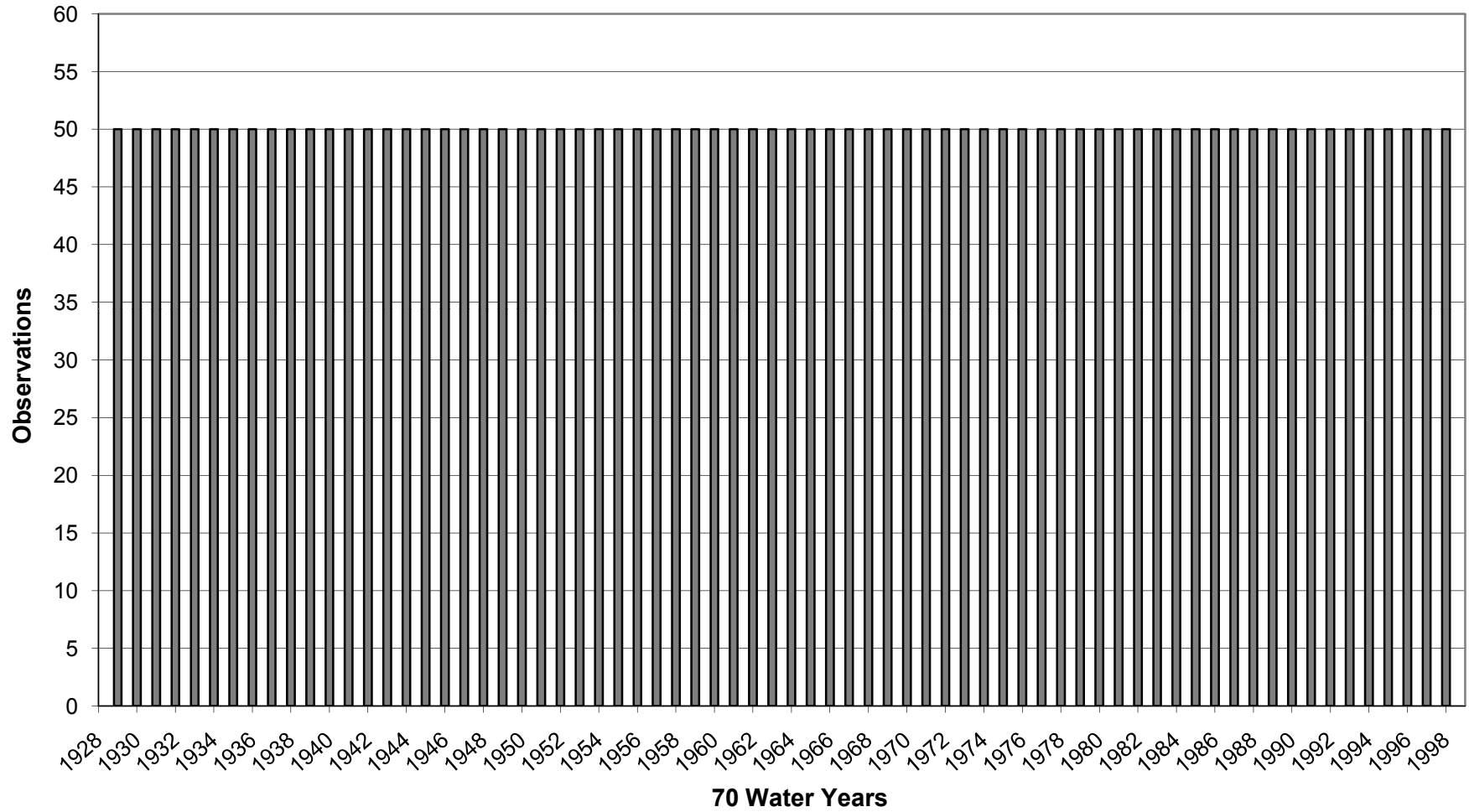
(GRAPHS 1-14)

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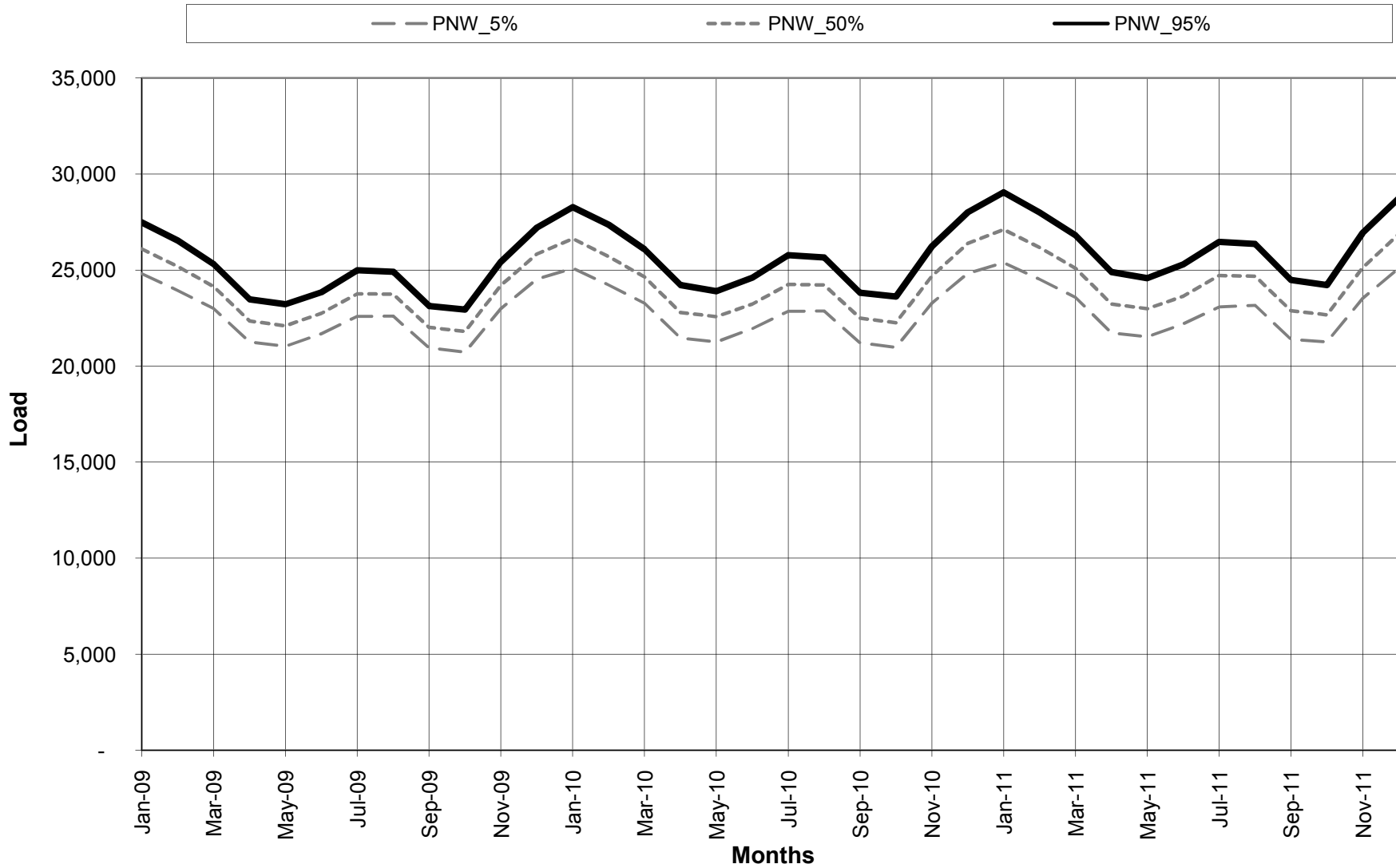
Graph 1: RiskMod Risk Analysis Information Flow



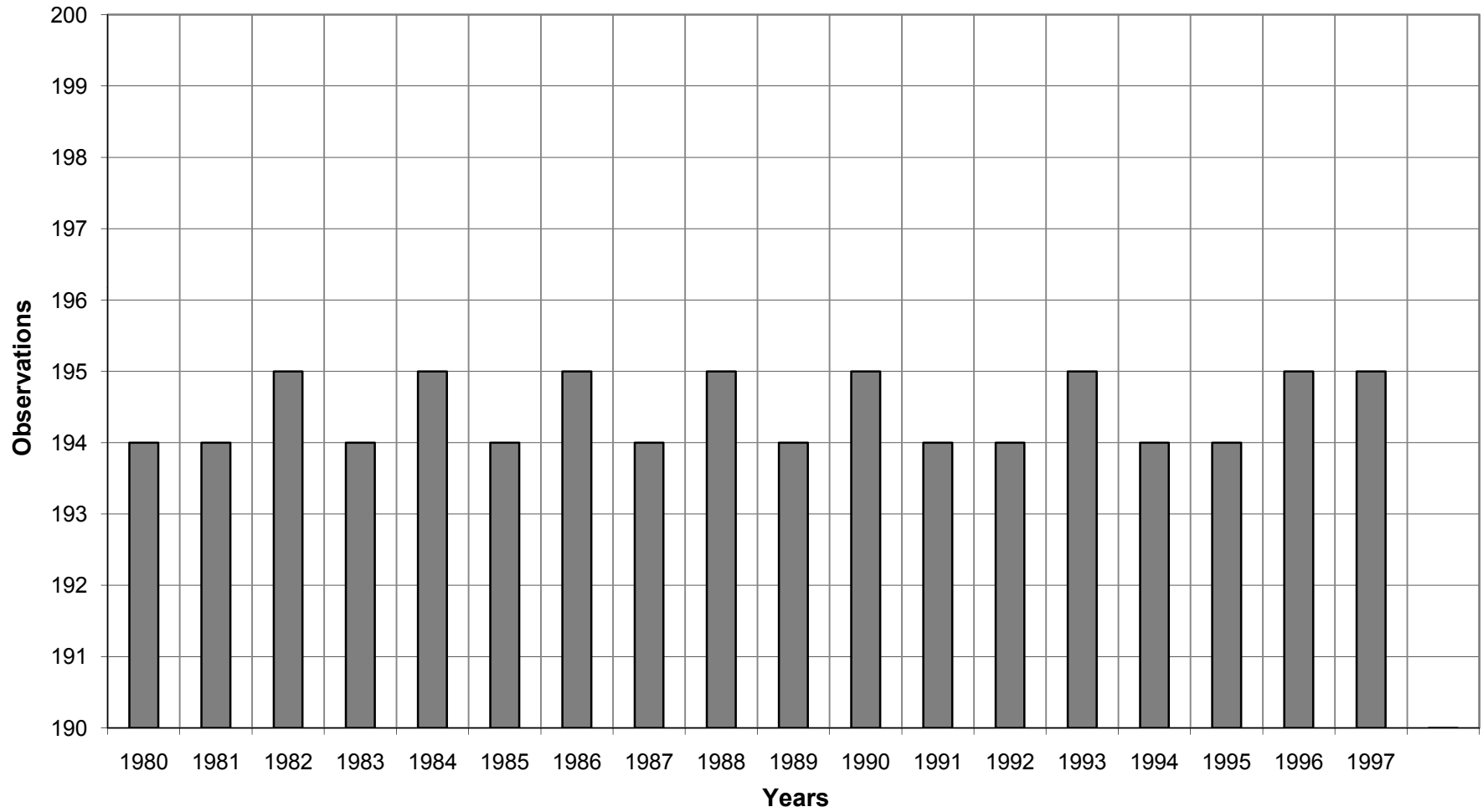
**Graph 2: Number of Times PNW and Federal Hydro Generation
for the 70 Water Years were Sampled Based on 3,500 Sampled Values**



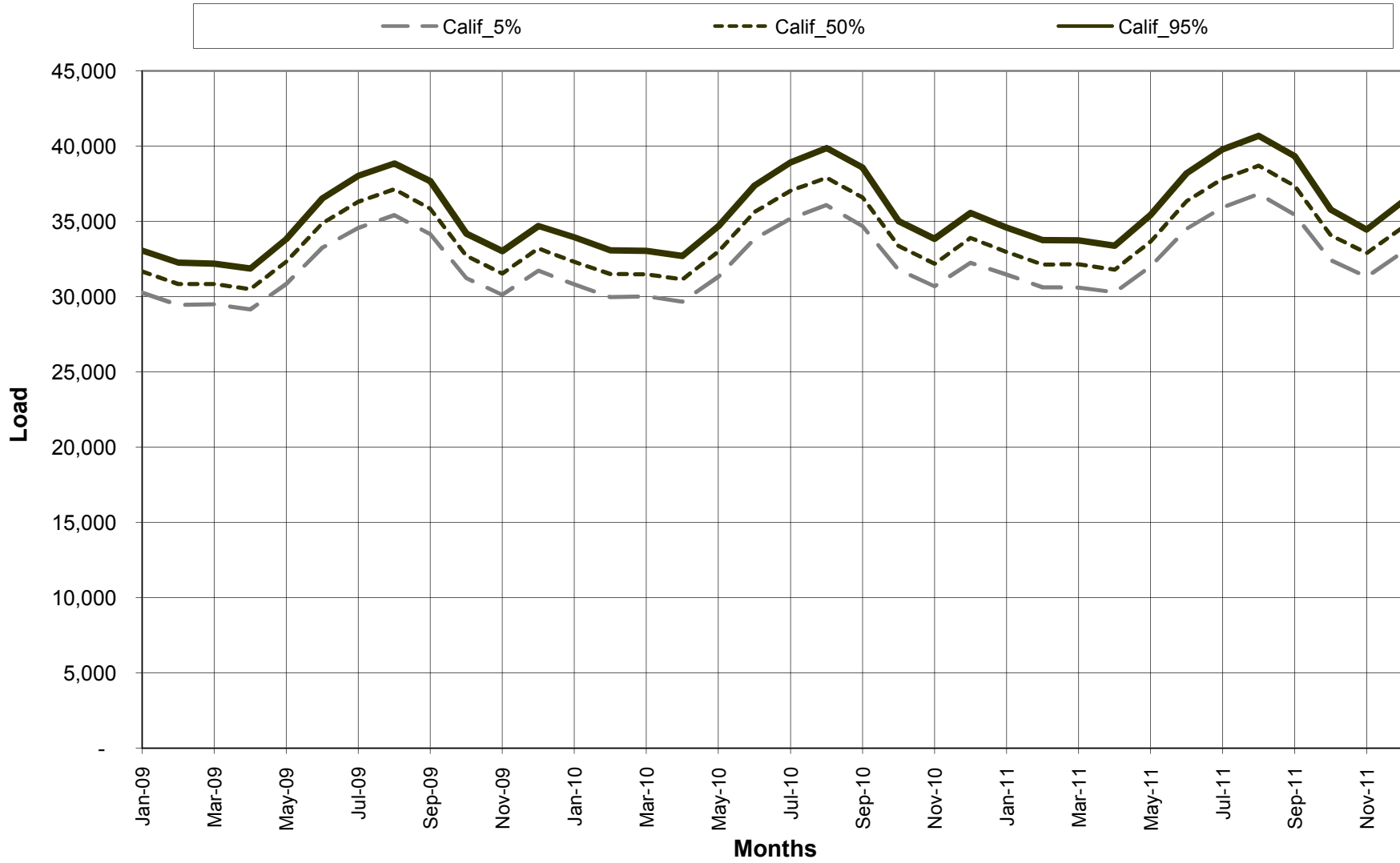
Graph 3: Simulated PNW Loads for CY 2009 - 2011



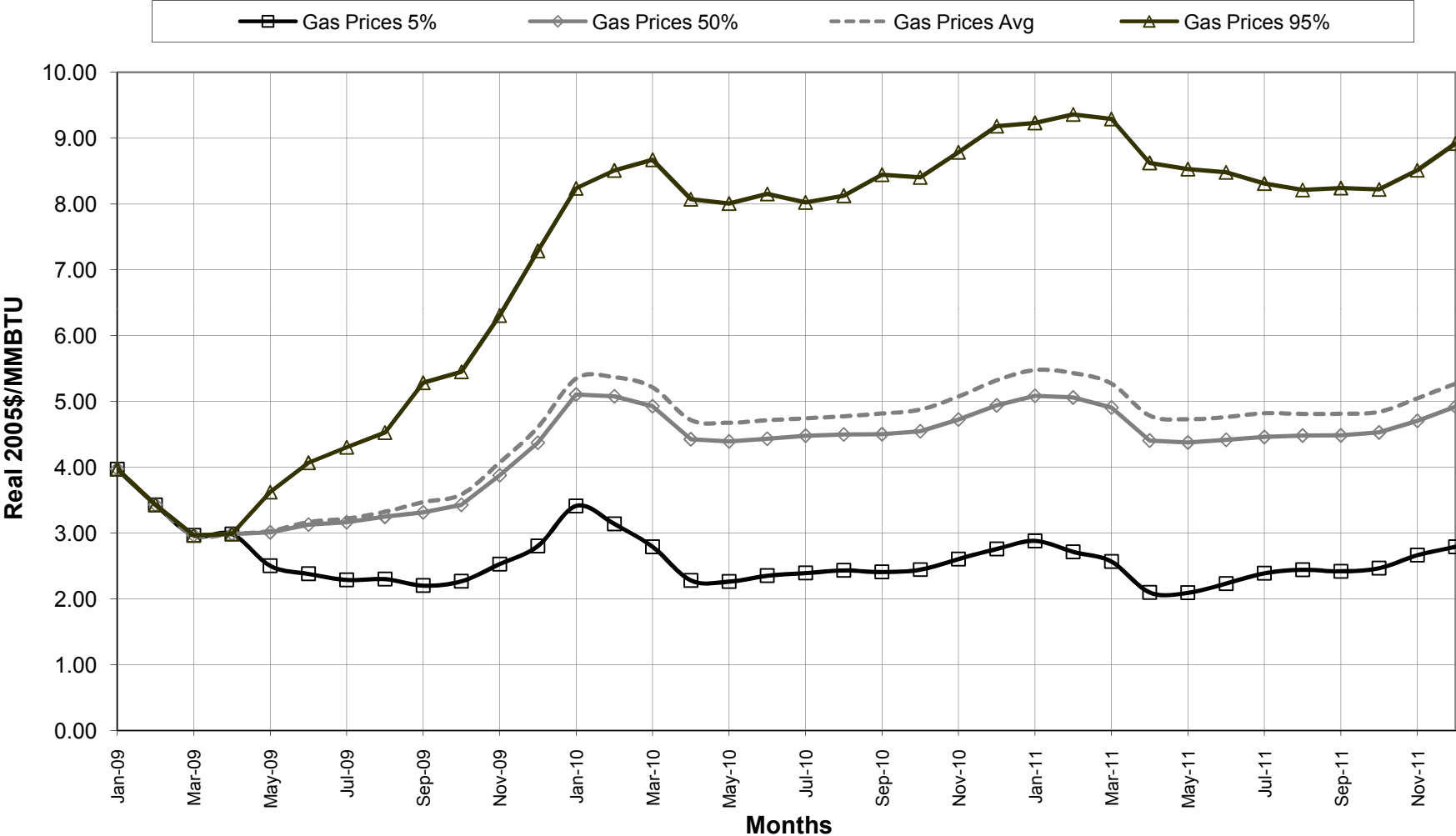
Graph 4: Number of Times California Hydro Generation for 18 Years were Sampled Based on 3,500 Sampled Values



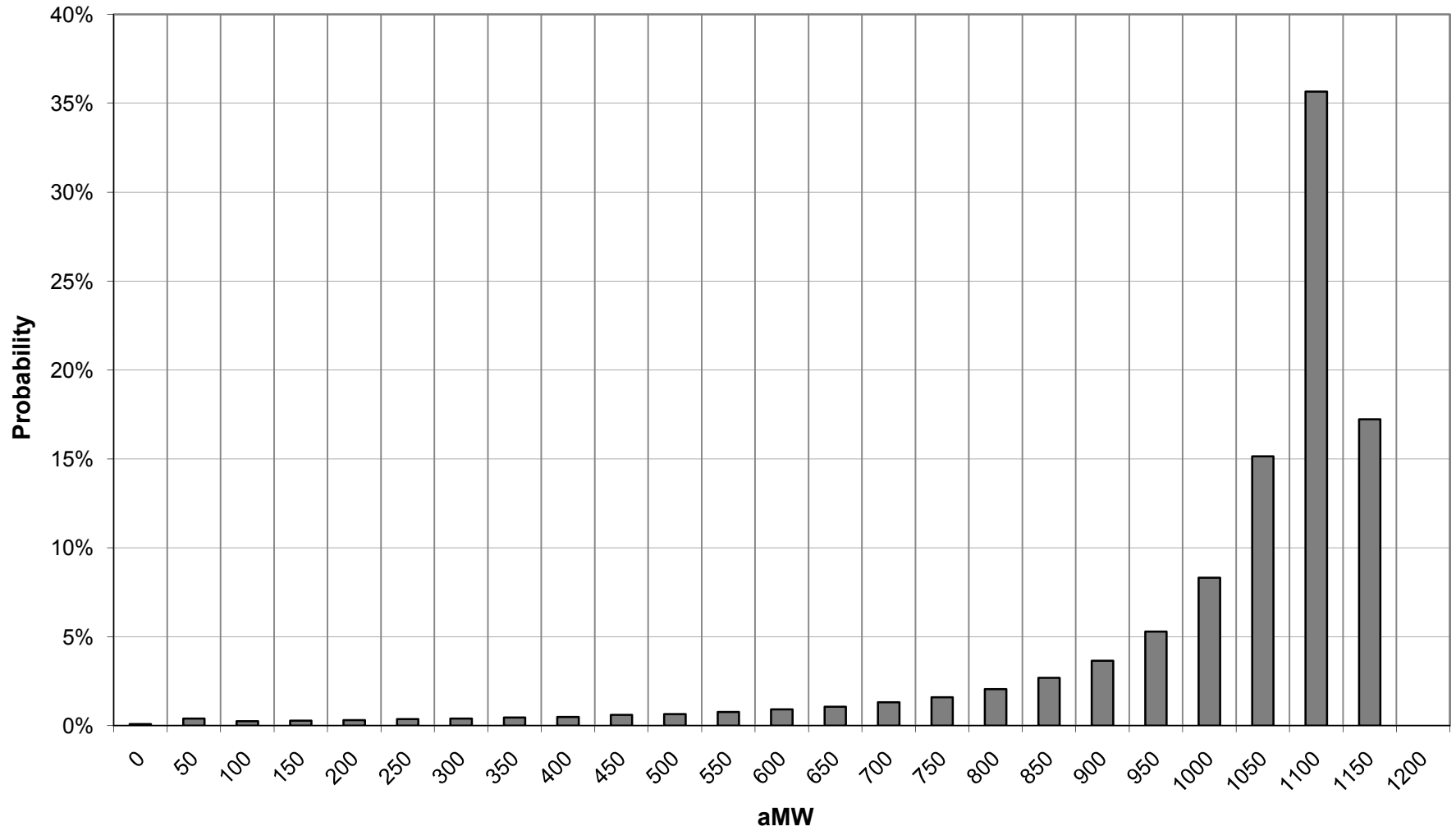
Graph 5: Simulated California Loads for CY 2009 - 2011



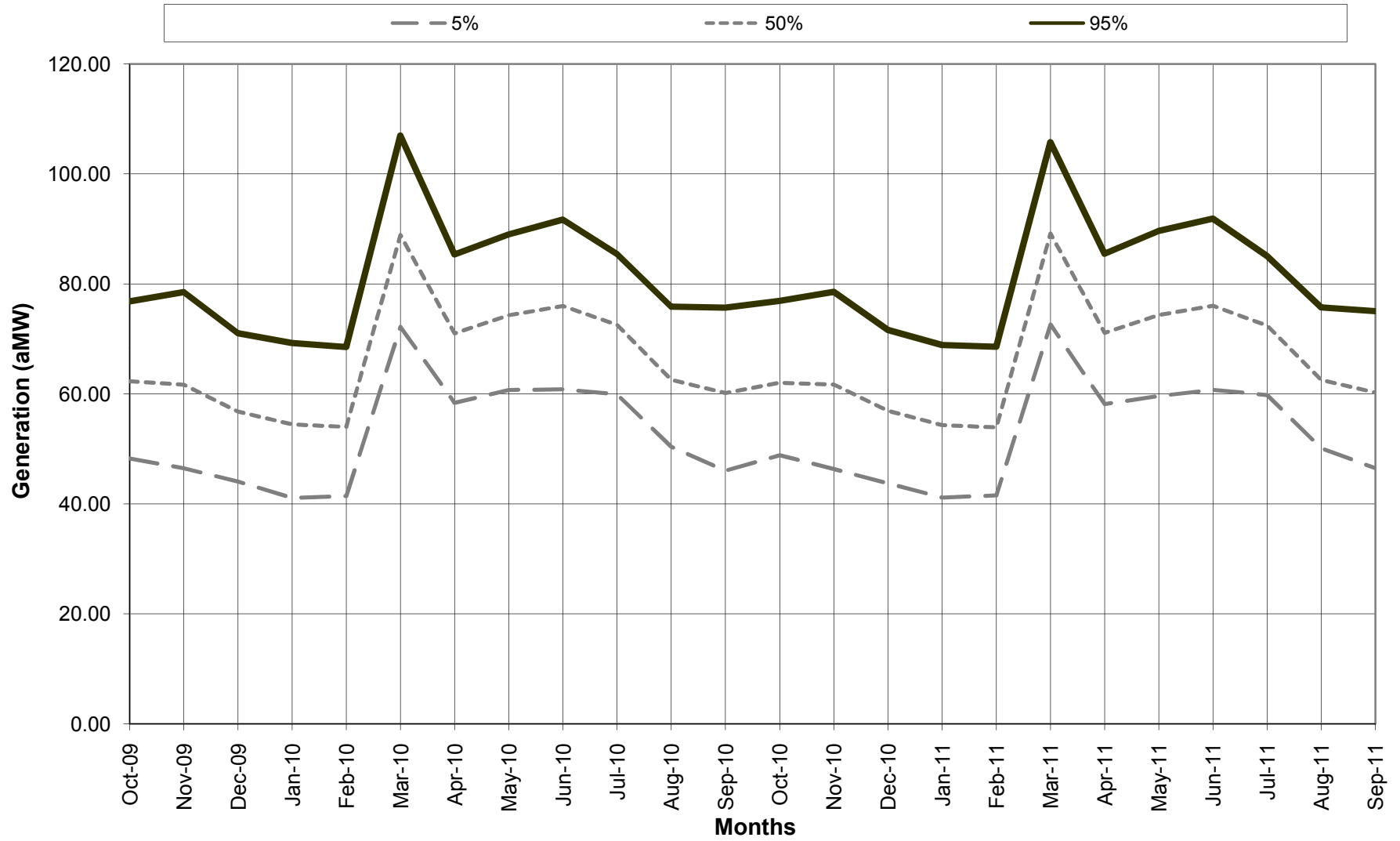
Graph 6: Simulated Natural Gas Prices for CY 2009 - 2011



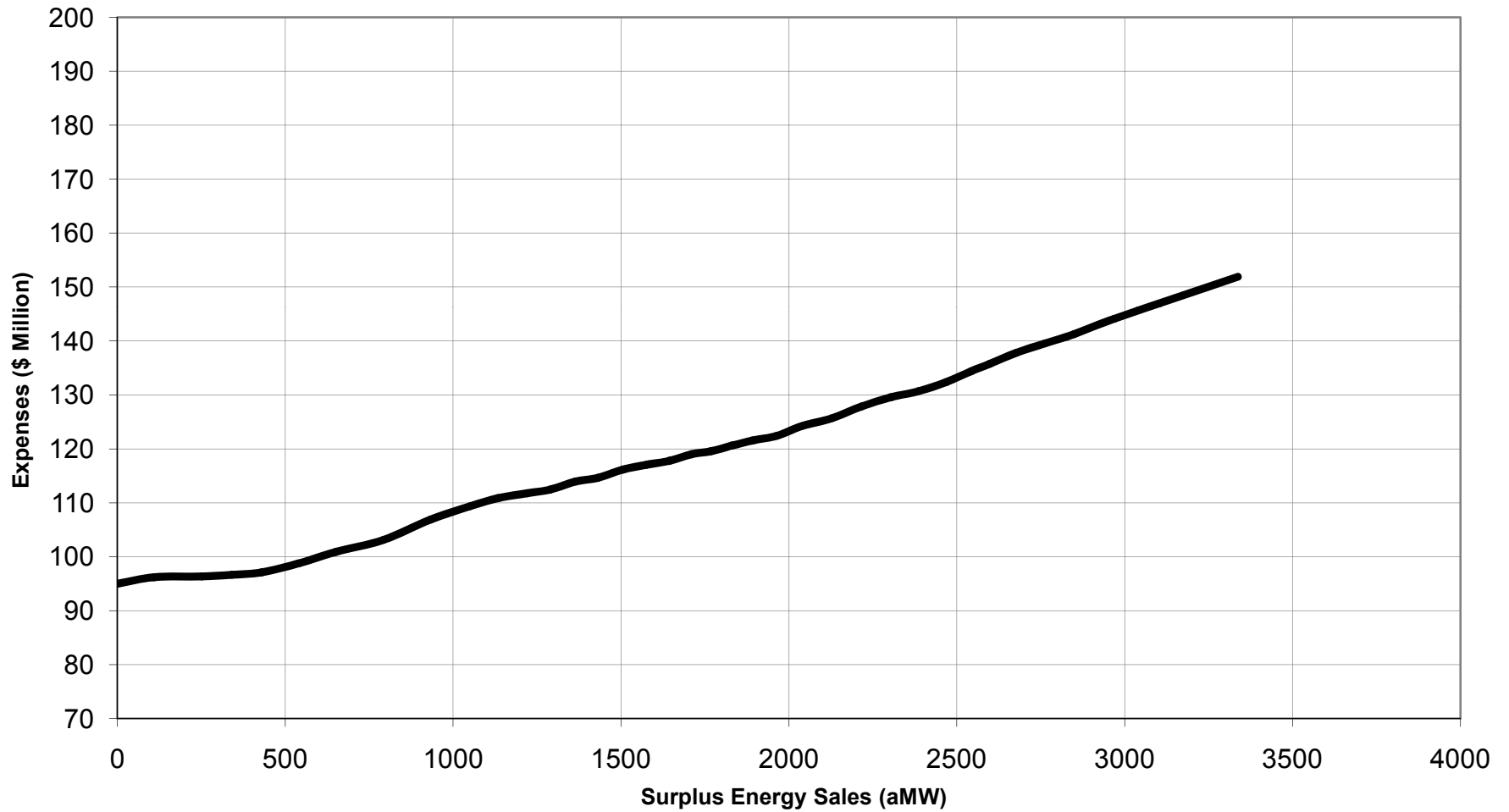
Graph 7: Simulated CGS Output Distribution for October 2010



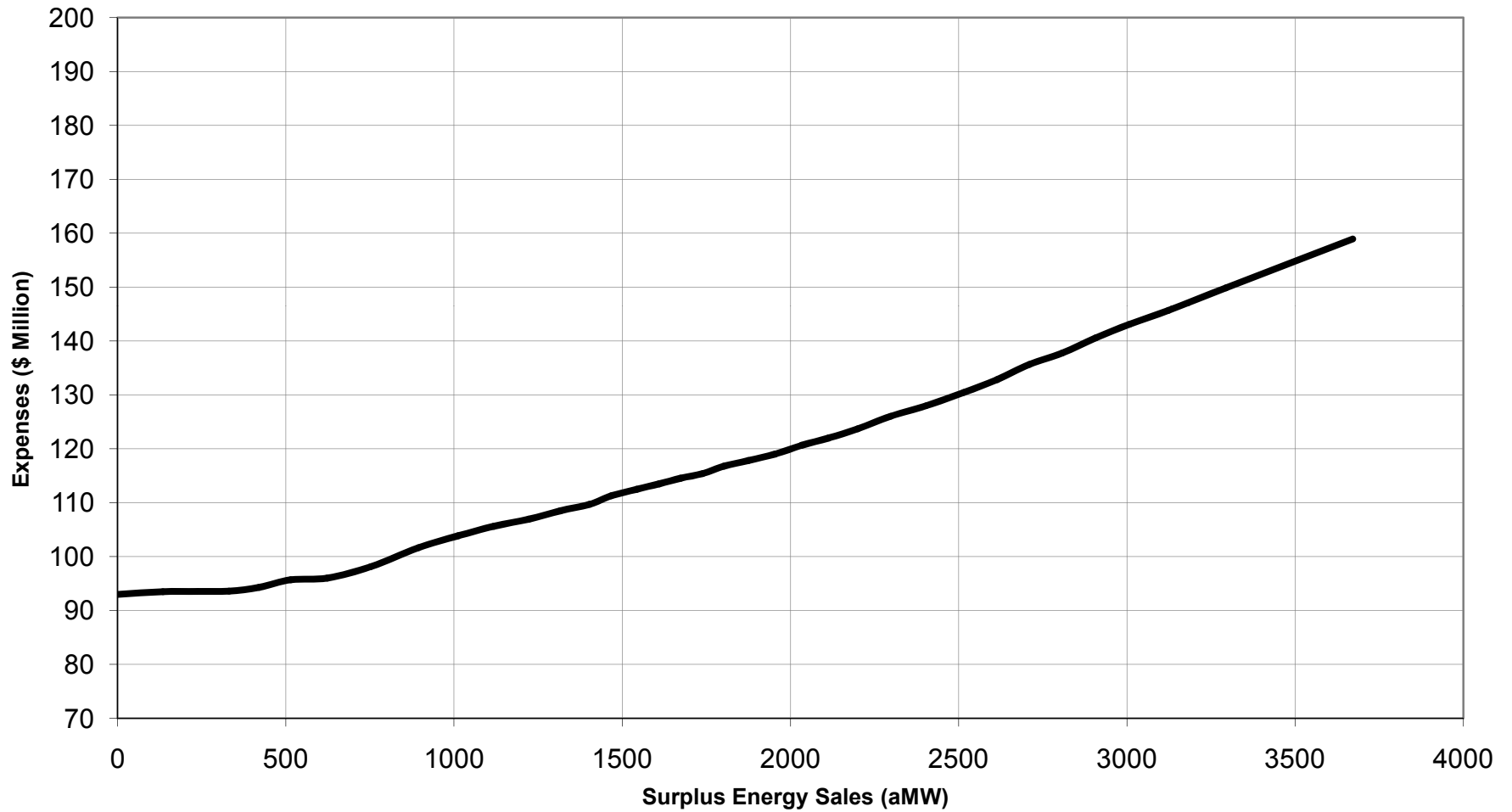
Graph 8: Simulated Total Wind Generation for FY 2010-2011



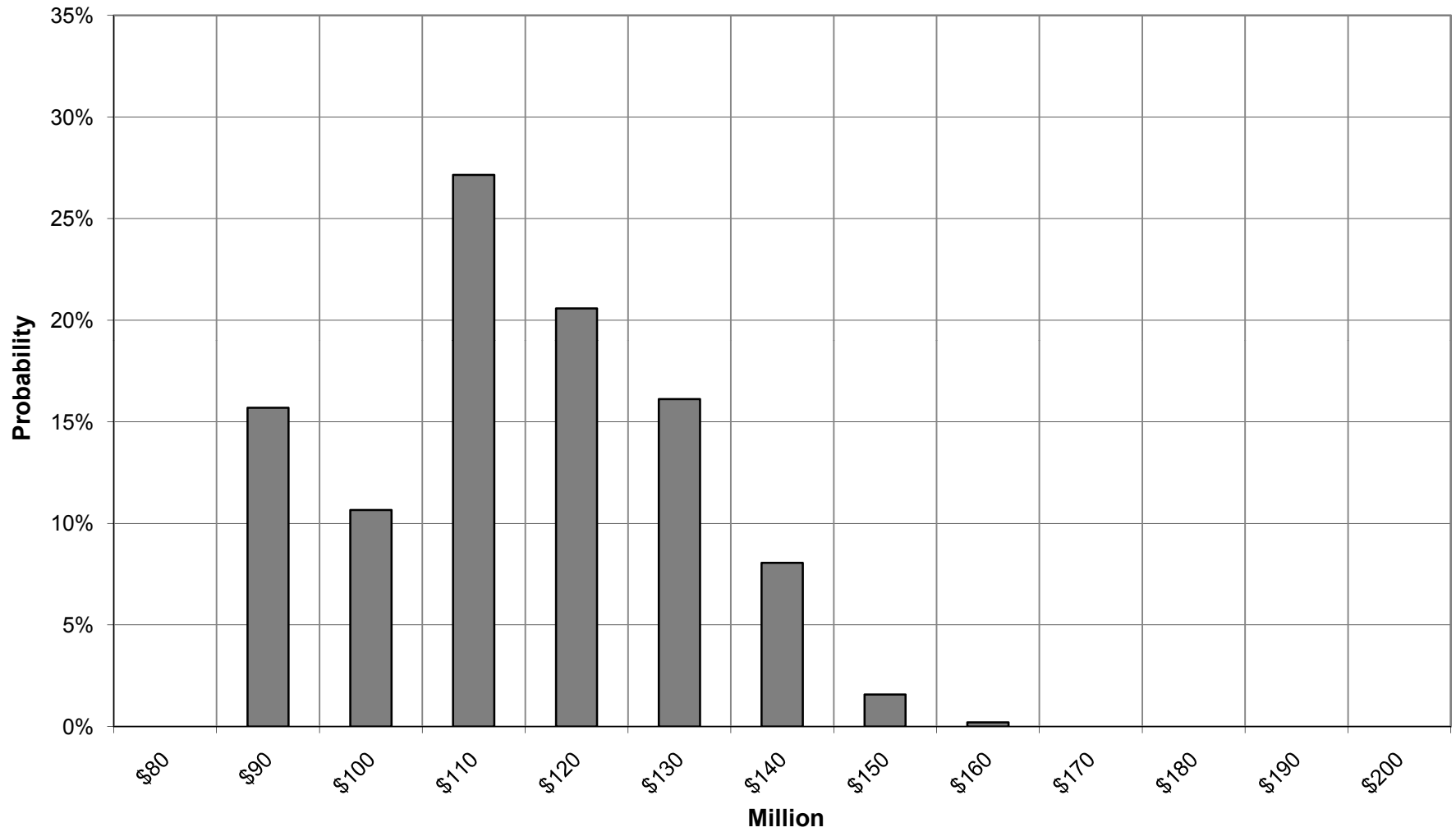
Graph 9: PS Transmission & Ancillary Services Expenses vs. Surplus Energy Sales For FY 2010



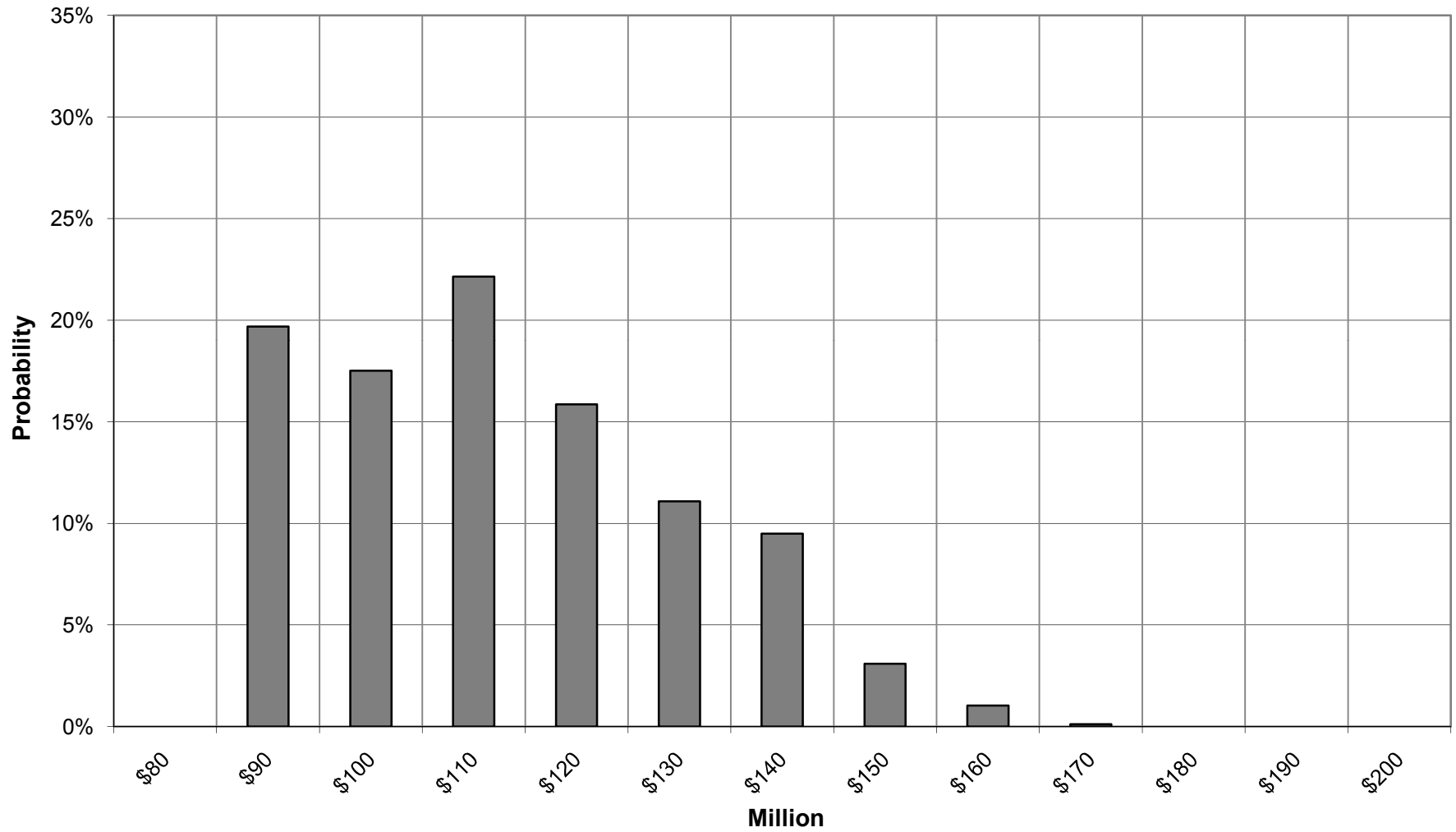
Graph 10: PS Transmission & Ancillary Services Expenses vs. Surplus Energy Sales For FY 2011



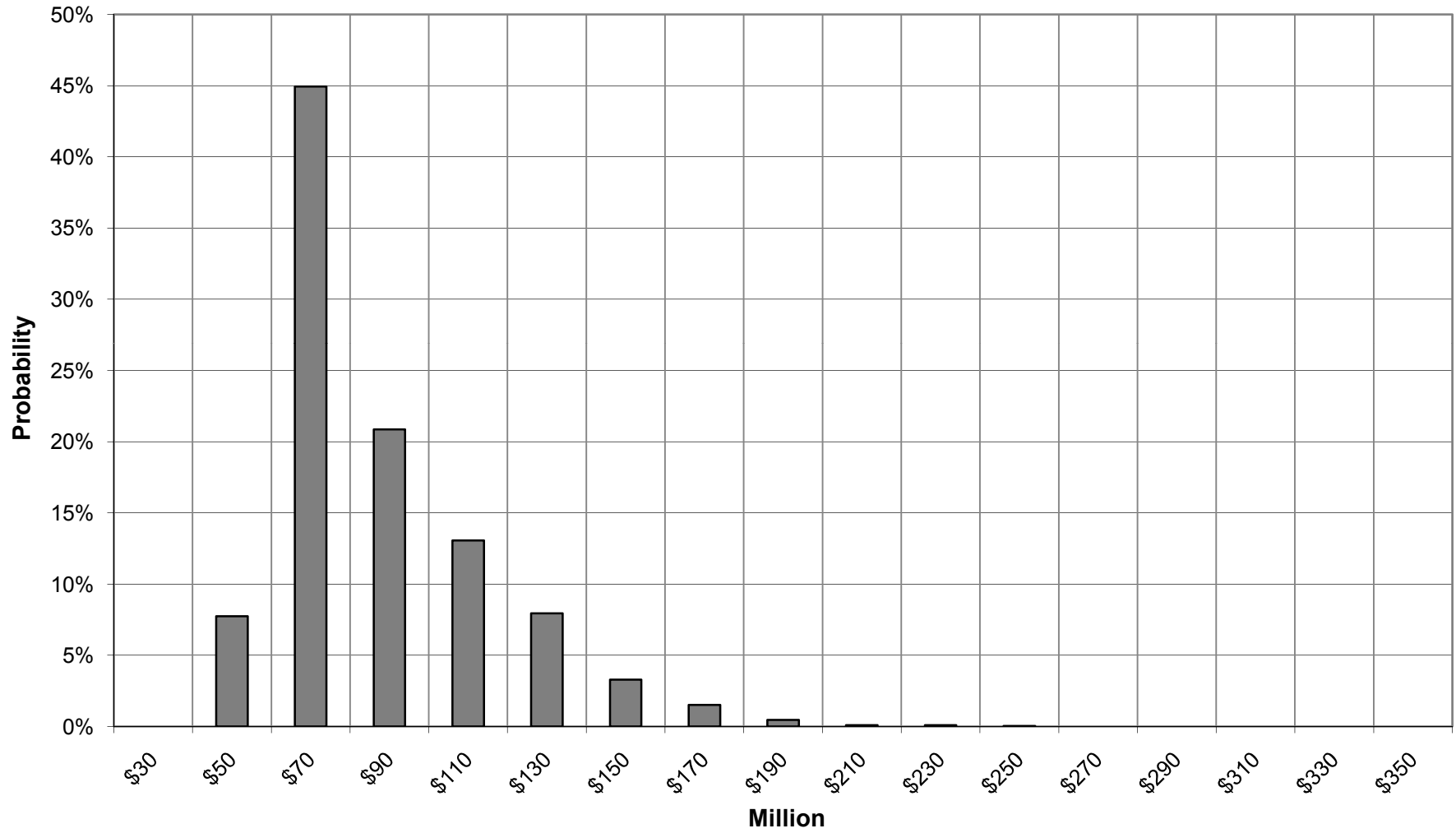
Graph 11: PS Transmission and Ancillary Service Expense Distribution for FY 2010



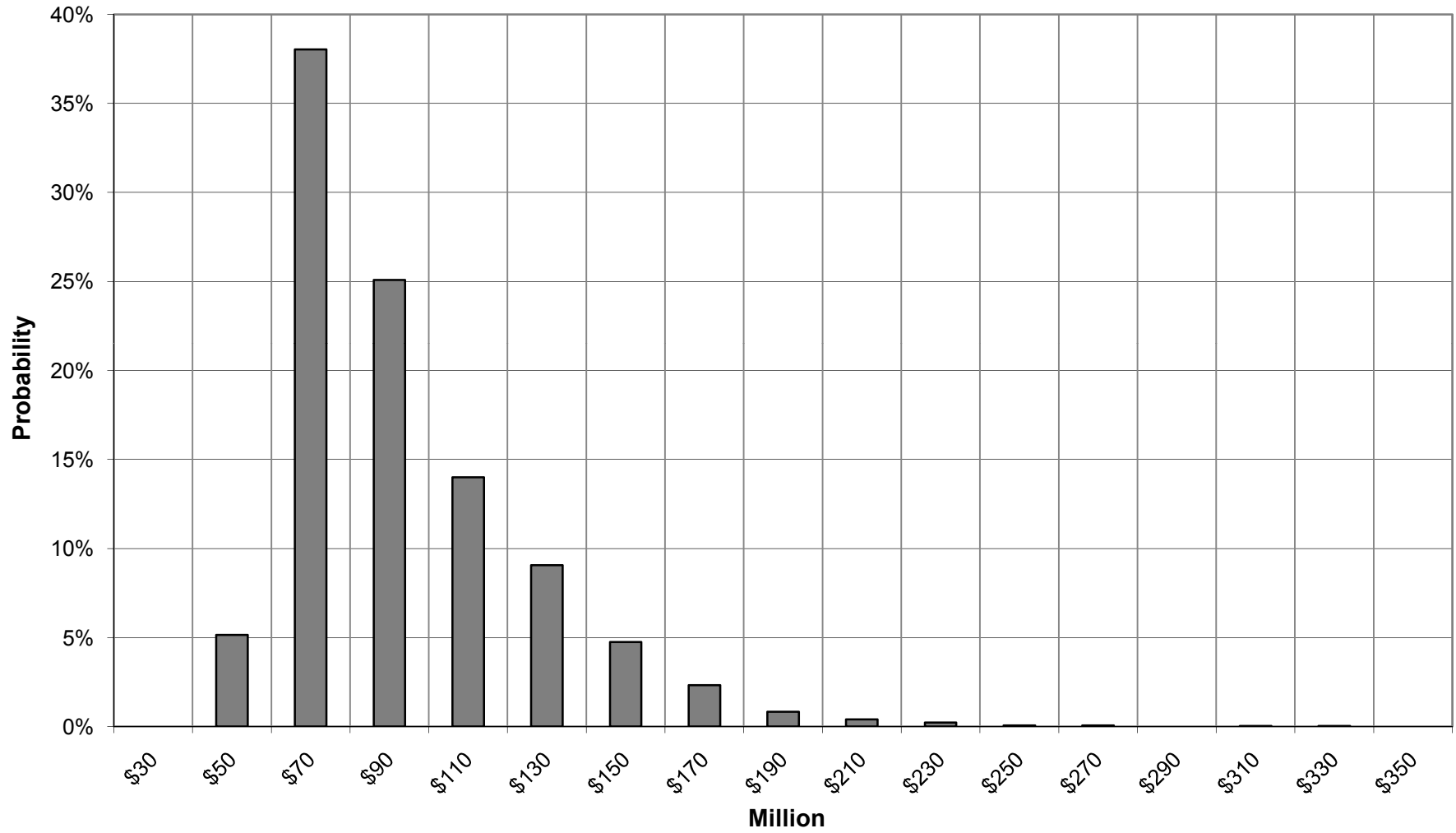
Graph 12: PS Transmission and Ancillary Service Expense Distribution for FY 2011



Graph 13: Simulated 4(h)(10)(C) Credits for FY 2010



Graph 14: Simulated 4(h)(10)(C) Credits for FY 2011



**RISK ANALYSIS AND MITIGATION STUDY
DOCUMENTATION**

OPERATING RISK ANALYSIS TABLES

(TABLES 1-42)

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 1: PNW Hydro Generation (aMW) with Hydro Independents													
2	for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	11,579	13,038	13,568	12,394	12,116	12,016	11,996	13,503	16,013	13,812	11,053	10,270	12,615
7	1930	11,175	12,347	13,351	12,731	12,036	11,405	13,138	12,754	12,992	13,392	10,334	9,930	12,133
8	1931	10,828	12,795	13,498	12,842	11,904	11,139	10,725	13,439	12,552	13,433	11,590	10,751	12,131
9	1932	10,069	11,798	13,163	12,125	11,119	13,156	17,800	22,305	20,621	15,570	11,813	10,918	14,218
10	1933	11,344	12,805	15,213	20,301	16,159	12,086	15,897	20,192	20,780	19,813	15,304	12,175	16,011
11	1934	13,396	17,235	21,586	21,658	20,863	18,966	19,601	20,708	18,728	14,938	10,668	10,509	17,386
12	1935	11,192	12,662	14,280	19,095	19,226	11,494	14,191	19,465	17,625	17,351	12,977	10,184	14,958
13	1936	11,033	12,358	13,154	11,349	12,420	11,674	15,885	20,904	20,464	14,087	11,845	9,644	13,736
14	1937	11,006	12,737	13,428	12,922	11,266	10,638	9,790	14,900	14,141	12,782	12,294	10,435	12,207
15	1938	11,163	13,020	15,025	19,598	14,630	15,548	18,879	22,964	19,602	16,439	11,202	11,069	15,772
16	1939	11,448	12,538	13,381	13,309	12,164	13,168	16,301	21,116	16,257	13,547	10,321	9,640	13,610
17	1940	11,419	12,881	14,975	12,923	13,336	16,376	17,572	17,633	17,046	12,107	10,078	10,312	13,886
18	1941	10,956	12,807	13,601	12,065	12,544	13,797	12,131	14,007	13,150	13,187	11,311	11,451	12,586
19	1942	10,353	12,793	15,593	14,893	14,921	11,225	14,309	17,702	20,530	18,058	13,240	11,143	14,559
20	1943	11,351	12,611	14,663	17,966	17,686	16,710	20,738	22,761	20,920	19,132	12,546	9,526	16,378
21	1944	11,350	12,912	13,704	12,703	12,275	12,109	12,074	12,483	12,058	11,818	11,093	11,013	12,133
22	1945	10,073	11,524	12,921	12,565	11,143	11,043	9,110	18,813	18,450	13,237	11,361	10,020	12,536
23	1946	10,886	13,717	15,340	17,490	13,862	17,916	19,711	22,938	20,255	18,288	12,759	11,203	16,215
24	1947	11,282	13,774	19,633	19,932	19,724	18,958	18,347	21,279	20,510	18,077	12,245	10,918	17,047
25	1948	15,924	17,392	16,629	21,648	15,858	15,157	17,876	22,986	21,152	19,825	15,255	12,059	17,668
26	1949	12,299	13,405	14,795	13,145	15,573	18,383	19,489	23,033	20,536	13,312	10,945	9,567	15,367
27	1950	11,280	13,322	14,817	18,717	19,223	20,385	20,354	21,787	20,467	20,088	14,226	11,513	17,172
28	1951	13,977	16,912	21,248	22,109	21,830	20,269	20,515	22,706	20,241	19,763	14,023	11,224	18,725
29	1952	14,918	15,328	16,956	21,561	17,073	13,497	20,331	23,113	21,040	17,094	12,554	10,270	16,980
30	1953	11,184	12,293	13,506	15,078	19,043	13,987	13,775	21,801	21,060	20,021	13,116	11,049	15,474
31	1954	12,267	13,965	16,431	18,723	20,733	15,284	17,941	22,470	20,358	19,955	18,257	15,231	17,617
32	1955	12,438	15,449	15,811	14,278	12,887	12,426	13,555	17,415	20,682	19,854	15,040	10,998	15,086
33	1956	13,269	16,938	20,390	22,405	21,296	20,230	20,543	22,814	20,993	20,012	13,822	11,340	18,663
34	1957	12,832	13,223	16,095	16,185	15,017	17,476	18,278	23,142	20,855	15,294	11,580	10,615	15,891
35	1958	11,351	13,068	14,238	15,894	18,913	15,267	18,014	23,097	20,785	15,096	11,885	10,372	15,639
36	1959	11,920	14,997	18,528	21,624	20,986	15,824	19,151	21,945	20,289	17,378	13,753	15,595	17,640
37	1960	16,999	19,244	19,071	19,497	16,907	16,226	20,155	20,051	20,344	17,070	12,258	11,048	17,407
38	1961	11,573	13,485	13,853	18,929	17,139	17,238	17,415	21,945	20,119	16,013	12,580	10,128	15,863
39	1962	10,776	13,239	15,351	16,732	16,121	12,585	18,837	21,190	20,375	14,454	12,129	10,042	15,140
40	1963	12,856	15,363	18,111	18,344	18,523	11,990	14,749	19,162	20,881	17,313	13,001	10,981	15,923
41	1964	11,093	13,481	14,771	15,634	15,792	12,092	14,099	20,351	21,271	19,874	14,367	12,728	15,461

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 1: PNW Hydro Generation (aMW) with Hydro Independents													
2	for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	13,270	14,665	20,238	22,267	21,735	19,634	19,195	22,876	20,708	17,022	14,451	11,762	18,139
43	1966	12,477	13,279	14,385	17,829	14,194	11,536	18,662	19,536	18,656	17,496	12,848	10,505	15,123
44	1967	11,165	12,808	15,347	21,685	21,246	15,900	14,090	20,144	21,048	19,834	13,691	11,175	16,491
45	1968	12,302	13,443	15,051	19,731	18,837	16,349	12,658	17,446	20,473	19,155	14,186	14,064	16,130
46	1969	13,859	16,901	17,100	21,936	21,319	16,342	20,501	23,157	20,710	18,736	11,792	10,770	17,737
47	1970	12,214	13,495	13,547	14,983	17,871	14,868	14,485	19,581	21,104	16,019	11,466	10,036	14,951
48	1971	11,263	13,179	15,065	22,476	21,598	20,433	20,535	22,897	21,141	20,559	15,502	11,872	18,028
49	1972	12,728	13,950	15,359	22,559	21,956	20,762	20,441	22,769	21,173	20,065	17,262	12,486	18,446
50	1973	12,306	13,456	16,526	16,071	13,129	12,259	11,555	16,542	14,565	13,763	10,127	9,949	13,367
51	1974	11,075	12,320	18,317	22,587	21,821	20,643	20,487	22,598	21,036	20,206	15,359	11,587	18,166
52	1975	10,965	13,099	14,091	17,906	16,236	16,810	14,204	22,456	21,141	20,452	13,400	12,150	16,084
53	1976	14,060	17,247	22,209	22,214	21,474	18,316	20,515	22,913	20,985	19,891	19,248	16,865	19,655
54	1977	12,158	13,139	13,642	12,604	12,542	11,775	10,614	11,575	10,797	11,881	11,665	10,673	11,924
55	1978	9,117	11,752	16,282	16,208	15,045	14,745	18,563	21,391	18,716	17,556	12,512	13,932	15,485
56	1979	12,251	13,287	13,801	13,348	15,344	16,727	14,170	20,449	15,163	13,123	10,015	9,776	13,952
57	1980	10,920	12,715	15,045	12,293	14,812	12,338	16,472	22,952	20,864	14,918	11,245	10,934	14,617
58	1981	11,256	13,777	19,964	21,455	18,598	15,697	13,519	18,532	20,555	19,645	15,646	11,222	16,660
59	1982	11,927	14,069	15,302	19,899	21,861	20,397	19,355	22,853	20,770	19,451	14,914	13,559	17,840
60	1983	13,771	14,632	16,537	21,875	17,759	20,565	19,006	21,581	20,676	20,262	15,100	12,310	17,852
61	1984	12,168	18,138	15,597	22,552	17,485	20,571	20,530	19,144	21,125	19,872	13,111	11,711	17,666
62	1985	12,109	14,966	14,631	16,031	12,600	15,291	19,054	21,723	17,328	12,676	9,704	10,565	14,732
63	1986	12,049	15,708	12,896	19,172	19,191	20,560	20,052	18,393	19,462	15,808	11,859	10,202	16,254
64	1987	11,060	14,506	14,486	13,062	13,857	13,875	14,944	17,511	16,885	13,336	10,192	9,670	13,609
65	1988	10,413	12,225	12,793	11,871	11,701	11,456	12,831	16,098	11,986	14,065	11,700	10,114	12,281
66	1989	10,118	12,478	14,289	12,485	13,335	14,666	19,578	20,539	17,381	13,865	10,220	10,160	14,090
67	1990	10,927	13,597	17,093	20,554	17,255	14,874	19,232	19,697	20,207	16,442	13,200	9,942	16,079
68	1991	10,714	17,247	17,194	21,224	21,029	14,523	17,242	21,677	19,903	19,625	14,721	10,644	17,123
69	1992	10,701	12,792	13,075	13,425	12,246	15,643	13,224	15,040	13,072	12,765	9,761	9,191	12,586
70	1993	10,493	12,278	13,490	12,530	12,396	12,559	13,481	19,618	15,060	14,909	12,106	9,469	13,213
71	1994	10,578	13,176	13,912	12,691	13,665	12,076	14,368	16,063	14,121	13,562	10,112	9,461	12,809
72	1995	10,322	12,180	14,428	14,742	18,188	18,255	15,799	19,491	19,419	16,991	12,162	10,656	15,202
73	1996	12,692	19,431	22,024	22,294	21,921	20,384	20,652	22,984	20,758	19,948	14,031	11,387	19,029
74	1997	12,118	13,710	16,978	22,560	21,978	20,679	20,448	22,945	21,082	20,304	14,860	14,128	18,465
75	1998	17,044	15,888	14,996	19,417	17,850	16,104	15,659	20,002	20,979	17,267	12,226	10,771	16,514
76	50 WY Average	11,956	13,804	15,757	17,408	16,628	15,162	16,596	20,095	19,128	16,882	12,927	11,274	15,631
77	70 WY Average	11,878	13,957	15,662	17,341	16,635	15,505	16,706	20,029	18,903	16,756	12,760	11,137	15,602
78	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8,760

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 2: PNW Hydro Generation (aMW) with Hydro Independents													
2	for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	11,602	13,062	13,577	12,399	12,122	12,021	12,003	13,517	16,032	13,833	11,068	10,280	12,628
7	1930	11,194	12,365	13,360	12,737	12,041	11,410	13,146	12,772	13,011	13,412	10,349	9,940	12,146
8	1931	10,850	12,819	13,508	12,848	11,910	11,143	10,731	13,451	12,568	13,454	11,609	10,760	12,144
9	1932	10,092	11,821	13,171	12,129	11,124	13,158	18,175	23,043	21,642	15,592	11,831	10,933	14,405
10	1933	11,367	12,827	15,223	20,290	16,171	12,090	15,906	20,218	21,800	20,073	15,324	12,187	16,127
11	1934	13,420	17,240	22,242	22,810	21,800	18,941	21,059	20,732	18,704	14,959	10,683	10,520	17,735
12	1935	11,216	12,684	14,289	19,094	19,192	11,499	14,198	19,485	17,648	17,377	12,991	10,197	14,969
13	1936	11,055	12,381	13,163	11,352	12,426	11,678	15,901	20,929	21,055	14,109	11,865	9,654	13,798
14	1937	11,024	12,757	13,437	12,928	11,272	10,642	9,794	14,919	14,158	12,801	12,311	10,445	12,220
15	1938	11,186	13,043	15,034	19,596	14,637	15,554	19,590	23,638	19,627	16,462	11,214	11,080	15,899
16	1939	11,469	12,561	13,389	13,315	12,170	13,176	16,318	21,147	16,279	13,568	10,337	9,651	13,626
17	1940	11,442	12,904	14,986	12,928	13,341	16,381	17,582	17,660	17,071	12,127	10,093	10,321	13,901
18	1941	10,979	12,831	13,610	12,149	12,456	13,804	12,139	14,023	13,170	13,208	11,326	11,461	12,599
19	1942	10,374	12,816	15,602	14,899	14,928	11,231	14,319	17,726	20,557	18,084	13,257	11,152	14,575
20	1943	11,370	12,633	14,671	17,972	17,669	16,715	22,196	22,781	21,947	19,157	12,562	9,535	16,591
21	1944	11,372	12,935	13,712	12,709	12,283	12,115	12,083	12,499	12,076	11,838	11,111	11,026	12,147
22	1945	10,090	11,547	12,930	12,569	11,147	11,047	9,115	18,833	18,473	13,257	11,376	10,030	12,549
23	1946	10,905	13,741	15,349	17,496	13,875	17,915	20,514	23,709	20,281	18,313	12,775	11,213	16,359
24	1947	11,303	13,797	19,633	19,930	19,710	18,945	18,359	21,300	21,316	18,104	12,261	10,928	17,122
25	1948	15,922	17,418	16,640	22,294	14,754	15,163	18,002	23,746	22,163	20,087	15,274	12,069	17,824
26	1949	12,322	13,428	14,804	13,150	15,580	18,358	20,286	23,549	21,041	13,332	10,959	9,576	15,525
27	1950	11,302	13,344	14,826	18,715	19,198	20,944	20,250	21,798	21,490	20,261	14,243	11,523	17,316
28	1951	14,000	16,936	21,238	23,278	22,764	20,705	21,983	23,313	20,268	20,024	14,043	11,236	19,136
29	1952	14,930	15,352	16,967	21,558	17,077	13,507	20,995	23,875	21,701	17,117	12,572	10,282	17,163
30	1953	11,203	12,315	13,514	15,082	19,029	13,992	13,785	21,826	22,079	20,281	13,134	11,059	15,589
31	1954	12,290	13,988	16,441	18,720	20,711	15,290	17,953	22,560	21,382	20,214	18,279	15,223	17,737
32	1955	12,461	15,474	15,821	14,283	12,893	12,433	13,561	17,432	21,704	20,114	15,058	11,006	15,203
33	1956	13,292	16,963	20,379	23,574	20,569	20,215	21,369	23,574	22,026	20,272	13,839	11,349	18,949
34	1957	12,855	13,246	16,104	16,192	15,032	17,483	18,292	23,902	21,893	15,316	11,597	10,624	16,053
35	1958	11,373	13,091	14,246	15,901	18,900	15,273	18,029	23,859	21,797	15,117	11,900	10,380	15,797
36	1959	11,943	15,020	18,527	22,778	20,923	14,489	19,067	21,819	21,325	17,403	13,774	15,585	17,695
37	1960	16,991	19,237	19,072	19,496	16,915	16,233	20,825	20,079	21,289	17,095	12,272	11,057	17,546
38	1961	11,596	13,508	13,862	18,928	17,112	17,245	17,426	21,958	21,134	16,036	12,597	10,137	15,956
39	1962	10,798	13,263	15,361	16,739	16,128	12,590	19,640	21,219	21,361	14,475	12,142	10,051	15,299
40	1963	12,879	15,387	18,111	18,345	18,498	11,996	14,757	19,186	20,946	17,338	13,018	10,992	15,939
41	1964	11,116	13,505	14,781	15,640	15,808	12,097	14,103	20,380	22,285	20,132	14,385	12,738	15,578

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 2: PNW Hydro Generation (aMW) with Hydro Independents													
2	for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	13,292	14,690	20,238	23,444	22,670	19,617	19,985	23,321	21,608	17,048	14,469	11,772	18,495
43	1966	12,498	13,302	14,394	17,837	14,205	11,540	19,064	19,566	18,681	17,521	12,866	10,519	15,172
44	1967	11,188	12,831	15,356	22,713	21,081	14,420	13,946	20,154	22,054	20,096	13,709	11,185	16,541
45	1968	12,324	13,466	15,060	19,729	18,813	16,358	12,669	17,468	21,162	19,183	14,205	14,066	16,196
46	1969	13,883	16,926	17,111	23,093	20,385	15,833	21,968	23,916	21,224	18,763	11,807	10,780	17,957
47	1970	12,237	13,519	13,556	14,987	17,855	14,874	14,498	19,607	22,113	16,042	11,481	10,046	15,045
48	1971	11,286	13,202	15,074	23,209	22,526	19,919	20,421	23,655	22,161	20,817	15,522	11,884	18,286
49	1972	12,751	13,973	15,369	23,067	22,075	22,331	21,109	23,528	22,193	20,325	17,285	12,499	18,864
50	1973	12,329	13,479	16,536	16,077	13,145	12,264	11,561	16,562	14,585	13,784	10,143	9,960	13,381
51	1974	11,097	12,341	18,317	23,737	22,835	22,227	21,952	23,361	22,069	20,465	15,377	11,597	18,767
52	1975	10,984	13,122	14,100	17,902	16,252	16,816	14,217	22,474	22,162	20,709	13,418	12,162	16,201
53	1976	14,083	17,272	22,858	23,379	21,951	16,996	21,190	23,674	21,897	20,148	19,292	16,860	19,958
54	1977	12,180	13,162	13,650	12,609	12,549	11,782	10,622	11,585	10,810	11,902	11,680	10,684	11,936
55	1978	9,138	11,774	16,278	16,212	15,049	14,749	18,551	21,398	18,741	17,580	12,528	13,922	15,494
56	1979	12,275	13,311	13,810	13,353	15,352	16,734	14,181	20,469	15,181	13,143	10,032	9,788	13,967
57	1980	10,943	12,739	15,055	12,336	14,774	12,343	16,489	23,484	20,890	14,940	11,260	10,943	14,676
58	1981	11,274	13,801	19,966	22,614	16,676	15,705	13,429	18,524	21,580	19,908	15,668	11,233	16,717
59	1982	11,950	14,093	15,311	19,898	22,782	21,985	19,029	23,265	21,772	19,477	14,933	13,556	18,144
60	1983	13,794	14,656	16,547	21,869	17,744	22,153	19,005	21,599	20,699	20,521	15,120	12,323	18,018
61	1984	12,190	18,142	15,606	23,712	16,022	20,762	20,302	19,169	22,133	19,898	13,130	11,724	17,742
62	1985	12,131	14,989	14,640	16,042	12,610	15,298	19,048	21,752	17,349	12,696	9,719	10,576	14,747
63	1986	12,071	15,733	12,904	19,170	19,149	22,135	20,464	18,418	19,486	15,831	11,875	10,211	16,431
64	1987	11,082	14,530	14,495	13,067	13,863	13,882	14,957	17,528	16,909	13,355	10,206	9,680	13,623
65	1988	10,429	12,249	12,801	11,875	11,706	11,461	12,837	16,111	12,002	14,085	11,713	10,124	12,293
66	1989	10,141	12,501	14,298	12,489	13,341	14,673	19,677	20,564	17,404	13,885	10,234	10,169	14,112
67	1990	10,950	13,620	17,104	20,554	17,263	14,880	20,046	19,722	21,219	16,465	13,218	9,953	16,241
68	1991	10,736	17,273	17,205	21,727	20,961	13,597	17,226	21,693	19,926	19,879	14,738	10,653	17,113
69	1992	10,719	12,809	13,082	13,430	12,251	15,650	13,231	15,051	13,091	12,784	9,772	9,199	12,597
70	1993	10,515	12,301	13,499	12,536	12,402	12,563	13,489	19,640	15,078	14,930	12,123	9,479	13,227
71	1994	10,594	13,200	13,922	12,696	13,672	12,081	14,376	16,083	14,141	13,583	10,127	9,470	12,822
72	1995	10,341	12,202	14,437	14,748	18,165	18,230	15,807	19,517	19,442	17,014	12,177	10,666	15,212
73	1996	12,715	19,435	22,663	23,468	22,852	21,959	21,656	23,564	21,769	20,208	14,050	11,398	19,630
74	1997	12,141	13,733	16,988	23,726	22,916	22,260	21,300	23,706	22,105	20,562	14,879	14,127	19,017
75	1998	17,031	15,913	15,005	19,419	17,855	16,110	15,676	20,017	21,997	17,293	12,243	10,782	16,607
76	50 WY Average	11,977	13,826	15,789	17,656	16,671	15,144	16,904	20,335	19,695	16,974	12,944	11,283	15,763
77	70 WY Average	11,898	13,979	15,697	17,594	16,656	15,595	16,963	20,237	19,413	16,845	12,777	11,146	15,730
78	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8,760
79														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 3: Federal Hydro Generation (aMW) with Hydro Independents													
2	for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	6,171	7,147	7,269	7,179	6,789	7,107	6,576	7,297	8,902	7,924	6,234	6,191	7,066
7	1930	6,496	7,258	7,395	7,303	6,725	6,658	7,531	6,870	7,124	7,682	6,006	5,960	6,918
8	1931	6,266	7,477	7,593	7,166	6,871	6,319	6,080	7,841	6,937	8,032	6,867	6,592	7,007
9	1932	5,712	6,677	7,247	6,442	6,097	7,496	10,555	13,897	11,467	8,922	6,683	6,742	8,171
10	1933	6,478	6,591	8,598	12,101	9,755	6,755	9,137	12,202	11,280	10,952	9,281	7,119	9,190
11	1934	7,111	9,526	12,115	12,563	11,844	11,146	11,784	12,564	11,232	8,998	6,015	6,402	10,098
12	1935	6,254	6,223	7,680	11,281	11,558	6,431	8,256	11,473	9,633	10,202	7,666	6,019	8,543
13	1936	6,301	7,059	7,182	6,044	7,362	6,746	9,213	12,582	11,735	8,406	6,831	5,832	7,940
14	1937	6,415	7,599	7,303	7,385	6,532	6,087	4,982	8,626	7,305	7,181	7,073	6,349	6,910
15	1938	6,378	6,903	8,417	11,389	8,505	9,269	11,337	13,569	11,396	9,578	6,264	6,834	9,159
16	1939	6,554	7,062	7,035	7,406	6,775	7,701	9,454	12,836	8,699	7,878	5,870	5,789	7,763
17	1940	6,616	7,618	8,748	7,166	7,249	9,854	10,662	10,792	10,158	6,732	5,717	6,308	8,136
18	1941	6,348	7,478	8,032	6,816	6,984	8,384	6,985	8,319	7,426	7,813	6,803	7,136	7,381
19	1942	5,781	7,419	9,010	8,854	8,679	6,578	8,197	10,719	12,230	10,990	8,180	6,580	8,601
20	1943	6,479	6,613	7,905	10,528	10,633	10,072	11,914	13,784	11,419	10,770	7,148	5,344	9,379
21	1944	6,319	7,185	7,147	7,263	6,941	6,786	6,733	7,004	6,315	6,902	6,655	6,786	6,836
22	1945	5,788	6,686	7,161	6,755	6,059	6,297	4,646	11,223	10,553	7,593	6,476	5,982	7,112
23	1946	5,997	7,558	8,702	9,605	7,807	10,770	11,865	13,242	11,373	10,675	7,423	6,700	9,321
24	1947	6,219	7,496	11,549	12,047	11,396	11,263	10,486	13,078	11,941	10,925	7,075	6,494	9,995
25	1948	8,736	9,808	9,707	13,168	9,315	9,044	10,446	13,792	10,956	11,817	9,177	6,983	10,261
26	1949	6,755	7,242	8,343	7,333	9,160	11,356	11,481	13,731	11,665	7,324	5,931	5,457	8,810
27	1950	6,328	6,909	8,084	10,713	11,523	12,056	11,585	13,081	10,850	11,310	8,085	6,715	9,763
28	1951	7,511	9,030	12,002	12,824	12,046	12,060	11,790	13,369	11,367	11,647	8,128	6,476	10,687
29	1952	8,110	8,364	9,831	13,199	9,738	7,727	12,370	13,755	12,030	10,055	7,314	5,954	9,874
30	1953	6,375	6,972	7,251	7,993	11,316	8,136	7,647	13,041	11,909	11,822	7,544	6,525	8,864
31	1954	6,738	7,611	9,225	10,484	12,379	8,612	10,130	13,765	10,758	10,719	11,349	9,086	10,060
32	1955	6,762	8,401	9,113	7,753	7,119	7,114	7,472	10,501	11,560	10,846	9,114	6,226	8,511
33	1956	6,979	9,165	11,824	13,276	12,704	12,052	11,575	13,136	10,809	11,759	7,940	6,635	10,650
34	1957	6,982	6,986	8,979	9,093	8,294	10,164	10,885	14,064	11,333	9,036	6,487	6,381	9,065
35	1958	6,375	7,391	7,825	8,877	10,896	9,042	10,512	14,155	12,084	8,917	6,743	6,214	9,071
36	1959	6,675	8,090	10,760	13,169	12,672	9,288	10,932	13,254	10,970	9,787	8,018	9,428	10,238
37	1960	9,426	10,898	11,158	11,852	9,369	9,537	11,662	12,095	12,012	9,953	6,841	6,604	10,122
38	1961	6,513	7,113	7,901	10,904	9,693	10,302	10,213	13,677	11,479	9,529	7,396	6,018	9,230
39	1962	5,999	7,418	8,569	9,828	9,481	7,309	11,061	12,950	12,257	8,219	6,833	5,970	8,815
40	1963	7,289	8,374	10,506	10,789	10,414	6,735	8,473	11,756	12,239	10,405	7,713	6,546	9,265
41	1964	6,061	7,255	8,430	8,527	9,250	6,652	7,789	12,312	11,866	11,530	8,677	7,435	8,814

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 3: Federal Hydro Generation (aMW) with Hydro Independents													
2	for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	7,457	8,176	11,882	13,387	12,563	11,988	10,941	13,815	12,528	9,777	8,642	6,783	10,657
43	1966	6,900	7,174	8,322	10,305	8,276	6,317	10,714	11,558	10,622	10,369	7,489	6,068	8,680
44	1967	6,205	6,924	8,569	12,787	12,958	9,216	7,523	11,782	11,542	11,867	8,167	6,714	9,507
45	1968	6,644	7,128	8,552	11,316	10,803	9,293	7,077	10,291	11,569	11,748	8,591	8,216	9,264
46	1969	7,523	9,332	9,898	13,249	13,282	9,743	11,561	13,567	11,699	11,353	6,868	6,269	10,345
47	1970	6,794	7,446	7,600	8,053	10,397	8,794	8,385	11,502	12,509	9,421	6,442	5,974	8,595
48	1971	6,334	7,317	8,234	13,237	13,004	12,020	11,907	13,396	11,241	11,584	9,472	6,945	10,380
49	1972	6,963	7,418	8,854	13,233	13,086	11,420	11,050	13,419	10,999	10,839	10,549	7,144	10,406
50	1973	6,758	7,337	9,322	8,872	7,211	7,031	6,152	9,842	8,076	7,809	5,769	5,830	7,510
51	1974	6,250	6,500	10,726	13,015	12,373	11,735	11,648	13,303	11,012	10,958	9,238	6,671	10,283
52	1975	5,977	7,118	7,706	9,809	9,323	10,109	7,865	13,633	11,552	11,726	7,648	7,141	9,140
53	1976	7,701	9,509	12,563	12,891	12,876	10,983	11,996	13,653	11,969	11,456	11,909	10,296	11,478
54	1977	6,789	7,310	7,324	7,271	7,231	6,860	5,710	6,200	5,621	7,055	6,985	6,565	6,744
55	1978	5,126	6,459	9,347	9,474	8,711	8,768	10,825	12,796	10,861	10,322	7,228	8,319	9,021
56	1979	6,997	7,469	7,489	7,646	8,996	9,817	8,184	12,555	7,843	7,390	5,760	5,784	7,993
57	1980	6,309	7,435	8,586	6,534	8,203	6,963	9,390	13,913	12,065	8,663	6,353	6,523	8,408
58	1981	6,427	7,602	11,378	12,919	10,490	9,019	7,568	11,107	11,641	12,035	9,866	6,525	9,723
59	1982	6,581	7,832	8,667	11,486	13,223	11,520	11,417	13,989	11,649	11,271	9,161	8,108	10,392
60	1983	7,711	8,109	9,332	12,568	10,159	11,936	11,278	12,960	11,927	12,012	9,096	7,121	10,360
61	1984	6,771	10,099	8,802	13,120	9,633	12,395	12,619	11,764	12,425	11,972	7,608	6,999	10,354
62	1985	6,650	8,089	8,522	9,453	6,848	9,078	11,387	12,974	8,949	7,042	5,357	6,106	8,381
63	1986	6,662	8,834	7,460	10,754	11,570	12,271	11,698	10,932	11,154	9,518	7,024	5,891	9,464
64	1987	6,057	7,918	7,774	7,273	7,395	7,913	8,663	10,395	10,205	7,876	5,843	5,647	7,746
65	1988	6,072	7,161	6,820	6,902	6,656	6,447	7,077	9,321	6,314	8,464	6,842	6,168	7,027
66	1989	5,814	6,705	7,776	6,753	7,701	8,484	11,651	12,325	9,629	7,521	5,591	5,982	7,991
67	1990	6,234	7,517	9,600	11,781	10,096	8,549	11,511	11,695	11,627	9,365	7,732	5,840	9,291
68	1991	5,857	9,205	9,931	12,864	12,562	8,111	9,947	13,303	11,609	11,377	9,009	6,143	9,981
69	1992	6,116	6,870	6,910	7,456	6,667	9,199	7,188	8,903	7,426	7,478	5,728	5,501	7,128
70	1993	6,124	7,121	7,424	7,304	6,904	7,139	7,317	11,987	8,441	8,694	7,092	5,462	7,595
71	1994	6,088	7,679	8,100	7,208	7,438	6,687	8,061	9,444	7,934	7,930	5,827	5,661	7,337
72	1995	5,986	6,754	7,857	8,196	10,342	10,817	8,963	11,650	11,037	10,082	6,911	6,421	8,743
73	1996	7,077	10,854	12,535	12,797	11,921	11,362	11,494	13,854	12,270	11,810	8,588	6,556	10,925
74	1997	6,618	7,311	9,829	12,926	12,649	11,647	11,601	13,384	11,316	11,502	8,858	8,243	10,482
75	1998	9,474	8,716	8,423	11,017	9,896	9,259	8,736	12,145	11,959	10,152	7,159	6,376	9,444
76	50 WY Average	6,654	7,595	8,890	10,040	9,640	8,864	9,515	11,982	10,701	9,782	7,571	6,695	8,993
77	70 WY Average	6,633	7,700	8,824	9,985	9,591	9,026	9,593	11,967	10,607	9,732	7,485	6,597	8,977
78	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8,760

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 4: Federal Hydro Generation (aMW) with Hydro Independents													
2	for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	6,176	7,154	7,276	7,186	6,781	7,113	6,582	7,302	8,908	7,932	6,241	6,197	7,072
7	1930	6,503	7,266	7,402	7,310	6,730	6,664	7,538	6,875	7,131	7,690	6,012	5,966	6,925
8	1931	6,272	7,485	7,601	7,173	6,878	6,324	6,085	7,848	6,945	8,042	6,875	6,599	7,014
9	1932	5,718	6,684	7,254	6,449	6,102	7,500	10,863	14,633	12,476	8,932	6,691	6,748	8,346
10	1933	6,485	6,597	8,607	12,091	9,764	6,760	9,146	12,219	12,285	11,199	9,292	7,125	9,299
11	1934	7,118	9,514	12,769	13,195	12,777	11,123	12,826	12,582	11,197	9,009	6,021	6,408	10,363
12	1935	6,261	6,228	7,688	11,283	11,524	6,437	8,264	11,489	9,643	10,216	7,675	6,025	8,548
13	1936	6,307	7,066	7,190	6,049	7,369	6,751	9,220	12,596	12,312	8,416	6,839	5,838	7,995
14	1937	6,421	7,607	7,311	7,393	6,538	6,093	4,985	8,633	7,311	7,188	7,081	6,355	6,917
15	1938	6,384	6,910	8,425	11,390	8,512	9,276	11,734	14,231	11,407	9,589	6,271	6,840	9,253
16	1939	6,560	7,069	7,042	7,413	6,781	7,707	9,463	12,853	8,709	7,886	5,876	5,794	7,771
17	1940	6,623	7,626	8,757	7,173	7,255	9,861	10,672	10,806	10,171	6,740	5,723	6,313	8,144
18	1941	6,354	7,485	8,040	6,879	6,923	8,392	6,992	8,326	7,432	7,821	6,811	7,142	7,388
19	1942	5,786	7,426	9,017	8,862	8,687	6,584	8,203	10,733	12,243	11,003	8,190	6,586	8,609
20	1943	6,485	6,619	7,911	10,526	10,608	10,078	13,159	13,792	12,277	10,780	7,155	5,347	9,555
21	1944	6,325	7,192	7,154	7,270	6,948	6,792	6,740	7,009	6,320	6,909	6,662	6,792	6,843
22	1945	5,794	6,693	7,169	6,761	6,063	6,303	4,649	11,235	10,563	7,600	6,484	5,987	7,118
23	1946	6,002	7,565	8,709	9,595	7,813	10,712	12,348	13,995	11,385	10,688	7,432	6,705	9,424
24	1947	6,224	7,502	11,547	12,047	11,371	11,251	10,496	13,083	12,579	10,938	7,083	6,500	10,049
25	1948	8,718	9,818	9,716	13,677	8,520	9,051	10,572	14,541	11,955	12,055	9,187	6,989	10,422
26	1949	6,761	7,249	8,351	7,341	9,167	11,331	12,005	14,222	12,156	7,331	5,937	5,461	8,937
27	1950	6,333	6,916	8,091	10,713	11,498	12,449	11,625	13,082	11,859	11,471	8,094	6,720	9,897
28	1951	7,517	9,038	11,990	13,949	12,990	12,497	12,909	13,966	11,379	11,822	8,137	6,481	11,052
29	1952	8,106	8,372	9,840	13,190	9,733	7,733	12,713	14,504	12,663	10,066	7,322	5,959	10,020
30	1953	6,381	6,979	7,259	7,999	11,292	8,142	7,654	13,054	12,917	11,986	7,552	6,531	8,965
31	1954	6,744	7,618	9,234	10,483	12,346	8,619	10,138	13,843	11,771	10,964	11,363	9,073	10,171
32	1955	6,768	8,409	9,122	7,761	7,126	7,121	7,479	10,514	12,567	11,093	9,124	6,232	8,621
33	1956	6,986	9,173	11,812	14,333	12,138	12,028	12,201	13,885	11,831	11,930	7,949	6,640	10,909
34	1957	6,988	6,992	8,987	9,102	8,301	10,171	10,894	14,610	12,357	9,045	6,494	6,386	9,201
35	1958	6,381	7,398	7,832	8,886	10,872	9,050	10,521	14,612	12,958	8,927	6,750	6,219	9,186
36	1959	6,681	8,098	10,759	13,967	12,629	8,325	10,902	13,120	11,991	9,798	8,030	9,414	10,293
37	1960	9,401	10,875	11,157	11,853	9,378	9,545	12,165	12,111	12,667	9,965	6,848	6,610	10,218
38	1961	6,519	7,120	7,909	10,905	9,667	10,310	10,223	13,684	11,954	9,540	7,405	6,023	9,273
39	1962	6,005	7,425	8,577	9,837	9,503	7,316	11,759	12,967	12,908	8,228	6,841	5,975	8,934
40	1963	7,296	8,382	10,505	10,792	10,389	6,741	8,481	11,769	12,290	10,417	7,722	6,552	9,273

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 4: Federal Hydro Generation (aMW) with Hydro Independents													
2	for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
41	1964	6,067	7,262	8,438	8,536	9,259	6,658	7,795	12,327	12,869	11,775	8,686	7,442	8,924
42	1965	7,464	8,184	11,880	14,447	13,609	11,964	11,742	14,154	12,969	9,788	8,652	6,788	10,959
43	1966	6,906	7,181	8,330	10,315	8,284	6,322	11,115	11,573	10,634	10,382	7,497	6,074	8,721
44	1967	6,211	6,931	8,577	13,601	12,730	8,167	7,465	11,788	11,841	12,116	8,176	6,720	9,515
45	1968	6,650	7,134	8,560	11,317	10,778	9,301	7,084	10,303	12,245	11,762	8,601	8,212	9,324
46	1969	7,530	9,341	9,907	14,127	12,598	9,377	12,901	14,226	12,201	11,367	6,876	6,274	10,548
47	1970	6,801	7,454	7,608	8,059	10,373	8,802	8,393	11,516	13,376	9,431	6,448	5,979	8,671
48	1971	6,339	7,324	8,241	13,778	13,681	11,850	11,945	14,143	12,251	11,827	9,483	6,952	10,637
49	1972	6,969	7,425	8,862	13,630	13,118	13,290	11,619	14,167	12,006	11,086	10,562	7,150	10,818
50	1973	6,764	7,344	9,330	8,880	7,217	7,038	6,159	9,854	8,084	7,818	5,775	5,835	7,518
51	1974	6,256	6,505	10,725	13,868	12,978	13,315	12,764	14,045	12,032	11,204	9,249	6,677	10,797
52	1975	5,982	7,126	7,713	9,789	9,323	10,117	7,872	13,640	12,562	11,968	7,656	7,147	9,246
53	1976	7,707	9,518	13,210	13,913	13,199	10,035	12,618	14,296	12,557	11,700	11,943	10,285	11,742
54	1977	6,795	7,318	7,331	7,279	7,238	6,867	5,716	6,206	5,627	7,064	6,994	6,571	6,751
55	1978	5,131	6,466	9,343	9,482	8,717	8,774	10,814	12,802	10,872	10,333	7,236	8,305	9,024
56	1979	7,004	7,476	7,496	7,672	9,004	9,880	8,191	12,569	7,850	7,398	5,766	5,789	8,007
57	1980	6,316	7,442	8,594	6,567	8,179	6,968	9,398	14,432	12,077	8,672	6,360	6,529	8,459
58	1981	6,433	7,610	11,378	13,857	9,124	9,019	7,543	11,098	12,653	12,285	9,878	6,531	9,802
59	1982	6,587	7,839	8,674	11,487	13,735	13,246	11,220	14,392	11,922	11,282	9,171	8,101	10,621
60	1983	7,717	8,117	9,340	12,557	10,133	13,518	11,267	12,966	11,936	12,026	9,106	7,127	10,496
61	1984	6,777	10,087	8,810	13,928	8,597	12,631	12,470	11,776	13,419	11,985	7,616	7,005	10,436
62	1985	6,656	8,096	8,530	9,462	6,853	9,086	11,375	12,989	8,958	7,050	5,362	6,110	8,387
63	1986	6,668	8,842	7,467	10,753	11,527	13,031	12,097	10,944	11,164	9,528	7,032	5,896	9,564
64	1987	6,063	7,926	7,781	7,279	7,402	7,920	8,672	10,408	10,218	7,885	5,849	5,652	7,753
65	1988	6,078	7,169	6,826	6,909	6,662	6,453	7,083	9,332	6,319	8,474	6,850	6,173	7,034
66	1989	5,820	6,712	7,784	6,759	7,708	8,489	11,750	12,342	9,639	7,529	5,596	5,988	8,006
67	1990	6,240	7,524	9,609	11,783	10,105	8,556	12,108	11,711	12,626	9,375	7,741	5,845	9,429
68	1991	5,863	9,214	9,941	13,286	12,458	7,451	9,947	13,316	11,622	11,622	9,020	6,149	9,979
69	1992	6,123	6,876	6,916	7,455	6,673	9,208	7,195	8,911	7,435	7,486	5,734	5,506	7,134
70	1993	6,131	7,128	7,431	7,312	6,910	7,143	7,322	11,999	8,446	8,703	7,099	5,467	7,602
71	1994	6,094	7,687	8,108	7,215	7,446	6,692	8,069	9,456	7,942	7,939	5,833	5,666	7,345
72	1995	5,992	6,761	7,865	8,203	10,315	10,793	8,971	11,664	11,046	10,092	6,918	6,427	8,746
73	1996	7,084	10,842	13,167	13,968	12,844	12,938	12,491	14,421	13,268	12,056	8,598	6,562	11,517
74	1997	6,624	7,318	9,838	13,690	13,426	13,223	12,442	14,133	12,326	11,746	8,868	8,236	10,978
75	1998	9,450	8,725	8,431	11,016	9,893	9,266	8,744	12,147	12,964	10,164	7,167	6,381	9,529
76	50 WY Average	6,659	7,601	8,921	10,237	9,682	8,881	9,764	12,195	11,193	9,857	7,580	6,699	9,104
77	70 WY Average	6,638	7,706	8,858	10,186	9,615	9,136	9,808	12,154	11,050	9,802	7,494	6,601	9,086
78	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8,760

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 5: Heavy-Load Hydro Generation Ratios												
2	for FY 2010												
3													
4													
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
6	1929	1.200	1.241	1.166	1.264	1.171	1.143	1.121	1.214	1.094	1.224	1.184	1.184
7	1930	1.207	1.251	1.165	1.275	1.162	1.136	1.127	1.224	1.140	1.233	1.188	1.186
8	1931	1.205	1.249	1.171	1.266	1.175	1.133	1.118	1.237	1.153	1.259	1.217	1.200
9	1932	1.190	1.239	1.165	1.247	1.143	1.105	1.071	1.154	0.994	1.229	1.239	1.214
10	1933	1.206	1.225	1.183	1.190	1.172	1.126	1.129	1.182	1.015	1.003	1.238	1.212
11	1934	1.216	1.251	1.100	1.154	1.111	1.091	1.063	1.180	1.085	1.243	1.217	1.201
12	1935	1.207	1.223	1.172	1.216	1.151	1.136	1.120	1.222	1.112	1.198	1.215	1.194
13	1936	1.205	1.247	1.166	1.244	1.174	1.136	1.127	1.209	1.089	1.260	1.217	1.181
14	1937	1.203	1.248	1.167	1.277	1.175	1.124	1.112	1.237	1.121	1.211	1.222	1.195
15	1938	1.203	1.235	1.181	1.223	1.170	1.125	1.076	1.100	1.085	1.247	1.217	1.212
16	1939	1.205	1.242	1.161	1.267	1.173	1.135	1.128	1.202	1.160	1.233	1.185	1.177
17	1940	1.209	1.245	1.190	1.262	1.160	1.128	1.130	1.263	1.150	1.222	1.199	1.198
18	1941	1.203	1.245	1.173	1.253	1.160	1.141	1.133	1.252	1.124	1.241	1.210	1.204
19	1942	1.188	1.239	1.180	1.285	1.185	1.142	1.146	1.263	1.114	1.188	1.222	1.198
20	1943	1.208	1.226	1.167	1.246	1.150	1.120	1.054	1.159	0.961	1.145	1.229	1.148
21	1944	1.194	1.239	1.160	1.264	1.173	1.144	1.114	1.233	1.107	1.199	1.202	1.202
22	1945	1.191	1.241	1.165	1.251	1.164	1.127	1.104	1.230	1.097	1.199	1.202	1.186
23	1946	1.193	1.241	1.180	1.264	1.156	1.118	1.069	1.075	1.098	1.205	1.247	1.202
24	1947	1.190	1.236	1.199	1.216	1.145	1.118	1.110	1.180	1.087	1.171	1.241	1.202
25	1948	1.226	1.248	1.193	1.209	1.161	1.139	1.101	1.094	0.944	1.095	1.240	1.208
26	1949	1.209	1.237	1.177	1.269	1.163	1.116	1.079	1.155	1.111	1.217	1.181	1.163
27	1950	1.202	1.232	1.171	1.252	1.141	1.114	1.079	1.171	0.946	1.150	1.246	1.206
28	1951	1.208	1.245	1.197	1.232	1.130	1.055	1.052	1.086	1.092	1.101	1.227	1.199
29	1952	1.216	1.245	1.196	1.181	1.175	1.147	1.065	1.102	1.102	1.231	1.246	1.181
30	1953	1.200	1.242	1.163	1.284	1.147	1.143	1.136	1.194	1.035	1.116	1.240	1.200
31	1954	1.207	1.241	1.194	1.245	1.131	1.139	1.107	1.158	0.959	1.007	1.174	1.233
32	1955	1.212	1.253	1.193	1.283	1.175	1.140	1.120	1.257	1.039	0.997	1.249	1.186
33	1956	1.215	1.251	1.197	1.246	1.072	1.084	1.038	1.066	1.009	1.093	1.244	1.202
34	1957	1.206	1.235	1.184	1.304	1.167	1.131	1.084	1.150	0.965	1.249	1.222	1.194
35	1958	1.196	1.241	1.162	1.301	1.143	1.151	1.109	1.154	1.060	1.251	1.238	1.191
36	1959	1.211	1.244	1.207	1.259	1.116	1.131	1.098	1.098	0.953	1.202	1.251	1.218
37	1960	1.208	1.243	1.206	1.282	1.188	1.135	1.096	1.218	1.084	1.230	1.237	1.206
38	1961	1.207	1.240	1.173	1.233	1.180	1.141	1.111	1.146	0.952	1.231	1.257	1.183
39	1962	1.192	1.240	1.188	1.307	1.175	1.146	1.064	1.197	1.077	1.217	1.245	1.189
40	1963	1.202	1.247	1.211	1.306	1.162	1.140	1.156	1.242	1.106	1.225	1.219	1.202
41	1964	1.191	1.238	1.179	1.303	1.139	1.123	1.123	1.216	0.962	1.090	1.230	1.209

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 5: Heavy-Load Hydro Generation Ratios for FY 2010												
2													
3													
4													
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
42	1965	1.217	1.248	1.191	1.241	1.085	1.081	1.073	1.083	1.034	1.232	1.243	1.197
43	1966	1.207	1.243	1.175	1.318	1.179	1.142	1.091	1.240	1.128	1.199	1.218	1.182
44	1967	1.201	1.238	1.187	1.216	1.126	1.122	1.151	1.200	0.957	1.134	1.225	1.209
45	1968	1.206	1.237	1.180	1.244	1.167	1.146	1.120	1.261	1.096	1.127	1.209	1.205
46	1969	1.211	1.248	1.197	1.258	1.092	1.126	1.037	1.094	1.100	1.143	1.229	1.193
47	1970	1.212	1.245	1.168	1.260	1.156	1.148	1.121	1.231	1.061	1.233	1.194	1.174
48	1971	1.198	1.235	1.170	1.237	1.107	1.087	1.066	1.072	1.032	1.065	1.237	1.210
49	1972	1.201	1.235	1.181	1.207	1.138	1.040	1.066	1.088	0.951	0.993	1.199	1.210
50	1973	1.202	1.236	1.191	1.293	1.162	1.147	1.123	1.248	1.134	1.234	1.175	1.169
51	1974	1.203	1.215	1.214	1.133	1.063	1.042	1.040	1.067	0.945	1.029	1.261	1.212
52	1975	1.181	1.241	1.165	1.301	1.170	1.128	1.128	1.155	1.021	1.086	1.237	1.209
53	1976	1.209	1.250	1.167	1.255	1.136	1.105	1.056	1.097	1.082	1.038	1.137	1.224
54	1977	1.209	1.240	1.168	1.269	1.177	1.144	1.112	1.225	1.140	1.229	1.220	1.188
55	1978	1.164	1.226	1.172	1.271	1.153	1.133	1.100	1.173	1.081	1.225	1.244	1.220
56	1979	1.217	1.244	1.170	1.271	1.187	1.129	1.132	1.207	1.140	1.223	1.173	1.174
57	1980	1.202	1.247	1.183	1.250	1.138	1.144	1.145	1.163	1.117	1.239	1.215	1.204
58	1981	1.207	1.243	1.208	1.210	1.171	1.144	1.159	1.235	0.985	1.094	1.220	1.207
59	1982	1.207	1.248	1.191	1.225	1.094	1.067	1.093	1.129	0.949	1.150	1.237	1.214
60	1983	1.199	1.241	1.197	1.208	1.159	1.062	1.078	1.180	1.057	1.102	1.246	1.209
61	1984	1.197	1.248	1.188	1.215	1.161	1.092	1.058	1.204	1.046	1.172	1.239	1.203
62	1985	1.195	1.234	1.179	1.304	1.154	1.119	1.080	1.200	1.141	1.219	1.150	1.169
63	1986	1.207	1.248	1.171	1.300	1.103	1.050	1.072	1.224	1.084	1.240	1.216	1.176
64	1987	1.192	1.238	1.163	1.253	1.177	1.155	1.160	1.252	1.143	1.251	1.172	1.170
65	1988	1.198	1.249	1.162	1.258	1.174	1.135	1.157	1.261	1.118	1.258	1.218	1.189
66	1989	1.191	1.230	1.168	1.251	1.159	1.115	1.075	1.205	1.120	1.231	1.165	1.183
67	1990	1.203	1.237	1.195	1.193	1.168	1.131	1.075	1.211	1.045	1.235	1.238	1.187
68	1991	1.192	1.248	1.201	1.185	1.142	1.134	1.111	1.175	1.097	1.035	1.233	1.202
69	1992	1.195	1.234	1.154	1.264	1.161	1.130	1.159	1.265	1.150	1.238	1.174	1.154
70	1993	1.202	1.245	1.167	1.266	1.157	1.116	1.139	1.193	1.090	1.222	1.204	1.153
71	1994	1.195	1.248	1.171	1.257	1.178	1.137	1.129	1.274	1.156	1.253	1.183	1.166
72	1995	1.196	1.239	1.169	1.284	1.146	1.124	1.124	1.217	1.072	1.224	1.237	1.205
73	1996	1.212	1.244	1.070	1.227	1.056	1.039	1.066	1.103	1.043	1.035	1.235	1.204
74	1997	1.205	1.235	1.203	1.172	1.056	1.027	1.055	1.060	0.948	1.060	1.250	1.211
75	1998	1.215	1.251	1.179	1.295	1.179	1.137	1.143	1.161	1.029	1.230	1.213	1.192

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 6: Heavy-Load Hydro Generation Ratios												
2	for FY 2011												
3													
4													
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
6	1929	1.217	1.171	1.152	1.249	1.159	1.131	1.104	1.196	1.076	1.248	1.126	1.161
7	1930	1.227	1.182	1.151	1.256	1.153	1.120	1.113	1.203	1.121	1.260	1.129	1.160
8	1931	1.225	1.182	1.158	1.250	1.162	1.122	1.099	1.220	1.135	1.291	1.159	1.181
9	1932	1.205	1.169	1.150	1.231	1.129	1.095	1.064	1.143	0.987	1.260	1.181	1.186
10	1933	1.227	1.156	1.168	1.185	1.167	1.117	1.119	1.170	1.015	1.041	1.182	1.184
11	1934	1.240	1.189	1.090	1.152	1.108	1.090	1.057	1.167	1.076	1.275	1.160	1.179
12	1935	1.226	1.153	1.159	1.212	1.144	1.120	1.112	1.208	1.100	1.226	1.157	1.171
13	1936	1.225	1.178	1.154	1.218	1.162	1.126	1.113	1.196	1.076	1.291	1.160	1.156
14	1937	1.223	1.182	1.154	1.259	1.161	1.111	1.084	1.223	1.097	1.236	1.163	1.173
15	1938	1.222	1.165	1.169	1.218	1.163	1.120	1.068	1.095	1.074	1.279	1.160	1.185
16	1939	1.226	1.173	1.148	1.251	1.166	1.124	1.119	1.190	1.145	1.262	1.127	1.151
17	1940	1.232	1.179	1.174	1.247	1.156	1.123	1.120	1.250	1.137	1.249	1.141	1.174
18	1941	1.224	1.179	1.161	1.239	1.157	1.130	1.123	1.241	1.107	1.270	1.153	1.174
19	1942	1.203	1.174	1.165	1.272	1.176	1.127	1.132	1.249	1.101	1.216	1.168	1.172
20	1943	1.230	1.155	1.155	1.240	1.142	1.115	1.050	1.146	0.958	1.175	1.170	1.121
21	1944	1.212	1.171	1.148	1.249	1.162	1.128	1.097	1.215	1.070	1.221	1.142	1.180
22	1945	1.207	1.169	1.152	1.236	1.153	1.117	1.077	1.218	1.085	1.220	1.143	1.162
23	1946	1.209	1.174	1.168	1.253	1.149	1.112	1.063	1.071	1.085	1.232	1.190	1.174
24	1947	1.208	1.168	1.189	1.212	1.140	1.113	1.102	1.167	1.074	1.202	1.184	1.176
25	1948	1.256	1.186	1.179	1.178	1.156	1.131	1.093	1.088	0.944	1.131	1.185	1.178
26	1949	1.230	1.169	1.164	1.253	1.155	1.112	1.071	1.146	1.093	1.239	1.122	1.131
27	1950	1.221	1.164	1.159	1.247	1.137	1.105	1.084	1.158	0.946	1.180	1.188	1.176
28	1951	1.235	1.182	1.188	1.223	1.125	1.054	1.042	1.085	1.080	1.136	1.172	1.173
29	1952	1.243	1.180	1.181	1.178	1.167	1.137	1.060	1.096	1.089	1.266	1.187	1.157
30	1953	1.219	1.172	1.152	1.272	1.143	1.134	1.120	1.180	1.025	1.148	1.182	1.173
31	1954	1.229	1.173	1.181	1.243	1.128	1.129	1.099	1.145	0.956	1.045	1.123	1.209
32	1955	1.233	1.189	1.179	1.268	1.162	1.129	1.109	1.244	1.030	1.032	1.192	1.163
33	1956	1.237	1.187	1.187	1.212	1.102	1.085	1.033	1.065	1.002	1.132	1.188	1.172
34	1957	1.231	1.167	1.170	1.291	1.161	1.120	1.078	1.142	0.963	1.281	1.165	1.171
35	1958	1.216	1.173	1.149	1.290	1.138	1.143	1.098	1.147	1.049	1.283	1.180	1.168
36	1959	1.233	1.179	1.194	1.208	1.099	1.124	1.092	1.096	0.952	1.231	1.195	1.195
37	1960	1.236	1.181	1.195	1.275	1.179	1.128	1.086	1.205	1.072	1.256	1.177	1.183
38	1961	1.228	1.171	1.160	1.230	1.172	1.134	1.104	1.136	0.952	1.263	1.199	1.160
39	1962	1.209	1.170	1.174	1.294	1.167	1.136	1.055	1.182	1.064	1.245	1.186	1.165
40	1963	1.230	1.183	1.197	1.298	1.156	1.128	1.144	1.230	1.094	1.253	1.164	1.177
41	1964	1.208	1.167	1.166	1.289	1.136	1.109	1.110	1.205	0.958	1.124	1.173	1.179

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 6: Heavy-Load Hydro Generation Ratios												
2	for FY 2011												
3													
4													
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
42	1965	1.242	1.182	1.180	1.219	1.089	1.077	1.062	1.079	1.024	1.265	1.186	1.167
43	1966	1.232	1.175	1.163	1.306	1.169	1.131	1.088	1.227	1.117	1.229	1.160	1.159
44	1967	1.220	1.167	1.174	1.161	1.119	1.116	1.141	1.194	0.954	1.165	1.170	1.185
45	1968	1.227	1.170	1.167	1.242	1.159	1.139	1.107	1.248	1.084	1.166	1.155	1.181
46	1969	1.238	1.185	1.182	1.202	1.102	1.121	1.031	1.088	1.087	1.174	1.174	1.171
47	1970	1.234	1.176	1.154	1.248	1.148	1.136	1.112	1.220	1.051	1.266	1.135	1.151
48	1971	1.219	1.167	1.159	1.195	1.093	1.105	1.073	1.069	1.023	1.102	1.184	1.180
49	1972	1.226	1.168	1.171	1.181	1.124	1.055	1.057	1.085	0.949	1.027	1.150	1.179
50	1973	1.224	1.167	1.178	1.280	1.157	1.132	1.108	1.241	1.120	1.263	1.117	1.142
51	1974	1.223	1.149	1.201	1.130	1.064	1.046	1.041	1.066	0.945	1.057	1.206	1.185
52	1975	1.197	1.171	1.151	1.289	1.163	1.120	1.117	1.143	1.013	1.119	1.179	1.178
53	1976	1.237	1.188	1.156	1.228	1.109	1.115	1.053	1.091	1.070	1.071	1.087	1.203
54	1977	1.232	1.174	1.155	1.254	1.166	1.131	1.095	1.197	1.085	1.256	1.162	1.167
55	1978	1.178	1.155	1.157	1.260	1.146	1.125	1.092	1.163	1.069	1.257	1.187	1.201
56	1979	1.241	1.176	1.157	1.255	1.178	1.122	1.120	1.195	1.121	1.250	1.115	1.149
57	1980	1.221	1.178	1.169	1.234	1.131	1.133	1.132	1.152	1.103	1.271	1.159	1.177
58	1981	1.228	1.176	1.199	1.147	1.170	1.136	1.139	1.221	0.981	1.128	1.168	1.183
59	1982	1.227	1.182	1.179	1.220	1.087	1.081	1.090	1.121	0.948	1.180	1.180	1.189
60	1983	1.227	1.177	1.184	1.207	1.150	1.061	1.071	1.169	1.041	1.137	1.190	1.177
61	1984	1.222	1.187	1.175	1.177	1.150	1.090	1.059	1.190	1.037	1.199	1.182	1.171
62	1985	1.218	1.171	1.166	1.291	1.149	1.115	1.070	1.188	1.127	1.243	1.093	1.147
63	1986	1.229	1.185	1.155	1.290	1.095	1.051	1.067	1.212	1.070	1.276	1.156	1.152
64	1987	1.210	1.173	1.152	1.241	1.165	1.145	1.150	1.237	1.128	1.280	1.112	1.142
65	1988	1.216	1.181	1.148	1.241	1.163	1.121	1.136	1.250	1.075	1.288	1.159	1.167
66	1989	1.205	1.159	1.154	1.232	1.149	1.107	1.065	1.192	1.111	1.257	1.107	1.159
67	1990	1.220	1.169	1.180	1.190	1.163	1.124	1.070	1.197	1.035	1.264	1.180	1.160
68	1991	1.208	1.185	1.185	1.158	1.131	1.129	1.103	1.163	1.083	1.069	1.178	1.177
69	1992	1.213	1.166	1.140	1.248	1.153	1.123	1.146	1.254	1.135	1.263	1.118	1.127
70	1993	1.221	1.177	1.153	1.252	1.146	1.108	1.124	1.179	1.064	1.249	1.145	1.125
71	1994	1.212	1.180	1.158	1.242	1.166	1.123	1.112	1.261	1.145	1.283	1.124	1.137
72	1995	1.212	1.168	1.157	1.273	1.135	1.116	1.116	1.205	1.059	1.256	1.177	1.181
73	1996	1.238	1.182	1.064	1.222	1.057	1.040	1.062	1.099	1.032	1.069	1.178	1.177
74	1997	1.224	1.167	1.189	1.168	1.056	1.030	1.049	1.059	0.947	1.091	1.193	1.186
75	1998	1.243	1.187	1.165	1.285	1.173	1.128	1.132	1.146	1.020	1.265	1.152	1.168

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 7: Federal Hydro Generation Adjustment													
2	for Refill of Non-Treaty Storage for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	-54	-398	0	0	-21	-38	0	0	0	0	0	0	-42
7	1930	-518	0	0	0	0	0	0	0	0	0	0	0	-44
8	1931	-519	0	0	0	0	0	0	0	0	0	0	0	-44
9	1932	0	0	0	0	0	0	0	0	0	0	0	-532	-44
10	1933	-519	0	0	0	0	0	0	0	0	0	0	0	-44
11	1934	-508	-8	0	0	0	0	0	0	0	0	0	0	-44
12	1935	-519	0	0	0	0	0	0	0	0	0	0	0	-44
13	1936	-519	0	0	0	0	0	0	0	0	0	0	0	-44
14	1937	-519	0	0	0	0	0	0	0	0	0	0	0	-44
15	1938	-407	0	-111	0	0	0	0	0	0	0	0	0	-44
16	1939	-519	0	0	0	0	0	0	0	0	0	0	0	-44
17	1940	-518	0	0	0	0	0	0	0	0	0	0	0	-44
18	1941	-519	0	0	0	0	0	0	0	0	0	0	0	-44
19	1942	-520	0	0	0	0	0	0	0	0	0	0	0	-44
20	1943	-519	0	0	0	0	0	0	0	0	0	0	0	-44
21	1944	0	-529	0	0	0	0	0	0	0	0	0	0	-44
22	1945	0	-525	0	0	0	0	0	0	0	0	0	0	-43
23	1946	-30	-141	-58	-18	-21	-109	0	0	0	0	0	0	-32
24	1947	-511	-9	0	0	0	0	0	0	0	0	0	0	-44
25	1948	-430	0	0	0	0	0	0	0	0	0	0	0	-36
26	1949	-518	0	0	0	0	0	0	0	0	0	0	0	-44
27	1950	-519	0	0	0	0	0	0	0	0	0	0	0	-44
28	1951	-517	0	0	0	0	0	0	0	0	0	0	0	-44
29	1952	-470	0	0	0	0	0	0	0	0	0	0	0	-40
30	1953	-519	0	0	0	0	0	0	0	0	0	0	0	-44
31	1954	-518	0	0	0	0	0	0	0	0	0	0	0	-44
32	1955	-518	0	0	0	0	0	0	0	0	0	0	0	-44
33	1956	-518	0	0	0	0	0	0	0	0	0	0	0	-44
34	1957	-518	0	0	0	0	0	0	0	0	0	0	0	-44
35	1958	-519	0	0	0	0	0	0	0	0	0	0	0	-44
36	1959	-518	0	0	0	0	0	0	0	0	0	0	0	-44
37	1960	-431	0	0	0	0	0	0	0	0	0	0	0	-37
38	1961	-519	0	0	0	0	0	0	0	0	0	0	0	-44
39	1962	0	0	-368	-90	-48	0	0	0	0	0	0	0	-43
40	1963	-518	0	0	0	0	0	0	0	0	0	0	0	-44
41	1964	0	0	-331	-77	-114	0	0	0	0	0	0	0	-43

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 7: Federal Hydro Generation Adjustment													
2	for Refill of Non-Treaty Storage for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	-516	0	0	0	0	0	0	0	0	0	0	0	-44
43	1966	-518	0	0	0	0	0	0	0	0	0	0	0	-44
44	1967	-519	0	0	0	0	0	0	0	0	0	0	0	-44
45	1968	-519	0	0	0	0	0	0	0	0	0	0	0	-44
46	1969	-516	0	0	0	0	0	0	0	0	0	0	0	-44
47	1970	-518	0	0	0	0	0	0	0	0	0	0	0	-44
48	1971	-480	0	-39	0	0	0	0	0	0	0	0	0	-44
49	1972	-519	0	0	0	0	0	0	0	0	0	0	0	-44
50	1973	-519	0	0	0	0	0	0	0	0	0	0	0	-44
51	1974	-471	0	-44	0	0	0	0	0	0	0	0	0	-44
52	1975	-137	0	-78	-53	-57	-127	0	0	0	0	0	-20	-40
53	1976	-516	0	0	0	0	0	0	0	0	0	0	0	-44
54	1977	-518	0	0	0	0	0	0	0	0	0	0	0	-44
55	1978	0	0	-324	-53	-104	-8	0	0	0	0	0	0	-41
56	1979	-517	0	0	0	0	0	0	0	0	0	0	0	-44
57	1980	-510	0	0	0	0	0	0	0	0	0	0	0	-43
58	1981	-519	0	0	0	0	0	0	0	0	0	0	0	-44
59	1982	-519	0	0	0	0	0	0	0	0	0	0	0	-44
60	1983	-517	0	0	0	0	0	0	0	0	0	0	0	-44
61	1984	-432	-83	0	0	0	0	0	0	0	0	0	0	-43
62	1985	-519	0	0	0	0	0	0	0	0	0	0	0	-44
63	1986	-519	0	0	0	0	0	0	0	0	0	0	0	-44
64	1987	-247	-280	0	0	0	0	0	0	0	0	0	0	-44
65	1988	-63	-463	0	0	0	0	0	0	0	0	0	0	-43
66	1989	0	0	-505	-9	0	0	0	0	0	0	0	0	-44
67	1990	-450	0	-68	0	0	0	0	0	0	0	0	0	-44
68	1991	0	-531	0	0	0	0	0	0	0	0	0	0	-44
69	1992	0	-120	0	-57	-81	-233	0	0	0	0	0	0	-41
70	1993	-124	-360	0	-40	0	0	0	0	0	0	0	0	-44
71	1994	0	-530	0	0	0	0	0	0	0	0	0	0	-44
72	1995	0	0	-194	-38	-171	-89	0	0	0	0	0	0	-40
73	1996	-372	-125	0	0	0	0	0	0	0	0	0	0	-42
74	1997	-519	0	0	0	0	0	0	0	0	0	0	0	-44
75	1998	-431	0	0	0	0	0	0	0	0	0	0	0	-37
76	50 WY Average	-421	-32	-27	-6	-7	-6	0	0	0	0	0	-11	-43
77	70 WY Average	-390	-59	-30	-6	-9	-9	0	0	0	0	0	-8	-43
78	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8,760

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 8: Federal Hydro Generation Adjustment													
2	for Refill of Non-Treaty Storage for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	0	0	0	0	-14	0	0	0	0	0	0	0	-1
7	1930	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1931	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1932	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1933	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1934	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1935	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1936	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1937	0	0	0	0	0	0	0	0	0	0	0	0	0
15	1938	0	0	0	0	0	0	0	0	0	0	0	0	0
16	1939	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1940	0	0	0	0	0	0	0	0	0	0	0	0	0
18	1941	0	0	0	0	0	0	0	0	0	0	0	0	0
19	1942	0	0	0	0	0	0	0	0	0	0	0	0	0
20	1943	0	0	0	0	0	0	0	0	0	0	0	0	0
21	1944	0	0	0	0	0	0	0	0	0	0	0	0	0
22	1945	0	0	0	0	0	0	0	0	0	0	0	0	0
23	1946	0	0	0	-18	0	-55	0	0	0	0	0	0	-6
24	1947	0	0	0	0	0	0	0	0	0	0	0	0	0
25	1948	0	0	0	0	0	0	0	0	0	0	0	0	0
26	1949	0	0	0	0	0	0	0	0	0	0	0	0	0
27	1950	0	0	0	0	0	0	0	0	0	0	0	0	0
28	1951	0	0	0	0	0	0	0	0	0	0	0	0	0
29	1952	0	0	0	0	0	0	0	0	0	0	0	0	0
30	1953	0	0	0	0	0	0	0	0	0	0	0	0	0
31	1954	0	0	0	0	0	0	0	0	0	0	0	0	0
32	1955	0	0	0	0	0	0	0	0	0	0	0	0	0
33	1956	0	0	0	0	0	0	0	0	0	0	0	0	0
34	1957	0	0	0	0	0	0	0	0	0	0	0	0	0
35	1958	0	0	0	0	0	0	0	0	0	0	0	0	0
36	1959	0	0	0	0	0	0	0	0	0	0	0	0	0
37	1960	0	0	0	0	0	0	0	0	0	0	0	0	0
38	1961	0	0	0	0	0	0	0	0	0	0	0	0	0
39	1962	0	0	0	0	0	0	0	0	0	0	0	0	0
40	1963	0	0	0	0	0	0	0	0	0	0	0	0	0
41	1964	0	0	0	0	0	0	0	0	0	0	0	0	0

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 8: Federal Hydro Generation Adjustment													
2	for Refill of Non-Treaty Storage for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	0	0	0	0	0	0	0	0	0	0	0	0	0
43	1966	0	0	0	0	0	0	0	0	0	0	0	0	0
44	1967	0	0	0	0	0	0	0	0	0	0	0	0	0
45	1968	0	0	0	0	0	0	0	0	0	0	0	0	0
46	1969	0	0	0	0	0	0	0	0	0	0	0	0	0
47	1970	0	0	0	0	0	0	0	0	0	0	0	0	0
48	1971	0	0	0	0	0	0	0	0	0	0	0	0	0
49	1972	0	0	0	0	0	0	0	0	0	0	0	0	0
50	1973	0	0	0	0	0	0	0	0	0	0	0	0	0
51	1974	0	0	0	0	0	0	0	0	0	0	0	0	0
52	1975	0	0	0	-18	-8	0	0	0	0	0	0	0	-2
53	1976	0	0	0	0	0	0	0	0	0	0	0	0	0
54	1977	0	0	0	0	0	0	0	0	0	0	0	0	0
55	1978	0	0	0	0	0	0	0	0	0	0	0	0	0
56	1979	0	0	0	0	0	0	0	0	0	0	0	0	0
57	1980	0	0	0	0	0	0	0	0	0	0	0	0	0
58	1981	0	0	0	0	0	0	0	0	0	0	0	0	0
59	1982	0	0	0	0	0	0	0	0	0	0	0	0	0
60	1983	0	0	0	0	0	0	0	0	0	0	0	0	0
61	1984	0	0	0	0	0	0	0	0	0	0	0	0	0
62	1985	0	0	0	0	0	0	0	0	0	0	0	0	0
63	1986	0	0	0	0	0	0	0	0	0	0	0	0	0
64	1987	0	0	0	0	0	0	0	0	0	0	0	0	0
65	1988	0	0	0	0	0	0	0	0	0	0	0	0	0
66	1989	0	0	0	0	0	0	0	0	0	0	0	0	0
67	1990	0	0	0	0	0	0	0	0	0	0	0	0	0
68	1991	0	0	0	0	0	0	0	0	0	0	0	0	0
69	1992	0	0	0	-9	0	0	0	0	0	0	0	0	-1
70	1993	0	0	0	0	0	0	0	0	0	0	0	0	0
71	1994	0	0	0	0	0	0	0	0	0	0	0	0	0
72	1995	0	0	0	0	0	0	0	0	0	0	0	0	0
73	1996	0	0	0	0	0	0	0	0	0	0	0	0	0
74	1997	0	0	0	0	0	0	0	0	0	0	0	0	0
75	1998	0	0	0	0	0	0	0	0	0	0	0	0	0
76	50 WY Average	0	0	0	-1	0	-1	0	0	0	0	0	0	0
77	70 WY Average	0	0	0	-1	0	-1	0	0	0	0	0	0	0
78	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8,760

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 9: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Light-Load-Hours for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	-59	-89	17	-14	-23	11	-73	59	-36	-57	138	154	3
7	1930	-46	-15	33	-15	110	25	-69	50	-58	-51	120	167	21
8	1931	-46	-16	-26	-21	-16	120	99	-65	-142	-45	-5	125	-4
9	1932	-59	-86	17	-23	84	216	-54	-51	-24	-116	-30	131	-1
10	1933	-48	47	-21	-8	-95	191	-53	-108	-26	-81	-95	128	-14
11	1934	-138	-15	-8	-9	-9	-14	-25	-91	-20	-25	131	141	-7
12	1935	-45	46	8	-10	-14	62	-59	-19	-131	-21	-119	147	-12
13	1936	-49	-15	4	36	-15	86	-57	-55	-63	-48	-17	157	-3
14	1937	-48	-24	6	-15	-20	164	75	-55	-18	-51	-20	141	10
15	1938	-47	-57	11	-82	-15	-20	-135	-50	-60	-32	104	131	-21
16	1939	-55	-101	44	-14	12	39	-56	-26	-56	-51	165	162	5
17	1940	-46	-15	-96	-14	46	-19	-136	-32	-21	-27	135	145	-7
18	1941	-59	-17	-6	-24	26	-20	-60	-55	-66	-53	-30	131	-20
19	1942	57	-65	26	-13	-20	46	-72	-55	-59	-20	-38	144	-6
20	1943	-51	42	44	-88	-22	-15	-98	-50	-28	-43	-40	173	-15
21	1944	-21	-72	44	-13	-21	16	-72	12	62	-3	-8	132	4
22	1945	-37	-82	11	-20	216	149	75	-127	-135	-59	32	151	11
23	1946	-24	-100	-14	-13	24	-20	-133	-51	-27	-80	-122	147	-35
24	1947	19	-59	-10	-13	-17	-96	-133	-24	-19	-21	-19	146	-20
25	1948	-43	-16	-96	-9	-12	-16	-133	-178	-57	-10	-26	135	-39
26	1949	-55	-58	-11	-21	-16	-13	-119	-90	-64	-46	171	179	-12
27	1950	-54	-50	11	-15	-18	-18	-131	-113	-42	-27	-128	146	-37
28	1951	-46	-16	-11	-8	-84	-14	-26	-49	-56	-11	-38	152	-16
29	1952	-120	-10	-98	-8	-15	-23	-133	-105	-96	-28	-23	156	-41
30	1953	-54	-97	2	-18	-17	-24	-74	-23	-25	-18	-47	142	-21
31	1954	-49	-97	-91	-12	-13	-12	-54	-49	-14	3	-15	-35	-37
32	1955	-40	-20	-94	-15	-15	-13	-64	-126	-26	21	-21	150	-22
33	1956	-46	-17	-13	-11	-11	-18	-25	-50	-74	-65	-127	143	-26
34	1957	-50	-50	-27	-83	-13	-14	-57	-65	-59	-47	63	151	-21
35	1958	-57	-91	47	-95	-19	-22	-59	-79	-85	-36	-22	154	-31
36	1959	-45	-90	-10	-57	-11	-13	-19	-51	-163	-124	-112	-39	-62
37	1960	-45	-48	-12	-11	-19	-19	-27	-90	-81	-21	-25	138	-22
38	1961	-51	-65	-30	-52	-21	-17	-130	-49	-35	-24	-107	164	-35
39	1962	-54	-86	-22	-10	-19	-15	-131	-30	-21	-55	-28	157	-26
40	1963	-48	-15	-10	-11	-18	47	-59	-53	-23	-21	-115	141	-16
41	1964	-58	-67	-19	-96	-93	-12	95	-27	-31	-67	-26	121	-24

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 9: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Light-Load-Hours for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	-121	-16	-12	-55	-14	-96	-114	-51	-28	-112	-26	151	-41
43	1966	-50	-102	-25	-16	-23	133	-26	-89	-83	-77	-102	152	-27
44	1967	-56	-72	-22	-8	-88	-17	-58	-25	-90	-20	-16	130	-28
45	1968	-53	-59	-27	-82	-15	-16	-61	-29	-75	-68	-23	-18	-44
46	1969	-126	-16	-10	-57	-10	-20	-87	-105	-71	-19	-8	141	-32
47	1970	-51	-15	7	12	-94	-15	-63	-38	-111	-114	91	155	-18
48	1971	-59	-65	16	-13	-10	-13	-21	-49	-84	-5	-99	135	-22
49	1972	-56	-44	-101	-9	-16	-91	-21	-50	-8	23	-17	136	-21
50	1973	-55	-57	-95	-16	19	-6	-68	-49	-58	-50	120	177	-12
51	1974	-58	46	-10	-8	-9	-90	-26	-111	-35	25	22	138	-13
52	1975	19	-102	39	-89	-16	-12	-57	-114	-83	-24	-32	138	-29
53	1976	-124	-12	-80	-11	-77	-20	-41	-48	-50	-71	-17	-74	-51
54	1977	-58	3	37	-21	-13	-20	-14	-49	-60	-31	-89	147	-14
55	1978	83	41	45	-16	18	-9	-112	-24	-49	-47	-22	-126	-18
56	1979	-135	-16	5	-18	-15	-19	-60	-25	-65	-38	111	182	-7
57	1980	-45	-15	-93	45	-15	96	-58	-24	-114	-116	75	149	-9
58	1981	-52	-17	-15	-60	-100	-17	-65	-55	-43	-24	-18	136	-27
59	1982	-47	-10	-26	-80	-25	-14	-133	-52	-73	-126	-23	-24	-53
60	1983	-45	-19	-30	-67	-23	-10	-133	-28	-137	-61	-23	147	-35
61	1984	-59	-15	-1	-81	-13	-97	-104	-57	-134	-60	-41	143	-43
62	1985	-33	-63	-7	-89	139	-16	-53	-24	-139	-47	113	149	-7
63	1986	-55	-19	8	-12	-15	-13	-121	-129	-131	-28	-9	151	-31
64	1987	-6	-101	21	-19	-21	-11	-133	-47	-21	-116	138	183	-11
65	1988	-43	-11	44	-12	-21	47	-36	-58	57	-45	-4	145	5
66	1989	-53	22	-22	-25	-12	166	-134	-23	-131	-58	126	150	1
67	1990	-52	-102	-10	-8	-95	-16	-19	-102	-90	-26	-120	151	-41
68	1991	-43	-16	-15	-7	-77	-13	-136	-102	-84	-77	-86	144	-42
69	1992	-53	12	43	-13	61	-103	-57	-60	-131	-48	130	195	-1
70	1993	-47	-92	-13	-14	-16	215	94	-54	62	-49	-21	165	17
71	1994	-56	-10	-19	-13	-23	53	-54	-125	-131	-114	131	195	-14
72	1995	-49	-83	-10	-15	-15	-96	-55	-112	-66	-125	-23	140	-43
73	1996	-46	-74	-83	-9	-65	-15	-101	-51	-19	-73	-30	140	-35
74	1997	-54	-61	-92	-8	-10	-93	-103	-52	-178	-20	-26	-24	-59
75	1998	-44	-23	-26	-12	-20	-15	-54	-54	-22	-26	-18	149	-14
76	50 WY Average	-50	-41	-13	-26	-11	8	-59	-57	-55	-41	-12	126	-19
77	70 WY Average	-50	-40	-14	-26	-13	6	-64	-58	-62	-48	-3	129	-20
78	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	Table 10: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Heavy-Load-Hours for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	-3	-31	-27	-2	-72	-96	-82	-128	-105	-1	-158	-179	-73
7	1930	-7	-1	-49	-2	-107	-35	-80	-112	-2	-2	-144	-193	-61
8	1931	-4	-1	-31	-2	-55	-106	-212	-72	-62	0	-32	-195	-65
9	1932	-3	-41	-28	-6	-81	-177	-3	16	-18	-43	-22	-302	-59
10	1933	-2	-61	-1	2	-33	-162	-3	17	5	69	8	-209	-30
11	1934	-47	-1	2	-15	2	-2	2	17	14	6	-151	-169	-29
12	1935	-5	-60	-24	2	-5	-58	-2	-5	-2	7	-36	-174	-30
13	1936	-2	-1	-16	-49	-1	-80	-2	-2	15	-1	-22	-238	-33
14	1937	-4	-2	-18	-2	-75	-135	-129	-73	-119	-2	-22	-169	-62
15	1938	-2	-91	-166	-9	-1	-67	-59	15	-4	7	-279	-164	-69
16	1939	-2	-21	-56	-1	-101	-44	-146	17	-3	-2	-182	-244	-65
17	1940	-138	-2	-2	-2	-52	-1	-1	6	15	-14	-156	-174	-44
18	1941	-2	-1	-64	-84	-36	-2	-2	-3	-45	-2	-21	-164	-35
19	1942	-145	-71	-40	-2	-2	-51	-2	-3	15	7	-19	-169	-40
20	1943	-2	-64	-52	-1	-2	-85	15	15	15	-2	-35	-257	-38
21	1944	-19	-65	-55	-2	-54	-96	-68	-72	-121	-107	-54	-164	-73
22	1945	-6	-47	-23	-4	-268	-128	-126	-64	-36	-36	-120	-230	-90
23	1946	-17	-2	-46	-2	-37	-1	-37	17	-8	-14	-12	-174	-28
24	1947	-55	-85	-6	-49	-3	-23	-53	-28	-1	7	-20	-173	-40
25	1948	-6	-1	-2	2	-1	-1	-20	3	41	8	10	-168	-11
26	1949	-2	-88	-53	-2	-2	-2	2	17	15	-1	-187	-196	-41
27	1950	-2	-51	-22	-3	-55	-48	-1	17	28	7	-5	-174	-25
28	1951	-139	-1	0	2	-1	-2	14	14	-45	9	-15	-176	-29
29	1952	-1	-1	-1	2	-1	-79	-54	17	4	7	-18	-239	-30
30	1953	-2	-23	-15	-4	-141	-75	-74	17	0	7	-12	-173	-40
31	1954	-3	-2	-1	-2	-1	-1	-2	15	13	-24	10	-1	0
32	1955	-2	-2	-2	-2	-1	-1	-45	-17	4	-18	10	-231	-25
33	1956	-138	-5	-17	1	-50	-60	14	15	15	7	-52	-174	-37
34	1957	-2	-49	-43	-1	-2	-1	-3	17	14	-1	-156	-177	-33
35	1958	-2	-1	-58	-57	-56	-2	-63	17	15	-1	-29	-175	-34
36	1959	-3	-1	-4	0	-28	-1	14	17	15	-28	-30	2	-4
37	1960	-39	-2	-1	0	-51	-2	-5	17	15	5	-23	-171	-21
38	1961	-4	-68	-40	0	-1	-63	-1	-13	15	6	-24	-184	-31
39	1962	-2	-24	-1	-1	-2	-9	-1	17	13	-1	-22	-179	-17
40	1963	-4	-1	-6	-41	-64	-54	-63	-2	15	4	-56	-170	-36
41	1964	-2	-69	-1	-53	-1	-15	-137	-40	-21	-6	10	-198	-44

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 10: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Heavy-Load-Hours for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	-1	-2	-50	0	-39	-24	4	17	14	-1	10	-176	-20
43	1966	-3	-34	-37	-2	-2	-123	-28	17	15	-12	-23	-178	-34
44	1967	-2	-69	-1	1	2	-2	-44	16	15	7	10	-163	-19
45	1968	-2	-96	-32	-10	-3	-2	-2	5	15	7	10	-37	-12
46	1969	-19	-50	-4	-1	2	-1	15	17	15	7	-29	-170	-18
47	1970	-6	-1	-23	-26	-15	-1	-3	1	7	-29	-187	-176	-38
48	1971	-2	-74	-31	-46	-1	-2	13	15	15	-7	8	-167	-22
49	1972	-2	-106	-1	3	-1	7	14	17	-1	-20	10	-168	-20
50	1973	-2	-84	-1	-2	-107	-17	-3	-1	-4	-2	-146	-257	-51
51	1974	-2	-59	-5	2	2	0	14	0	-39	-29	9	-169	-22
52	1975	-52	-2	-54	-1	-2	-1	-3	17	15	7	-15	-169	-22
53	1976	-44	-19	-1	0	-22	-140	3	13	0	7	25	0	-16
54	1977	-6	-13	-51	-2	-1	-2	-52	-28	-75	-22	-38	-177	-39
55	1978	-176	-64	-57	-1	-28	-95	5	-24	-2	1	-21	-49	-43
56	1979	-34	-1	-162	-2	-3	-2	-2	16	-2	-4	-135	-252	-49
57	1980	-5	-1	-1	-68	-2	-88	-140	-26	-1	-49	-168	-177	-61
58	1981	-2	-1	0	0	-19	-141	-3	-2	15	17	10	-165	-25
59	1982	-2	-1	-53	-6	-61	-1	-37	17	15	-35	10	-20	-15
60	1983	-5	-1	-1	0	-1	-1	-48	14	-42	7	10	-176	-20
61	1984	-2	-1	-60	-11	-1	-20	8	-3	-44	-2	-5	-174	-26
62	1985	-9	-72	-68	-1	-128	-3	-3	-37	-45	-2	-213	-178	-62
63	1986	-2	-4	-24	-2	-1	-1	1	-153	-2	7	-26	-177	-31
64	1987	-33	-23	-33	-71	-51	-13	-38	-1	12	-47	-161	-267	-60
65	1988	-3	-1	-58	-2	-79	-46	-91	-5	-116	0	-32	-173	-50
66	1989	-2	-46	-51	-7	-77	-138	-56	-12	-2	-1	-155	-229	-65
67	1990	-2	-37	-4	2	-44	-65	14	5	15	7	-44	-228	-32
68	1991	-2	-35	-39	2	-23	-1	-42	17	15	7	9	-174	-22
69	1992	-2	-32	-56	-1	-60	-37	-2	-2	-23	-2	-151	-278	-53
70	1993	-3	-1	-7	-2	-71	-179	-137	-2	-121	-2	-50	-189	-64
71	1994	-2	-1	-1	-52	-1	-61	-3	-46	-25	-37	-151	-266	-54
72	1995	-2	-52	-10	-1	-83	-36	-2	-45	-4	0	-27	-166	-35
73	1996	-5	-2	0	2	2	6	15	17	15	7	10	-169	-8
74	1997	-2	-89	-1	1	2	-1	-3	17	27	7	10	-33	-5
75	1998	-14	-2	-43	-1	-59	-1	-3	-3	14	7	-21	-174	-24
76	50 WY Average	-23	-34	-26	-9	-33	-43	-30	-5	-6	-5	-49	-172	-36
77	70 WY Average	-18	-30	-28	-10	-34	-43	-29	-7	-9	-5	-53	-175	-37
78	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	Table 11: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Flat Energy for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	-26	-58	-8	-7	-51	-51	-78	-41	-76	-26	-27	-31	-40
7	1930	-23	-8	-13	-8	-14	-10	-75	-37	-26	-23	-28	-33	-25
8	1931	-22	-8	-29	-10	-38	-11	-81	-69	-96	-20	-20	-53	-38
9	1932	-26	-62	-8	-14	-10	-12	-24	-15	-21	-75	-25	-110	-34
10	1933	-21	-10	-10	-2	-60	-14	-24	-41	-8	3	-37	-59	-23
11	1934	-85	-8	-3	-12	-3	-7	-9	-33	0	-8	-27	-31	-19
12	1935	-22	-10	-10	-4	-9	-8	-26	-12	-56	-5	-73	-31	-22
13	1936	-22	-7	-7	-10	-7	-11	-25	-26	-18	-22	-20	-62	-20
14	1937	-22	-12	-7	-8	-52	-10	-42	-64	-76	-23	-21	-31	-30
15	1938	-21	-75	-88	-43	-7	-47	-91	-15	-28	-10	-110	-33	-48
16	1939	-24	-58	-12	-7	-52	-9	-108	-3	-25	-23	-29	-63	-34
17	1940	-99	-8	-44	-7	-10	-8	-58	-12	0	-19	-28	-32	-27
18	1941	-26	-9	-38	-56	-9	-10	-26	-27	-54	-25	-25	-33	-28
19	1942	-60	-68	-11	-7	-9	-11	-32	-27	-16	-5	-27	-30	-25
20	1943	-23	-15	-10	-41	-10	-56	-33	-15	-3	-20	-37	-66	-28
21	1944	-20	-68	-11	-7	-40	-49	-70	-33	-44	-61	-34	-33	-39
22	1945	-19	-63	-8	-11	-60	-12	-41	-93	-78	-46	-53	-61	-45
23	1946	-20	-48	-32	-7	-11	-9	-78	-15	-16	-43	-60	-31	-31
24	1947	-24	-73	-8	-32	-9	-54	-87	-26	-8	-5	-19	-31	-31
25	1948	-22	-8	-44	-3	-6	-7	-68	-81	-1	0	-6	-33	-23
26	1949	-24	-74	-35	-11	-8	-6	-49	-32	-19	-21	-29	-29	-28
27	1950	-24	-50	-7	-9	-39	-36	-56	-43	-2	-8	-59	-32	-30
28	1951	-100	-8	-5	-3	-36	-7	-3	-15	-49	0	-25	-30	-23
29	1952	-51	-5	-44	-3	-7	-55	-87	-39	-38	-9	-20	-64	-35
30	1953	-24	-58	-8	-10	-88	-53	-74	-2	-10	-4	-27	-33	-32
31	1954	-22	-46	-41	-6	-6	-6	-24	-15	2	-15	-1	-16	-16
32	1955	-18	-10	-42	-8	-7	-6	-53	-67	-9	-1	-4	-62	-24
33	1956	-99	-11	-15	-4	-33	-43	-2	-15	-23	-25	-85	-33	-33
34	1957	-22	-50	-36	-39	-6	-7	-26	-21	-17	-21	-59	-31	-28
35	1958	-25	-43	-12	-75	-40	-10	-61	-27	-27	-16	-26	-29	-33
36	1959	-21	-43	-7	-26	-21	-6	0	-14	-60	-70	-66	-16	-29
37	1960	-42	-23	-6	-5	-38	-9	-15	-32	-26	-6	-24	-33	-21
38	1961	-24	-67	-36	-24	-10	-44	-56	-29	-6	-7	-60	-29	-33
39	1962	-24	-53	-10	-5	-9	-12	-56	-5	-1	-25	-25	-30	-21
40	1963	-22	-7	-8	-27	-44	-11	-61	-26	-1	-7	-82	-31	-27
41	1964	-26	-68	-9	-73	-40	-14	-39	-34	-25	-33	-6	-56	-35

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 11: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Flat Energy for FY 2010													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	-52	-9	-33	-25	-28	-54	-46	-15	-4	-50	-6	-31	-29
43	1966	-23	-65	-32	-8	-11	-16	-27	-32	-26	-41	-58	-32	-31
44	1967	-25	-71	-10	-3	-36	-8	-50	-3	-29	-5	-2	-33	-23
45	1968	-24	-79	-30	-43	-8	-8	-27	-11	-23	-26	-5	-29	-26
46	1969	-64	-34	-7	-27	-3	-9	-28	-39	-22	-4	-20	-32	-24
47	1970	-25	-7	-10	-9	-49	-7	-29	-17	-43	-67	-64	-29	-29
48	1971	-26	-70	-10	-30	-5	-7	-1	-15	-27	-6	-39	-33	-22
49	1972	-25	-77	-45	-3	-7	-34	-1	-14	-4	-1	-2	-33	-21
50	1973	-24	-72	-43	-8	-53	-12	-30	-23	-27	-23	-29	-64	-34
51	1974	-26	-10	-7	-3	-3	-37	-3	-51	-38	-5	-5	-32	-18
52	1975	-22	-48	-13	-42	-8	-6	-26	-43	-26	-7	-22	-33	-25
53	1976	-77	-15	-36	-5	-46	-90	-16	-16	-21	-27	6	-33	-31
54	1977	-27	-6	-12	-11	-6	-9	-36	-38	-69	-26	-61	-33	-28
55	1978	-68	-15	-12	-8	-8	-59	-44	-24	-22	-20	-22	-84	-32
56	1979	-76	-8	-89	-9	-8	-9	-26	-3	-29	-19	-27	-59	-30
57	1980	-22	-8	-42	-16	-7	-11	-106	-25	-49	-79	-61	-32	-38
58	1981	-23	-9	-7	-28	-54	-89	-29	-27	-9	-1	-3	-32	-26
59	1982	-21	-6	-41	-40	-45	-7	-78	-15	-22	-75	-5	-22	-31
60	1983	-22	-9	-14	-31	-10	-5	-84	-5	-82	-23	-5	-33	-27
61	1984	-26	-8	-34	-43	-6	-52	-39	-28	-82	-28	-21	-33	-33
62	1985	-20	-68	-41	-42	-13	-8	-24	-31	-85	-22	-69	-33	-38
63	1986	-24	-11	-10	-6	-7	-6	-50	-142	-56	-8	-18	-31	-31
64	1987	-22	-60	-9	-47	-38	-12	-79	-22	-2	-78	-29	-67	-39
65	1988	-20	-5	-13	-7	-54	-7	-68	-29	-43	-20	-19	-31	-26
66	1989	-24	-14	-38	-15	-49	-11	-89	-17	-56	-26	-31	-60	-36
67	1990	-23	-67	-7	-3	-66	-44	0	-50	-29	-7	-78	-60	-36
68	1991	-19	-26	-29	-2	-46	-6	-82	-38	-27	-30	-33	-33	-31
69	1992	-23	-11	-12	-7	-8	-64	-26	-29	-68	-22	-27	-68	-31
70	1993	-21	-44	-9	-7	-47	-14	-39	-26	-43	-23	-37	-32	-28
71	1994	-25	-5	-9	-34	-10	-13	-24	-82	-69	-71	-27	-62	-36
72	1995	-22	-67	-10	-8	-54	-61	-25	-76	-30	-55	-25	-30	-38
73	1996	-22	-35	-36	-3	-27	-3	-34	-15	0	-28	-8	-32	-20
74	1997	-24	-76	-41	-3	-3	-40	-46	-15	-59	-5	-6	-29	-29
75	1998	-26	-12	-35	-6	-42	-7	-24	-27	-1	-8	-20	-30	-20
76	50 WY Average	-34	-37	-20	-17	-23	-22	-42	-29	-27	-21	-33	-39	-29
77	70 WY Average	-32	-35	-22	-17	-25	-22	-44	-31	-31	-24	-31	-40	-29
78	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	Table 12: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Light-Load-Hours for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	164	-32	47	-1	76	166	79	68	84	-62	173	193	78
7	1930	-4	17	55	-30	228	228	84	74	-46	-38	146	203	73
8	1931	38	10	42	-12	38	237	71	79	-177	-48	-10	156	35
9	1932	176	-32	46	136	236	223	-89	-137	-38	-142	46	150	45
10	1933	79	159	47	-20	-112	226	-89	-188	-46	-110	-101	149	-1
11	1934	-168	-30	-9	-57	-24	-32	-110	-170	-12	-35	189	160	-26
12	1935	18	162	47	-26	-29	238	-2	-40	-167	-32	-139	162	16
13	1936	82	52	45	223	33	232	16	-67	-71	-73	-4	188	55
14	1937	50	-20	46	-30	132	233	107	36	74	135	-23	164	74
15	1938	74	-34	46	-93	24	153	-169	-139	-100	-37	194	149	5
16	1939	124	-32	124	-4	116	236	-92	-78	-94	-63	178	196	49
17	1940	-14	20	-86	41	192	55	-172	-54	-44	40	179	157	25
18	1941	165	50	45	49	184	-19	16	-72	92	-78	43	150	50
19	1942	186	-31	44	-29	-10	233	-9	-92	-73	-31	-43	155	24
20	1943	94	119	156	-105	-14	183	-54	-134	-93	-69	54	195	26
21	1944	186	-31	140	17	53	160	72	79	63	180	87	151	97
22	1945	184	-32	48	124	226	235	107	-161	-170	146	132	180	84
23	1946	187	-31	43	-29	235	-7	-138	-137	-49	-84	-134	152	-1
24	1947	180	-32	-26	-29	-33	-113	-168	-44	-36	-32	-25	153	-16
25	1948	-74	-31	-85	-20	206	58	-168	-258	-13	-4	-36	153	-26
26	1949	118	-34	47	-11	-24	-28	-128	-105	-79	95	200	198	22
27	1950	170	-40	48	-31	-35	-110	-168	-194	-46	-39	-154	153	-37
28	1951	-7	9	-26	-21	-98	-34	-51	-137	-65	-5	-46	157	-26
29	1952	-148	39	-80	-20	-31	172	-160	-184	-105	-39	-37	190	-35
30	1953	144	-29	47	121	-34	167	82	-67	-45	-21	-58	151	38
31	1954	97	-28	51	-29	-33	64	-50	-133	-8	30	-9	38	-16
32	1955	63	-34	-93	-30	36	45	50	-138	-45	17	-31	158	-2
33	1956	-27	-37	-32	-22	-32	-35	-40	-138	-42	-6	-144	153	-34
34	1957	90	-43	44	-99	42	20	-93	-40	1	-72	172	174	15
35	1958	175	-22	62	-110	-35	-15	-95	-42	-169	-62	83	182	-4
36	1959	61	-22	-27	-20	-30	235	-40	-167	-39	-150	-128	-31	-32
37	1960	-84	-59	-30	-28	-36	-20	-47	-105	-95	-30	65	152	-27
38	1961	53	-30	42	-60	-10	-35	-166	-132	-12	-34	-115	200	-25
39	1962	176	-31	-24	-26	-20	108	-84	-90	-41	-76	50	192	11
40	1963	48	30	-26	-26	-35	228	-96	-87	-45	-32	-124	154	-1
41	1964	177	-31	48	-111	-110	236	66	-50	-49	-70	-39	147	17

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 12: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Light-Load-Hours for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	-150	3	-32	-26	-36	-113	-133	-139	-61	-138	-40	154	-60
43	1966	52	-31	44	-35	-14	230	-50	-104	-101	-82	-118	193	-2
44	1967	144	-31	46	-33	-25	197	66	-47	-38	-25	-24	146	31
45	1968	118	-35	44	-93	-31	-26	-3	-44	-90	-23	-35	73	-12
46	1969	-155	-35	-27	-20	-25	79	-101	-132	-86	-24	-4	185	-29
47	1970	23	51	46	132	-110	42	-98	-46	-104	-140	163	181	13
48	1971	179	-31	46	-68	-33	-113	-146	-136	-100	-30	-104	152	-31
49	1972	119	-39	-30	-20	-34	-112	-54	-178	-24	32	-25	151	-18
50	1973	140	-32	-28	-19	106	101	19	-67	-93	-56	135	200	32
51	1974	149	212	26	-20	-21	-105	-48	-141	-39	1	-32	152	7
52	1975	201	-31	38	-104	-21	21	35	-194	-102	-33	-50	153	-8
53	1976	-154	-27	-91	-25	-92	52	-46	-132	-112	-52	-27	-81	-66
54	1977	38	47	41	-12	28	53	82	73	84	-23	-99	188	41
55	1978	248	103	64	-21	213	196	-128	-52	-84	-44	-17	-155	25
56	1979	-164	50	46	-19	-31	-21	6	-47	-39	21	119	209	11
57	1980	3	52	-25	188	19	238	-94	-75	-144	-141	155	159	28
58	1981	92	51	-30	-19	52	-35	52	-80	-8	-16	-29	151	14
59	1982	86	39	46	-91	-107	-27	-99	-140	-44	-152	-33	81	-37
60	1983	13	49	39	-78	-9	-11	-168	-52	-173	-21	-37	159	-23
61	1984	172	-31	43	-23	234	-110	-136	-91	-70	-65	-47	152	1
62	1985	187	-29	45	-105	229	-32	-89	-47	-174	99	112	176	30
63	1986	120	-36	47	-28	31	-31	-129	-163	-166	-43	-4	181	-18
64	1987	186	-32	47	53	50	94	-169	-80	-42	-127	152	206	27
65	1988	55	25	117	30	127	239	88	-93	62	-69	-8	191	61
66	1989	173	65	49	140	94	231	-169	-52	-167	-36	139	185	55
67	1990	157	-33	26	-20	-111	138	-51	-178	-39	-29	-139	178	-13
68	1991	184	-32	-34	-54	-31	171	-154	-181	-101	-60	-93	153	-20
69	1992	128	64	204	-20	240	-119	-6	-94	-166	-47	136	201	42
70	1993	58	-24	44	-30	120	223	67	-87	62	-76	75	192	49
71	1994	151	23	37	38	-10	236	-89	-159	-166	-122	132	214	23
72	1995	96	-32	46	-15	105	-113	-49	-124	-101	-150	80	157	-10
73	1996	-13	-85	-47	-20	-75	-32	-123	-138	-102	-55	-43	151	-48
74	1997	137	-33	-48	-21	-24	-106	-124	-192	-161	-26	-40	91	-45
75	1998	-73	-23	44	-31	-37	-2	-89	-88	-44	-39	-22	168	-20
76	50 WY Average	76	0	18	-16	24	89	-47	-92	-55	-31	6	146	9
77	70 WY Average	79	0	22	-13	29	77	-55	-96	-65	-39	13	152	8
78	Hours	328	321	328	344	288	311	304	344	304	344	312	320	3848

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 13: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Heavy-Load-Hours for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	-199	-94	-64	-36	-157	-222	-219	-227	-216	-21	-191	-211	-156
7	1930	-194	-41	-74	-3	-198	-196	-226	-226	-39	-36	-169	-222	-136
8	1931	-94	-38	-94	-25	-108	-193	-146	-168	-63	-18	-47	-245	-103
9	1932	-207	-101	-64	-155	-204	-177	-5	17	-13	-44	-96	-188	-103
10	1933	-127	-152	-68	16	-34	-251	-5	19	10	114	14	-187	-55
11	1934	-48	-2	13	16	15	-2	19	19	13	15	-203	-189	-29
12	1935	-79	-154	-208	16	-7	-196	-73	-3	-3	17	-42	-187	-78
13	1936	-129	-67	-65	-220	-50	-193	-84	-3	19	-2	-51	-266	-93
14	1937	-106	-20	-66	-3	-200	-186	-182	-182	-149	-190	-39	-192	-126
15	1938	-122	-120	-208	-9	-44	-202	-33	18	-6	17	-204	-191	-94
16	1939	-166	-85	-126	-34	-192	-200	-146	18	-5	-16	-195	-272	-119
17	1940	-186	-46	-24	-63	-177	-65	-3	7	19	-98	-195	-184	-84
18	1941	-196	-68	-118	-152	-167	-17	-86	-19	-189	-5	-93	-190	-108
19	1942	-247	-111	-63	-4	-21	-197	-78	-5	19	18	-19	-182	-75
20	1943	-139	-128	-151	-2	-21	-236	-35	16	19	-4	-125	-287	-92
21	1944	-190	-115	-136	-42	-120	-217	-202	-164	-145	-301	-142	-192	-164
22	1945	-200	-104	-66	-141	-196	-191	-179	-65	-37	-240	-210	-265	-158
23	1946	-192	-66	-111	-4	-210	-24	0	19	-4	-3	-24	-180	-66
24	1947	-246	-117	-8	-49	-4	-24	-53	-26	3	17	-35	-180	-60
25	1948	-8	-2	-25	16	-185	-67	-21	5	14	15	16	-186	-35
26	1949	-161	-118	-115	-24	-8	-3	6	19	19	-151	-213	-215	-81
27	1950	-200	-69	-67	-5	-55	-2	-46	19	19	17	-7	-180	-48
28	1951	-192	-38	-1	15	-1	-4	16	18	-42	16	-10	-228	-38
29	1952	-2	-55	-28	16	-2	-227	-23	19	8	17	-28	-202	-43
30	1953	-180	-89	-63	-137	-141	-221	-218	19	5	16	-23	-179	-101
31	1954	-140	-67	-47	-4	-2	-68	-32	16	12	-18	14	6	-28
32	1955	-107	-8	-16	-3	-53	-57	-157	-17	8	-5	16	-245	-54
33	1956	-186	-7	-18	16	-2	-61	19	18	15	17	-15	-181	-32
34	1957	-135	-67	-107	-2	-56	-39	-6	17	28	-2	-251	-243	-72
35	1958	-197	-68	-79	-58	-57	-20	-64	18	19	-2	-124	-252	-74
36	1959	-114	-67	-5	15	-43	-201	19	19	19	-29	-35	9	-35
37	1960	-40	-3	-2	-1	-52	-16	-1	19	19	15	-108	-186	-30
38	1961	-111	-108	-105	14	-23	-63	-3	-11	18	16	-38	-268	-57
39	1962	-204	-84	-67	-2	-14	-106	-2	18	16	-7	-100	-258	-68
40	1963	-104	-53	-8	-42	-65	-195	-64	-3	19	14	-69	-185	-63
41	1964	-198	-112	-68	-54	-2	-199	-206	-38	-17	4	16	-324	-100

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 13: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Heavy-Load-Hours for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	-2	-33	-51	8	-4	-25	3	19	-32	-2	16	-229	-27
43	1966	-107	-97	-102	-3	-21	-191	-24	19	19	-2	-31	-262	-68
44	1967	-182	-119	-68	-15	-30	-249	-175	18	-6	17	14	-190	-83
45	1968	-158	-124	-97	-10	-4	-8	-73	8	19	15	16	-137	-46
46	1969	-20	-50	-6	16	-45	-82	19	-10	19	17	-51	-204	-33
47	1970	-89	-68	-69	-147	-16	-55	-6	3	11	-30	-250	-199	-77
48	1971	-197	-115	-67	9	-2	-42	-1	18	19	18	14	-188	-44
49	1972	-162	-116	-65	16	-2	5	-27	19	2	-16	17	-188	-43
50	1973	-176	-114	-67	-14	-187	-99	-96	-3	-7	-22	-165	-213	-97
51	1974	-186	-241	-7	16	15	0	17	-20	-16	-4	16	-187	-49
52	1975	-262	-65	-60	-2	-10	-38	-99	19	19	16	-22	-186	-58
53	1976	-45	-19	-3	11	16	-65	5	16	4	15	28	7	-3
54	1977	-106	-65	-63	-25	-46	-64	-151	-170	-215	-54	-50	-210	-102
55	1978	-239	-116	-82	-12	-190	-246	9	-22	-3	7	-43	-50	-83
56	1979	-35	-68	-208	-15	-5	-13	-80	18	-50	-80	-150	-281	-81
57	1980	-69	-69	-68	-198	-41	-194	-141	-23	-3	-50	-240	-185	-108
58	1981	-139	-68	-1	17	-65	-63	-164	-3	15	25	16	-186	-51
59	1982	-131	-55	-118	-7	-1	-1	-62	19	18	-36	16	-131	-41
60	1983	-75	-67	-64	4	-24	22	-49	15	-43	14	16	-191	-36
61	1984	-199	-2	-110	16	-204	-1	2	-5	-47	8	-21	-181	-61
62	1985	-193	-113	-123	-2	-261	-5	-5	-35	-46	-155	-144	-203	-106
63	1986	-163	-8	-208	-4	-50	9	6	-154	-4	17	-49	-203	-67
64	1987	-239	-86	-64	-143	-112	-95	-39	-3	16	-61	-178	-281	-107
65	1988	-109	-44	-122	-52	-197	-196	-149	-7	-143	0	-47	-214	-107
66	1989	-203	-91	-115	-157	-168	-187	-57	-10	-3	-46	-227	-268	-128
67	1990	-190	-100	-6	16	-44	-187	16	-2	-6	17	-51	-261	-67
68	1991	-198	-36	-40	-22	-35	-227	-44	19	19	15	15	-181	-60
69	1992	-166	-85	-187	-10	-204	-38	-69	-5	-24	-26	-162	-278	-104
70	1993	-114	-67	-69	-3	-185	-180	-203	-5	-144	-3	-139	-213	-111
71	1994	-187	-42	-59	-108	-24	-194	-5	-47	-25	-54	-162	-291	-101
72	1995	-139	-110	-210	-16	-186	-37	-33	-43	-7	-1	-122	-187	-90
73	1996	-66	-3	14	16	15	17	19	18	19	15	16	-181	-8
74	1997	-174	-122	-50	15	15	3	1	19	12	17	16	-139	-32
75	1998	-15	-18	-107	-2	-59	-32	-5	-5	18	17	-39	-243	-41
76	50 WY Average	-145	-80	-67	-26	-68	-114	-62	-18	-15	-17	-70	-195	-73
77	70 WY Average	-144	-75	-75	-28	-74	-104	-60	-16	-17	-18	-74	-201	-74
78	Hours	416	400	416	400	384	432	416	400	416	400	432	400	4912

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 14: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Flat Energy for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
6	1929	-39	-66	-15	-20	-57	-60	-93	-91	-89	-40	-38	-32	-53
7	1930	-110	-15	-17	-16	-15	-18	-95	-88	-42	-37	-37	-33	-44
8	1931	-36	-16	-34	-19	-45	-13	-54	-54	-111	-32	-32	-67	-43
9	1932	-38	-70	-15	-20	-15	-10	-41	-54	-24	-89	-37	-38	-38
10	1933	-36	-13	-17	0	-67	-52	-40	-77	-14	10	-34	-37	-31
11	1934	-100	-15	4	-18	-2	-15	-35	-68	2	-8	-39	-34	-28
12	1935	-36	-13	-96	-3	-17	-14	-43	-20	-73	-6	-83	-32	-36
13	1936	-36	-14	-17	-15	-15	-15	-42	-32	-19	-35	-31	-64	-28
14	1937	-37	-20	-16	-16	-58	-11	-60	-81	-55	-40	-32	-34	-38
15	1938	-36	-81	-96	-48	-14	-54	-90	-54	-45	-8	-37	-40	-51
16	1939	-38	-62	-16	-20	-60	-17	-123	-26	-43	-38	-39	-64	-45
17	1940	-110	-17	-51	-15	-19	-15	-74	-21	-8	-34	-38	-32	-36
18	1941	-37	-15	-46	-59	-17	-18	-43	-43	-71	-39	-36	-39	-39
19	1942	-56	-76	-16	-16	-17	-17	-49	-46	-20	-5	-29	-32	-31
20	1943	-36	-18	-16	-49	-18	-61	-43	-53	-28	-34	-50	-73	-40
21	1944	-24	-78	-14	-15	-46	-59	-86	-51	-57	-78	-46	-40	-50
22	1945	-30	-72	-16	-18	-15	-12	-58	-109	-93	-62	-67	-67	-52
23	1946	-25	-51	-43	-16	-19	-17	-58	-53	-23	-41	-70	-32	-37
24	1947	-58	-79	-16	-40	-17	-61	-102	-34	-13	-5	-31	-32	-41
25	1948	-37	-15	-51	-1	-17	-15	-83	-116	2	6	-6	-35	-31
26	1949	-38	-80	-44	-18	-15	-13	-51	-38	-23	-37	-39	-31	-36
27	1950	-37	-56	-17	-17	-47	-47	-98	-79	-9	-9	-69	-32	-43
28	1951	-110	-17	-12	-1	-43	-16	-12	-54	-52	6	-25	-57	-33
29	1952	-66	-13	-51	-1	-15	-60	-81	-75	-40	-9	-32	-28	-39
30	1953	-37	-63	-15	-18	-95	-59	-91	-21	-16	-1	-38	-33	-40
31	1954	-36	-50	-49	-16	-15	-13	-39	-53	4	4	4	-14	-23
32	1955	-32	-20	-50	-16	-15	-14	-69	-73	-14	6	-4	-66	-31
33	1956	-116	-20	-24	-1	-15	-50	-6	-54	-9	6	-69	-33	-33
34	1957	-36	-56	-40	-47	-14	-14	-43	-9	17	-34	-74	-57	-34
35	1958	-33	-47	-17	-82	-48	-18	-77	-10	-60	-30	-37	-59	-43
36	1959	-37	-47	-15	-1	-37	-19	-6	-67	-5	-85	-74	-9	-34
37	1960	-59	-28	-14	-13	-45	-17	-20	-38	-29	-6	-36	-36	-28
38	1961	-38	-74	-40	-20	-17	-51	-71	-67	5	-7	-70	-60	-43
39	1962	-36	-61	-48	-13	-16	-17	-37	-32	-8	-39	-37	-58	-34
40	1963	-37	-16	-16	-35	-52	-18	-77	-42	-8	-7	-92	-34	-36
41	1964	-33	-76	-17	-81	-48	-17	-91	-44	-30	-30	-7	-114	-49

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 14: Federal Hydro Generation Adjustment for													
2	Stand Ready & Deployment Losses, Flat Energy for FY 2011													
3														
4														
5	Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Wtd Avg.
42	1965	-67	-17	-42	-8	-17	-62	-55	-54	-44	-65	-7	-59	-42
43	1966	-37	-68	-38	-18	-18	-15	-35	-38	-31	-39	-68	-60	-39
44	1967	-38	-80	-18	-24	-28	-62	-73	-12	-20	-2	-2	-40	-33
45	1968	-37	-85	-35	-49	-16	-15	-44	-16	-27	-3	-5	-43	-31
46	1969	-79	-44	-15	-1	-36	-14	-32	-66	-25	-2	-31	-31	-31
47	1970	-40	-15	-18	-18	-56	-15	-45	-20	-37	-81	-77	-30	-38
48	1971	-31	-78	-17	-26	-15	-72	-62	-54	-31	-5	-36	-37	-39
49	1972	-38	-82	-49	-1	-15	-44	-39	-72	-9	6	-1	-37	-32
50	1973	-37	-77	-50	-17	-61	-15	-47	-32	-43	-38	-40	-30	-40
51	1974	-38	-39	-15	-1	0	-44	-10	-76	-26	-2	-4	-36	-24
52	1975	-58	-50	-17	-50	-15	-13	-43	-79	-32	-6	-33	-36	-36
53	1976	-93	-23	-42	-5	-31	-16	-16	-53	-45	-16	5	-32	-31
54	1977	-42	-15	-17	-19	-14	-15	-53	-58	-89	-40	-70	-34	-39
55	1978	-24	-19	-17	-16	-17	-61	-49	-36	-37	-16	-32	-97	-35
56	1979	-92	-15	-96	-17	-16	-16	-44	-12	-45	-33	-37	-63	-41
57	1980	-37	-15	-49	-19	-15	-13	-121	-47	-62	-93	-74	-32	-48
58	1981	-37	-15	-14	0	-15	-51	-73	-39	5	6	-3	-36	-23
59	1982	-35	-13	-45	-46	-47	-12	-78	-54	-8	-89	-5	-37	-39
60	1983	-36	-15	-19	-34	-18	8	-99	-16	-98	-2	-6	-36	-31
61	1984	-36	-15	-43	-2	-16	47	-56	-45	-57	-26	-32	-33	-34
62	1985	-26	-75	-49	-50	-51	-16	-41	-40	-100	-38	-37	-35	-46
63	1986	-38	-21	-96	-15	-15	-8	-51	-158	-72	-11	-30	-32	-46
64	1987	-52	-62	-15	-53	-43	-16	-94	-39	-9	-92	-40	-65	-48
65	1988	-37	-13	-17	-14	-58	-14	-49	-47	-56	-32	-31	-34	-33
66	1989	-37	-21	-43	-20	-56	-12	-104	-29	-72	-42	-74	-67	-48
67	1990	-37	-70	-15	-1	-73	-51	-12	-84	-20	-4	-88	-66	-43
68	1991	-29	-34	-37	-37	-33	-60	-90	-74	-31	-20	-30	-33	-42
69	1992	-37	-19	-15	-14	-14	-72	-42	-46	-84	-35	-37	-65	-40
70	1993	-38	-48	-19	-16	-54	-11	-89	-43	-57	-37	-50	-33	-41
71	1994	-38	-13	-17	-40	-18	-14	-41	-99	-85	-85	-39	-66	-46
72	1995	-35	-75	-97	-16	-61	-69	-40	-80	-47	-70	-37	-34	-55
73	1996	-42	-39	-13	-1	-23	-3	-41	-54	-32	-17	-9	-33	-26
74	1997	-37	-83	-49	-1	-2	-43	-52	-78	-61	-3	-7	-37	-38
75	1998	-41	-20	-40	-15	-50	-20	-40	-44	-8	-9	-32	-60	-31
76	50 WY Average	-48	-44	-29	-21	-29	-29	-56	-52	-32	-24	-38	-44	-37
77	70 WY Average	-46	-41	-32	-21	-30	-29	-58	-53	-37	-27	-37	-44	-38
78	Hours	744	721	744	744	672	743	720	744	720	744	744	720	8760

	A	B	C	D	E	F	G	H	I	
1	Table 15: PNW and California Load Growth Standard Deviation Calculations for One to Four Years									
2	PNW Load Growth Standard Deviations Reflect Removal of Total DSI Loads Served by BPA									
4	<u>Pacific Northwest (NWPP)</u>									
6										
7	Year	NWPP with DSI Load	DSI Load	NWPP without DSI Load	% Change Over 1 Yr	% Change Over 2 Yr	% Change Over 3 Yr	% Change Over 4 Yr		
8	1985	29,372	2,170	27,202						
9	1986	28,927	2,232	26,695	-1.86%					
10	1987	29,954	2,485	27,469	2.90%	0.98%				
11	1988	31,986	2,986	29,001	5.57%	8.64%	6.61%			
12	1989	33,265	3,083	30,182	4.07%	9.88%	13.06%	10.96%		
13	1990	34,372	3,130	31,242	3.51%	7.73%	13.73%	17.03%		
14	1991	34,840	3,074	31,767	1.68%	5.25%	9.54%	15.64%		
15	1992	35,114	2,878	32,236	1.48%	3.18%	6.81%	11.16%		
16	1993	35,708	2,460	33,248	3.14%	4.66%	6.42%	10.16%		
17	1994	36,107	2,231	33,877	1.89%	5.09%	6.64%	8.43%		
18	1995	36,336	2,436	33,900	0.07%	1.96%	5.16%	6.71%		
19	1996	38,151	2,680	35,470	4.63%	4.70%	6.69%	10.03%		
20	1997	37,911	2,791	35,120	-0.99%	3.60%	3.67%	5.63%		
21	1998	39,144	2,819	36,325	3.43%	2.41%	7.15%	7.23%		
22	1999	39,829	2,815	37,014	1.90%	5.39%	4.35%	9.19%		
23	2000	40,479	2,473	38,007	2.68%	4.63%	8.22%	7.15%		
24	2001	36,998	285	36,713	-3.40%	-0.81%	1.07%	4.54%		
25	2002	39,121	410	38,711	5.44%	1.85%	4.59%	6.57%		
26	2003	38,881	439	38,442	-0.70%	4.71%	1.15%	3.86%		
27	2004	39,646	328	39,318	2.28%	1.57%	7.10%	3.45%		
28	2005	41,199	308	40,891	4.00%	6.37%	5.63%	11.38%		
29										
30					Avg	0.021	0.043	0.065	0.088	
31					StDev	0.0242	0.0269	0.0330	0.0380	
32					Min	-0.034	-0.008	0.011	0.035	
33					Max	0.056	0.099	0.137	0.170	
34										
35	NWPP (Without DSI Load) & California Load Correlation (Post 1986)							0.971		
36										
37	<u>California</u>									
38										
39	Year			CAL/MEX	% Change Over 1 Yr	% Change Over 2 Yr	% Change Over 3 Yr	% Change Over 4 Yr		
40	1987			24,498						
41	1988			25,491	4.05%					
42	1989			26,153	2.60%	6.76%				
43	1990			27,021	3.32%	6.00%	10.30%			
44	1991			26,324	-2.58%	0.65%	3.27%	7.46%		
45	1992			27,021	2.65%	0.00%	3.32%	6.00%		
46	1993			26,895	-0.46%	2.17%	-0.46%	2.84%		
47	1994			27,820	3.44%	2.96%	5.68%	2.96%		
48	1995			27,454	-1.31%	2.08%	1.61%	4.29%		
49	1996			28,390	3.41%	2.05%	5.56%	5.07%		
50	1997			29,326	3.30%	6.82%	5.42%	9.04%		
51	1998			29,064	-0.90%	2.37%	5.86%	4.47%		
52	1999			29,943	3.02%	2.10%	5.47%	9.06%		
53	2000			31,461	5.07%	8.25%	7.28%	10.82%		
54	2001			30,708	-2.39%	2.55%	5.66%	4.71%		
55	2002			31,689	3.20%	0.73%	5.83%	9.03%		
56	2003			31,632	-0.18%	3.01%	0.54%	5.64%		
57	2004			32,945	4.15%	3.96%	7.29%	4.72%		
58	2005			32,534	-1.25%	2.85%	2.67%	5.95%		
59										
60					Avg	0.016	0.033	0.047	0.061	
61					StDev	0.0251	0.0235	0.0274	0.0242	
62					Min	-0.026	0.000	-0.005	0.028	
63					Max	0.051	0.082	0.103	0.108	
64										
65	Note: For the reason describe below, California load growth variability was calculated using data that starts in 1987.									
66										
67	Prior to 1997, the Southern Nevada reporting-area data were included in the California sub-area data.									
68	The Arizona-New Mexico-Southern Nevada Power Area and California-Mexico Power Area data, prior to 1987,									
69	have not been adjusted for the Southern Nevada reporting-area change									

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Table 16: Derivation of Load-Weighted, Monthly Load Standard Deviations for PNW															
2																
3																
4	PNW															
5			Loads CY 2005	Daily Load Standard Deviations												
6				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
7	PGE	PGEFRM	2057	0.1	0.1	0.08	0.09	0.08	0.08	0.11	0.08	0.09	0.09	0.09	0.09	0.1
8	PP&L	PPLFRM	2462	0.12	0.13	0.1	0.13	0.12	0.10	0.16	0.11	0.12	0.12	0.12	0.12	0.13
9	OIOU	OIOFRM	2772	0.07	0.09	0.05	0.07	0.06	0.07	0.08	0.06	0.07	0.06	0.07	0.07	
10	GPUB	GPUFRM	2827	0.08	0.08	0.07	0.08	0.09	0.07	0.08	0.07	0.08	0.09	0.08	0.09	
11	BPA	BPAFRM	3740	0.09	0.09	0.06	0.07	0.06	0.05	0.06	0.06	0.07	0.08	0.09	0.1	
12	OIOU	PSPL	2673	0.09	0.1	0.07	0.1	0.08	0.06	0.07	0.06	0.07	0.09	0.09	0.09	
13	GPUB	COPOSN	1499	0.09	0.08	0.06	0.08	0.08	0.08	0.14	0.04	0.07	0.07	0.07	0.1	
14	BPA	DSIFRM	1061	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.05	0.01	0.01	0.01	
15	BPA	DSI2Q	2122	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.05	0.01	0.01	0.01	
16	BPA	DSINFM	0	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.05	0.01	0.01	0.01	
17	Total PNW		21213													
18																
19																
20																
21			Loads CY 2005	Daily Load Variances												
22				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
23	PGE	PGEFRM	2057	0.01	0.01	0.0064	0.0081	0.01	0.01	0.01	0.0064	0.0081	0.0081	0.0081	0.01	
24	PP&L	PPLFRM	2462	0.0144	0.0169	0.01	0.0169	0.01	0.01	0.03	0.0121	0.0144	0.0144	0.0144	0.0169	
25	OIOU	OIOFRM	2772	0.0049	0.0081	0.0025	0.0049	0.00	0.00	0.01	0.0036	0.0049	0.0036	0.0049	0.0049	
26	GPUB	GPUFRM	2827	0.0064	0.0064	0.0049	0.0064	0.01	0.00	0.01	0.0049	0.0064	0.0081	0.0064	0.0081	
27	BPA	BPAFRM	3740	0.0081	0.0081	0.00	0.00	0.00	0.0025	0.00	0.0036	0.00	0.0064	0.01	0.01	
28	OIOU	PSPL	2673	0.0081	0.01	0.0049	0.01	0.0064	0.0036	0.0049	0.0036	0.00	0.0081	0.0081	0.0081	
29	GPUB	COPOSN	1499	0.0081	0.0064	0.0036	0.0064	0.01	0.01	0.0196	0.00	0.0049	0.00	0.0049	0.01	
30	BPA	DSIFRM	1061	0.0004	0.0001	0.0001	0.0004	0.00	0.00	0.0001	0.00	0.0025	0.00	0.0001	0.0001	
31	BPA	DSI2Q	2122	0.0004	0.0001	0.0001	0.0004	0.0001	0.0004	0.0001	0.0001	0.0025	0.0001	0.0001	0.0001	
32	BPA	DSINFM	0	0.0004	0.0001	0.0001	0.0004	0.0001	0.0004	0.0001	0.0001	0.0025	0.0001	0.0001	0.0001	
33	Total PNW		21213													
34																
35	Number of Days Per Month			31	28	31	30	31	30	31	31	30	31	30	31	
36																
37	Weighted Daily Load Variances			0.0072	0.0080	0.0043	0.0069	0.0058	0.0045	0.0085	0.0044	0.0062	0.0065	0.0068	0.0082	
38	Weighted Daily Load Standard Deviations			0.0849	0.0894	0.0654	0.0829	0.0758	0.0669	0.0921	0.0661	0.0784	0.0807	0.0822	0.0903	
39	Monthly Load Standard Deviations			0.0153	0.0169	0.0118	0.0151	0.0136	0.0122	0.0165	0.0119	0.0143	0.0145	0.0150	0.0162	
40																

	A	B	C	D	E
1	Table 17: PNW and California Load Variability Calibration				
2					
3					
4					
5	Mean-Reversion Calibration Section				
6			<u>CY09</u>	<u>CY10</u>	<u>CY11</u>
7	Mean Reversion Rate		20.550	5.400	5.000
8	Min/Max Standard Deviations		5.000	5.000	5.000
9	Additional California Annual Load Volatility Adjustment Factors		0.160	0.527	0.001
10	Sum of Residuals ^2 for PNW (CY09-11)		71		
11	Sum of Residuals ^2 for California (CY09-11)		6,438		
12	Sum of Residuals ^2 for PNW & California (CY09-11)		6,509		
13					
14	PNW Load Risk Result Section				
15					
16		<u>Avg 09-11</u>	<u>CY 2009</u>	<u>CY 2010</u>	<u>CY 2011</u>
17	Simulated Annual PNW Loads (aMW)	24,149	23,666	24,161	24,618
18	Forecasted Annual PNW Loads (aMW)	24,157	23,672	24,169	24,629
19	Sim Less Forecast	(8)	(7)	(8)	(10)
20					
21		<u>Avg 09-11</u>	<u>CY 2009</u>	<u>CY 2010</u>	<u>CY 2011</u>
22	Sim Load Stdev	791	638	805	930
23	Historical Load Stdev Applied to Current Load Forecast	791	638	798	936
24	Sim Less Hist Stdev	0	0	6	(6)
25					
26	California Load Risk Result Section				
27					
28		<u>Avg 09-11</u>	<u>CY 2009</u>	<u>CY 2010</u>	<u>CY 2011</u>
29	Simulated Annual Calif Loads (aMW)	33,856	33,155	33,851	34,562
30	Forecasted Annual Calif Loads (aMW)	33,858	33,157	33,853	34,564
31	Sim Less Forecast	(2)	(2)	(2)	(2)
32					
33		<u>Avg 09-11</u>	<u>CY 2009</u>	<u>CY 2010</u>	<u>CY 2011</u>
34	Sim Load Stdev	847	779	871	891
35	Historical Load Stdev Applied to Current Load Forecast	848	780	928	835
36	Sim Less Hist Stdev	(0)	(1)	(57)	57

Table 18: PNW Load Risk Model for CY 2009 - 2011

PNW Load Variability

PNW Load Growth Uncertainty:

Forecasted Calendar Year (2007) Annual Average PNW Loads	22,583
Forecasted PNW Load Growth for 2008; Source: Aurora	2.57%
Forecasted PNW Load Growth for 2009; Source: Aurora	2.20%
Forecasted PNW Load Growth for 2010; Source: Aurora	2.10%
Forecasted PNW Load Growth for 2011; Source: Aurora	1.90%
Annual Load Growth Std Dev; Source: WECC Load Data (1982-2005)	2.42%

Estimated Base Case Loads	Std Normal Dist	Base MR	Additional MR Decay Factors	
			Base MR	Factors
CY 2008	23,163	0.0	N/A	
CY 2009	23,672	0.0	1.00	20.55
CY 2010	24,169	0.0	1.00	5.40
CY 2011	24,629	0.0	1.00	5.00

Load Growth Dev from any specified forecasted load level

CY 2008	23163
CY 2009	23672
CY 2010	24169
CY 2011	24629

PNW Load Variability Due to Load Growth Uncertainty

Calendar Year 2009

	Jan '09	Feb '09	Mar '09	Apr '09	May '09	Jun '09	Jul '09	Aug '09	Sep '09	Oct '09	Nov '09	Dec '09	Simple Avg
Average Annual PNW Loads (Average Energy in aMW)	23672	23672	23672	23672	23672	23672	23672	23672	23672	23672	23672	23672	
PNW Monthly Load Shapes (Source: AURORA)	1.103	1.064	1.020	0.944	0.934	0.961	1.004	1.003	0.931	0.921	1.022	1.092	
Simulated Monthly PNW Loads (Average Energy in aMW)	26103	25194	24147	22352	22107	22757	23772	23743	22029	21808	24201	25855	23,672 aMW

PNW Load Variability Due to Load Growth and Weather Uncertainty

	Jan '09	Feb '09	Mar '09	Apr '09	May '09	Jun '09	Jul '09	Aug '09	Sep '09	Oct '09	Nov '09	Dec '09	Simple Avg
PNW Loads after Load Growth (Average Energy in aMW)	26103	25194	24147	22352	22107	22757	23772	23743	22029	21808	24201	25855	23,672 aMW
Monthly Load Standard Deviation	1.53%	1.69%	1.18%	1.51%	1.36%	1.22%	1.65%	1.19%	1.43%	1.45%	1.50%	1.62%	
Random PNW Loads (Average Energy in aMW)	26,103	25,194	24,147	22,352	22,107	22,757	23,772	23,743	22,029	21,808	24,201	25,855	23,672 aMW

Annual PNW Load Variability Calibration Data (Output Cells)	CY09	CY10	CY11
	23,672	24,169	24,629

	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Table 18: PNW Load Risk Model for CY 2009 - 2011													
2														
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16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28	PNW Load Variability Due to Load Growth Uncertainty													
29		Calendar Year 2010												
30		Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10	Nov '10	Dec '10	Simple Avg
31	Average Annual PNW Loads (Average Energy in aMW)	24169	24169	24169	24169	24169	24169	24169	24169	24169	24169	24169	24169	24169
32	PNW Monthly Load Shapes (Source: AURORA)	1.103	1.064	1.020	0.944	0.934	0.961	1.004	1.003	0.931	0.921	1.022	1.092	
33	<i>Simulated Monthly PNW Loads (Average Energy in aMW)</i>	26652	25723	24654	22821	22571	23235	24272	24241	22492	22266	24709	26398	24,169 aMW
34														
35	PNW Load Variability Due to Load Growth and Weather Uncertainty													
36		Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10	Nov '10	Dec '10	Simple Avg
37	PNW Loads after Load Growth (Average Energy in aMW)	26652	25723	24654	22821	22571	23235	24272	24241	22492	22266	24709	26398	24,169 aMW
38	Monthly Load Standard Deviation	1.53%	1.69%	1.18%	1.51%	1.36%	1.22%	1.65%	1.19%	1.43%	1.45%	1.50%	1.62%	
39	<i>Random PNW Loads (Average Energy in aMW)</i>	26,652	25,723	24,654	22,821	22,571	23,235	24,272	24,241	22,492	22,266	24,709	26,398	24,169 aMW
40														
41														
42														

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Table 18: PNW Load Risk Model for CY 2009 - 2011

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19														
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21														
22														
23														
24														
25														
26														
27														
28	PNW Load Variability Due to Load Growth Uncertainty													
29	Calendar Year 2011													
30		Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Simple Avg
31	Average Annual PNW Loads (Average Energy in aMW)	24629	24629	24629	24629	24629	24629	24629	24629	24629	24629	24629	24629	24629
32	PNW Monthly Load Shapes (Source: AURORA)	1.103	1.064	1.020	0.944	0.934	0.961	1.004	1.003	0.931	0.921	1.022	1.092	
33	Simulated Monthly PNW Loads (Average Energy in aMW)	27158	26212	25123	23255	23000	23676	24733	24702	22919	22689	25178	26899	24,169 aMW
34														
35	PNW Load Variability Due to Load Growth and Weather Uncertainty													
36		Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Simple Avg
37	PNW Loads after Load Growth (Average Energy in aMW)	27158	26212	25123	23255	23000	23676	24733	24702	22919	22689	25178	26899	24,629 aMW
38	Monthly Load Standard Deviation	1.53%	1.69%	1.18%	1.51%	1.36%	1.22%	1.65%	1.19%	1.43%	1.45%	1.50%	1.62%	
39	Random PNW Loads (Average Energy in aMW)	27,158	26,212	25,123	23,255	23,000	23,676	24,733	24,702	22,919	22,689	25,178	26,899	24,629 aMW
40														
41														
42														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 19: California Hydro Generation for 1980 - 1997													
2														
3														
4														
5		FY	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
6	1	1980	2983	2486	3179	5011	5351	6007	5438	5128	4957	5087	4858	4418
7	2	1981	3210	3132	3142	2450	2701	2894	3471	3633	3931	4043	3667	3243
8	3	1982	2179	3167	5336	5649	5884	6243	6757	6800	6332	5809	5587	5146
9	4	1983	4036	4933	5649	5778	6903	7276	7075	7563	7547	6945	6302	5601
10	5	1984	4668	5338	6956	6786	5430	5250	5222	5110	5375	5517	5235	4501
11	6	1985	3261	3315	3950	3195	3594	3522	4176	4366	3943	4501	3962	3476
12	7	1986	3114	3276	3062	3215	4975	6784	5851	5423	5701	5621	4812	4721
13	8	1987	3750	3274	2710	2011	2342	2446	3118	3230	3322	3923	3548	3081
14	9	1988	2422	1951	2214	2327	2115	2392	2764	2792	3524	4238	3687	2779
15	10	1989	1677	1858	1887	1421	2060	3349	4318	4313	4557	5048	4415	3149
16	11	1990	2605	2665	2454	1995	1671	2656	3128	3164	3428	4081	3712	2692
17	12	1991	2522	1828	1626	1267	1146	1626	1978	2293	3711	3992	3398	2879
18	13	1992	2157	1664	1776	1478	1767	1991	2369	3071	2978	3106	2559	2078
19	14	1993	1687	1424	1704	2403	3463	5177	5785	6293	6650	5819	5071	3604
20	15	1994	2878	2515	2703	1767	1708	2409	2713	3226	3860	3989	3599	2403
21	16	1995	1875	1465	2203	3738	5443	6431	7339	7484	7507	6694	6121	4915
22	17	1996	3853	2910	2591	3013	5684	6597	6871	6954	6089	5442	4883	3688
23	18	1997	3003	2926	5204	5597	5923	5171	4896	5321	5489	5245	4796	3838
24														
25														
26														
27	Source: Energy Information Administration (EIA) - Electric Power Monthly. Electric Utility Hydroelectric Net Generation by Census Division and State, 1980 - 1997													
28														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Table 20: Derivation of Load-Weighted, Monthly Load Standard Deviations for California															
2																
3																
4	California															
5			Loads CY 2005	Daily Load Standard Deviations												
6				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
7	SCE	SCEFRM	11497	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.11	0.09	0.09	0.09	
8	SCE	AAAFRM	423	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.11	0.09	0.09	0.09	
9	SCE	BCRVFM	420	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.11	0.09	0.09	0.09	
10	SCE	DWRFRM	910	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.11	0.09	0.09	0.09	
11	LADWP	LADFRM	3366	0.09	0.09	0.10	0.10	0.10	0.11	0.12	0.11	0.12	0.11	0.10	0.09	
12	SDG&E	SDEFRM	2319	0.07	0.08	0.07	0.07	0.08	0.09	0.09	0.09	0.10	0.08	0.07	0.07	
13	OSC	BGPFRM	442	0.09	0.08	0.09	0.09	0.10	0.10	0.11	0.10	0.11	0.10	0.09	0.09	
14	OSC	IIDOFM	474	0.09	0.08	0.09	0.09	0.10	0.10	0.11	0.10	0.11	0.10	0.09	0.09	
15	PG&E	PG&FRM	10987	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.07	0.07	0.07	
16	ONC	NCPFRM	393	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.07	0.07	0.07	
17	ONC	REDFRM	130	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.07	0.07	0.07	
18	ONC	SNCFRM	305	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.07	0.07	0.07	
19	ONC	MIDFRM	275	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.07	0.07	0.07	
20	ONC	TIDFRM	200	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.07	0.07	0.07	
21	ONC	SMUFRM	1271	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.07	0.07	0.07	
22	Total Cal		33412													
23																
24			Loads CY 2005	Daily Load Variances												
25				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
26	SCE	SCEFRM	11497	0.0081	0.0081	0.0081	0.0081	0.01	0.01	0.01	0.0081	0.0121	0.0081	0.0081	0.0081	
27	SCE	AAAFRM	423	0.0081	0.0081	0.0081	0.0081	0.01	0.01	0.01	0.0081	0.0121	0.0081	0.0081	0.0081	
28	SCE	BCRVFM	420	0.0081	0.0081	0.0081	0.0081	0.01	0.01	0.01	0.0081	0.0121	0.0081	0.0081	0.0081	
29	SCE	DWRFRM	910	0.0081	0.0081	0.0081	0.0081	0.01	0.01	0.01	0.0081	0.0121	0.0081	0.0081	0.0081	
30	LADWP	LADFRM	3366	0.0081	0.0081	0.01	0.01	0.01	0.0121	0.01	0.0121	0.01	0.0121	0.01	0.0081	
31	SDG&E	SDEFRM	2319	0.0049	0.0064	0.0049	0.0049	0.0064	0.0081	0.0081	0.0081	0.01	0.0064	0.0049	0.0049	
32	OSC	BGPFRM	442	0.0081	0.0064	0.0081	0.0081	0.01	0.01	0.0121	0.01	0.0121	0.01	0.0081	0.0081	
33	OSC	IIDOFM	474	0.0081	0.0064	0.0081	0.0081	0.01	0.01	0.0121	0.01	0.0121	0.01	0.0081	0.0081	
34	PG&E	PG&FRM	10987	0.0049	0.0049	0.0049	0.0049	0.0081	0.0081	0.0081	0.0064	0.0081	0.0049	0.0049	0.0049	
35	ONC	NCPFRM	393	0.0049	0.0049	0.0049	0.0049	0.0081	0.0081	0.0081	0.0064	0.0081	0.0049	0.0049	0.0049	
36	ONC	REDFRM	130	0.0049	0.0049	0.0049	0.0049	0.0081	0.0081	0.0081	0.0064	0.0081	0.0049	0.0049	0.0049	
37	ONC	SNCFRM	305	0.0049	0.0049	0.0049	0.0049	0.0081	0.0081	0.0081	0.0064	0.0081	0.0049	0.0049	0.0049	
38	ONC	MIDFRM	275	0.0049	0.0049	0.0049	0.0049	0.0081	0.0081	0.0081	0.0064	0.0081	0.0049	0.0049	0.0049	
39	ONC	TIDFRM	200	0.0049	0.0049	0.0049	0.0049	0.0081	0.0081	0.0081	0.0064	0.0081	0.0049	0.0049	0.0049	
40	ONC	SMUFRM	1271	0.0049	0.0049	0.0049	0.0049	0.0081	0.0081	0.0081	0.0064	0.0081	0.0049	0.0049	0.0049	
41	Total Cal		33412													
42																
43	Number of Days Per Month				31	28	31	30	31	30	31	31	30	31	30	31
45	Weighted Daily Load Variances				0.0066	0.0066	0.0068	0.0068	0.0090	0.0093	0.0096	0.0079	0.0106	0.0071	0.0068	0.0066
46	Weighted Daily Load Standard Deviations				0.0811	0.0815	0.0823	0.0823	0.0948	0.0965	0.0980	0.0887	0.1028	0.0845	0.0823	0.0811
47	Monthly Load Standard Deviations				0.0146	0.0154	0.0148	0.0150	0.0170	0.0176	0.0176	0.0159	0.0188	0.0152	0.0150	0.0146

Table 21: California Load Risk Model for CY 2009 - 2011

California Load Variability

California Load Growth Uncertainty:

Forecasted Calendar Year (2007) Annual Average California Loads	31,793
Forecasted California Load Growth for 2008; Source: Aurora	2.14%
Forecasted California Load Growth for 2009; Source: Aurora	2.10%
Forecasted California Load Growth for 2010; Source: Aurora	2.10%
Forecasted California Load Growth for 2011; Source: Aurora	2.10%
Annual Load Growth Std Dev; Source: WECC Load Data (1987-2005)	2.51%

	Std Normal Dist (Same as PNW)	Additional Adj Factors
CY 2008 Estimated Base Case Loads	0.0	N/A
CY 2009 Estimated Base Case Loads	0.0	0.160
CY 2010 Estimated Base Case Loads	0.0	0.527
CY 2011 Estimated Base Case Loads	0.0	0.001

Load Growth Dev from any specified forecasted load level

CY 2008	32475
CY 2009	33157
CY 2010	33853
CY 2011	34564

California Load Variability Due to Load Growth Uncertainty

Calendar Year 2009

	Jan '09	Feb '09	Mar '09	Apr '09	May '09	Jun '09	Jul '09	Aug '09	Sep '09	Oct '09	Nov '09	Dec '09	Simple Avg
Average Annual California Loads (Average Energy in aMW)	33157	33157	33157	33157	33157	33157	33157	33157	33157	33157	33157	33157	
California Monthly Load Shapes	0.955	0.930	0.930	0.920	0.975	1.052	1.095	1.121	1.082	0.986	0.952	1.002	
Simulated Monthly California Loads (Average Energy in aMW)	31659	30850	30850	30519	32322	34893	36303	37153	35868	32696	31555	33214	33,157 aMW

California Load Variability Due to Load Growth and Weather Uncertainty

	Jan '09	Feb '09	Mar '09	Apr '09	May '09	Jun '09	Jul '09	Aug '09	Sep '09	Oct '09	Nov '09	Dec '09	Simple Avg
California Loads (Average Energy in aMW)	31659	30850	30850	30519	32322	34893	36303	37153	35868	32696	31555	33214	33,157 aMW
Monthly Load Standard Deviation	1.46%	1.54%	1.48%	1.50%	1.70%	1.76%	1.76%	1.59%	1.88%	1.52%	1.50%	1.46%	
Random California Non-Fed Loads (Average Energy in aMW)	31,659	30,850	30,850	30,519	32,322	34,893	36,303	37,153	35,868	32,696	31,555	33,214	33,157 aMW

	CY09	CY10	CY11
Annual California Load Variability Calibration Data (Output Cells)	33,157	33,853	34,564

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Table 21: California Load Risk Model for CY 2009 - 2011

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28	California Load Variability Due to Load Growth Uncertainty													
29	Calendar Year 2010													
30		Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10	Nov '10	Dec '10	Simple Avg
31	Average Annual California Loads (Average Energy in aMW)	33853	33853	33853	33853	33853	33853	33853	33853	33853	33853	33853	33853	
32	California Monthly Load Shapes	0.955	0.930	0.930	0.920	0.975	1.052	1.095	1.121	1.082	0.986	0.952	1.002	
33	Simulated Monthly California Loads (Average Energy in aMW)	32324	31498	31498	31159	33001	35626	37065	37933	36621	33382	32218	33911	33,853 aMW
34														
35	California Load Variability Due to Load Growth and Weather Uncertainty													
36		Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10	Nov '10	Dec '10	Simple Avg
37	California Loads (Average Energy in aMW)	32324	31498	31498	31159	33001	35626	37065	37933	36621	33382	32218	33911	33,853 aMW
38	Monthly Load Standard Deviation	1.46%	1.54%	1.48%	1.50%	1.70%	1.76%	1.76%	1.59%	1.88%	1.52%	1.50%	1.46%	
39	Random California Non-Fed Loads (Average Energy in aMW)	32,324	31,498	31,498	31,159	33,001	35,626	37,065	37,933	36,621	33,382	32,218	33,911	33,853 aMW
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Table 21: California Load Risk Model for CY 2009 - 2011

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28	California Load Variability Due to Load Growth Uncertainty
29	Calendar Year 2011
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35	California Load Variability Due to Load Growth and Weather Uncertainty
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	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Simple Avg
Average Annual California Loads (Average Energy in aMW)	34564	34564	34564	34564	34564	34564	34564	34564	34564	34564	34564	34564	
California Monthly Load Shapes	0.955	0.930	0.930	0.920	0.975	1.052	1.095	1.121	1.082	0.986	0.952	1.002	
Simulated Monthly California Loads (Average Energy in aMW)	33002	32160	32160	31814	33694	36374	37844	38730	37390	34083	32895	34624	34,564 aMW

	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Simple Avg
California Loads (Average Energy in aMW)	33002	32160	32160	31814	33694	36374	37844	38730	37390	34083	32895	34624	34,564 aMW
Monthly Load Standard Deviation	1.46%	1.54%	1.48%	1.50%	1.70%	1.76%	1.76%	1.59%	1.88%	1.52%	1.50%	1.46%	
Random California Non-Fed Loads (Average Energy in aMW)	33,002	32,160	32,160	31,814	33,694	36,374	37,844	38,730	37,390	34,083	32,895	34,624	34,564 aMW

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1	Table 22: Estimated Monthly Price Volatilities, Annual CY 2009 Price Volatility, and Annual CY 2009 Price Variability Based on the Gas Price Forecast														
4	Input Calculations for Gas Price Risk Model														
5		Dec-89	3.17												
6	Ignacio Monthly Spot Gas Prices in real 2005\$														
8	Year	1 Jan	2 Feb	3 Mar	4 Apr	5 May	6 Jun	7 Jul	8 Aug	9 Sep	10 Oct	11 Nov	12 Dec	Annual Average	
9	1990	3.64	2.53	2.00	2.01	1.98	2.03	1.98	1.95	1.93	2.37	2.69	2.56	2.30	
10	1991	2.19	1.58	1.38	1.43	1.39	1.36	1.38	1.47	1.67	1.69	2.24	2.24	1.67	
11	1992	1.64	1.48	1.57	1.79	1.89	1.96	2.06	2.36	2.79	2.74	2.69	2.75	2.14	
12	1993	2.57	2.20	2.67	2.51	2.34	2.17	2.30	2.47	2.59	2.36	2.48	2.57	2.44	
13	1994	2.31	2.66	2.39	2.19	2.06	1.89	1.97	1.96	1.65	1.62	1.85	1.97	2.04	
14	1995	1.57	1.36	1.35	1.39	1.42	1.40	1.24	1.48	1.55	1.45	1.51	1.55	1.44	
15	1996	1.45	1.47	1.41	1.38	1.35	1.57	2.08	2.24	1.86	2.19	3.15	4.16	2.03	
16	1997	4.17	2.86	1.89	2.03	2.24	2.32	2.40	2.65	3.08	3.25	3.47	2.54	2.74	
17	1998	2.34	2.26	2.43	2.54	2.27	1.98	2.21	2.08	1.99	1.99	2.24	2.06	2.20	
18	1999	2.04	1.90	1.75	2.06	2.32	2.35	2.34	2.76	2.75	2.91	2.60	2.57	2.36	
19	2000	2.54	2.73	2.92	3.11	3.44	4.89	4.19	3.87	4.67	5.10	5.78	8.66	4.33	
20	2001	9.06	6.30	5.34	5.10	3.91	2.96	2.70	2.83	2.03	2.32	2.43	2.51	3.96	
21	2002	2.27	2.30	2.92	2.85	2.71	2.51	2.77	2.64	2.61	3.01	3.67	4.19	2.87	
22	2003	4.76	5.49	5.68	3.78	4.76	5.19	4.79	4.85	4.47	4.49	4.29	5.60	4.85	
23	2004	5.67	5.03	4.93	5.30	5.49	5.44	5.41	5.19	4.45	5.11	5.65	6.22	5.32	
24	2005	5.53	5.54	6.27	6.39	5.62	5.77	6.22	7.42	8.99	10.17	7.41	11.27	7.22	
25	2006	7.15	6.36	5.57	5.60	4.93	5.28	5.39	6.33	4.14	5.08	5.61	6.24	5.64	
26	2007	5.85	6.61	5.80	6.32	6.34	6.17	5.19	5.24	4.93	5.88	5.09	6.11	5.79	
27	Annual Average	3.71	3.37	3.24	3.21	3.14	3.18	3.15	3.32	3.23	3.54	3.60	4.21	3.41	
28	Median	2.55	2.59	2.55	2.53	2.33	2.33	2.37	2.65	2.68	2.82	2.92	2.66	2.59	
29	Annual Standard Deviation													1.71	
31	Ignacio Monthly Spot Gas Price Natural Log (Ln) Ratio Deltas (Returns) and Volatility Computations: Reflects Month-To-Month Price Changes														
32		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
33	1990	0.14	-0.37	-0.23	0.00	-0.02	0.02	-0.02	-0.02	-0.01	0.21	0.13	-0.05		
34	1991	-0.16	-0.33	-0.13	0.04	-0.03	-0.02	0.02	0.06	0.12	0.01	0.28	0.00		
35	1992	-0.31	-0.10	0.06	0.13	0.05	0.04	0.05	0.13	0.17	-0.02	-0.02	0.02		
36	1993	-0.07	-0.15	0.19	-0.06	-0.07	-0.08	0.05	0.07	0.05	-0.09	0.05	0.03		
37	1994	-0.10	0.14	-0.11	-0.09	-0.06	-0.08	0.04	-0.01	-0.17	-0.02	0.13	0.06		
38	1995	-0.22	-0.14	-0.01	0.03	0.02	-0.01	-0.12	0.18	0.05	-0.07	0.04	0.02		
39	1996	-0.07	0.01	-0.04	-0.02	-0.02	0.15	0.28	0.08	-0.19	0.16	0.36	0.28		
40	1997	0.00	-0.38	-0.42	0.07	0.10	0.03	0.03	0.10	0.15	0.05	0.07	-0.31		
41	1998	-0.08	-0.03	0.07	0.05	-0.11	-0.14	0.11	-0.06	-0.04	0.00	0.12	-0.09		
42	1999	-0.01	-0.07	-0.08	0.16	0.12	0.01	-0.01	0.16	0.00	0.05	-0.11	-0.01		
43	2000	-0.01	0.07	0.07	0.06	0.10	0.35	-0.15	-0.08	0.19	0.09	0.12	0.40		
44	2001	0.05	-0.36	-0.17	-0.05	-0.26	-0.28	-0.09	0.05	-0.33	0.13	0.04	0.03		
45	2002	-0.10	0.01	0.24	-0.02	-0.05	-0.08	0.10	-0.05	-0.01	0.14	0.20	0.13		
46	2003	0.13	0.14	0.03	-0.41	0.23	0.09	-0.08	0.01	-0.08	0.00	-0.05	0.27		
47	2004	0.01	-0.12	-0.02	0.07	0.04	-0.01	-0.01	-0.04	-0.15	0.14	0.10	0.10		
48	2005	-0.12	0.00	0.12	0.02	-0.13	0.03	0.07	0.18	0.19	0.12	-0.32	0.42		
49	2006	-0.46	-0.12	-0.13	0.00	-0.13	0.07	0.02	0.16	-0.42	0.20	0.10	0.11		
50	2007	-0.06	0.12	-0.13	0.09	0.00	-0.03	-0.17	0.01	-0.06	0.18	-0.14	0.18		
51	Volatilities (Std Devs of Ln Ratio Deltas)	0.144	0.173	0.158	0.121	0.113	0.127	0.108	0.086	0.174	0.093	0.156	0.177		
52	Average of Ln Ratio Deltas	-0.08	-0.09	-0.04	0.00	-0.01	0.00	0.01	0.05	-0.03	0.07	0.06	0.09		
54	Cumulative Monthly Price Standard Deviation Computations for Gas Price Forecast Made at the Beginning of the Current Calendar Year (Impacted by Both Price Level and Volatility)														
56		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Avg	
57	CY09 Price Forecast (Median)	3.97	3.43	2.97	2.99	3.01	3.13	3.16	3.25	3.31	3.43	3.88	4.37	3.41	
58	CY09 Computed Average Prices	4.01	3.52	3.17	3.16	3.25	3.47	3.51	3.57	3.76	3.88	4.33	5.06	3.72	
60	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
61	1990	4.94	3.22	2.18	2.20	2.22	2.38	2.35	2.27	2.39	2.84	3.48	3.53	2.83	
62	1991	3.68	2.36	1.75	1.83	1.82	1.89	1.94	2.05	2.46	2.43	3.48	3.67	2.45	
63	1992	3.16	2.59	2.38	2.72	2.94	3.16	3.33	3.69	4.58	4.29	4.42	4.62	3.49	
64	1993	4.02	3.24	3.61	3.41	3.24	3.11	3.30	3.45	3.80	3.33	3.75	4.04	3.52	
65	1994	3.88	4.35	3.60	3.30	3.17	3.02	3.16	3.06	2.72	2.60	3.25	3.66	3.31	
66	1995	3.44	2.72	2.33	2.42	2.52	2.60	2.32	2.71	3.00	2.72	3.11	3.41	2.78	
67	1996	4.03	3.95	3.46	3.40	3.40	4.04	5.36	5.57	4.83	5.40	7.75	9.87	5.09	
68	1997	4.31	2.71	1.75	1.89	2.14	2.32	2.42	2.62	3.22	3.26	3.72	2.99	2.78	
69	1998	3.96	3.67	3.62	3.80	3.46	3.12	3.49	3.20	3.24	3.12	3.75	3.84	3.51	
70	1999	4.28	3.83	3.19	3.76	4.31	4.47	4.45	5.06	5.28	5.30	4.92	4.92	4.48	
71	2000	4.26	4.48	4.52	4.81	5.41	7.77	6.66	5.92	7.43	7.67	8.62	12.30	6.65	
72	2001	4.51	2.90	2.08	2.00	1.75	1.75	1.75	1.82	1.75	1.97	2.39	2.75	2.29	
73	2002	3.89	3.78	4.53	4.42	4.28	4.06	4.48	4.15	4.29	4.71	5.85	6.62	4.59	
74	2003	4.89	5.64	5.60	3.73	4.78	5.30	4.90	4.79	4.63	4.44	4.43	5.79	4.91	
75	2004	4.36	3.70	3.30	3.55	3.75	3.82	3.80	3.55	3.21	3.54	4.13	4.65	3.78	
76	2005	3.83	3.67	3.84	3.92	3.51	3.71	4.01	4.62	5.85	6.26	4.74	7.09	4.59	
77	2006	2.73	2.12	1.75	1.77	1.75	1.98	2.05	2.36	1.75	2.11	2.64	3.18	2.18	
78	2007	4.04	4.46	3.60	3.93	4.01	4.01	3.38	3.32	3.29	3.77	3.52	4.35	3.81	
79	CY09 Cumulative Price Std Dev	0.547	0.888	1.095	0.944	1.076	1.445	1.312	1.220	1.483	1.530	1.633	2.528	1.160	
81	Cumulative Monthly Volatility Computations for Gas Price Forecast Made at the Beginning of the Current Calendar Year														
82		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual (LN)	
83	1990	0.22	-0.06	-0.31	-0.30	-0.31	-0.27	-0.30	-0.36	-0.33	-0.19	-0.11	-0.21	1.04	
84	1991	-0.08	-0.37	-0.53	-0.49	-0.51	-0.51	-0.49	-0.46	-0.30	-0.34	-0.11	-0.17	0.89	
85	1992	-0.23	-0.28	-0.22	-0.09	-0.03	0.01	0.05	0.13	0.32	0.22	0.13	0.06	1.25	
86	1993	0.01	-0.06	0.20	0.13	0.07	-0.01	0.04	0.06	0.14	-0.03	-0.03	-0.08	1.26	
87	1994	-0.02	0.24	0.19	0.10	0.05	-0.04	0.00	-0.06	-0.20	-0.28	-0.18	-0.18	1.20	
88	1995	-0.14	-0.23	-0.24	-0.21	-0.18	-0.19	-0.31	-0.18	-0.10	-0.23	-0.22	-0.25	1.02	
89	1996	0.01	0.14	0.15	0.13	0.12	0.26	0.53	0.54	0.38	0.45	0.69	0.81	1.63	
90	1997	0.08	-0.24	-0.53	-0.46	-0.34	-0.30	-0.27	-0.21	-0.03	-0.05	-0.04	-0.38	1.02	
91	1998	0.00	0.07	0.20	0.24	0.14	0.00	0.10	-0.01	-0.02	-0.09	-0.03	-0.18	1.25	
92	1999	0.07	0.11	0.07	0.23	0.36	0.36	0.34	0.44	0.47	0.44	0.24	0.12	1.50	
93	2000	0.07	0.27	0.42	0.48	0.59	0.91	0.74	0.60	0.81	0.81	0.80	1.03	1.90	
94	2001	0.13	-0.17	-0.35	-0.40	-0.54	-0.58	-0.59	-0.58						

	A	B	C	D	E						
1	Table 23: Estimated CY 2010-2011 Price Statistics Based on Applying Historical Volatility to the Gas Price Forecast										
2											
3	<table border="1"> <thead> <tr> <th colspan="2">Annual Gas Price Forecast</th> </tr> <tr> <th>CY10</th> <th>CY11</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4.67</td> <td style="text-align: center;">4.65</td> </tr> </tbody> </table>					Annual Gas Price Forecast		CY10	CY11	4.67	4.65
Annual Gas Price Forecast											
CY10	CY11										
4.67	4.65										
4											
5											
6											
7	Ignacio Annual Spot Gas Price <u>Natural Log (Ln) Ratio Deltas (Returns) and Volatility Computations</u>;										
8	Reflects Cumulative Annual Price Changes Over Time										
9	Year	Annual Average Historical Real Prices	1 Yr LN Ratio Changes	2 Yr LN Ratio Changes							
10	1990	2.30									
11	1991	1.67	-0.32								
12	1992	2.14	0.25	-0.07							
13	1993	2.44	0.13	0.38							
14	1994	2.04	-0.18	-0.05							
15	1995	1.44	-0.35	-0.53							
16	1996	2.03	0.34	-0.01							
17	1997	2.74	0.30	0.64							
18	1998	2.20	-0.22	0.08							
19	1999	2.36	0.07	-0.15							
20	2000	4.33	0.61	0.68							
21	2001	3.96	-0.09	0.52							
22	2002	2.87	-0.32	-0.41							
23	2003	4.85	0.52	0.20							
24	2004	5.32	0.09	0.62							
25	2005	7.22	0.30	0.40							
26	2006	5.64	-0.25	0.06							
27	2007	5.79	0.03	-0.22							
28	Volatilities (Std Devs of Ln Ratio Deltas)		0.302	0.375							
29	Average of Ln Ratio Deltas		0.054	0.134							
30											
31	Forecast Prices With + 2 Standard Deviations		8.55	9.84							
32	Forecast Prices With + 1 Standard Deviation		6.32	6.77							
33	Forecast Prices (Median)		4.67	4.65							
34	Forecast Prices With - 1 Standard Deviation		3.45	3.20							
35	Forecast Prices With - 2 Standard Deviations		2.55	2.20							
36											
37	Gas Price Standard Deviations for Gas Price Forecast and Historical Volatility										
38											
39	Year		CY10	CY11							
40	1990										
41	1991		3.20								
42	1992		5.69	3.78							
43	1993		5.03	5.94							
44	1994		3.71	3.88							
45	1995		3.12	2.41							
46	1996		6.22	4.03							
47	1997		5.99	7.74							
48	1998		3.55	4.42							
49	1999		4.75	3.50							
50	2000		8.10	8.00							
51	2001		4.05	6.82							
52	2002		3.21	2.70							
53	2003		7.47	4.98							
54	2004		4.86	7.55							
55	2005		6.00	6.06							
56	2006		3.46	4.31							
57	2007		4.54	3.27							
58	Standard Deviation		1.51	1.83							

	A	B	C	D	E	F	G	H	I	J	K	L	M	N				
	Table 24: Natural Gas Price Volatility Calibration																	
1																		
2																		
3	Mean-Reversion Calibration Section:																	
4	CY 2009																	
5		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
6	Mean Reversion Rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
7	Max/Min Std Dev.	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000				
8																		
9	CY 2010																	
10		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
11	Mean Reversion Rate	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631				
12	Max/Min Std Dev.	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000				
13																		
14	CY 2011																	
15		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
16	Mean Reversion Rate	0.842	0.842	0.842	0.842	0.842	0.842	0.842	0.842	0.842	0.842	0.842	0.842	0.842				
17	Max/Min Std Dev.	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000				
18																		
19																		
20	Volatility Reporting & Calibration Section:																	
21																		
22	Simulated Price Volatilities for CY09-11													Sum 09-11	CY 2009	CY 2010	CY 2011	
23	Historical Price Volatilities Over 1, 2, and 3 Year Periods														0.296	0.339	0.339	
24	Simulated Less Historical Volatilities														0.304	0.339	0.339	
25	Residual ^2														-0.007	0.000	0.000	
26															0.000056	0.00006	0.00000	0.00000
27	Statistical Reporting Section:																	
28																		
29	Simulated CY09-11 Price Standard Deviations													Sum 09-11	CY 2009	CY 2010	CY 2011	
30	Estimated CY09-11 Price Standard Deviations; Derived By Applying Historical Price Volatilities to the Price Forecast														1.191	1.852	1.792	
31	Simulated Less Estimated Standard Deviations														1.160	1.720	1.720	
32	Residual ^2														0.031	0.132	0.073	
33															0.023741	0.00095	0.01749	0.00530
34																		
35																		
36	Simulated Average Price													Sum 09-11	CY 2009	CY 2010	CY 2011	
37	Simulated Median Price														4.64	3.68	5.16	5.07
38	Simulated Average Minus Median Price														4.35	3.43	4.82	4.79
39	Average Minus Median Prices; Derived By Applying Historical Price Volatilities to the Price Forecast														0.29	0.24	0.34	0.28
40	Gas Price Forecast														0.29	0.32	0.28	0.27
41	Simulated Average Price Less Forecast Price														4.24	3.41	4.67	4.65
42	Simulated Median Price Less Forecast Price														0.40	0.27	0.49	0.42
43															0.11	0.03	0.15	0.14
44																		
45	CY 2009																	
46		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual				
47	Simulated Cumulative Monthly Price Volatilities	0.145	0.260	0.329	0.340	0.349	0.355	0.363	0.362	0.391	0.386	0.370	0.362	0.296				
48	Historical Cumulative Monthly Price Volatilities	0.144	0.253	0.358	0.324	0.350	0.382	0.374	0.347	0.394	0.377	0.331	0.410	0.304				
49	Simulated Less Historical Monthly Price Volatilities	0.000	0.006	-0.029	0.016	-0.002	-0.027	-0.011	0.015	-0.003	0.008	0.038	-0.048	-0.007				
50																		
51	Residual ^2	0.0000	0.0000	0.0008	0.0002	0.0000	0.0007	0.0001	0.0002	0.0000	0.0001	0.0015	0.0023	0.0001				
52	Sum of Squares	0.0060												0.0001				
53																		
54		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual				
55	Simulated Cumulative Monthly Price Standard Deviations	0.584	0.921	1.088	1.163	1.217	1.313	1.370	1.417	1.619	1.641	1.795	1.979	1.191				
56	Estimated Cumulative Price Std Devs; Derived From Historical LN Price	0.547	0.888	1.095	0.944	1.076	1.445	1.312	1.220	1.483	1.530	1.633	2.528	1.160				
57	Simulated Less Estimated Price Standard Deviations	0.037	0.033	-0.008	0.218	0.142	-0.132	0.058	0.197	0.136	0.110	0.161	-0.549	0.031				
58																		
59	Residual ^2	0.0014	0.0011	0.0001	0.0477	0.0201	0.0175	0.0033	0.0387	0.0186	0.0122	0.0260	0.3016	0.0010				
60	Sum of Squares	0.4881												0.0010				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Table 25: Natural Gas Price Risk Model															
2	Forecasted Real 2005\$ Delivered Natural Gas Prices Per MMBTU to Southern California															
3		Price 2005\$	Minimum	Maximum												
4																
5	CY 2009 Avg	\$ 3.41	1.75	50												
6	CY 2010 Avg	\$ 4.67	1.75	50												
7	CY 2011 Avg	\$ 4.65	1.75	50												
8	CY09-11 Avg	\$ 4.24	1.75	50												
9																
10																
11		Price Forecast (\$/MMBTU)	Standard Normal Truncated Distribution N(var mean, 1); Includes Max and Min Std Devs	Monthly Volatility	Price Risk (\$/MMBTU)	Standard Normal Distribution Mean Adjustor (Causes Mean Reversion)			Monthly Volatility	Mean Reversion Decay Parameters	Maximum and Minimum Standard Deviations	Monthly Gas Price Shapes	Price Forecast (\$/MMBTU)	Minimum Price (\$/MMBTU)	Maximum Price (\$/MMBTU)	Unconstrained Simulated Prices (\$/MMBTU)
12	Initial Value					1.00	Actuals									
13	Jan-09	3.97	0.00	0.144	3.97	1.00	Y	Jan-09	0.144	0.00	5.00	1.17	3.97	1.75	50.00	3.97
14	Feb-09	3.43	0.00	0.173	3.43	1.00	Y	Feb-09	0.173	0.00	5.00	1.01	3.43	1.75	50.00	3.43
15	Mar-09	2.97	0.00	0.158	2.97	1.00	Y	Mar-09	0.158	0.00	5.00	0.87	2.97	1.75	50.00	2.97
16	Apr-09	2.99	0.00	0.121	2.99	1.00	Y	Apr-09	0.121	0.00	5.00	0.88	2.99	1.75	50.00	2.99
17	May-09	3.01	0.00	0.113	3.01	1.00	N	May-09	0.113	0.00	5.00	0.88	3.01	1.75	50.00	3.01
18	Jun-09	3.13	0.00	0.127	3.13	1.00	N	Jun-09	0.127	0.00	5.00	0.92	3.13	1.75	50.00	3.13
19	Jul-09	3.16	0.00	0.108	3.16	1.00	N	Jul-09	0.108	0.00	5.00	0.93	3.16	1.75	50.00	3.16
20	Aug-09	3.25	0.00	0.086	3.25	1.00	N	Aug-09	0.086	0.00	5.00	0.95	3.25	1.75	50.00	3.25
21	Sep-09	3.31	0.00	0.174	3.31	1.00	N	Sep-09	0.174	0.00	5.00	0.97	3.31	1.75	50.00	3.31
22	Oct-09	3.43	0.00	0.093	3.43	1.00	N	Oct-09	0.093	0.00	5.00	1.01	3.43	1.75	50.00	3.43
23	Nov-09	3.88	0.00	0.156	3.88	1.00	N	Nov-09	0.156	0.00	5.00	1.14	3.88	1.75	50.00	3.88
24	Dec-09	4.37	0.00	0.177	4.37	1.00	N	Dec-09	0.177	0.00	5.00	1.28	4.37	1.75	50.00	4.37
25	Jan-10	5.10	0.00	0.144	5.10	1.00		Jan-10	0.144	0.63	5.00	1.09	5.10	1.75	50.00	5.10
26	Feb-10	5.08	0.00	0.173	5.08	1.00		Feb-10	0.173	0.63	5.00	1.09	5.08	1.75	50.00	5.08
27	Mar-10	4.93	0.00	0.158	4.93	1.00		Mar-10	0.158	0.63	5.00	1.05	4.93	1.75	50.00	4.93
28	Apr-10	4.42	0.00	0.121	4.42	1.00		Apr-10	0.121	0.63	5.00	0.95	4.42	1.75	50.00	4.42
29	May-10	4.39	0.00	0.113	4.39	1.00		May-10	0.113	0.63	5.00	0.94	4.39	1.75	50.00	4.39
30	Jun-10	4.43	0.00	0.127	4.43	1.00		Jun-10	0.127	0.63	5.00	0.95	4.43	1.75	50.00	4.43
31	Jul-10	4.48	0.00	0.108	4.48	1.00		Jul-10	0.108	0.63	5.00	0.96	4.48	1.75	50.00	4.48
32	Aug-10	4.50	0.00	0.086	4.50	1.00		Aug-10	0.086	0.63	5.00	0.96	4.50	1.75	50.00	4.50
33	Sep-10	4.50	0.00	0.174	4.50	1.00		Sep-10	0.174	0.63	5.00	0.96	4.50	1.75	50.00	4.50
34	Oct-10	4.55	0.00	0.093	4.55	1.00		Oct-10	0.093	0.63	5.00	0.97	4.55	1.75	50.00	4.55
35	Nov-10	4.72	0.00	0.156	4.72	1.00		Nov-10	0.156	0.63	5.00	1.01	4.72	1.75	50.00	4.72
36	Dec-10	4.94	0.00	0.177	4.94	1.00		Dec-10	0.177	0.63	5.00	1.06	4.94	1.75	50.00	4.94
37	Jan-11	5.08	0.00	0.144	5.08	1.00		Jan-11	0.144	0.84	5.00	1.09	5.08	1.75	50.00	5.08
38	Feb-11	5.06	0.00	0.173	5.06	1.00		Feb-11	0.173	0.84	5.00	1.09	5.06	1.75	50.00	5.06
39	Mar-11	4.91	0.00	0.158	4.91	1.00		Mar-11	0.158	0.84	5.00	1.05	4.91	1.75	50.00	4.91
40	Apr-11	4.40	0.00	0.121	4.40	1.00		Apr-11	0.121	0.84	5.00	0.95	4.40	1.75	50.00	4.40
41	May-11	4.37	0.00	0.113	4.37	1.00		May-11	0.113	0.84	5.00	0.94	4.37	1.75	50.00	4.37
42	Jun-11	4.41	0.00	0.127	4.41	1.00		Jun-11	0.127	0.84	5.00	0.95	4.41	1.75	50.00	4.41
43	Jul-11	4.46	0.00	0.108	4.46	1.00		Jul-11	0.108	0.84	5.00	0.96	4.46	1.75	50.00	4.46
44	Aug-11	4.48	0.00	0.086	4.48	1.00		Aug-11	0.086	0.84	5.00	0.96	4.48	1.75	50.00	4.48
45	Sep-11	4.48	0.00	0.174	4.48	1.00		Sep-11	0.174	0.84	5.00	0.96	4.48	1.75	50.00	4.48
46	Oct-11	4.53	0.00	0.093	4.53	1.00		Oct-11	0.093	0.84	5.00	0.97	4.53	1.75	50.00	4.53
47	Nov-11	4.70	0.00	0.156	4.70	1.00		Nov-11	0.156	0.84	5.00	1.01	4.70	1.75	50.00	4.70
48	Dec-11	4.92	0.00	0.177	4.92	1.00		Dec-11	0.177	0.84	5.00	1.06	4.92	1.75	50.00	4.92

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 26: CGS Nuclear Plant Risk Model												
2													
3													
4	CGS Input Parameters	H Factor: Capacity											
5		19.93	1162										
6													
7													
8													
9	CY 2009												
10		Jan '09	Feb '09	Mar '09	Apr '09	May '09	Jun '09	Jul '09	Aug '09	Sep '09	Oct '09	Nov '09	Dec '09
11	<i>Simulated CGS Output (aMW)</i>	1106	1106	1106	1106	286	0	1071	1106	1106	1106	1106	1106
12	<i>CGS L&R Study (Average Energy in aMW)</i>	1030	1030	1030	1030	266	0	997	1030	1030	1030	1030	1030
13	<i>Simulated Mean Values</i>	1030	1030	1030	1030	266	0	997	1030	1030	1030	1030	1030
14	<i>Risk Uniform Distribution</i>	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
15													
16	CY 2010												
17		Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Oct '10	Nov '10	Dec '10
18	<i>Simulated CGS Output (aMW)</i>	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106
19	<i>CGS L&R Study (Average Energy in aMW)</i>	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
20	<i>Simulated Mean Values</i>	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
21	<i>Risk Uniform Distribution</i>	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
22													
23	CY 2011												
24		Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11
25	<i>Simulated CGS Output (aMW)</i>	1106	1106	1106	295	0	0	964	1106	1106	1106	1106	1106
26	<i>CGS L&R Study (Average Energy in aMW)</i>	1030	1030	1030	275	0	0	897	1030	1030	1030	1030	1030
27	<i>Simulated Mean Values</i>	1030	1030	1030	275	0	0	897	1030	1030	1030	1030	1030
28	<i>Risk Uniform Distribution</i>	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 27: Condon Wind Project Daily Output Variability by Month												
2													
3													
4													
5	Condon												
6	Nameplate Capacity: 49.8 MW												
7													
8	Cumulative Probability Distribution of Daily Capacity Factors (Energy = Capacity * Capacity Factors)												
9	Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	Min	0.000	0.001	0.000	0.008	0.000	0.000	0.027	0.004	0.001	0.000	0.000	0.000
11	0.01	0.000	0.003	0.003	0.013	0.000	0.000	0.027	0.005	0.001	0.000	0.000	0.000
12	0.05	0.000	0.010	0.011	0.031	0.000	0.000	0.031	0.015	0.014	0.003	0.003	0.000
13	0.10	0.000	0.025	0.037	0.038	0.014	0.026	0.037	0.025	0.025	0.014	0.008	0.001
14	0.15	0.003	0.035	0.051	0.046	0.024	0.044	0.044	0.034	0.036	0.035	0.020	0.008
15	0.20	0.005	0.046	0.077	0.064	0.035	0.057	0.047	0.040	0.044	0.046	0.024	0.019
16	0.25	0.009	0.055	0.088	0.072	0.049	0.068	0.058	0.053	0.058	0.058	0.035	0.044
17	0.30	0.018	0.065	0.100	0.084	0.064	0.075	0.067	0.067	0.064	0.073	0.051	0.071
18	0.35	0.028	0.075	0.125	0.106	0.078	0.080	0.085	0.081	0.073	0.083	0.083	0.083
19	0.40	0.044	0.092	0.168	0.113	0.095	0.101	0.100	0.088	0.082	0.097	0.107	0.100
20	0.45	0.076	0.105	0.224	0.125	0.106	0.118	0.119	0.092	0.093	0.130	0.154	0.125
21	0.50	0.101	0.131	0.265	0.147	0.124	0.136	0.131	0.098	0.105	0.147	0.176	0.188
22	0.55	0.158	0.139	0.300	0.170	0.137	0.155	0.138	0.111	0.124	0.182	0.197	0.233
23	0.60	0.200	0.155	0.356	0.187	0.157	0.169	0.152	0.123	0.137	0.212	0.255	0.248
24	0.65	0.292	0.187	0.389	0.206	0.196	0.192	0.177	0.134	0.176	0.252	0.315	0.278
25	0.70	0.335	0.200	0.422	0.242	0.230	0.204	0.205	0.161	0.205	0.272	0.358	0.327
26	0.75	0.369	0.215	0.452	0.268	0.265	0.234	0.222	0.199	0.245	0.298	0.406	0.402
27	0.80	0.419	0.268	0.518	0.291	0.274	0.269	0.251	0.223	0.268	0.351	0.467	0.474
28	0.85	0.488	0.311	0.574	0.325	0.308	0.318	0.267	0.258	0.327	0.426	0.527	0.541
29	0.90	0.522	0.429	0.683	0.396	0.443	0.374	0.312	0.306	0.437	0.483	0.630	0.628
30	0.95	0.596	0.513	0.752	0.499	0.525	0.444	0.343	0.406	0.483	0.635	0.739	0.662
31	0.99	0.825	0.823	0.831	0.651	0.681	0.554	0.586	0.593	0.594	0.794	0.876	0.776
32	Max	0.866	0.953	0.901	0.712	0.696	0.628	0.723	0.719	0.758	0.859	0.931	0.800
33													
34	Average	0.207	0.175	0.301	0.189	0.175	0.169	0.158	0.142	0.166	0.213	0.254	0.243
35	Energy (aMW)	10.3	8.7	15.0	9.4	8.7	8.4	7.9	7.1	8.3	10.6	12.6	12.1

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 28: Combined Foote Creek I, II, and IV Wind Project Daily Output Variability by Month												
2													
3													
4													
5													
6													
7													
8	Cumulative Probability Distribution of Daily Capacity Factors (Energy = Capacity * Capacity Factors)												
9	Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	Min	0.270	0.331	0.168	0.189	0.151	0.135	0.118	0.075	0.092	0.144	0.189	0.162
11	0.01	0.274	0.342	0.168	0.213	0.160	0.141	0.119	0.082	0.103	0.153	0.198	0.177
12	0.05	0.322	0.353	0.176	0.245	0.176	0.155	0.129	0.088	0.114	0.158	0.224	0.213
13	0.10	0.382	0.364	0.202	0.269	0.186	0.177	0.134	0.097	0.122	0.167	0.254	0.278
14	0.15	0.435	0.382	0.246	0.282	0.190	0.186	0.140	0.103	0.134	0.182	0.290	0.317
15	0.20	0.469	0.405	0.265	0.298	0.201	0.193	0.144	0.116	0.140	0.203	0.341	0.354
16	0.25	0.490	0.439	0.272	0.310	0.206	0.225	0.149	0.127	0.151	0.216	0.349	0.374
17	0.30	0.500	0.462	0.319	0.332	0.210	0.233	0.152	0.130	0.169	0.236	0.363	0.409
18	0.35	0.519	0.506	0.354	0.353	0.233	0.246	0.156	0.140	0.188	0.245	0.375	0.430
19	0.40	0.539	0.524	0.361	0.373	0.246	0.253	0.165	0.151	0.200	0.264	0.392	0.465
20	0.45	0.561	0.542	0.400	0.386	0.265	0.264	0.168	0.157	0.207	0.303	0.399	0.495
21	0.50	0.576	0.569	0.409	0.399	0.280	0.274	0.175	0.171	0.229	0.334	0.435	0.520
22	0.55	0.582	0.587	0.428	0.418	0.292	0.283	0.190	0.181	0.235	0.355	0.459	0.540
23	0.60	0.590	0.592	0.444	0.443	0.303	0.295	0.193	0.192	0.244	0.369	0.475	0.556
24	0.65	0.602	0.619	0.453	0.459	0.321	0.318	0.195	0.204	0.250	0.388	0.502	0.561
25	0.70	0.612	0.630	0.475	0.479	0.329	0.336	0.204	0.225	0.273	0.413	0.524	0.571
26	0.75	0.624	0.638	0.492	0.490	0.342	0.353	0.222	0.242	0.282	0.418	0.529	0.590
27	0.80	0.630	0.654	0.510	0.506	0.366	0.376	0.229	0.258	0.298	0.426	0.540	0.598
28	0.85	0.643	0.676	0.559	0.519	0.390	0.398	0.240	0.270	0.315	0.446	0.566	0.610
29	0.90	0.661	0.691	0.587	0.540	0.426	0.444	0.265	0.278	0.344	0.473	0.595	0.628
30	0.95	0.673	0.696	0.604	0.580	0.452	0.485	0.296	0.321	0.386	0.495	0.643	0.636
31	0.99	0.706	0.721	0.639	0.627	0.484	0.566	0.334	0.350	0.485	0.526	0.680	0.648
32	Max	0.713	0.723	0.639	0.642	0.515	0.644	0.369	0.420	0.492	0.530	0.693	0.654
33													
34	Average	0.545	0.543	0.398	0.405	0.287	0.293	0.189	0.184	0.230	0.321	0.435	0.478
35	Energy (aMW)	18.5	18.4	13.5	13.7	9.7	9.9	6.4	6.3	7.8	10.9	14.7	16.2
36													
37	Note: Output from Foote Creek I, II, and IV were combined because the output of these wind plants are highly correlated												

Table 29: Klondike I and III Wind Project Daily Output Variability by Month

Klondike I and III

Nameplate Capacity: 74.0 MW

Cumulative Probability Distribution of Daily Capacity Factors (Energy = Capacity * Capacity Factors)

Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min	0.000	0.000	0.003	0.001	0.007	0.010	0.002	0.008	0.002	0.000	0.000	0.000
0.01	0.000	0.001	0.004	0.002	0.022	0.027	0.017	0.018	0.009	0.000	0.000	0.000
0.05	0.000	0.002	0.015	0.012	0.050	0.049	0.052	0.045	0.017	0.002	0.000	0.000
0.10	0.000	0.007	0.027	0.037	0.080	0.068	0.106	0.068	0.032	0.007	0.003	0.000
0.15	0.001	0.015	0.049	0.063	0.131	0.092	0.155	0.096	0.050	0.021	0.005	0.001
0.20	0.003	0.025	0.065	0.094	0.158	0.137	0.205	0.131	0.070	0.037	0.007	0.004
0.25	0.007	0.033	0.109	0.134	0.182	0.191	0.256	0.173	0.084	0.058	0.022	0.007
0.30	0.011	0.045	0.135	0.164	0.231	0.248	0.302	0.216	0.105	0.080	0.036	0.010
0.35	0.015	0.050	0.167	0.186	0.294	0.310	0.338	0.249	0.154	0.107	0.044	0.019
0.40	0.021	0.068	0.201	0.214	0.326	0.346	0.363	0.283	0.191	0.137	0.050	0.036
0.45	0.033	0.094	0.246	0.244	0.379	0.401	0.416	0.301	0.217	0.216	0.058	0.047
0.50	0.048	0.104	0.316	0.274	0.424	0.427	0.478	0.357	0.272	0.232	0.064	0.071
0.55	0.073	0.135	0.360	0.297	0.456	0.470	0.553	0.378	0.302	0.277	0.083	0.102
0.60	0.113	0.189	0.416	0.353	0.491	0.489	0.577	0.411	0.368	0.323	0.144	0.114
0.65	0.132	0.229	0.482	0.391	0.546	0.595	0.622	0.448	0.436	0.348	0.196	0.177
0.70	0.185	0.258	0.533	0.426	0.567	0.616	0.639	0.510	0.497	0.400	0.233	0.196
0.75	0.255	0.287	0.565	0.488	0.609	0.732	0.678	0.584	0.527	0.449	0.268	0.260
0.80	0.287	0.361	0.595	0.531	0.704	0.768	0.727	0.642	0.605	0.530	0.387	0.289
0.85	0.304	0.487	0.687	0.598	0.735	0.811	0.785	0.699	0.651	0.569	0.508	0.330
0.90	0.404	0.593	0.757	0.664	0.824	0.853	0.824	0.750	0.705	0.645	0.549	0.381
0.95	0.562	0.713	0.822	0.808	0.903	0.894	0.854	0.799	0.769	0.714	0.633	0.500
0.99	0.673	0.808	0.887	0.904	0.970	0.961	0.900	0.843	0.821	0.895	0.802	0.685
Max	0.817	0.835	0.915	0.918	0.978	0.976	0.915	0.852	0.873	0.896	0.827	0.847
Average	0.142	0.207	0.350	0.323	0.428	0.450	0.469	0.378	0.326	0.283	0.188	0.148
Energy (aMW)	10.5	15.3	25.9	23.9	31.7	33.3	34.7	28.0	24.1	20.9	13.9	11.0

**Note: Daily capacity factors were derived from historical data for only 24 MW from Klondike I.
An additional 50 MW for Klondike III was added in the monthly energy values above**

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Table 30: Stateline Wind Project Daily Output Variability by Month												
2													
3													
4													
5	Stateline												
6	Nameplate Capacity: 90.4 MW												
7													
8	Cumulative Probability Distribution of Daily Capacity Factors (Energy = Capacity * Capacity Factors)												
9	Percentile	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10	Min	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
11	0.01	0.000	0.000	0.000	0.000	0.003	0.001	0.002	0.001	0.000	0.000	0.000	0.000
12	0.05	0.000	0.000	0.003	0.007	0.005	0.003	0.005	0.003	0.000	0.000	0.000	0.000
13	0.10	0.000	0.000	0.018	0.017	0.013	0.006	0.020	0.010	0.000	0.000	0.000	0.000
14	0.15	0.000	0.000	0.036	0.028	0.019	0.009	0.025	0.015	0.008	0.001	0.001	0.000
15	0.20	0.000	0.001	0.063	0.049	0.041	0.021	0.044	0.033	0.014	0.007	0.002	0.000
16	0.25	0.000	0.002	0.086	0.078	0.068	0.029	0.070	0.049	0.022	0.020	0.005	0.001
17	0.30	0.001	0.005	0.125	0.105	0.091	0.037	0.094	0.080	0.039	0.027	0.011	0.003
18	0.35	0.002	0.009	0.240	0.132	0.114	0.071	0.130	0.114	0.061	0.063	0.027	0.014
19	0.40	0.005	0.012	0.299	0.170	0.140	0.101	0.167	0.152	0.074	0.095	0.034	0.024
20	0.45	0.009	0.017	0.343	0.194	0.168	0.143	0.201	0.180	0.090	0.126	0.047	0.031
21	0.50	0.015	0.025	0.387	0.212	0.195	0.179	0.221	0.196	0.125	0.143	0.067	0.053
22	0.55	0.045	0.043	0.425	0.244	0.208	0.213	0.259	0.223	0.179	0.215	0.113	0.133
23	0.60	0.089	0.087	0.508	0.285	0.232	0.260	0.310	0.251	0.200	0.241	0.176	0.158
24	0.65	0.176	0.108	0.546	0.305	0.307	0.337	0.329	0.280	0.277	0.290	0.241	0.254
25	0.70	0.222	0.141	0.585	0.357	0.409	0.412	0.391	0.314	0.316	0.329	0.346	0.316
26	0.75	0.269	0.191	0.623	0.399	0.482	0.505	0.415	0.342	0.372	0.392	0.446	0.356
27	0.80	0.325	0.234	0.647	0.503	0.507	0.563	0.453	0.384	0.482	0.457	0.528	0.471
28	0.85	0.376	0.306	0.699	0.537	0.578	0.628	0.491	0.480	0.526	0.483	0.585	0.505
29	0.90	0.671	0.393	0.750	0.658	0.645	0.691	0.554	0.551	0.614	0.545	0.760	0.587
30	0.95	0.787	0.569	0.847	0.719	0.728	0.769	0.604	0.686	0.721	0.622	0.822	0.692
31	0.99	0.878	0.951	0.875	0.821	0.858	0.880	0.815	0.760	0.804	0.788	0.857	0.779
32	Max	0.899	0.956	0.893	0.849	0.948	0.922	0.829	0.780	0.827	0.800	0.889	0.825
33													
34	Average	0.174	0.134	0.385	0.271	0.272	0.274	0.261	0.238	0.228	0.227	0.233	0.203
35	Energy (aMW)	15.8	12.1	34.8	24.5	24.6	24.7	23.6	21.5	20.6	20.5	21.1	18.3
36													
37	Note: Excludes Jan-02 & Feb-02 Data (Flawed Metered Data)												

	A	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1	Table 31: Condon Wind Project Risk Model (Continued)										
2											
3											
4	Condon										
5	Capacity (MW)										
6											
7		Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Day 29	Day 30	Day 31
8	Jan-08	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
9	Feb-08	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
10	Mar-08	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
11	Apr-08	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
12	May-08	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
13	Jun-08	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
14	Jul-08	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
15	Aug-08	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
16	Sep-08	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
17	Oct-08	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
18	Nov-08	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
19	Dec-08	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
20	Jan-09	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
21	Feb-09	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
22	Mar-09	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
23	Apr-09	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
24	May-09	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
25	Jun-09	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
26	Jul-09	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
27	Aug-09	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
28	Sep-09	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
29	Oct-09	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
30	Nov-09	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
31	Dec-09	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
32	Jan-10	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
33	Feb-10	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
34	Mar-10	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
35	Apr-10	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
36	May-10	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
37	Jun-10	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
38	Jul-10	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
39	Aug-10	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
40	Sep-10	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
41	Oct-10	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
42	Nov-10	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
43	Dec-10	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
44	Jan-11	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
45	Feb-11	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
46	Mar-11	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
47	Apr-11	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
48	May-11	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
49	Jun-11	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
50	Jul-11	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
51	Aug-11	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
52	Sep-11	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
53	Oct-11	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
54	Nov-11	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
55	Dec-11	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0

	A	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1	Table 32: Foote Creek I, II, & IV Wind Risk Model (Continued)											
2												
3												
4	Foote Creek I, II,											
5	Capacity (MW)											
6												
7		Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Day 29	Day 30	Day 31
8	Jan-08	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
9	Feb-08	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
10	Mar-08	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
11	Apr-08	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
12	May-08	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
13	Jun-08	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
14	Jul-08	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
15	Aug-08	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
16	Sep-08	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
17	Oct-08	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
18	Nov-08	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
19	Dec-08	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
20	Jan-09	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
21	Feb-09	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
22	Mar-09	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
23	Apr-09	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
24	May-09	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
25	Jun-09	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
26	Jul-09	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
27	Aug-09	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
28	Sep-09	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
29	Oct-09	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
30	Nov-09	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
31	Dec-09	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
32	Jan-10	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
33	Feb-10	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
34	Mar-10	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
35	Apr-10	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
36	May-10	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
37	Jun-10	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
38	Jul-10	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
39	Aug-10	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
40	Sep-10	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
41	Oct-10	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
42	Nov-10	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
43	Dec-10	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
44	Jan-11	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
45	Feb-11	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
46	Mar-11	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
47	Apr-11	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
48	May-11	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
49	Jun-11	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
50	Jul-11	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
51	Aug-11	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
52	Sep-11	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
53	Oct-11	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
54	Nov-11	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
55	Dec-11	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2

	A	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1	Table 33: Klondike I and III Wind Project Risk Model (Continued)												
2													
3													
4	Capacity (MW)												
5	<u>Klondike I</u>												
6	<u>Klondike III</u>												
7													
8		Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Day 29	Day 30	Day 31
9	Jan-08	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
10	Feb-08	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
11	Mar-08	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
12	Apr-08	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
13	May-08	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
14	Jun-08	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
15	Jul-08	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
16	Aug-08	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
17	Sep-08	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
18	Oct-08	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
19	Nov-08	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
20	Dec-08	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
21	Jan-09	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
22	Feb-09	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
23	Mar-09	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
24	Apr-09	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
25	May-09	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
26	Jun-09	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
27	Jul-09	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
28	Aug-09	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
29	Sep-09	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
30	Oct-09	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
31	Nov-09	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
32	Dec-09	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
33	Jan-10	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
34	Feb-10	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
35	Mar-10	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
36	Apr-10	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
37	May-10	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
38	Jun-10	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
39	Jul-10	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
40	Aug-10	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
41	Sep-10	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
42	Oct-10	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
43	Nov-10	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
44	Dec-10	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
45	Jan-11	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
46	Feb-11	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
47	Mar-11	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
48	Apr-11	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
49	May-11	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
50	Jun-11	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
51	Jul-11	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
52	Aug-11	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
53	Sep-11	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
54	Oct-11	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
55	Nov-11	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
56	Dec-11	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8

	A	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1	Table 34: Stateline Wind Project Risk Model (Continued)											
2												
3												
4	<u>Stateline</u>											
5	Capacity (MW)											
6												
7		Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Day 29	Day 30	Day 31
8	Jan-08	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
9	Feb-08	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
10	Mar-08	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
11	Apr-08	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
12	May-08	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
13	Jun-08	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
14	Jul-08	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
15	Aug-08	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
16	Sep-08	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
17	Oct-08	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
18	Nov-08	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
19	Dec-08	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1
20	Jan-09	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
21	Feb-09	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
22	Mar-09	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
23	Apr-09	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
24	May-09	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
25	Jun-09	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
26	Jul-09	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
27	Aug-09	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
28	Sep-09	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
29	Oct-09	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
30	Nov-09	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
31	Dec-09	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1
32	Jan-10	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
33	Feb-10	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
34	Mar-10	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
35	Apr-10	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
36	May-10	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
37	Jun-10	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
38	Jul-10	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
39	Aug-10	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
40	Sep-10	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
41	Oct-10	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
42	Nov-10	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
43	Dec-10	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1
44	Jan-11	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
45	Feb-11	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
46	Mar-11	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
47	Apr-11	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
48	May-11	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
49	Jun-11	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
50	Jul-11	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
51	Aug-11	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
52	Sep-11	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
53	Oct-11	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
54	Nov-11	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
55	Dec-11	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 35: Value of Wind Generation at Expected Wind Generation for FY 2010													
2														
3														
4	Expected Generation (aMW)													
5														
6	Wind Project	Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Annual
7	Foote Creek I, II, & IV	10.9	14.7	16.2	18.5	18.4	13.5	13.7	9.7	9.9	6.4	6.2	7.8	
8	Stateline	20.2	21.0	18.1	15.6	12.0	34.7	24.5	24.4	24.5	23.6	21.4	20.5	
9	Condon	10.5	12.5	12.0	10.2	8.7	15.0	9.4	8.7	8.4	7.8	7.1	8.3	
10	Klondike Phase I & III	20.8	13.7	10.8	10.4	15.2	25.9	23.8	31.8	33.3	34.7	28.0	24.0	
11	Total Wind Generation	62.4	61.9	57.1	54.7	54.4	89.1	71.4	74.6	76.1	72.5	62.7	60.5	66.54
12														
13	Contract Prices (\$/MWh)													
14														
15	Wind Project	Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Annual
16	Foote Creek I, II, & IV	57.3	57.3	57.3	62.1	62.1	62.1	62.2	62.2	62.1	62.2	62.1	62.1	
17	Stateline	34.0	34.0	34.0	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	
18	Condon	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	64.9	64.9	64.9	64.9	
19	Klondike Phase I & III	33.4	33.4	33.4	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.2	
20	Wtd. Average Price	42.8	45.3	46.6	49.3	48.5	43.6	43.6	41.5	41.5	40.2	40.7	42.2	43.55
21														
22														
23	Power Purchase Costs for Expected Wind Generation (\$1,000)													
24														
25		Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Annual
26	Total Purchase Cost	1,986	2,021	1,983	2,005	1,772	2,890	2,245	2,302	2,273	2,169	1,899	1,839	25,383
27														
28														
29	Average, Median, 5th Percentile, and 95th Percentile Spot Market Electricity Prices Estimated by AURORA (\$/MWh)													
30														
31		Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Annual
32	5%	24.0	24.7	25.6	28.6	26.4	24.8	20.6	18.9	20.3	22.0	24.8	24.5	25.15
33	50%	31.1	34.1	37.0	41.6	40.8	38.4	33.9	30.5	31.8	35.5	40.0	39.8	36.52
34	Average	32.6	35.7	39.1	43.7	43.2	41.1	36.6	33.0	33.9	38.2	42.8	42.9	38.34
35	95%	46.7	52.3	59.9	65.5	68.1	66.2	61.7	54.4	54.3	63.7	71.0	73.0	57.18
36														
37	Revenues from Expected Wind Generation at Various AURORA Price Percentiles (\$1,000)													
38														
39		Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10	Sep '10	Annual
40	5%	1,113.4	1,101.9	1,087.1	1,162.5	965.9	1,641.5	1,060.3	1,049.0	1,112.6	1,186.6	1,157.1	1,068.6	14,660
41	50%	1,442.6	1,519.4	1,573.5	1,693.6	1,491.5	2,542.5	1,742.0	1,689.8	1,744.6	1,913.6	1,868.8	1,734.1	21,287
42	Average	1,513.3	1,590.8	1,661.8	1,779.5	1,578.1	2,724.4	1,881.7	1,833.4	1,857.7	2,057.8	1,997.5	1,870.5	22,346
43	95%	2,167.8	2,334.2	2,546.2	2,664.8	2,486.9	4,384.4	3,172.1	3,016.9	2,979.4	3,433.6	3,315.3	3,180.9	33,330

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 36: Value of Wind Generation at Expected Wind Generation for FY 2011													
2														
3														
4	Expected Generation (aMW)													
5														
6	Wind Project	Oct '10	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Annual
7	Foote Creek I, II, & IV	10.9	14.7	16.2	18.5	18.4	13.5	13.7	9.7	9.9	6.4	6.2	7.8	
8	Stateline	20.2	21.0	18.1	15.6	12.0	34.7	24.5	24.4	24.5	23.6	21.4	20.5	
9	Condon	10.5	12.5	12.0	10.2	8.7	15.0	9.4	8.7	8.4	7.8	7.1	8.3	
10	Klondike Phase I & III	20.8	13.7	10.8	10.4	15.2	25.9	23.8	31.8	33.3	34.7	28.0	24.0	
11	Total Wind Generation	62.4	61.9	57.1	54.7	54.4	89.1	71.4	74.6	76.1	72.5	62.7	60.5	66.54
12														
13	Contract Prices (\$/MWh)													
14														
15	Wind Project	Oct '10	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Annual
16	Foote Creek I, II, & IV	49.3	49.3	49.3	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	
17	Stateline	34.0	34.0	34.0	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	
18	Condon	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	64.9	64.9	64.9	64.9	
19	Klondike Phase I & III	33.4	33.4	33.4	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.2	
20	Wtd. Average Price	41.4	43.4	44.4	48.3	47.5	43.2	43.1	41.1	41.1	39.9	40.4	41.8	42.74
21														
22														
23	Power Purchase Costs for Expected Wind Generation (\$1,000)													
24														
25		Oct '10	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Annual
26	Total Purchase Cost	1,922	1,936	1,887	1,963	1,735	2,861	2,215	2,279	2,251	2,154	1,885	1,823	24,912
27														
28														
29	Average, Median, 5th Percentile, and 95th Percentile Spot Market Electricity Prices Estimated by AURORA (\$/MWh)													
30														
31		Oct '10	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Annual
32	5%	24.8	25.2	25.6	25.8	25.0	24.3	20.7	19.3	20.7	23.0	25.4	25.2	25.25
33	50%	39.5	41.1	42.2	42.8	42.3	40.1	36.0	33.1	33.8	37.6	41.6	41.3	39.66
34	Average	42.7	44.2	45.4	46.2	45.6	43.5	39.2	36.0	36.5	40.7	45.0	44.5	42.14
35	95%	71.1	74.9	76.3	76.6	78.0	74.6	70.2	62.7	61.3	68.8	75.8	74.6	66.52
36														
37	Revenues from Expected Wind Generation at Various AURORA Price Percentiles (\$1,000)													
38														
39		Oct '10	Nov '10	Dec '10	Jan '11	Feb '11	Mar '11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Annual
40	5%	1,151.2	1,125.7	1,086.1	1,048.7	913.0	1,608.4	1,063.9	1,068.9	1,133.1	1,242.7	1,183.4	1,097.4	14,721
41	50%	1,831.8	1,830.9	1,794.4	1,740.5	1,546.8	2,657.5	1,853.8	1,836.6	1,851.8	2,027.6	1,939.8	1,799.7	23,115
42	Average	1,981.5	1,972.1	1,928.7	1,877.5	1,666.9	2,881.8	2,017.2	1,999.9	1,999.7	2,197.0	2,101.4	1,938.0	24,562
43	95%	3,300.6	3,338.7	3,241.2	3,115.2	2,848.6	4,946.4	3,610.7	3,479.2	3,359.5	3,713.2	3,535.7	3,250.3	38,772

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 37: Augmentation Pricing For Revenue Requirement for FY 2010													
2														
3		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Annual
4	HLH Hours	432	384	416	400	384	432	416	400	416	416	416	400	4,912
5	HLH Purchases for WY=1937 (aMW)	0	0	155	0	675	440	1,088	0	0	0	0	0	197
6	HLH Prices for WY=1937 (\$/MWh)	\$34.91	\$37.91	\$42.21	\$49.13	\$48.12	\$47.00	\$42.58	\$41.78	\$41.50	\$43.67	\$45.76	\$43.68	
7	HLH Purchase Expenses (\$Thousand)	\$0	\$0	\$2,726	\$0	\$12,465	\$8,942	\$19,268	\$0	\$0	\$0	\$0	\$0	\$43,400
8														
9	LLH Hours	312	337	328	344	288	311	304	344	304	328	328	320	3,848
10	LLH Purchases for WY=1937 (aMW)	300	284	904	1,288	1,323	413	815	0	0	329	150	0	479
11	LLH Prices for WY=1937 (\$/MWh)	\$29.20	\$34.97	\$39.96	\$45.21	\$45.47	\$42.77	\$39.84	\$32.40	\$33.02	\$38.54	\$37.96	\$39.78	
12	LLH Purchase Expenses (\$Thousand)	\$2,735	\$3,346	\$11,845	\$20,036	\$17,329	\$5,487	\$9,868	\$0	\$0	\$4,154	\$1,868	\$0	\$76,668
13														
14	Total Hours													8,760
15	Total Purchase Expense (\$ Thousand)													\$120,068
16	Annual Average Purchase Amount (aMW)													321
17	Weighted Purchase Price (\$/MWh)													\$42.74
18														
19	Augmentation Amount (aMW)													476
20	Augmentation Expense (\$ Thousand)													\$178,100

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 38: Augmentation Pricing For Revenue Requirement for FY 2011													
2														
3		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Annual
4	HLH Hours	416	400	416	400	384	432	416	400	416	400	432	400	4,912
5	HLH Purchases for WY=1937 (aMW)	0	0	52	0	631	327	1,599	0	14	0	0	0	219
6	HLH Prices for WY=1937 (\$/MWh)	\$44.58	\$44.84	\$46.10	\$49.91	\$49.88	\$48.49	\$44.06	\$42.57	\$43.26	\$45.98	\$47.19	\$45.00	
7	HLH Purchase Expenses (\$Thousand)	\$0	\$0	\$993	\$0	\$12,094	\$6,851	\$29,307	\$0	\$254	\$0	\$0	\$0	\$49,499
8														
9	LLH Hours	328	321	328	344	288	311	304	344	304	344	312	320	3,848
10	LLH Purchases for WY=1937 (aMW)	0	0	657	1,057	988	149	1,079	0	0	0	0	0	322
11	LLH Prices for WY=1937 (\$/MWh)	\$38.19	\$41.80	\$44.53	\$47.29	\$46.84	\$45.05	\$41.30	\$34.27	\$34.40	\$40.28	\$39.59	\$41.28	
12	LLH Purchase Expenses (\$Thousand)	\$0	\$0	\$9,596	\$17,194	\$13,330	\$2,088	\$13,540	\$0	\$0	\$0	\$0	\$0	\$55,748
13														
14	Total Hours													8,760
15	Total Purchase Expense (\$ Thousand)													\$105,246
16	Annual Average Purchase Amount (aMW)													264
17	Weighted Purchase Price (\$/MWh)													\$45.48
18														
19	Augmentation Amount (aMW)													680
20	Augmentation Expense (\$ Thousand)													\$271,045

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 39: Average Augmentation Cost For Risk Analysis for FY 2010													
2														
3	Augmentation Category 1 (Not Due to CGS Planned Outages)													476
4	Augmentation Category 2 (Due to CGS Planned Outages)													0
5	Total Augmentation Need													476
6														
7	Augmentation Price Method, Forecast 1 (based on average hydro)													
8		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Annual
9	50% of Category 1 Augmentation Need (aMW)	238	238	238	238	238	238	238	238	238	238	238	238	
10	Category 2 Augmentation Need (aMW)	0	0	0	0	0	0	0	0	0	0	0	0	
11	Total Augmentation Priced at Forecast 1 (aMW)	238	238	238	238	238	238	238	238	238	238	238	238	
12														
13	HLH Hours	432	384	416	400	384	432	416	400	416	416	416	400	4,912
14	Average HLH Price (\$/MWh)	\$34.83	\$37.80	\$41.45	\$47.32	\$46.53	\$44.24	\$39.47	\$38.59	\$38.10	\$40.72	\$46.08	\$45.18	
15	HLH Augmentation Expense (\$ Thousand)	\$3,579	\$3,452	\$4,101	\$4,502	\$4,250	\$4,546	\$3,906	\$3,672	\$3,770	\$4,029	\$4,559	\$4,299	\$48,665
16														
17	LLH Hours	312	337	328	344	288	311	304	344	304	328	328	320	3,848
18	Average LLH Price (\$/MWh)	\$29.51	\$33.25	\$36.11	\$39.59	\$38.73	\$36.77	\$32.63	\$26.59	\$28.13	\$34.90	\$38.66	\$40.15	
19	LLH Augmentation Expense (\$ Thousand)	\$2,190	\$2,665	\$2,817	\$3,239	\$2,653	\$2,720	\$2,359	\$2,176	\$2,034	\$2,723	\$3,016	\$3,056	\$31,648
20														
21	Total Augmentation Expense (\$ Thousand)													\$80,313
22														
23	Augmentation Price Method, Forecast 2 (based on critical hydro)													
24		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Annual
25	HLH Hours	432	384	416	400	384	432	416	400	416	416	416	400	4912
26	HLH Purchases Weights (aMW)	0	0	155	0	675	440	1,088	0	0	0	0	0	197
27	Avg. HLH Prices for WY=1937 (\$/MWh)	\$ 35.53	\$ 38.63	\$ 43.04	\$ 49.84	\$ 50.69	\$ 48.65	\$ 44.74	\$ 43.77	\$ 42.48	\$ 43.93	\$ 46.35	\$ 45.78	
28	HLH Purchase Expenses (\$Thousand)	\$0	\$0	\$2,780	\$0	\$13,132	\$9,256	\$20,244	\$0	\$0	\$0	\$0	\$0	\$45,412
29														
30	LLH Hours	312	337	328	344	288	311	304	344	304	328	328	320	3,848
31	LLH Purchases Weights (aMW)	300	284	904	1,288	1,323	413	815	0	0	329	150	0	479
32	Avg. LLH Prices for WY=1937 (\$/MWh)	\$ 29.84	\$ 34.34	\$ 38.61	\$ 45.11	\$ 45.99	\$ 43.54	\$ 39.90	\$ 31.85	\$ 33.23	\$ 38.97	\$ 39.01	\$ 40.74	
33	LLH Purchase Expenses (\$Thousand)	\$2,796	\$3,286	\$11,444	\$19,991	\$17,529	\$5,586	\$9,883	\$0	\$0	\$4,201	\$1,920	\$0	\$76,635
34														
35	Total Hours													8,760
36	Total Purchase Expense (\$ Thousand)													\$122,047
37	Total Purchases (aMW)													321
38	Weighted Purchase Price (\$/MWh)													\$43.44
39														
40	50% of Category 1 Augmentation Need (aMW)													238
41	Augmentation Expense (\$ Thousand)													\$90,518
42														
43	Total Augmentation Expense (\$ Thousand)													\$170,831

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Table 40: Average Augmentation Cost For Risk Analysis for FY 2011													
2														
3	Augmentation Category 1 (Not Due to CGS Planned Outages)												486	
4	Augmentation Category 2 (Due to CGS Planned Outages)												194	
5	Total Augmentation Need												680	
6														
7	Augmentation Price Method, Forecast 1 (based on average hydro)													
8		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Annual
9	50% of Category 1 Augmentation Need (aMW)	243	243	243	243	243	243	243	243	243	243	243	243	
10	Category 2 Augmentation Need (aMW)	194	194	194	194	194	194	194	194	194	194	194	194	
11	Total Augmentation Priced at Forecast 1 (aMW)	437	437	437	437	437	437	437	437	437	437	437	437	
12														
13	HLH Hours	432	384	416	400	384	432	416	400	416	416	416	400	4,912
14	Average HLH Price (\$/MWh)	\$45.80	\$46.41	\$47.60	\$49.85	\$48.76	\$46.56	\$41.95	\$41.48	\$40.69	\$43.50	\$48.18	\$47.00	
15	HLH Augmentation Expense (\$ Thousand)	\$8,650	\$7,791	\$8,657	\$8,717	\$8,186	\$8,794	\$7,629	\$7,253	\$7,400	\$7,911	\$8,763	\$8,220	\$97,971
16														
17	LLH Hours	312	337	328	344	288	311	304	344	304	328	328	320	3,848
18	Average LLH Price (\$/MWh)	\$38.73	\$41.49	\$42.55	\$41.86	\$41.43	\$39.22	\$35.48	\$29.73	\$30.72	\$37.52	\$40.67	\$41.36	
19	LLH Augmentation Expense (\$ Thousand)	\$5,283	\$6,113	\$6,102	\$6,295	\$5,216	\$5,332	\$4,715	\$4,470	\$4,082	\$5,380	\$5,831	\$5,786	\$64,607
20														
21	Total Augmentation Expense (\$ Thousand)													\$162,578
22														
23	Augmentation Price Method, Forecast 2 (based on critical hydro)													
24		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Annual
25	HLH Hours	432	384	416	400	384	432	416	400	416	416	416	400	4912
26	HLH Purchases Weights (aMW)	0	0	52	0	631	327	1,599	0	14	0	0	0	219
27	Avg. HLH Prices for WY=1937 (\$/MWh)	\$ 46.53	\$ 47.25	\$ 48.92	\$ 52.35	\$ 52.34	\$ 50.62	\$ 47.01	\$ 46.52	\$ 45.45	\$ 47.09	\$ 48.49	\$ 47.50	
28	HLH Purchase Expenses (\$Thousand)	\$0	\$0	\$1,053	\$0	\$12,690	\$7,152	\$31,273	\$0	\$267	\$0	\$0	\$0	\$52,435
29														
30	LLH Hours	312	337	328	344	288	311	304	344	304	328	328	320	3,848
31	LLH Purchases Weights (aMW)	0	0	657	1,057	988	149	1,079	0	0	0	0	0	322
32	Avg. LLH Prices for WY=1937 (\$/MWh)	\$ 39.38	\$ 42.65	\$ 45.24	\$ 47.79	\$ 48.57	\$ 45.81	\$ 43.21	\$ 35.38	\$ 36.77	\$ 41.66	\$ 40.88	\$ 42.00	
33	LLH Purchase Expenses (\$Thousand)	\$0	\$0	\$9,748	\$17,373	\$13,822	\$2,123	\$14,167	\$0	\$0	\$0	\$0	\$0	\$57,231
34														
35	Total Hours													8,760
36	Total Purchase Expense (\$ Thousand)													\$109,667
37	Total Purchases (aMW)													264
38	Weighted Purchase Price (\$/MWh)													\$47.39
39														
40	50% of Category 1 Augmentation Need (aMW)													243
41	Augmentation Expense (\$ Thousand)													\$100,948
42														
43	Total Augmentation Expense (\$ Thousand)													\$263,526

	A	B	C
1	Table 41: Risk Analysis Augmentation Cost Statistics (\$ Thousand)		
2			
3		FY 2010	FY 2011
4	Average	170,831	263,526
5	Median	163,226	248,482
6	Standard Deviation	45,148	85,535
7			
8	1%	102,147	138,738
9	2.50%	107,790	146,380
10	5%	113,437	157,218
11	10%	121,247	169,846
12	15%	127,583	182,761
13	20%	132,376	192,733
14	25%	137,848	202,154
15	30%	143,632	211,426
16	35%	148,553	220,699
17	40%	153,285	229,108
18	45%	157,996	240,277
19	50%	163,226	248,482
20	55%	168,458	257,818
21	60%	173,911	268,090
22	65%	179,923	278,905
23	70%	186,343	291,274
24	75%	194,263	306,064
25	80%	203,629	322,784
26	85%	215,122	347,489
27	90%	230,227	377,147
28	95%	255,136	421,491
29	97.50%	277,099	470,096
30	99%	310,970	536,876

	A	B	C
1	Table 42: RiskMod Net Revenue Statistics (With PNRR of \$0 million)		
2			
3		FY10	FY11
4	Average	108,534	20,412
5	Median	109,141	11,633
6	Standard Deviation	287,824	337,393
7			
8	1%	-413,955	-598,613
9	2.50%	-366,353	-535,369
10	5%	-326,714	-480,767
11	10%	-286,825	-423,143
12	15%	-227,663	-362,696
13	20%	-169,906	-297,174
14	25%	-108,701	-228,232
15	30%	-51,229	-162,886
16	35%	-9,528	-113,202
17	40%	27,086	-69,557
18	45%	69,964	-30,261
19	50%	109,141	11,633
20	55%	148,823	54,934
21	60%	186,152	95,486
22	65%	223,298	140,214
23	70%	260,122	189,455
24	75%	299,832	233,186
25	80%	350,396	292,178
26	85%	403,916	356,178
27	90%	473,000	445,206
28	95%	578,430	584,529
29	97.50%	690,879	721,852
30	99%	849,364	914,396

**RISK ANALYSIS AND MITIGATION STUDY
DOCUMENTATION**

NON-OPERATING RISK ANALYSIS TABLES

(TABLES 43-58)

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Table 43: CGS O&M Distributions

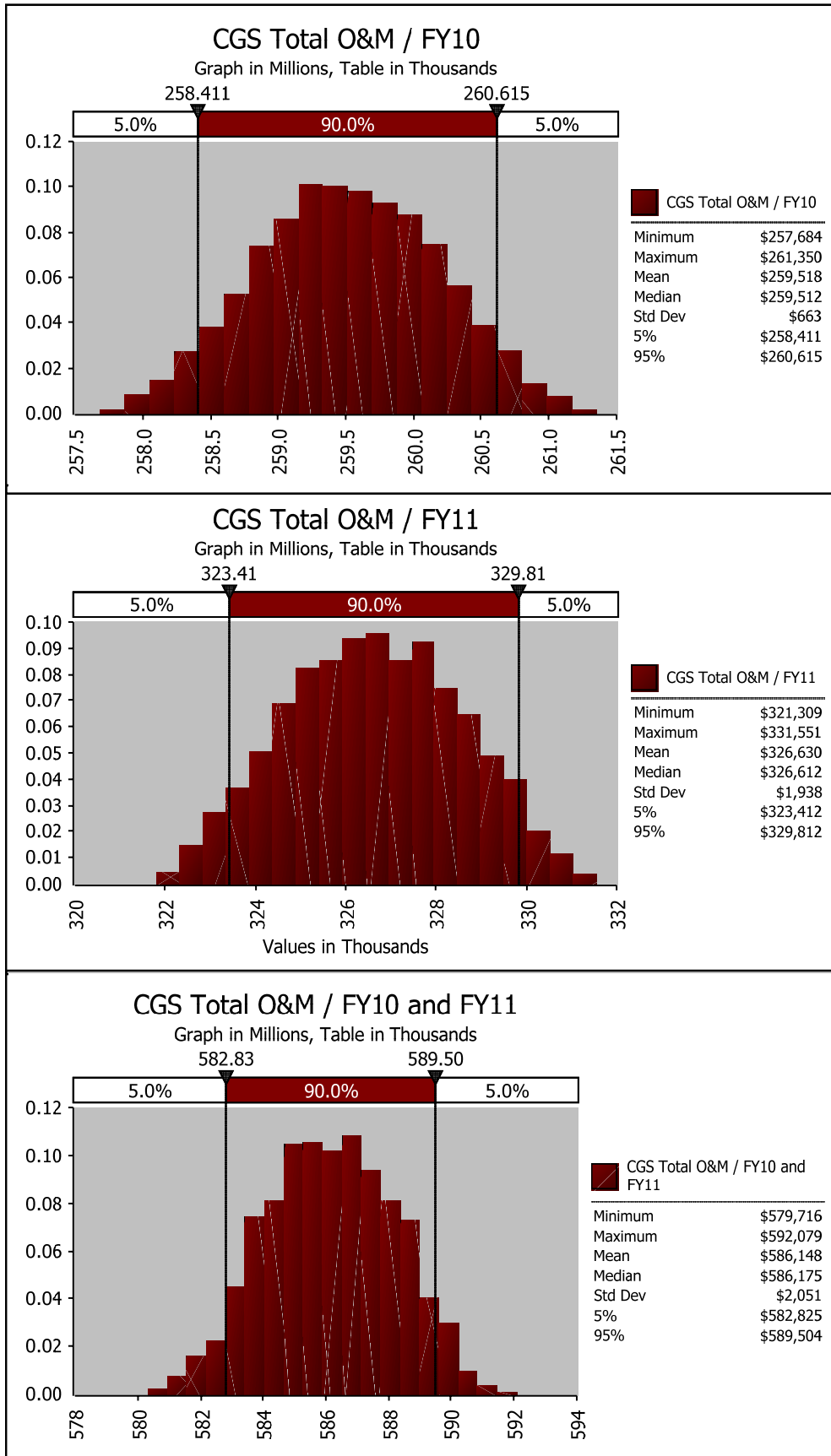


Table 44: Corps of Engineers (COE) and Bureau of Reclamation (Reclamation) O&M Distributions

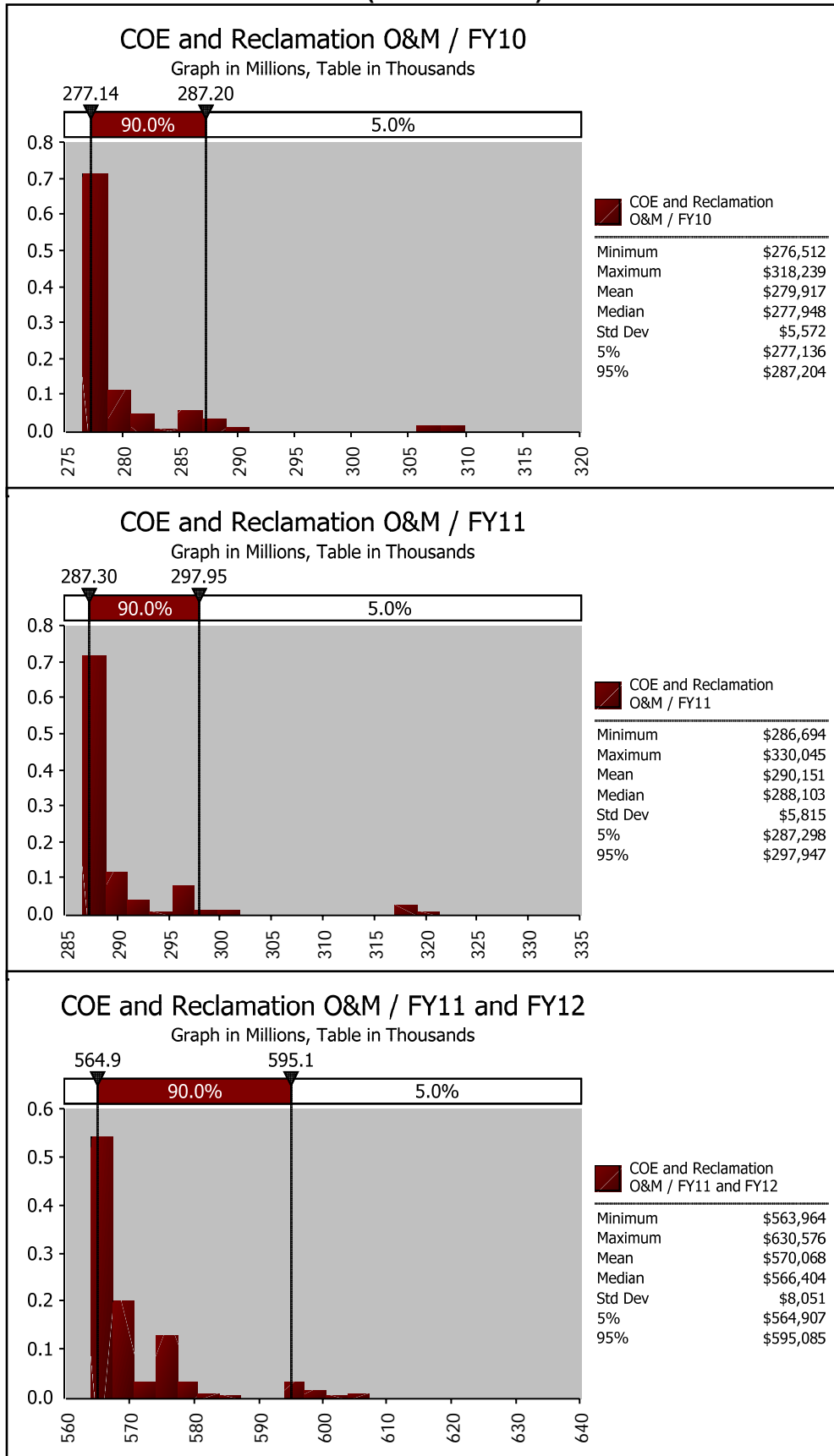


Table 45: Annual Grand Coulee Generation

	A	B
1		GWh
2	Mean	22,183
3	St Dev	3,003
4	Min	16,084
5	Max	28,615
6		
7	Avg. MW	GWh
8	1,931	16,916
9	1,947	17,053
10	2,025	17,743
11	2,380	20,845
12	2,766	24,228
13	3,267	28,615
14	2,453	21,486
15	2,312	20,256
16	1,944	17,028
17	2,456	21,515
18	2,189	19,174
19	2,317	20,300
20	1,998	17,498
21	2,317	20,296
22	2,512	22,007
23	1,836	16,084
24	1,975	17,297
25	2,441	21,387
26	2,646	23,177
27	2,864	25,087
28	2,436	21,337
29	2,594	22,726
30	2,892	25,335
31	2,697	23,623
32	2,417	21,174
33	2,755	24,132
34	2,803	24,553
35	3,096	27,119
36	2,600	22,775
37	2,432	21,306
38	2,797	24,501
39	2,991	26,205
40	2,787	24,413
41	2,416	21,165
42	2,496	21,867
43	2,556	22,392
44	2,812	24,637
45	2,578	22,579
46	2,715	23,781
47	2,551	22,349
48	3,029	26,534
49	2,346	20,553
50	2,676	23,443
51	3,091	27,078
52	2,245	19,663
53	3,097	27,129
54	2,655	23,257
55	2,855	25,012
56	2,359	20,661
57	2,266	19,851

Table 46: Colville Settlement Payment Distributions

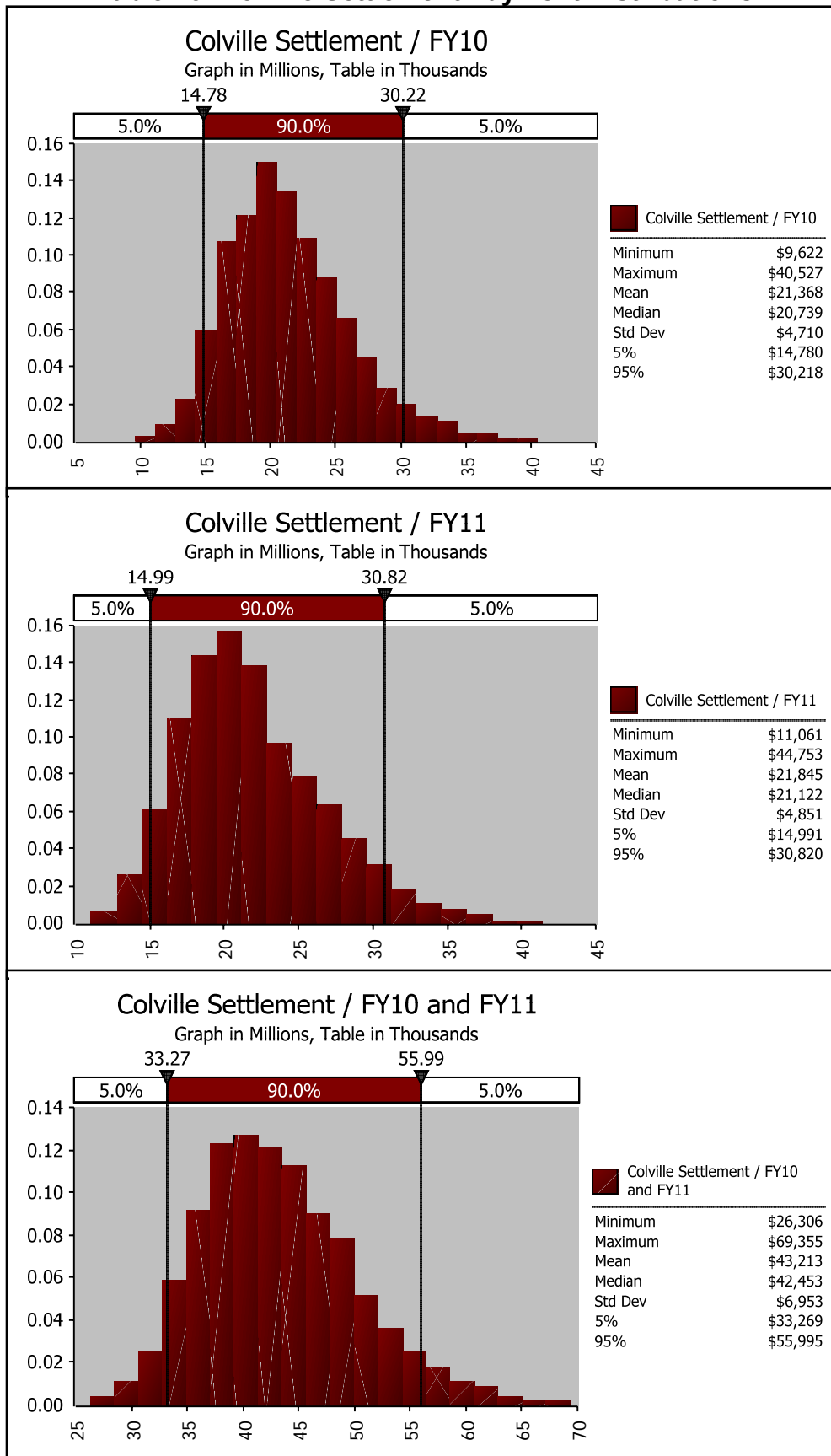


Table 47: Spokane Settlement Payment Distributions

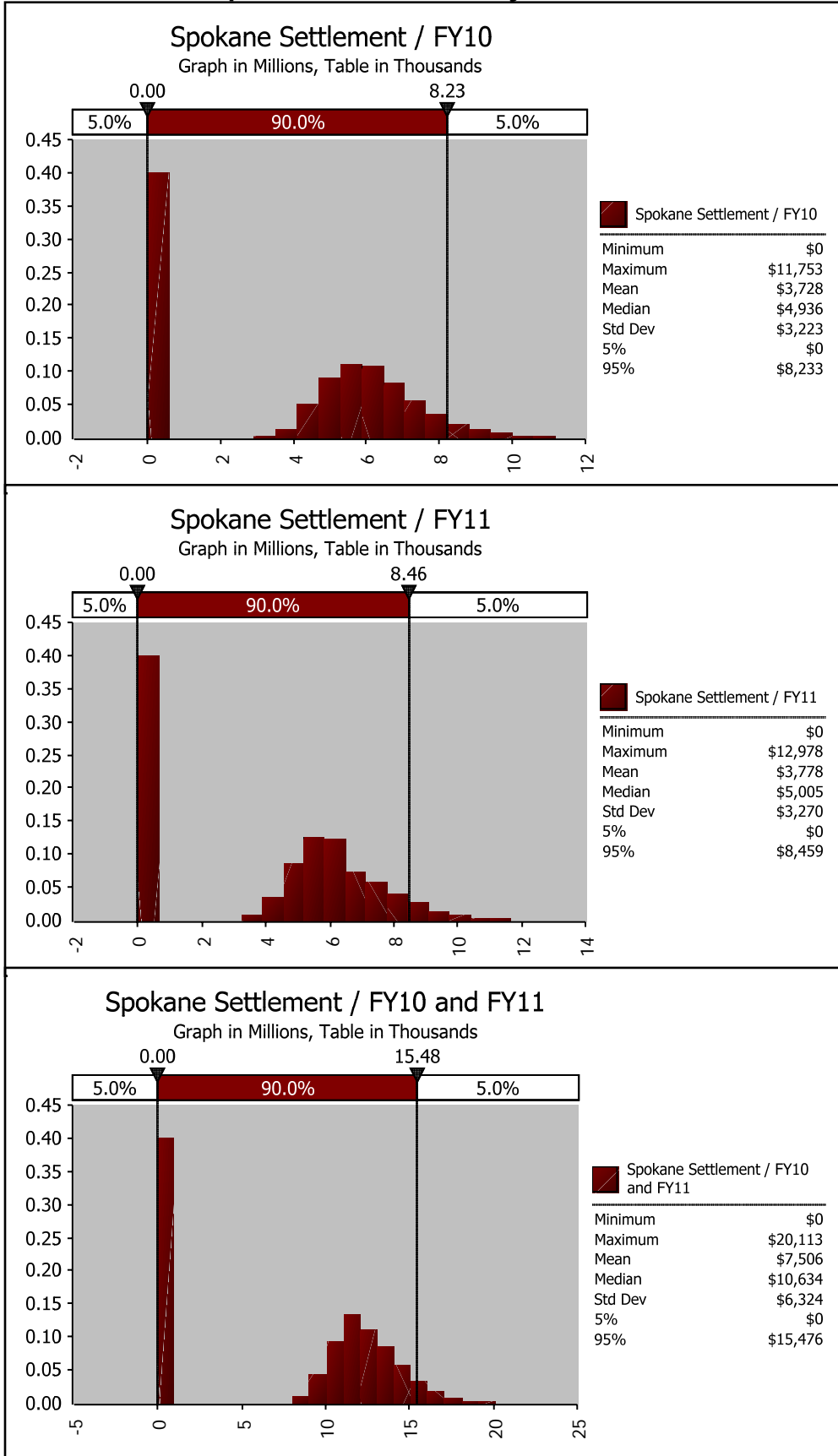


Table 48: PS Internal Operations Expense Distributions

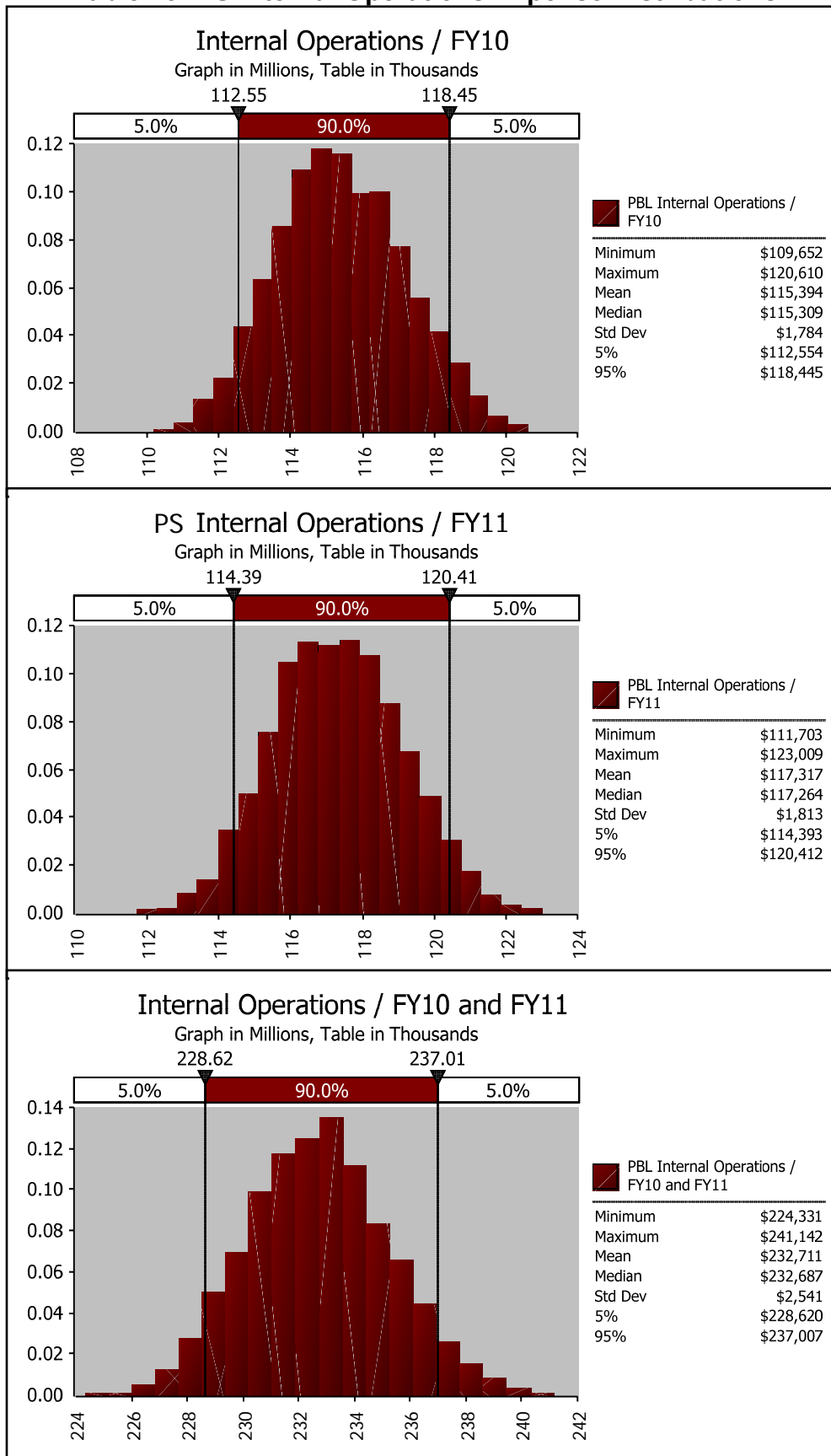


Table 49: F&W Direct Program Cost Distributions

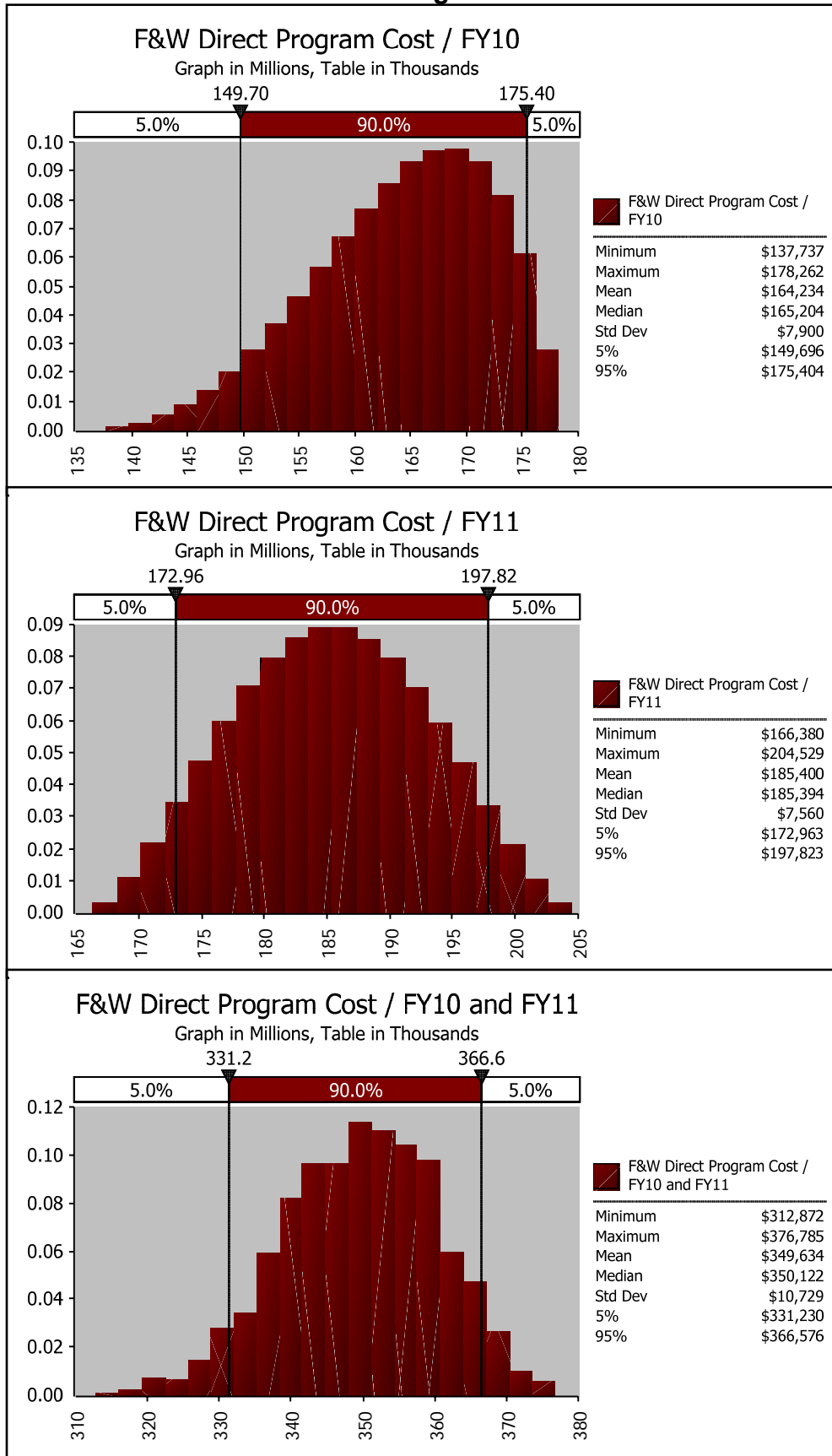


Table 50: F&W Lower Snake Hatcheries Distributions

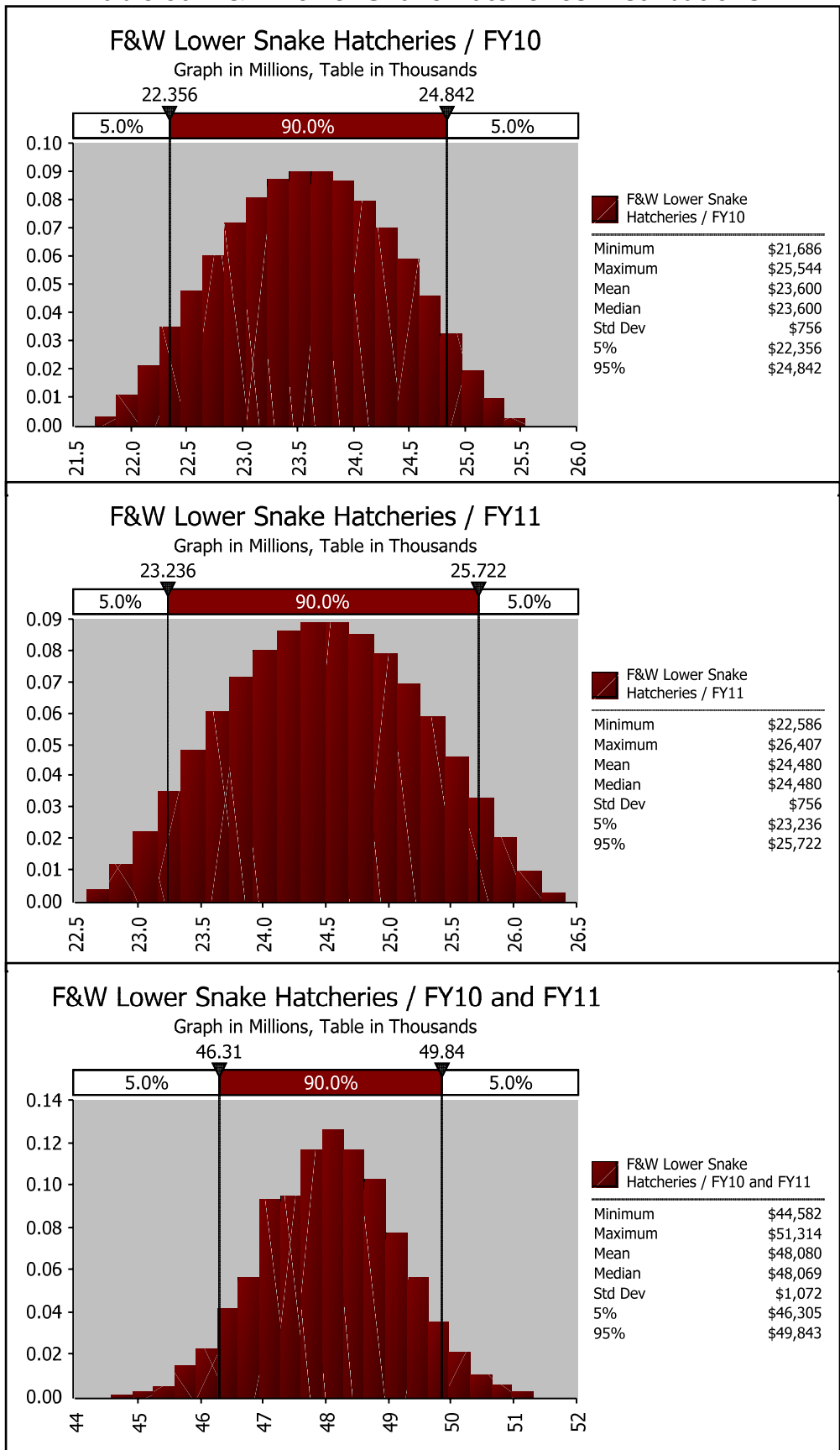


Table 51: Bureau of Reclamation Leavenworth Complex O&M Distributions

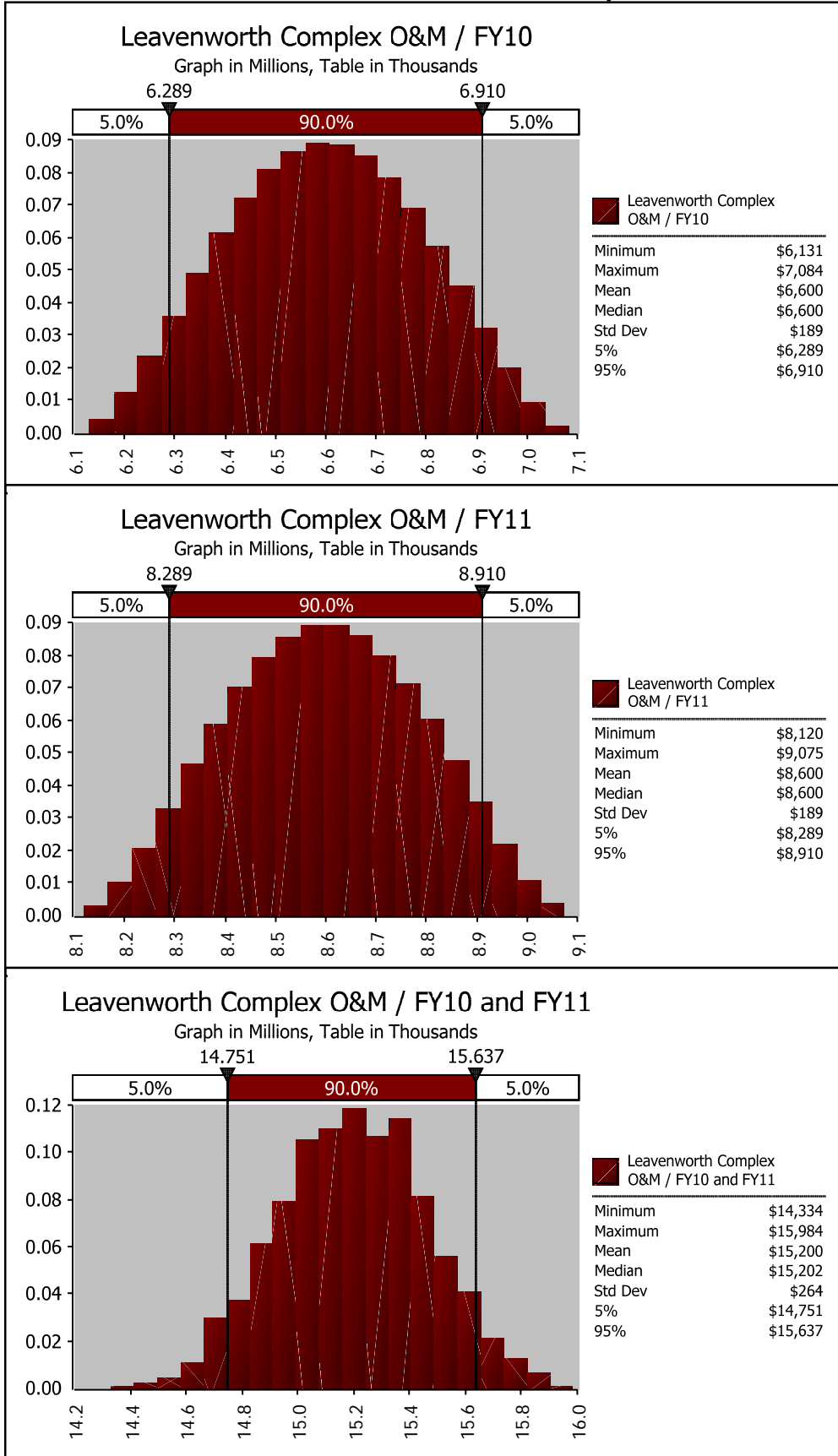


Table 52: Corps of Engineers Fish Passage Facilities Distributions

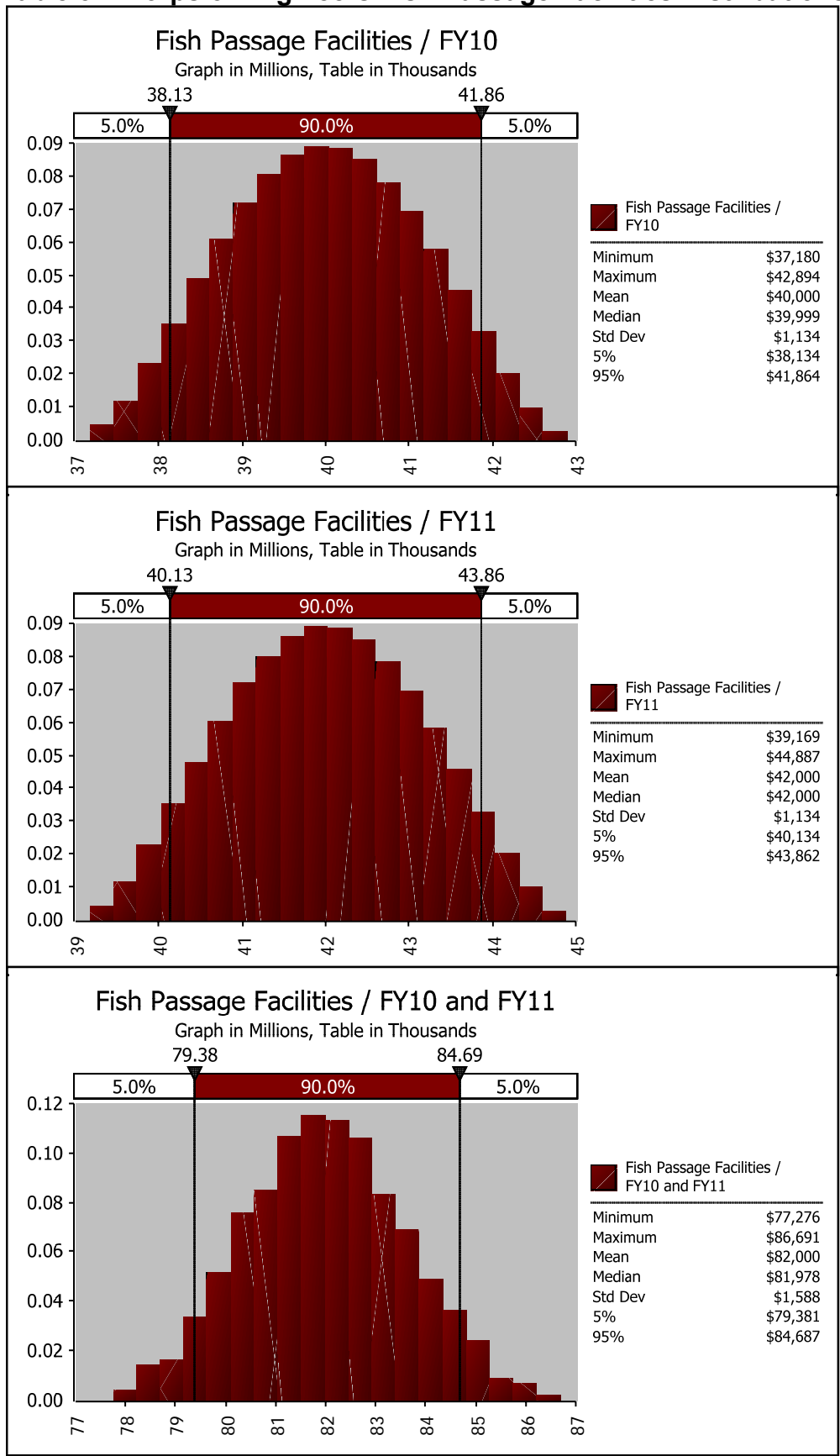


Table 53: Bi-Op Secondary Sales Adjustment Risk Distribution

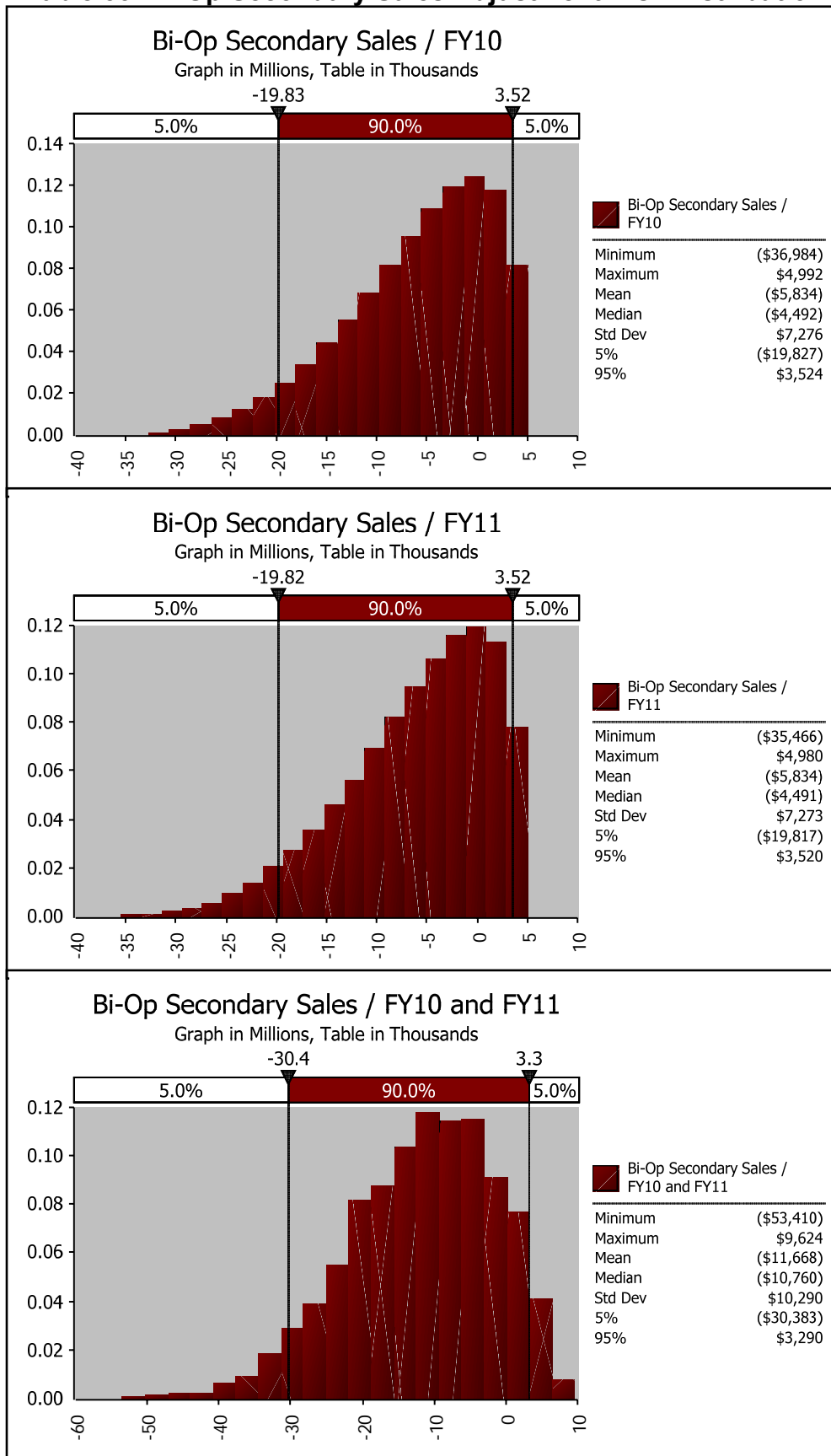


Table 54: CGS Capital Debt Service Distributions

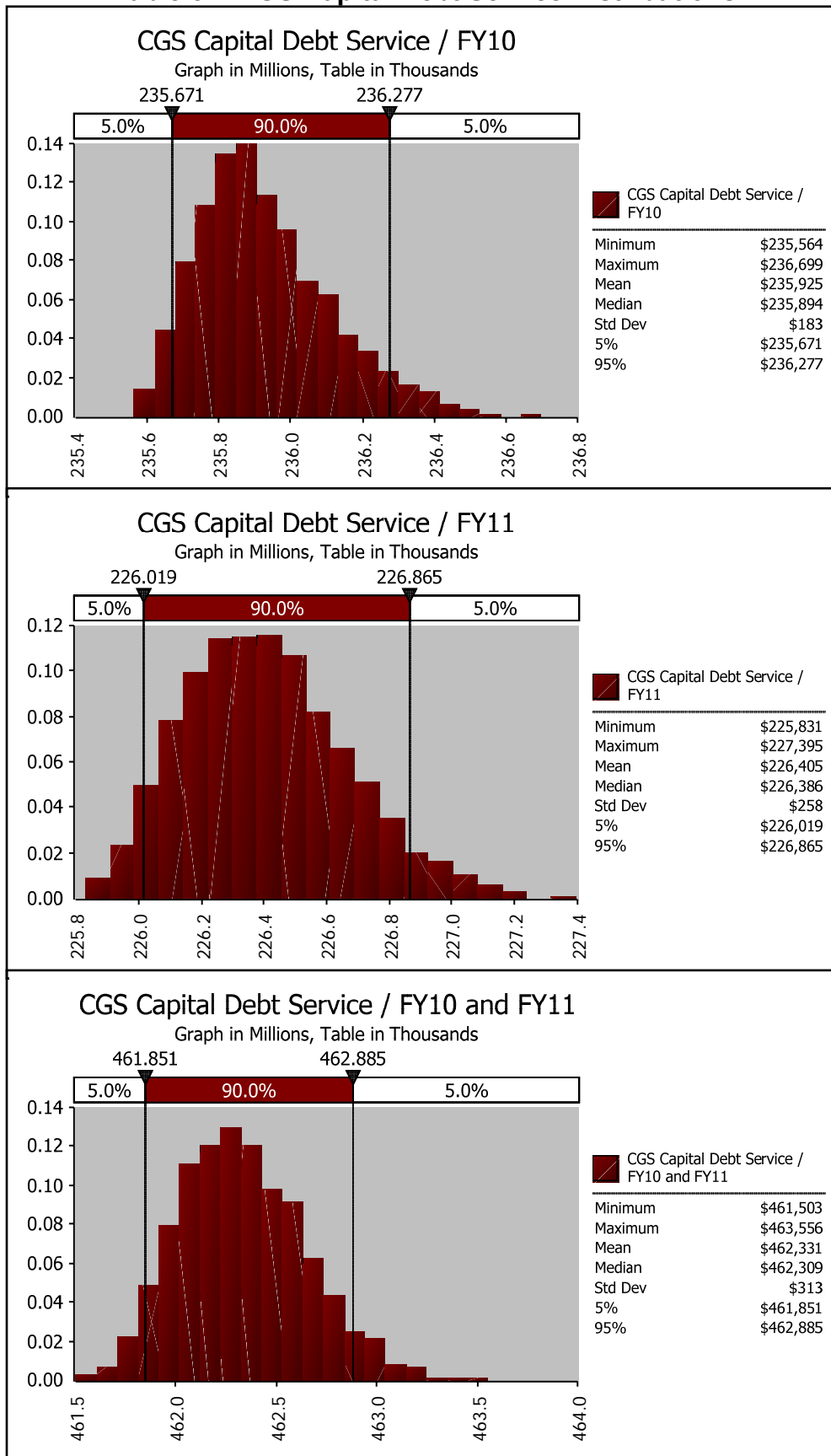


Table 55: CGS Outage Duration Distribution

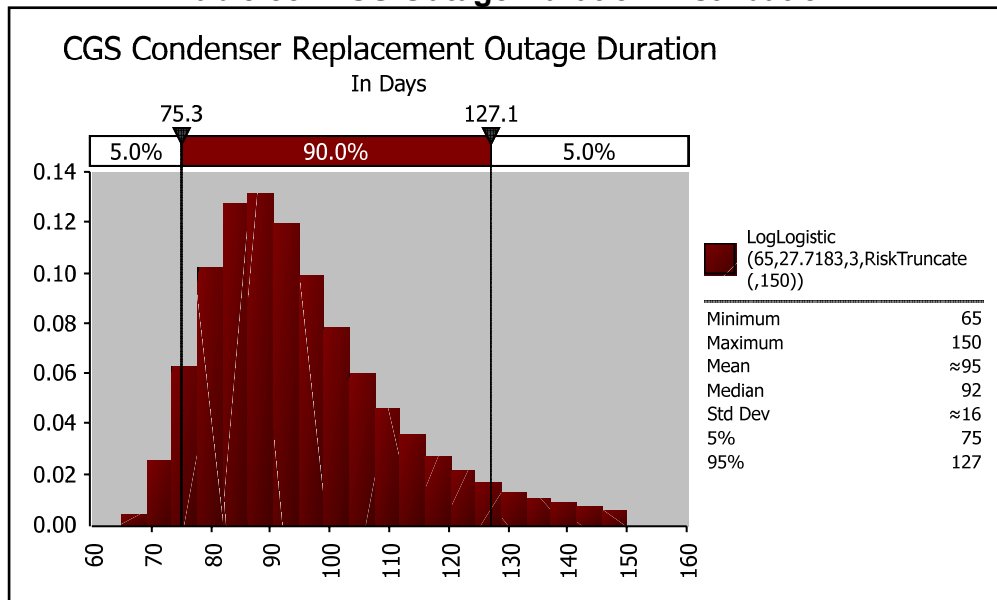


Table 56: CGS Outage Duration Revenue Distribution

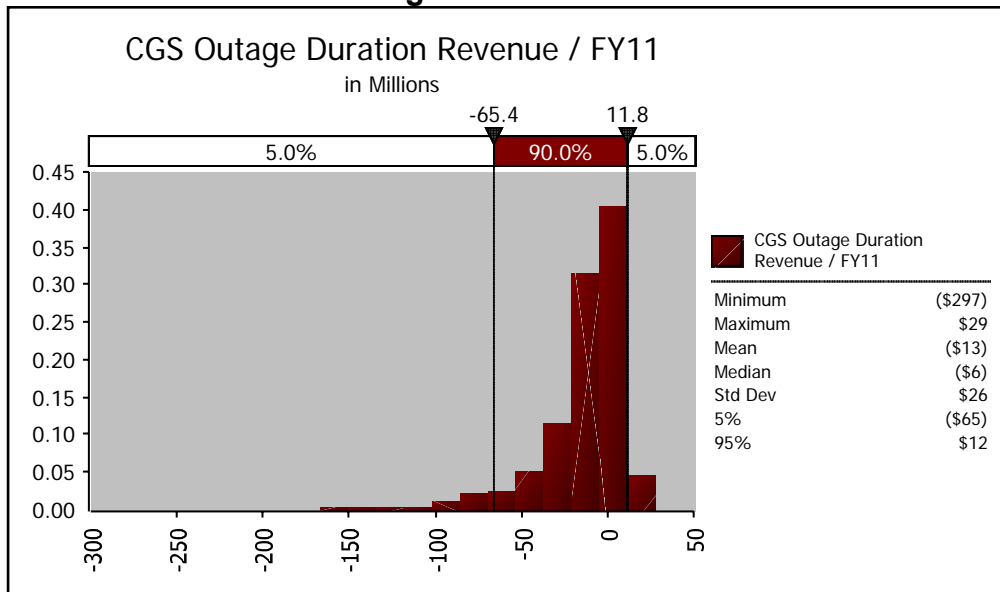


Table 57: Services For Wind Generators Revenue Distribution

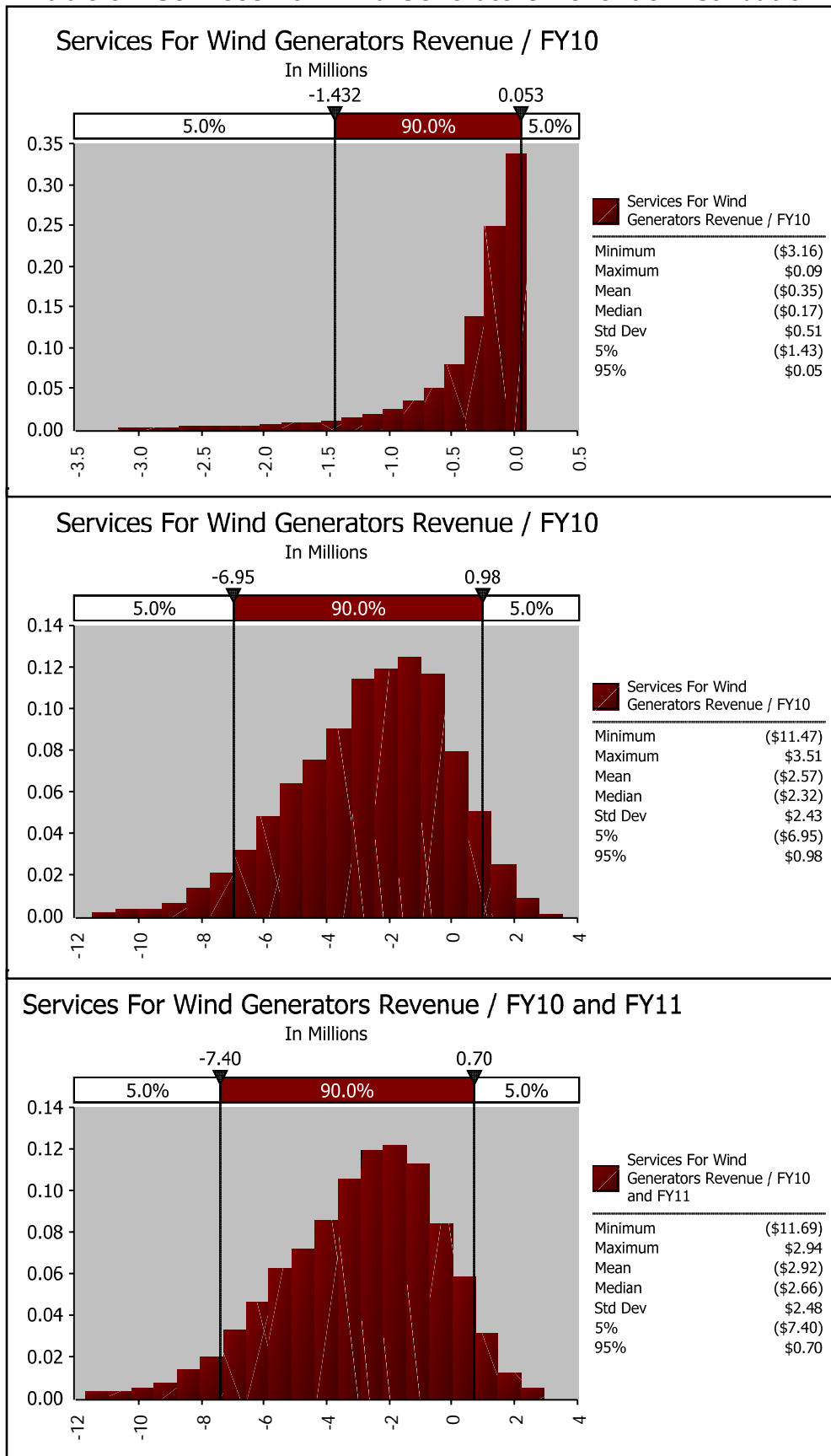
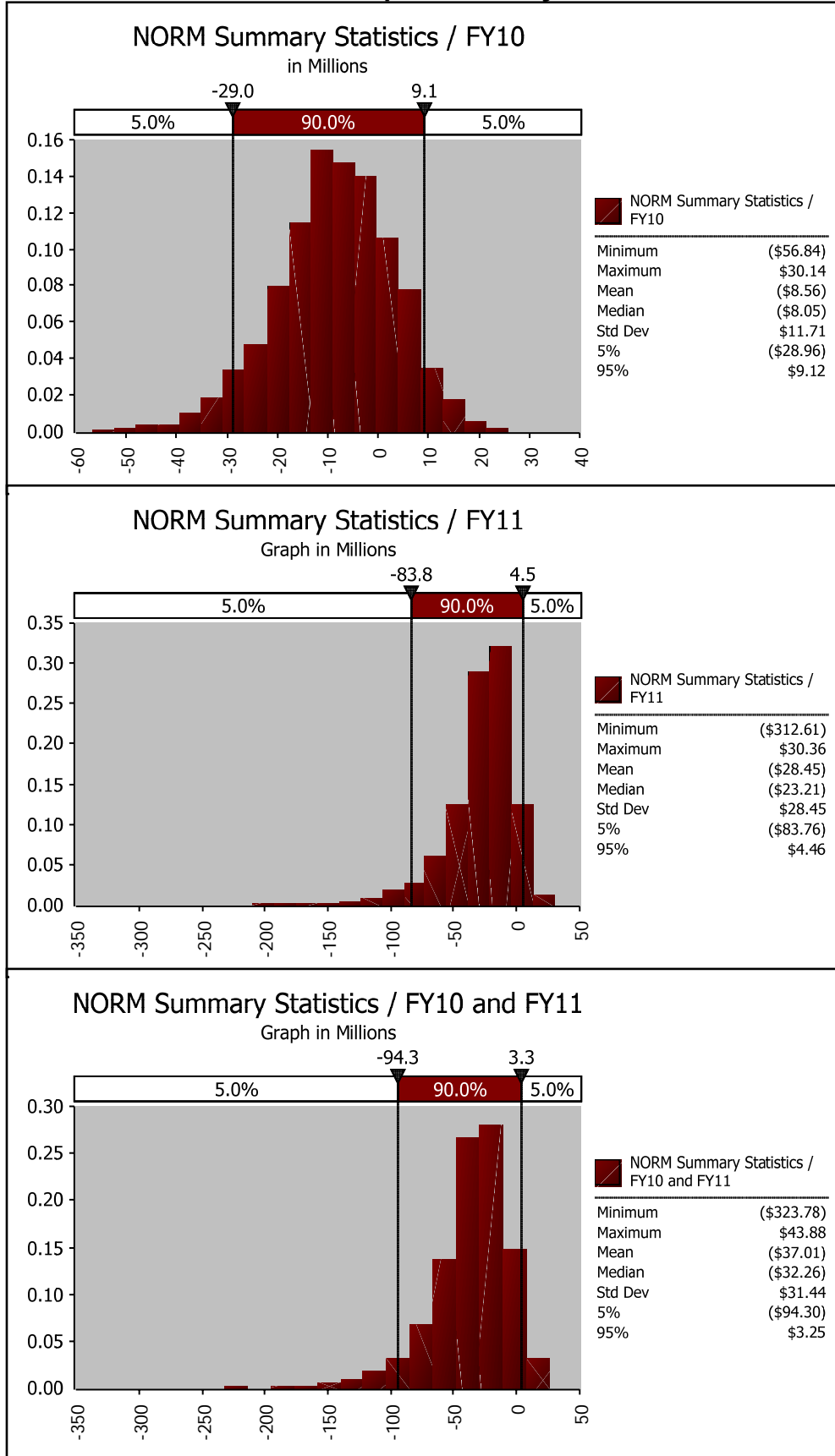


Table 58: NORM Output Summary Distributions



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**RISK ANALYSIS AND MITIGATION STUDY
DOCUMENTATION**

RISK MITIGATION TABLE

(TOOLKIT v. 2.60)

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
1	Toolkit v. 2.60, (7-13-2009)					Study title: Final TPP run for WP-10 PS reserves													
2	Time of run: 18:20:14 on 7-15-09				2 -yr TPP =		97.94%	Run Type	PS-only run										
3	Inputs	PS data: RM_HalfSelfAugmFY10-11aftCGS_FRWP10FP_30wind_071309.xls																	
4		NORM dat: NORM_output WP-10a FS Run 3 071409.xls																	
5	Files =>	TS data:																	
6	Start in TK Year	Stop in TK Year	Run Type PS	CRAC Lim/Total	PS LiqRes	TS LiqRes	Treasury Facility	PS Strng AMNR	Add'l LiqRes	Deferral Logic	<input checked="" type="checkbox"/>	Sec. Rev. Rebate Description					formula for calculating DDC limit		
7	1	3	BPA	20,000	0	0	325.17	69.00				n/a					-62		
8	1	3	BPA	20,000	0	0	325.17	69.00				n/a					-66		
9	Start TPP in TK Yr	"Small" Def. Size	No. of Iterations	Starting Iteration	PS Strt Rsrv Bal	TS Strt Rsrv Bal	Debug Level	Reserves Graph	AutoPrint Res Grph	AutoPrint This Page	Enable PNRR?			CRAC Stats On?					
10	2	\$200	3,500	1	874.9			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>					
12	Toolkit Year	Fiscal Year	Probabilistic?	BPA Fund IOC	Interest Rates Tr.Specials	Tr. Facility Int. Rate	Treasury Payment Sched Amort	Interest	PS Int. Cr. Sched	TS Int. Cr. Sched	Other Cash Adj	TS Rsrvs Available	Cash Lag for PNRR	PS Cash Tmg Adj	TS Cash Tmg Adj				
13	1	2009	TRUE	4.70%	4.70%	4.70%	198.3	207.6	45.93			0.0	0.0						
14	2	2010	TRUE	4.70%	4.70%	4.70%	202.7	224.3	41.03			0.0	0.0	10.0					
15	3	2011	TRUE	4.70%	4.70%	4.70%	204.2	230.0	41.02		10.9	0.0	0.0	10.0					
20	Toolkit Year	Fiscal Year	Div. Dist. Threshold	Lim/Year	CRAC Threshold	Lim/Year	Rev Basis	Shape	Risk Mod	Calc'd in TK	Sum	TS Fed. Int. Red.	Cash & NR Adj.	Other NR & Csh Adj					
21	1	2009		0		0.0				0	0								
22	2	2010	-126.5	1,004.2	-876.5	300	1,399.4	1.0		0	0			0.0					
23	3	2011	-40.7	1,060.7	-790.7	300	1,478.1	1.0	0.0	0	0			0.0					
24	6																		
27																Approx PF rates (average rates, not block)			
28	Outputs																		
29	Toolkit Year	Fiscal Year	No. of Deferrals	"Small" Deferrals	1-year Probab.	Cumul. Deferrals	Cumul. Probab.	Ave. Def. per Year	Ave. Def. per Def.	Ave 1st Def./Def.	Ave. End. Reserves	Ave. End. PS ANR	PNRR Added	PS Strt Bal	Base	After PNRR	After Var.Rates		
30	1	2009	0	-	100.0%	n/a	n/a	0.0	n/a	n/a	710.67	-165.79	-	874.9	26.90	26.90	26.90		
31	2	2010	0	-	100.0%	-	100.0%	0.0	n/a	n/a	719.12	-71.55	-		28.77	28.77	28.66		
32	3	2011	72	60	97.9%	72	97.9%	2.6	126.1	126.1	567.82	-184.34	-	FCCF	28.77	28.77	27.11		
33	3	-yr Total	72	60	n/a	n/a	n/a	2.6	n/a	n/a	n/a	n/a	-						
34	3	-yr Ave.	24	20	n/a	n/a	n/a	0.9	126.1	126.1	n/a	n/a	-						
39	Toolkit Year	Fiscal Year	Ave. DDC per each	Ave DDC per Year	PF share of DDC	IOU Share of DDC	No. of DDCs	Ave DDC Rate	Ave. CRAC per each	Ave CRAC per Year	PF share of CRAC	IOU Share of CRAC	No. of CRACs	Ave CRAC Rate	Ann.Lim. Reached	Total Lim. Reached	CRAC Freqncy		
40	1	2009		0.00			0	0.0		0.00			0	0.0	0	0	0.0%		
41	2	2010	33.81	7.21			746	0%		0.00			0	0%	0	0	0%		
42	3	2011	227.76	105.03			1614	0%		0.00			0	0%	0	0	0%		
43	3	-yr Total	n/a	112.2	0.0	0	2360	n/a	n/a	0	0	0	0	n/a	0	0	n/a		
44	3	-yr Ave.	166	37	0	0	787	0.0%		0	0	0	0	0.0%	0	n/a	0%		
49	Toolkit Year	Fiscal Year	NORM Inputs	PBL Inputs	TBL Inputs	A-T-C Totals	Ave. Reb. per each	Ave Reb. per Year	PF share of Rebate	IOU Share of Rebate	No. of Rebates	Ave. Re-bate Rate	PS Int Credit	TBL Int Credit	IOU REP \$ After calculating: Base PNRR CRAC/DDC				
50	1	2009	0.0	-228.1		62.1							28.81						
51	2	2010	-8.9	108.5		-87.1							33.53		252	252	254		
52	3	2011	-27.1	20.4		-70.7							30.66		257	257	284		
53	3	-yr Total	-36	-99	0	-96							n/a	93	0.0				
54	3	-yr Ave.	-12	-33	0	-32								31	0.0				

