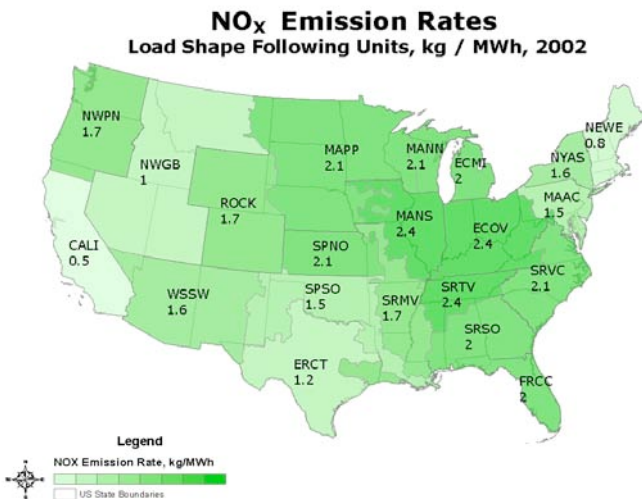
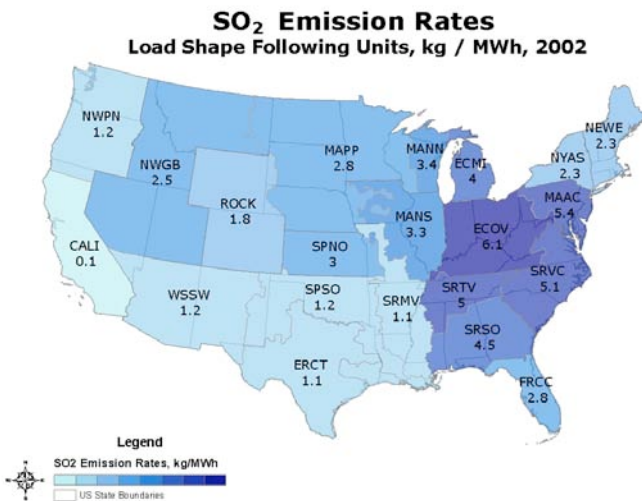
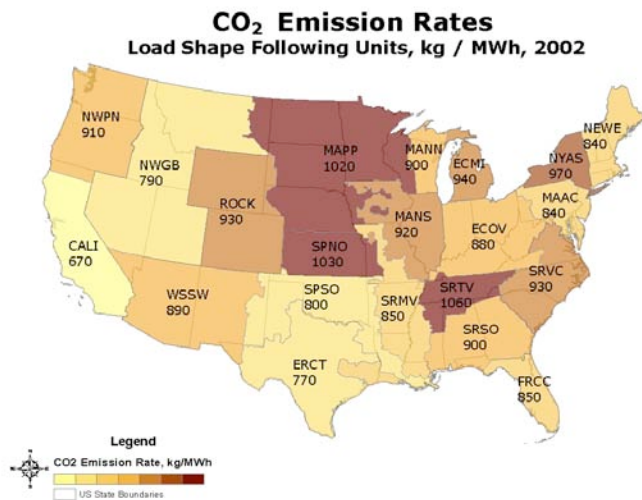


Appendix B Section IX – Geographic Information Systems (GIS) Maps

Figure BIX - 1. 2002 Emission Rate Maps.....	1
Figure BIX - 2. Maps of Solar Resource and PV Generation	2
Figure BIX - 3. Map of Effective PV Capacity Factor.....	3
Figure BIX - 4. Simulated PV Generation per Capacity	3
Figure BIX - 5. Maps of Actual Emissions Offset.....	4
Figure BIX - 6. Offsets per Simulated PV Capacity	5

Load Shape Following



Entire System

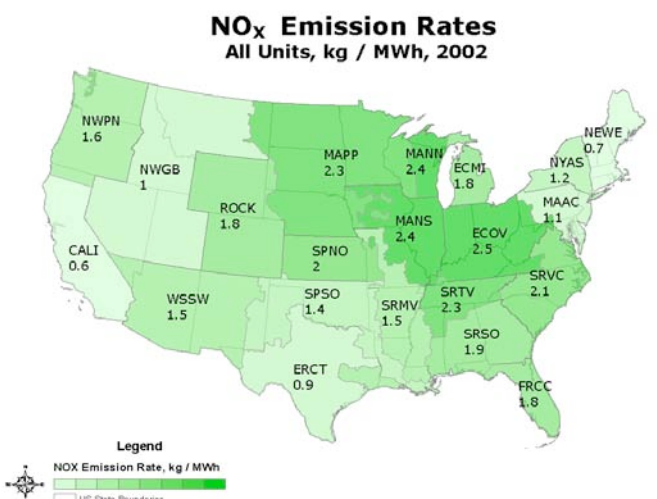
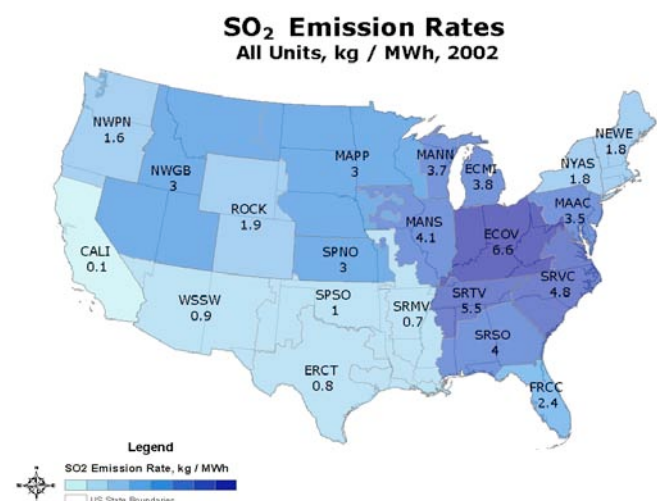
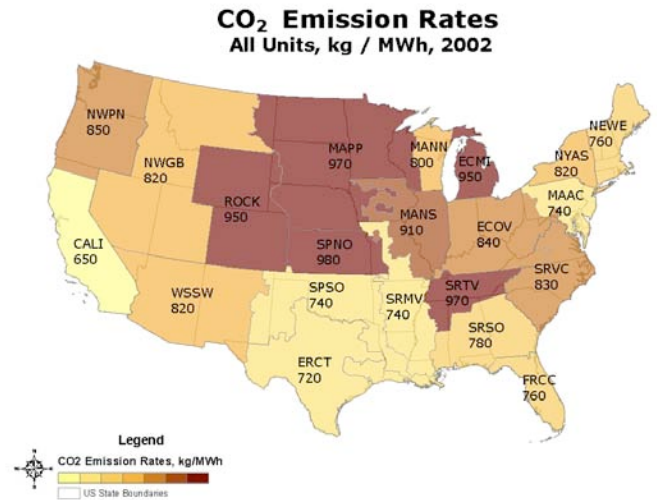
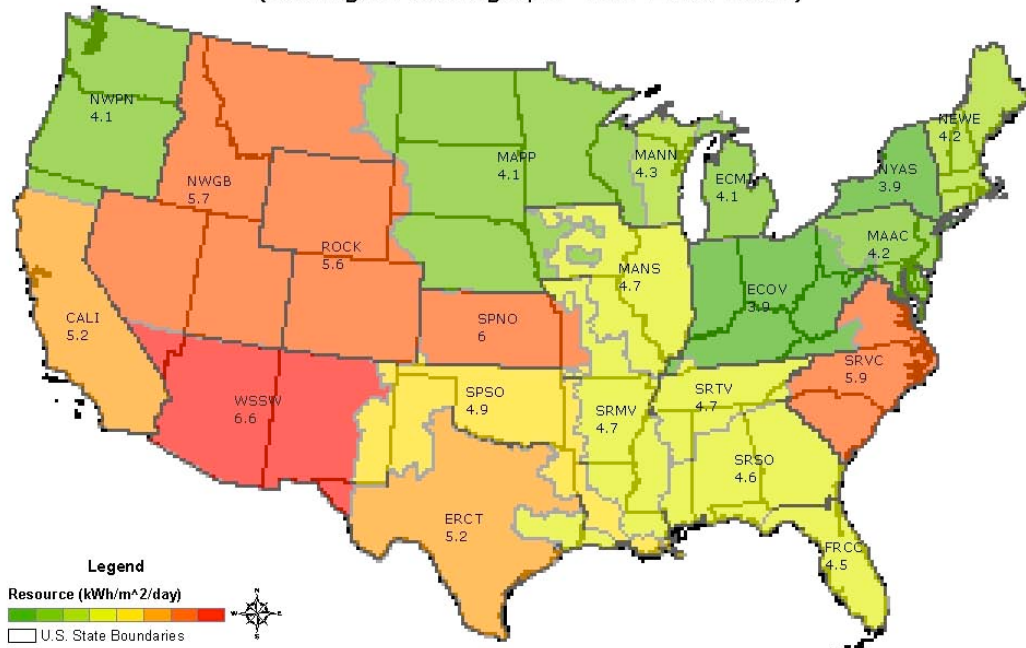


Figure BIX - 1. 2002 Emission Rate Maps

The maps show emission rates for load shape following units and emission rates for the entire system for the year 2002. The units on all graphs are kg/MWh.

Available Solar Resource

(Subregion Average per Year 1998-2002)



PV Generation per Monitored Capacity

kWh Generation per kW Monitored PV
(Subregion Average per Year 1998-2002)

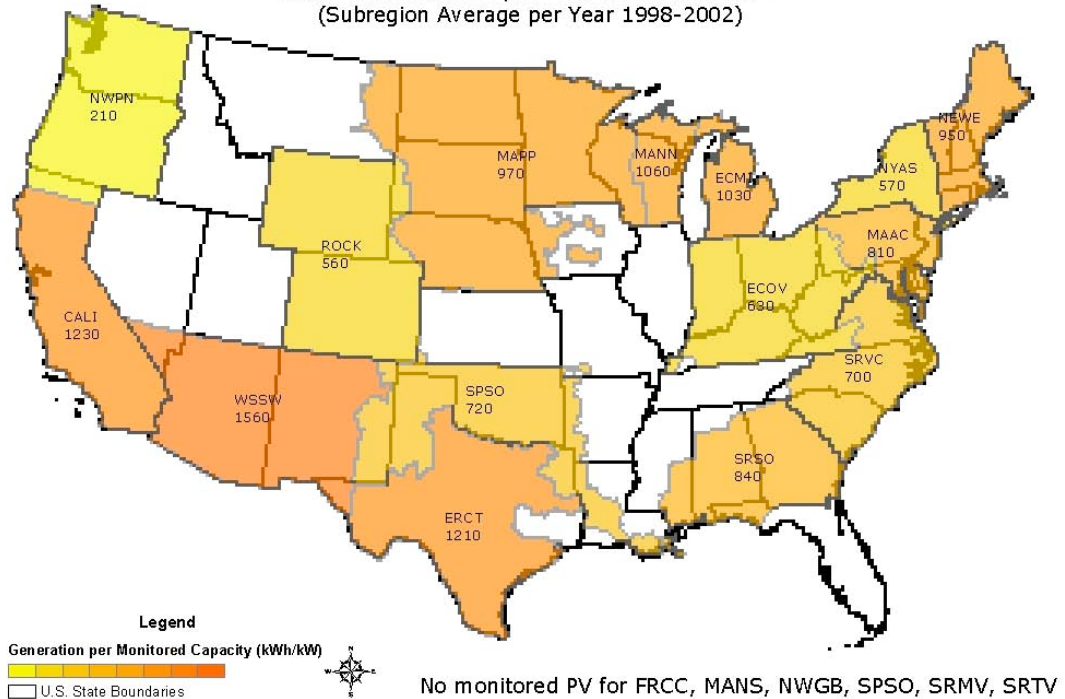


Figure BIX - 2. Maps of Solar Resource and PV Generation

Effective PV Capacity Factor

kWh Generation per kWh Possible
(Subregion Average per Year 1998-2002)

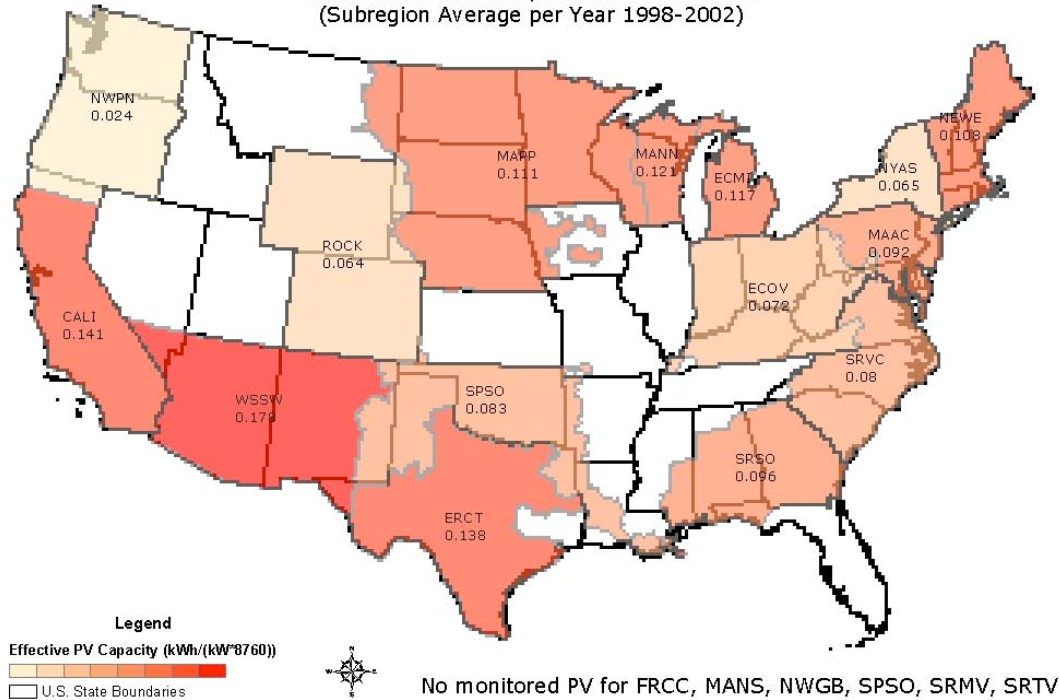


Figure BIX - 3. Map of Effective PV Capacity Factor

Simulated PV Generation per Capacity

kWh Generation per kW Simulated Capacity
2002

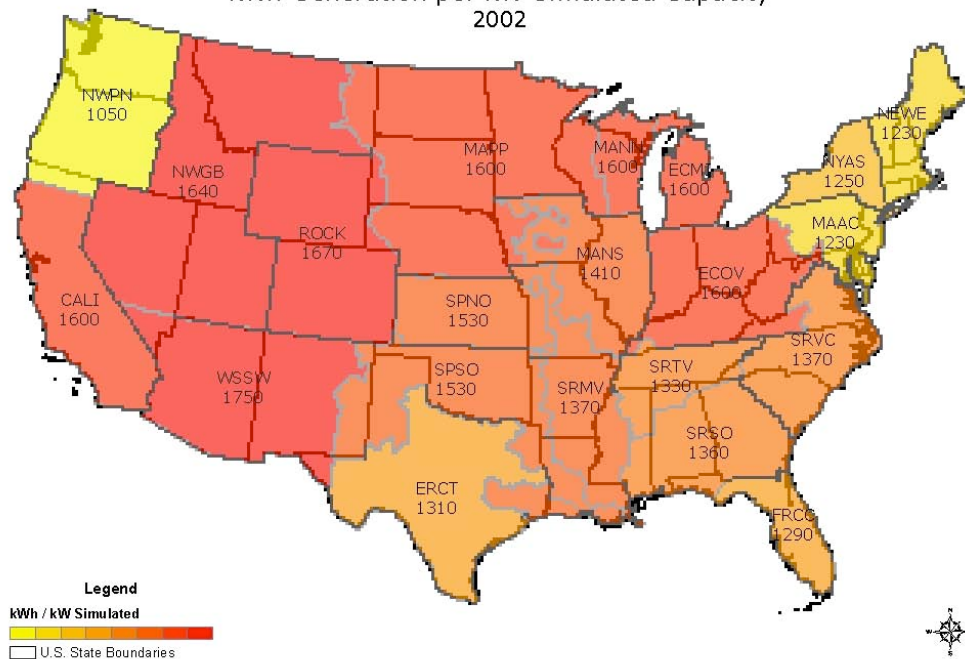
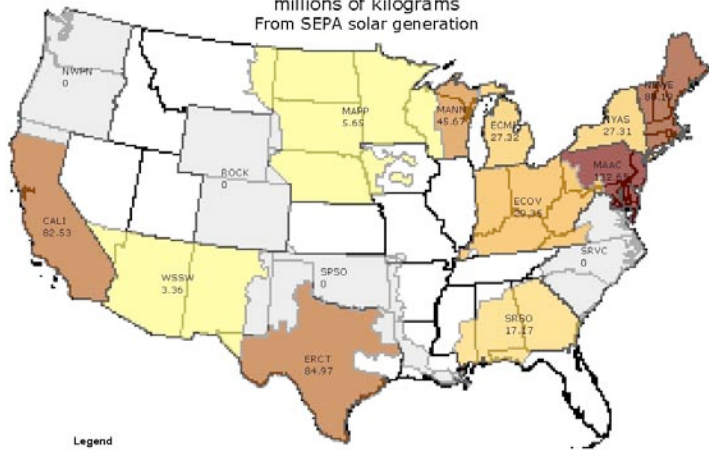


Figure BIX - 4. Simulated PV Generation per Capacity

Offset CO₂ 2002

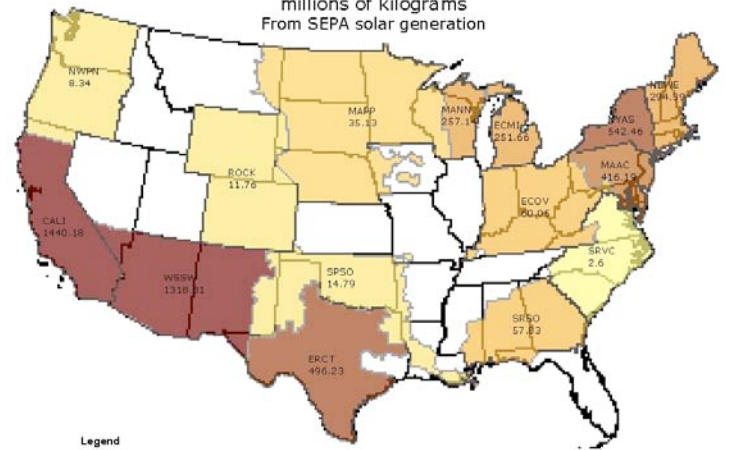
millions of kilograms
From SEPA solar generation



No monitored PV for FRCC, MANS, NWGB, SPSO, SRMV, SRTV

Offset CO₂ Totals, 1998 - 2002

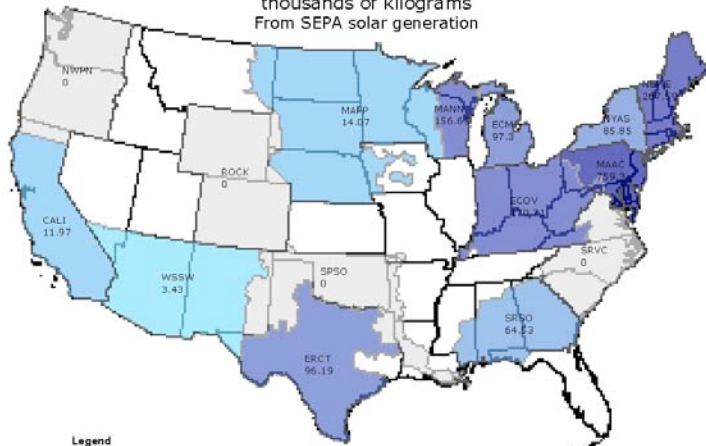
millions of kilograms
From SEPA solar generation



No monitored PV for FRCC, MANS, NWGB, SPSO, SRMV, SRTV

Offset SO₂ 2002

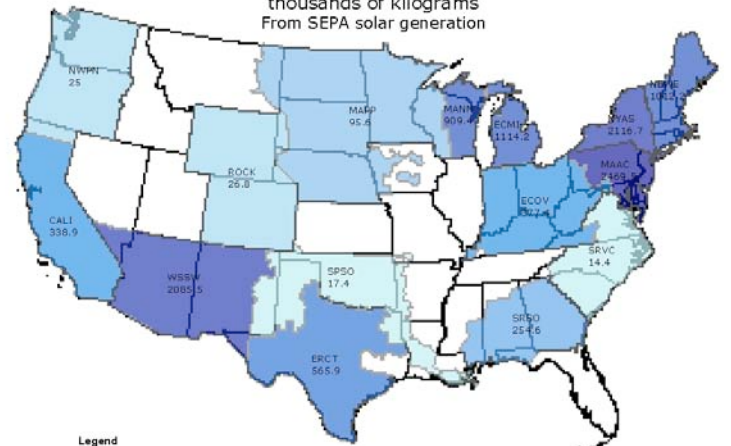
thousands of kilograms
From SEPA solar generation



No monitored PV for FRCC, MANS, NWGB, SPSO, SRMV, SRTV

Offset SO₂ Totals, 1998 - 2002

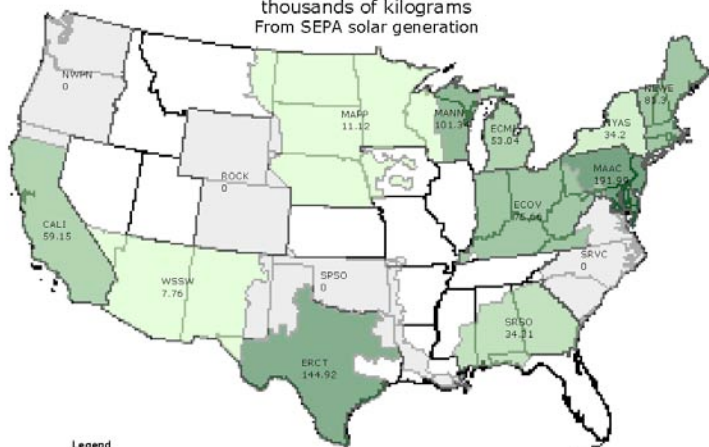
thousands of kilograms
From SEPA solar generation



No monitored PV for FRCC, MANS, NWGB, SPSO, SRMV, SRTV

Offset NO_x 2002

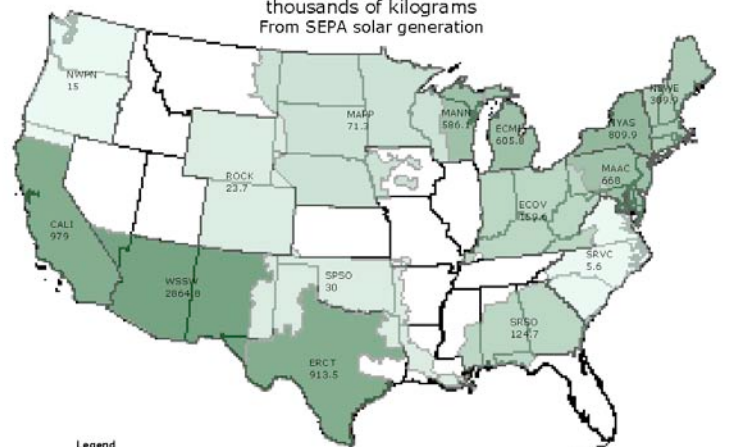
thousands of kilograms
From SEPA solar generation



No monitored PV for FRCC, MANS, NWGB, SPSO, SRMV, SRTV

Offset NO_x Totals, 1998 - 2002

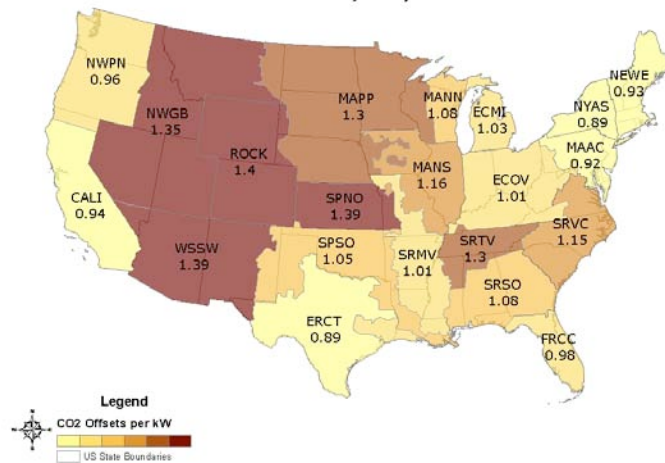
thousands of kilograms
From SEPA solar generation



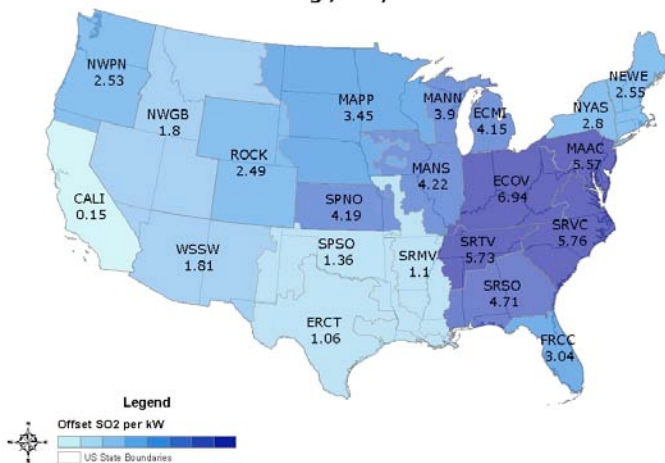
No monitored PV for FRCC, MANS, NWGB, SPSO, SRMV, SRTV

Figure BIX - 5. Maps of Actual Emissions Offset

Offset CO₂ per Simulated PV Capacity tonnes / kW, 2002



Offset SO₂ per Simulated PV Capacity kg / kW, 2002



Offset NO_x per Simulated PV Capacity kg / kW, 2002

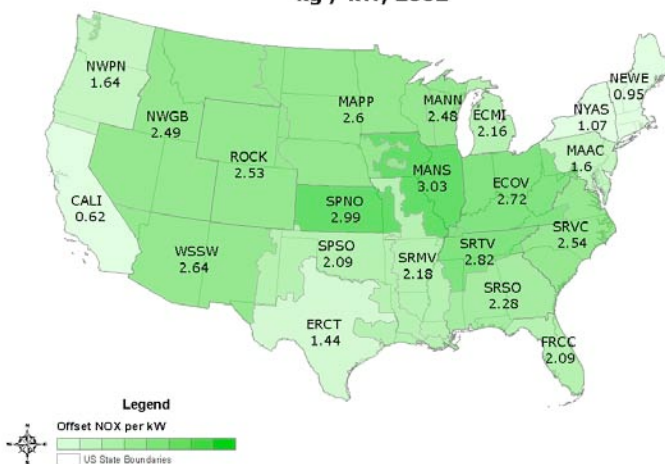


Figure BIX - 6. Offsets per Simulated PV Capacity

Appendix B Section X – 2002 Seasonal PV Generation (Simulated), Averages and Standard Deviation

Figure BX - 1. Simulated PV Statistics NEWE in 2002	2
Figure BX - 2. Simulated PV Statistics NYAS in 2002	2
Figure BX - 3. Simulated PV Statistics MAAC in 2002.....	3
Figure BX - 4. Simulated PV Statistics ECOV in 2002	3
Figure BX - 5. Simulated PV Statistics ECMI in 2002.....	4
Figure BX - 6. Simulated PV Statistics SRVC in 2002	4
Figure BX - 7. Simulated PV Statistics SRTV in 2002	5
Figure BX - 8. Simulated PV Statistics SRSO in 2002.....	5
Figure BX - 9. Simulated PV Statistics SRMV in 2002.....	6
Figure BX - 10. Simulated PV Statistics FRCC in 2002.....	6
Figure BX - 11. Simulated PV Statistics MANN in 2002.....	7
Figure BX - 12. Simulated PV Statistics MANS in 2002.....	7
Figure BX - 13. Simulated PV Statistics SPNO in 2002	8
Figure BX - 14. Simulated PV Statistics SPSO in 2002	8
Figure BX - 15. Simulated PV Statistics ERCT in 2002.....	9
Figure BX - 16. Simulated PV Statistics MAPP in 2002	9
Figure BX - 17. Simulated PV Statistics ROCK in 2002	10
Figure BX - 18. Simulated PV Statistics NWGB in 2002	10
Figure BX - 19. Simulated PV Statistics NWPN in 2002	11
Figure BX - 20. Simulated PV Statistics WSSW in 2002.....	11
Figure BX - 21. Simulated PV Statistics CALI in 2002	12

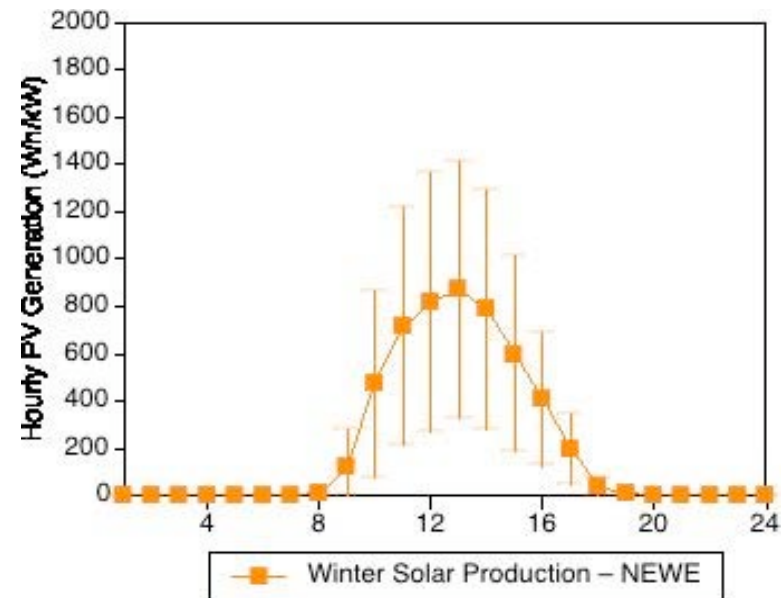
Simulated PV Generation Statistics

Average PV generation (Wh per installed kW) and plus and minus one standard deviation.

Statistics are for simulated PV generation in each hour of the day for each of four seasons; Winter, Spring, Summer and Fall. There are four graphs per NERC Subregion, one for each season. Source data are from simulated PV sites which used hourly solar resource data for each subregion.

Seasons were defined as:

- Winter–December through February
- Spring–March through May
- Summer–June through August
- Fall–September through November



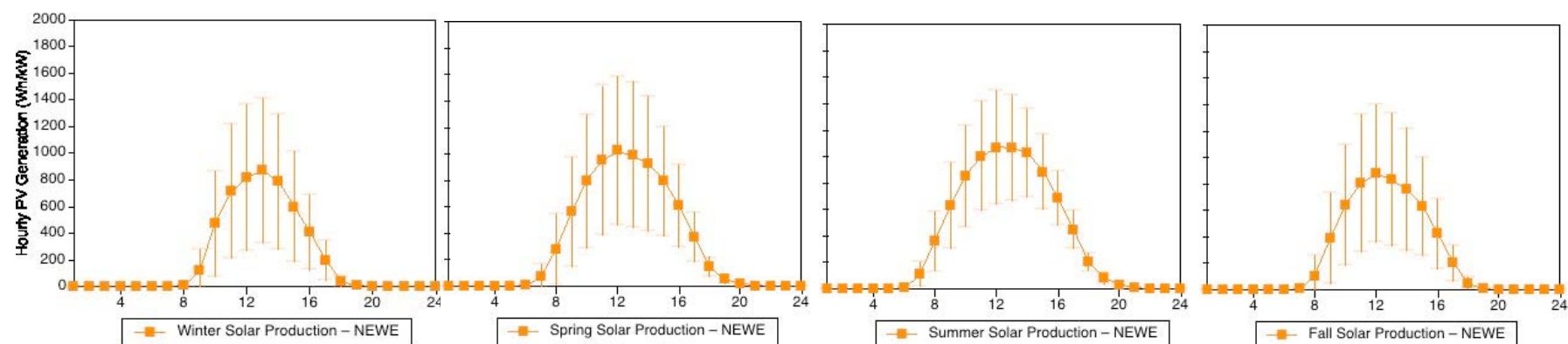


Figure BX - 1. Simulated PV Statistics NEWE in 2002

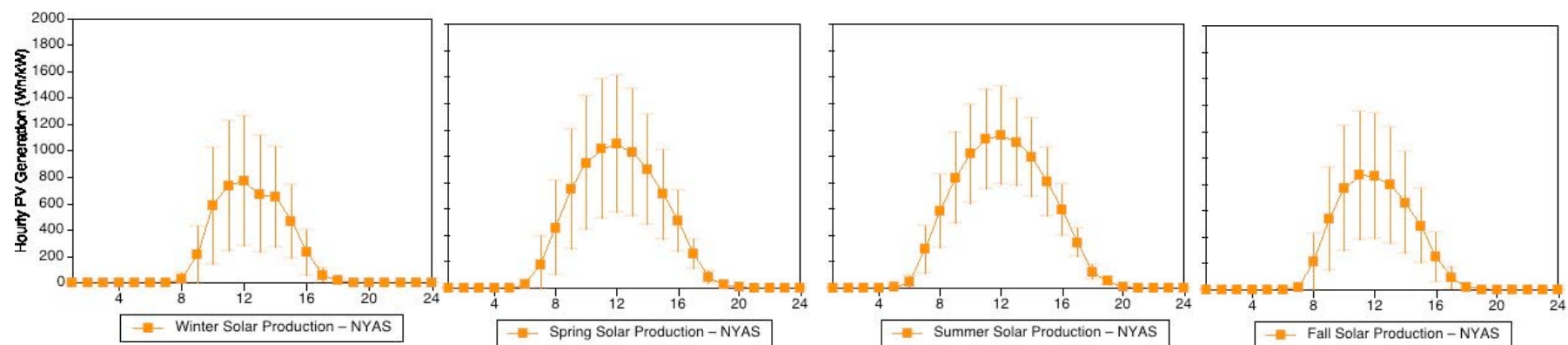


Figure BX - 2. Simulated PV Statistics NYAS in 2002

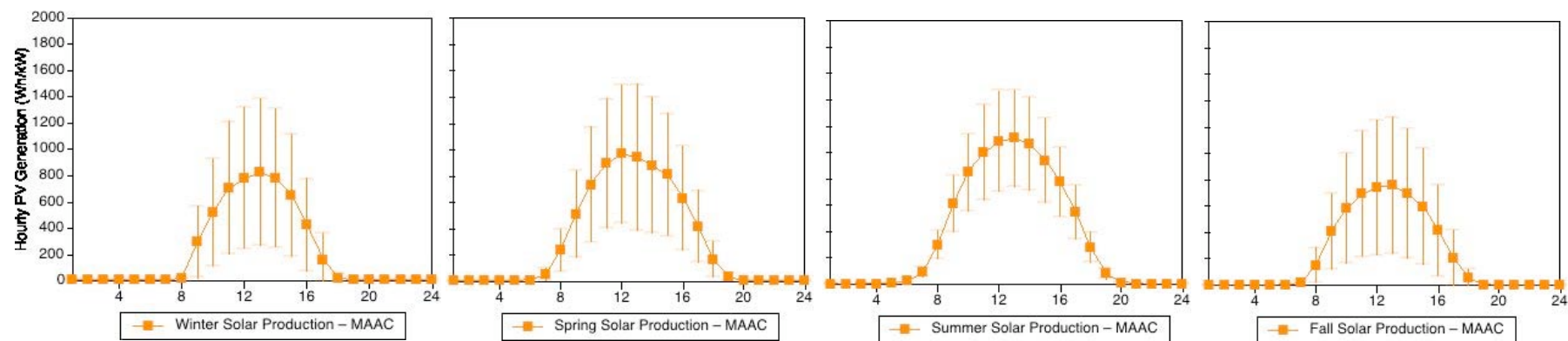


Figure BX - 3. Simulated PV Statistics MAAC in 2002

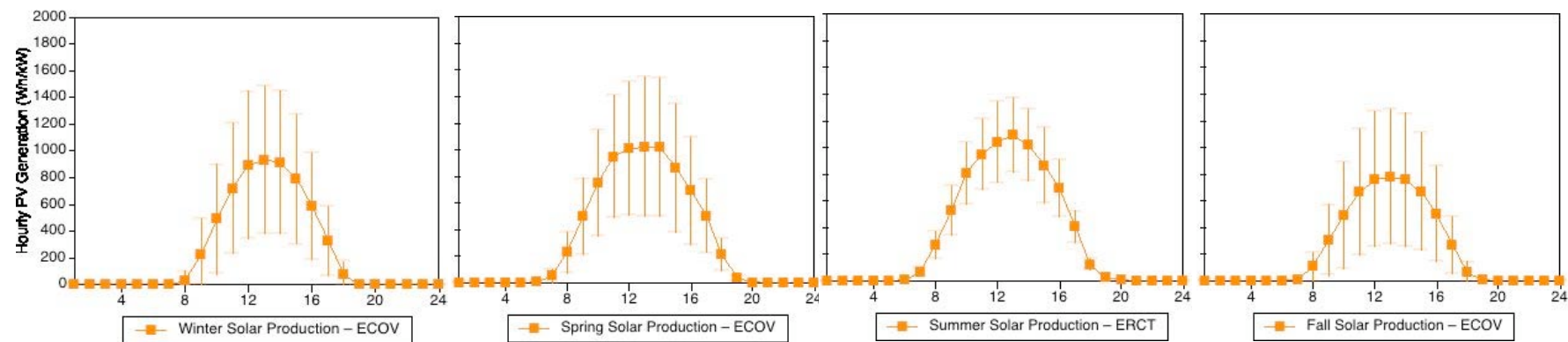


Figure BX - 4. Simulated PV Statistics ECOV in 2002

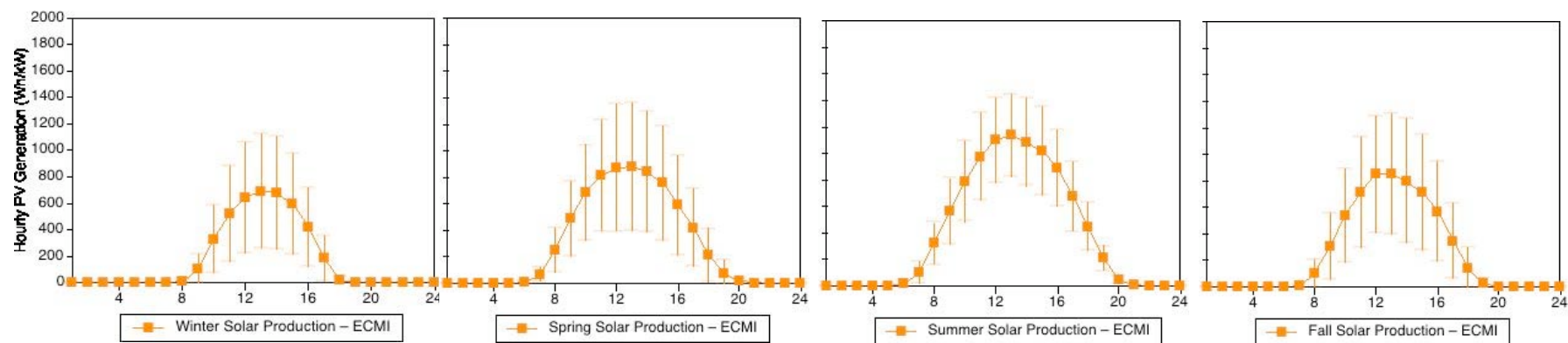


Figure BX - 5. Simulated PV Statistics ECMI in 2002

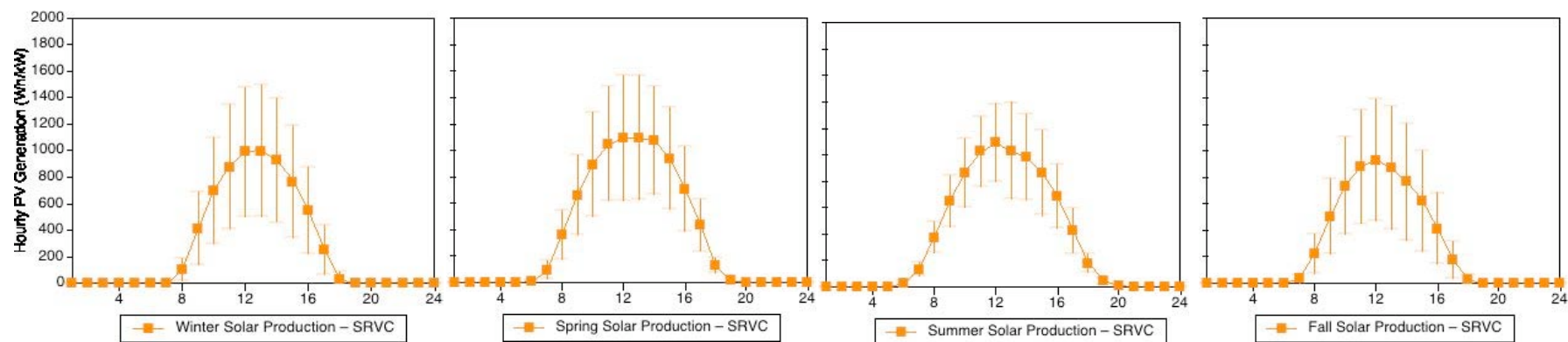


Figure BX - 6. Simulated PV Statistics SRVC in 2002

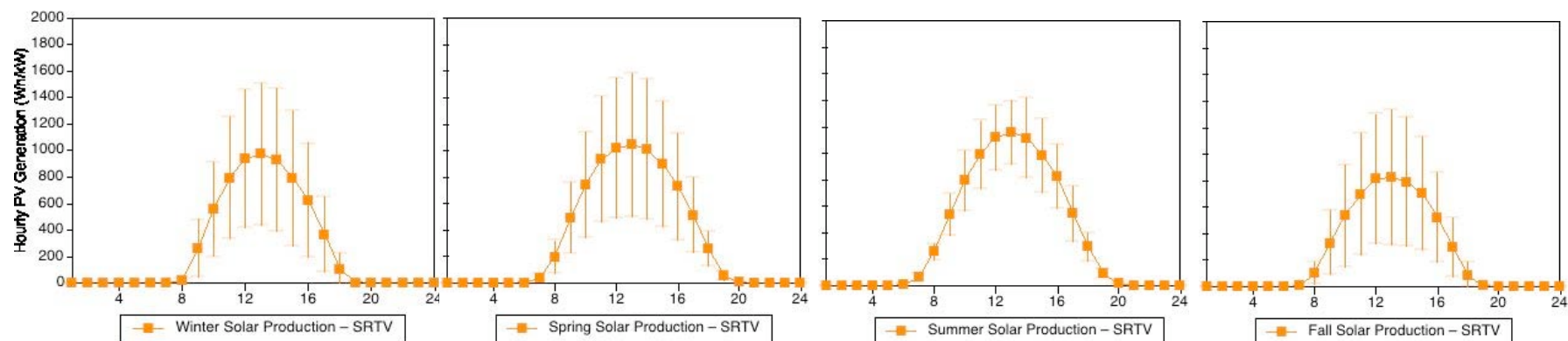


Figure BX - 7. Simulated PV Statistics SRTV in 2002

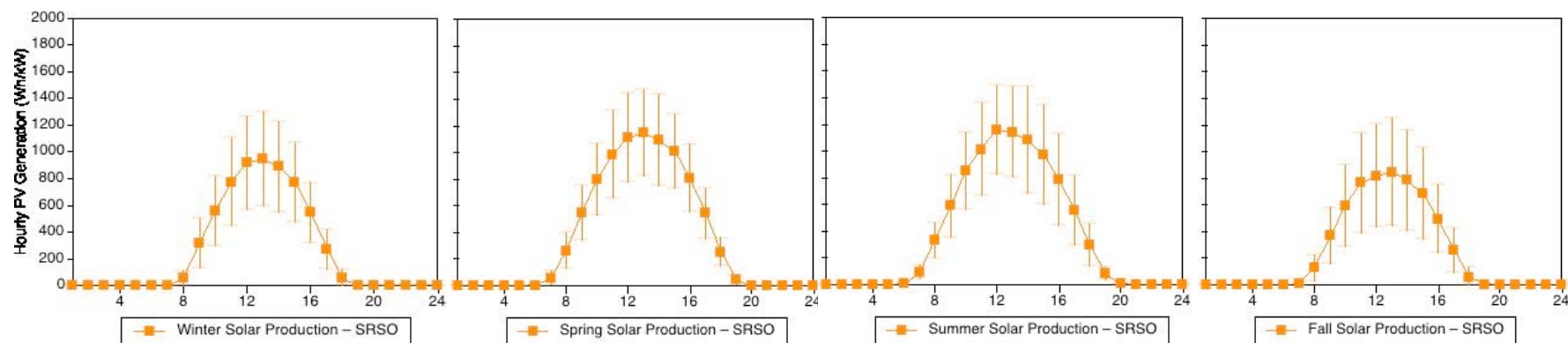


Figure BX - 8. Simulated PV Statistics SRSO in 2002

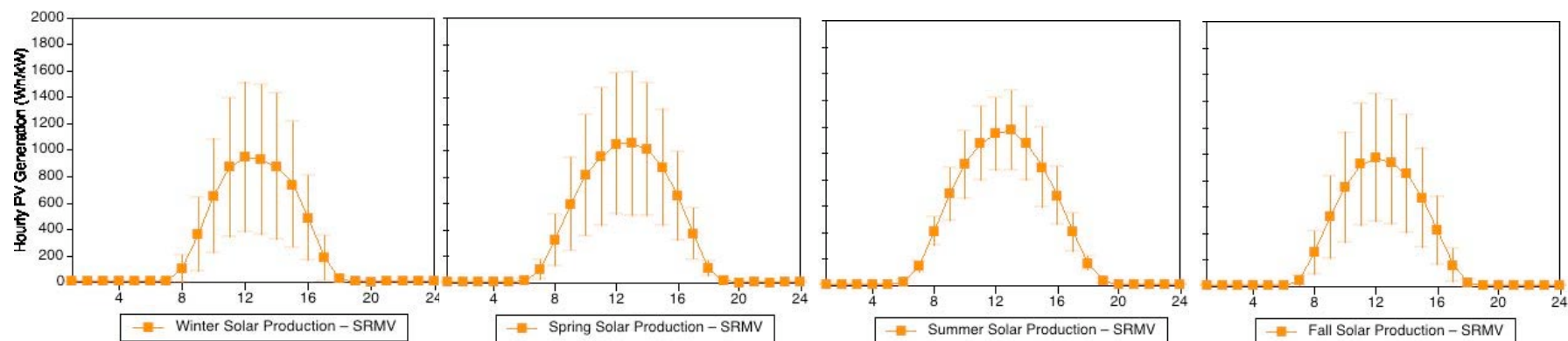


Figure BX - 9. Simulated PV Statistics SRMV in 2002

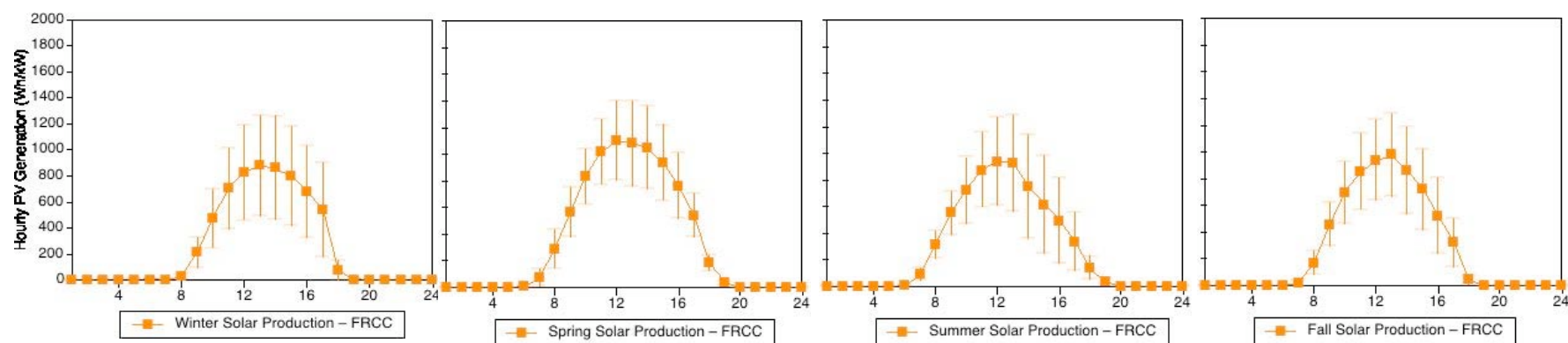


Figure BX - 10. Simulated PV Statistics FRCC in 2002

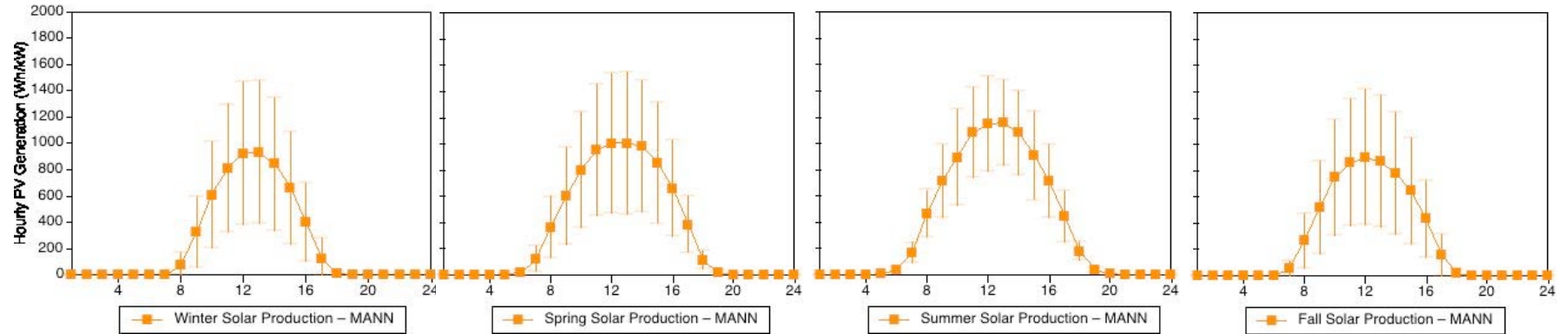


Figure BX - 11. Simulated PV Statistics MANN in 2002

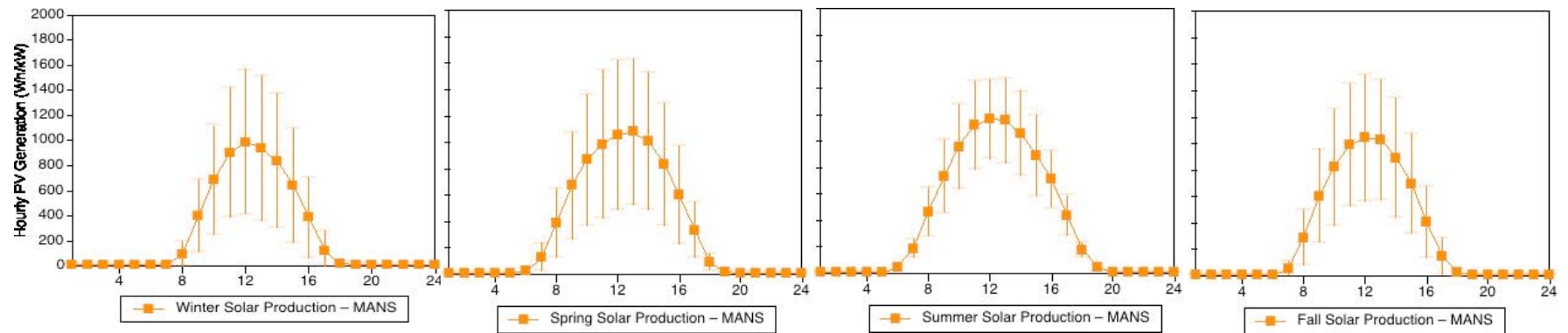


Figure BX - 12. Simulated PV Statistics MANS in 2002

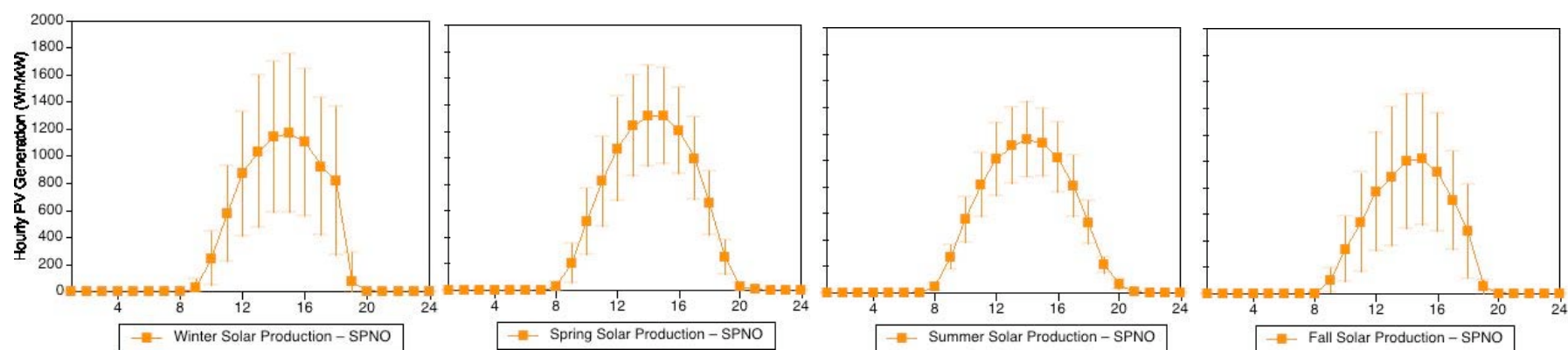


Figure BX - 13. Simulated PV Statistics SPNO in 2002

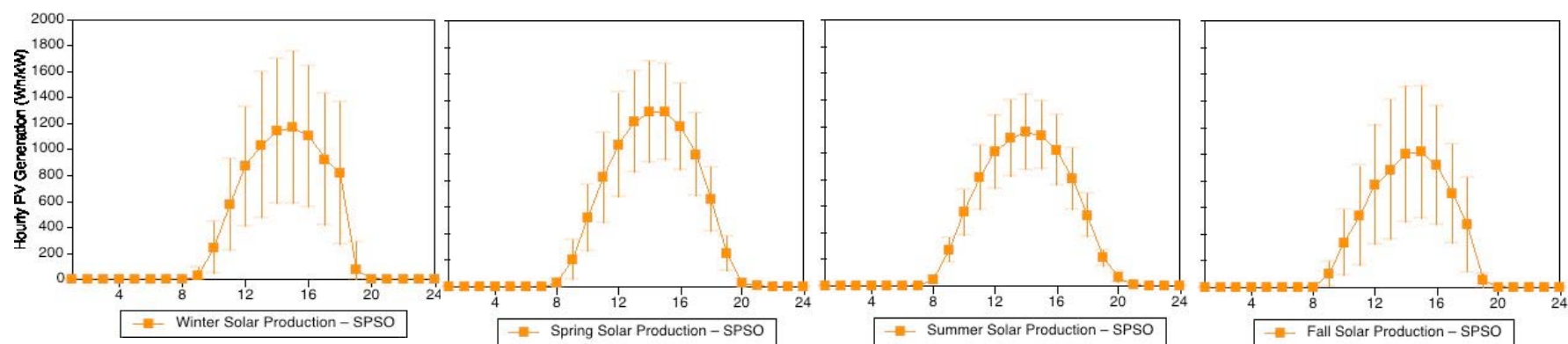


Figure BX - 14. Simulated PV Statistics SPSO in 2002

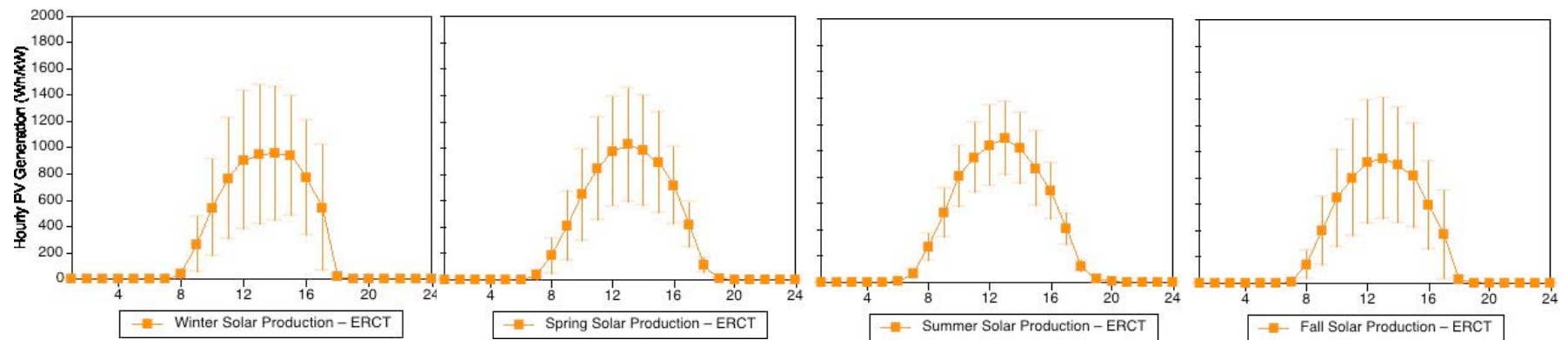


Figure BX - 15. Simulated PV Statistics ERCT in 2002

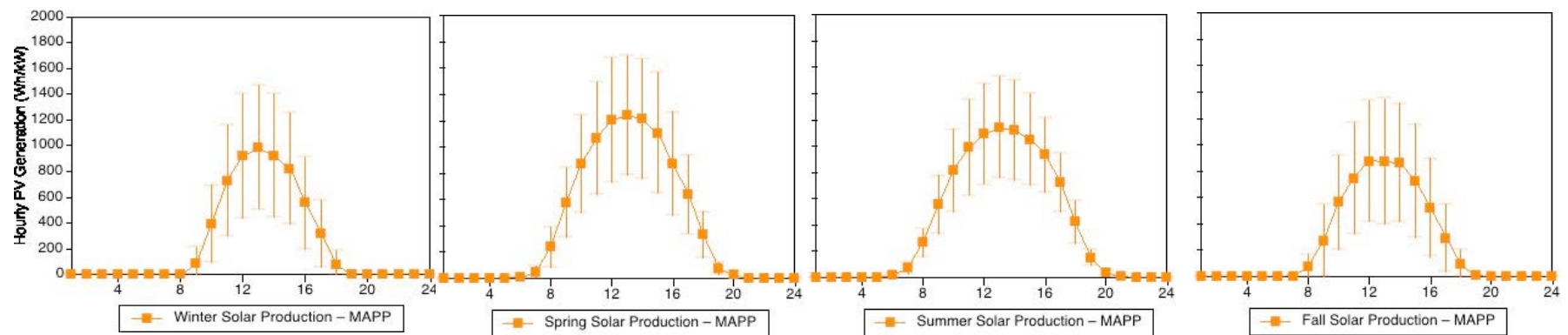


Figure BX - 16. Simulated PV Statistics MAPP in 2002

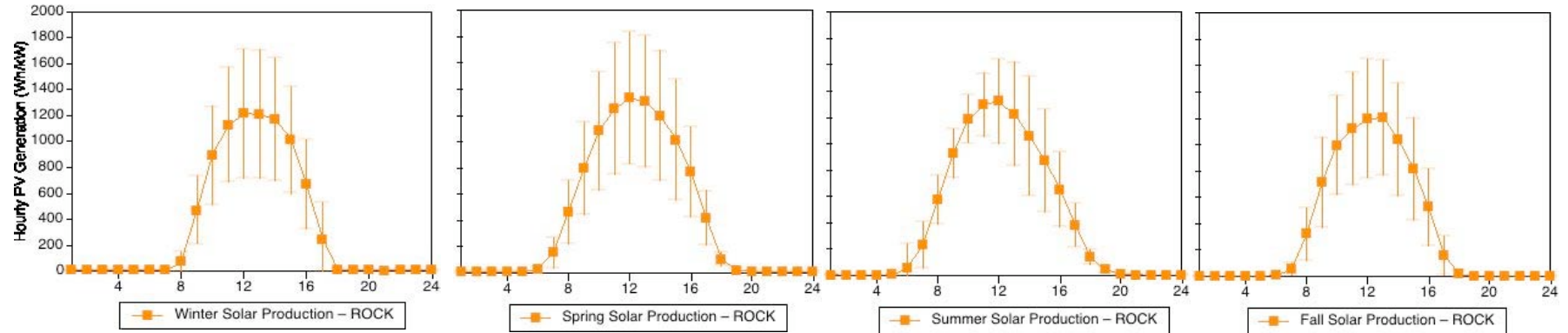


Figure BX - 17. Simulated PV Statistics ROCK in 2002

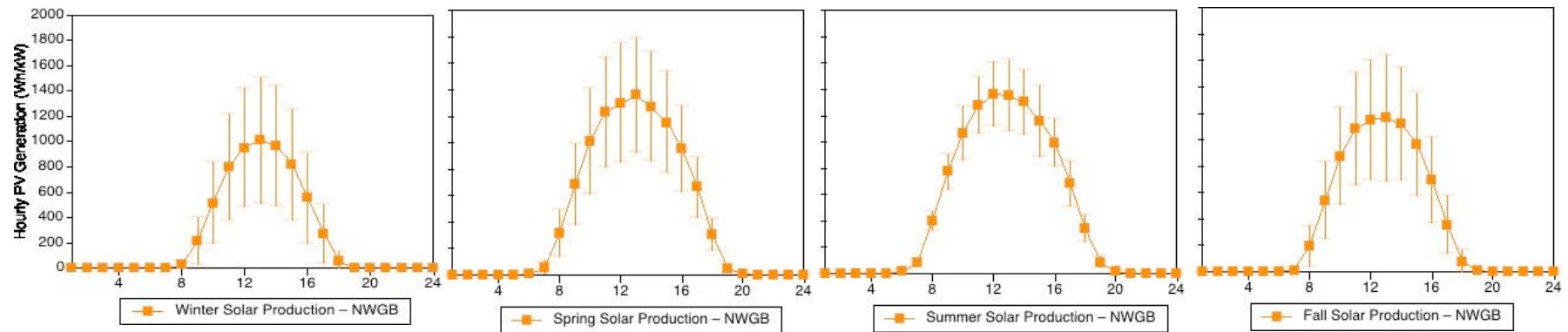


Figure BX - 18. Simulated PV Statistics NWGB in 2002

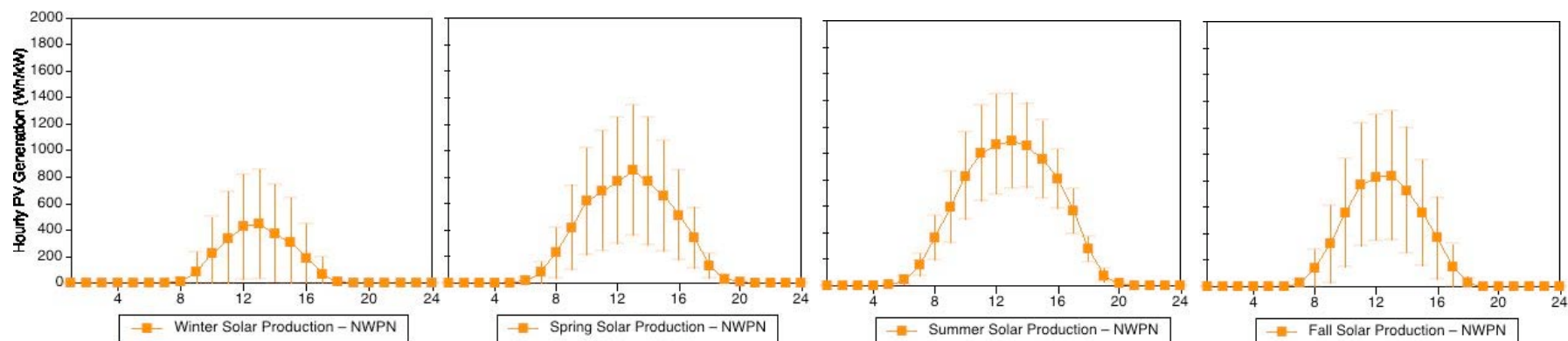


Figure BX - 19. Simulated PV Statistics NWPV in 2002

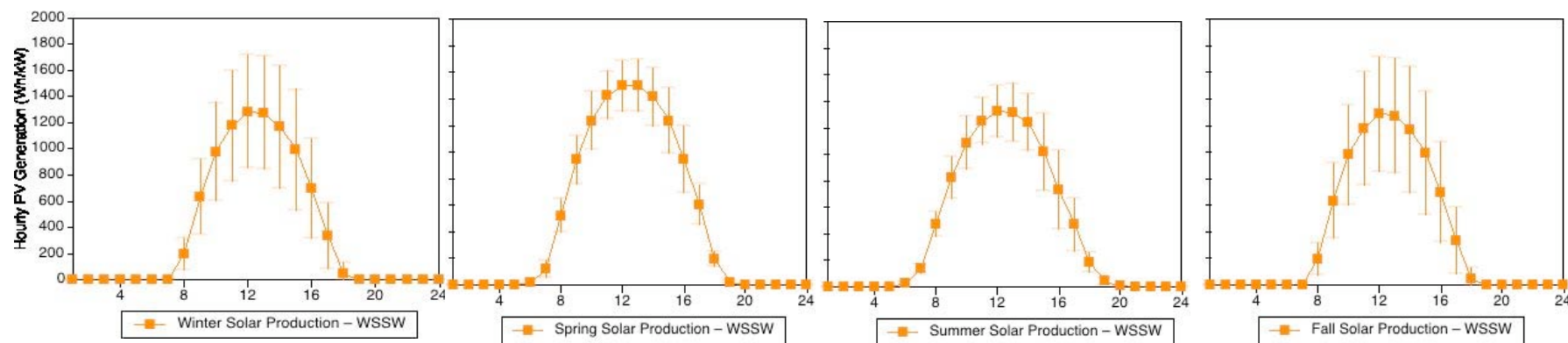


Figure BX - 20. Simulated PV Statistics WSSW in 2002

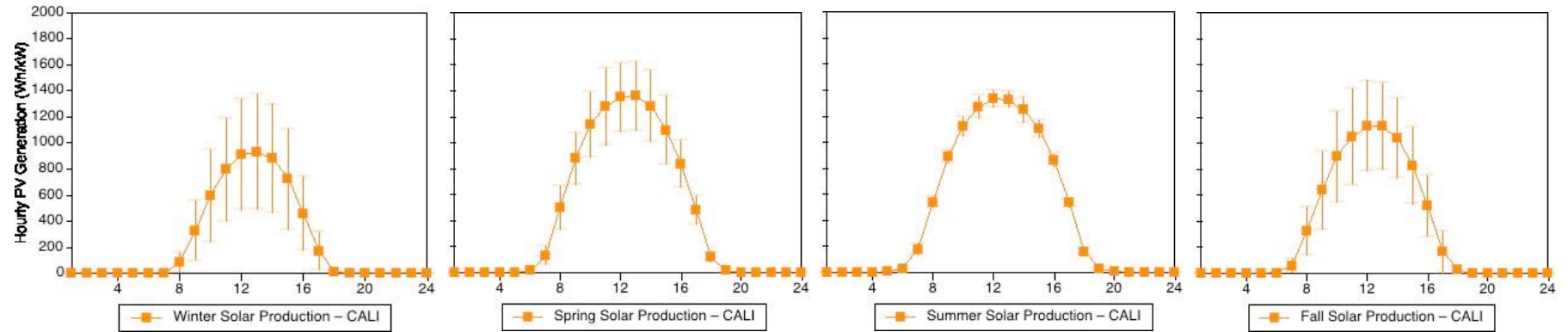


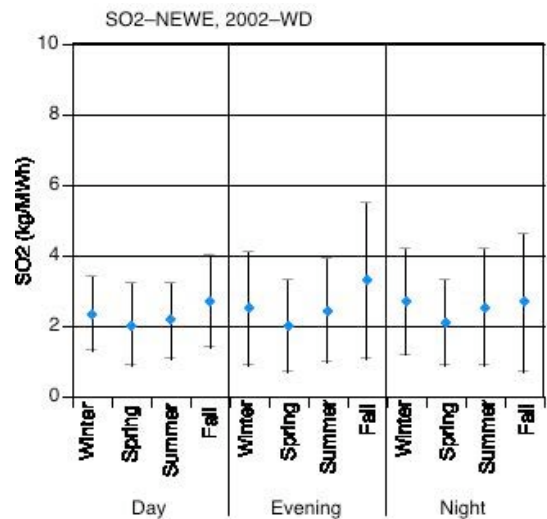
Figure BX - 21. Simulated PV Statistics CALI in 2002

Appendix B Section BXI – 2002 Load Shape Following Emission Rate Statistics

Figure BXI - 1. Emission Rate Statistics NEWE in 2002.....	2
Figure BXI - 2. Emission Rate Statistics NYAS in 2002	4
Figure BXI - 3. Emission Rate Statistics MAAC in 2002.....	6
Figure BXI - 4. Emission Rate Statistics ECOV in 2002	8
Figure BXI - 5. Emission Rate Statistics ECMI in 2002.....	10
Figure BXI - 6. Emission Rate Statistics SRVC in 2002	12
Figure BXI - 7. Emission Rate Statistics SRTV in 2002	14
Figure BXI - 8. Emission Rate Statistics SRSO in 2002.....	16
Figure BXI - 9. Emission Rate Statistics SRMV in 2002.....	18
Figure BXI - 10. Emission Rate Statistics FRCC in 2002.....	20
Figure BXI - 11. Emission Rate Statistics MANN in 2002.....	22
Figure BXI - 12. Emission Rate Statistics MANS in 2002.....	24
Figure BXI - 13. Emission Rate Statistics SPNO in 2002	26
Figure BXI - 14. Emission Rate Statistics SPSO in 2002	28
Figure BXI - 15. Emission Rate Statistics ERCT in 2002.....	30
Figure BXI - 16. Emission Rate Statistics MAPP in 2002.....	32
Figure BXI - 17. Emission Rate Statistics ROCK in 2002	34
Figure BXI - 18. Emission Rate Statistics NWGB in 2002	36
Figure BXI - 19. Emission Rate Statistics NWPN in 2002.....	38
Figure BXI - 20. Emission Rate Statistics WSSW in 2002.....	40
Figure BXI - 21. Emission Rate Statistics CALI in 2002.....	42

Emission Rate Statistics

This appendix includes average, standard deviation, minimum, and maximum load shape following emission rates by NERC Subregion, type of day, time of day and season. The graphs show average load shape following emission rates for SO₂, NO_x, and CO₂ and plus and minus one standard deviation. Tables on the pages facing the graphs show all statistics for the same subregion.



Emission rates are in kg/MWh.

Seasons are:

Winter–December through February

Spring–March through May

Summer–June through August

Fall–September through November

Types of days are:

Weekday (WD) – Monday through Friday

Weekend and Holiday (WEH) – Saturday and Sunday and
New Years, Memorial Day, 4th of July, Labor Day,
Thanksgiving Day, and Christmas Day

Times of day are:

Day–6am to 7pm

Evening–7pm to 11pm

Night–11pm to 6am

Day and Evening hours definitions are NYMEX peak hours and Night hours are off peak.

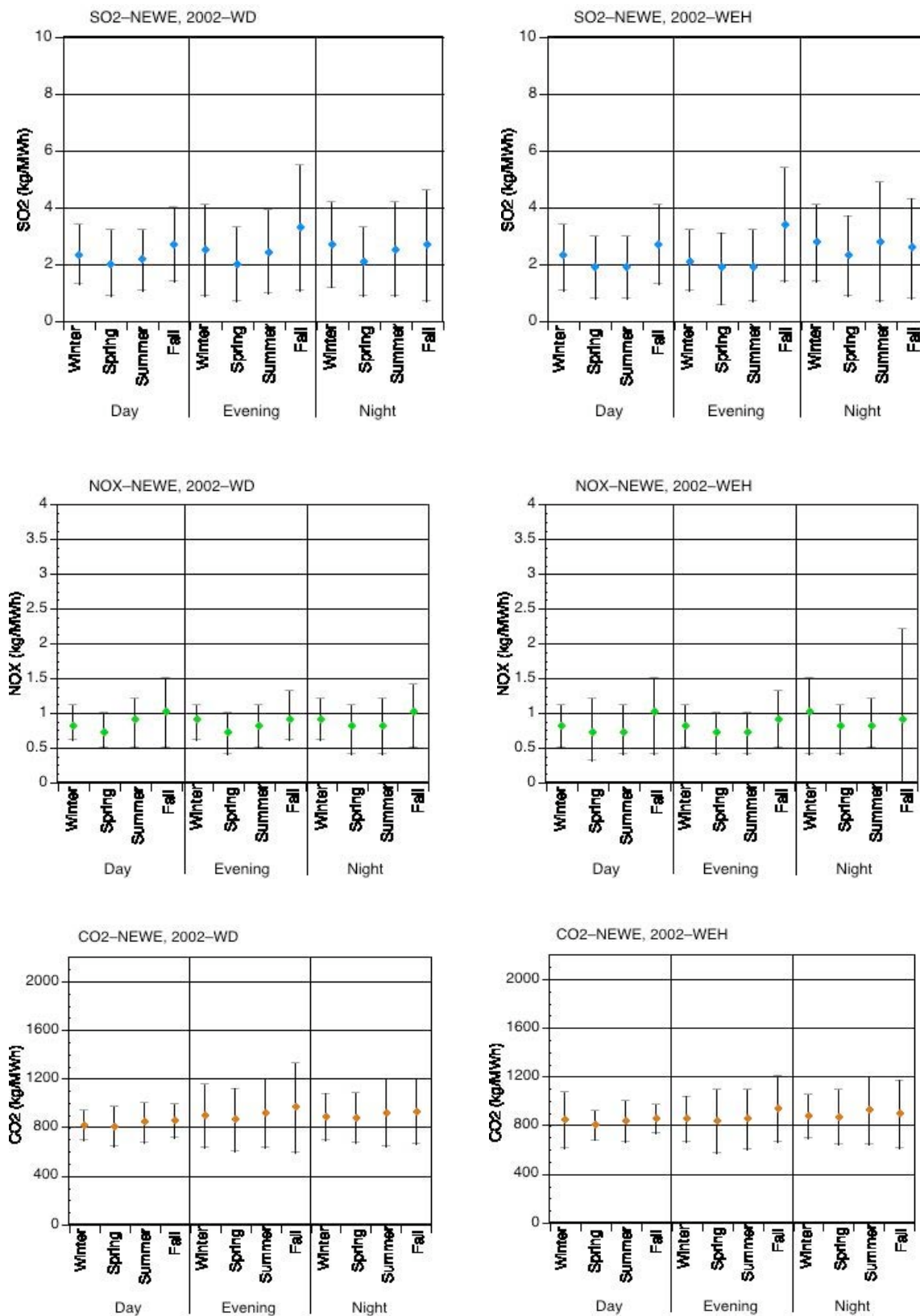


Figure BXI - 1. Emission Rate Statistics NEWWE in 2002

NEWE-2002		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
		Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.3	1.1	8.5	0.3	2.3	1.1	6.6	0.2
	Spring	2.0	1.1	13.7	0.1	1.9	1.1	8.8	0.2
	Summer	2.2	1.1	8.0	0.2	1.9	1.1	5.0	0.1
	Fall	2.7	1.3	15.9	0.1	2.7	1.4	8.0	0.1
Evening	Winter	2.5	1.6	18.3	0.4	2.1	1.0	5.7	0.4
	Spring	2.0	1.3	13.8	0.2	1.9	1.2	9.5	0.2
	Summer	2.4	1.4	11.5	0.1	1.9	1.3	6.0	0.0
	Fall	3.3	2.2	15.9	0.2	3.4	2.0	11.8	0.1
Night	Winter	2.7	1.5	8.6	0.2	2.8	1.4	8.5	0.0
	Spring	2.1	1.2	7.7	0.1	2.3	1.4	8.4	0.2
	Summer	2.5	1.6	17.4	0.2	2.8	2.1	17.4	0.0
	Fall	2.7	2.0	23.1	0.1	2.6	1.7	9.0	0.1

NEWE-2002		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
		Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	0.8	0.3	3.6	0.2	0.8	0.3	2.8	0.2
	Spring	0.7	0.3	2.8	0.2	0.7	0.4	5.3	0.2
	Summer	0.9	0.4	3.3	0.2	0.7	0.3	2.0	0.1
	Fall	1.0	0.5	9.0	0.3	1.0	0.5	5.1	0.1
Evening	Winter	0.9	0.3	2.1	0.3	0.8	0.3	2.2	0.2
	Spring	0.7	0.3	2.2	0.2	0.7	0.3	3.0	0.2
	Summer	0.8	0.3	2.0	0.1	0.7	0.3	2.0	0.1
	Fall	0.9	0.4	3.3	0.3	0.9	0.4	2.9	0.2
Night	Winter	0.9	0.3	3.7	0.2	1.0	0.5	6.0	0.2
	Spring	0.8	0.3	2.2	0.1	0.8	0.3	1.9	0.2
	Summer	0.8	0.4	4.0	0.1	0.8	0.3	1.7	0.1
	Fall	1.0	0.5	3.1	0.1	0.9	1.3	16.6	0.1

NEWE-2002		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
		Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	811	836	123	228	2040	4464	284	557
	Spring	800	796	165	123	3572	1524	282	315
	Summer	832	828	163	168	2577	2845	300	404
	Fall	848	848	137	119	2282	1549	415	472
Evening	Winter	889	845	264	186	2648	1630	384	136
	Spring	856	824	257	260	2360	2553	546	428
	Summer	912	843	280	245	3106	2145	484	305
	Fall	955	932	366	271	3965	2300	400	639
Night	Winter	880	868	191	176	1791	1846	276	442
	Spring	871	863	207	223	2581	3120	383	531
	Summer	914	915	275	278	3331	3116	340	386
	Fall	924	884	265	280	2695	2751	256	298

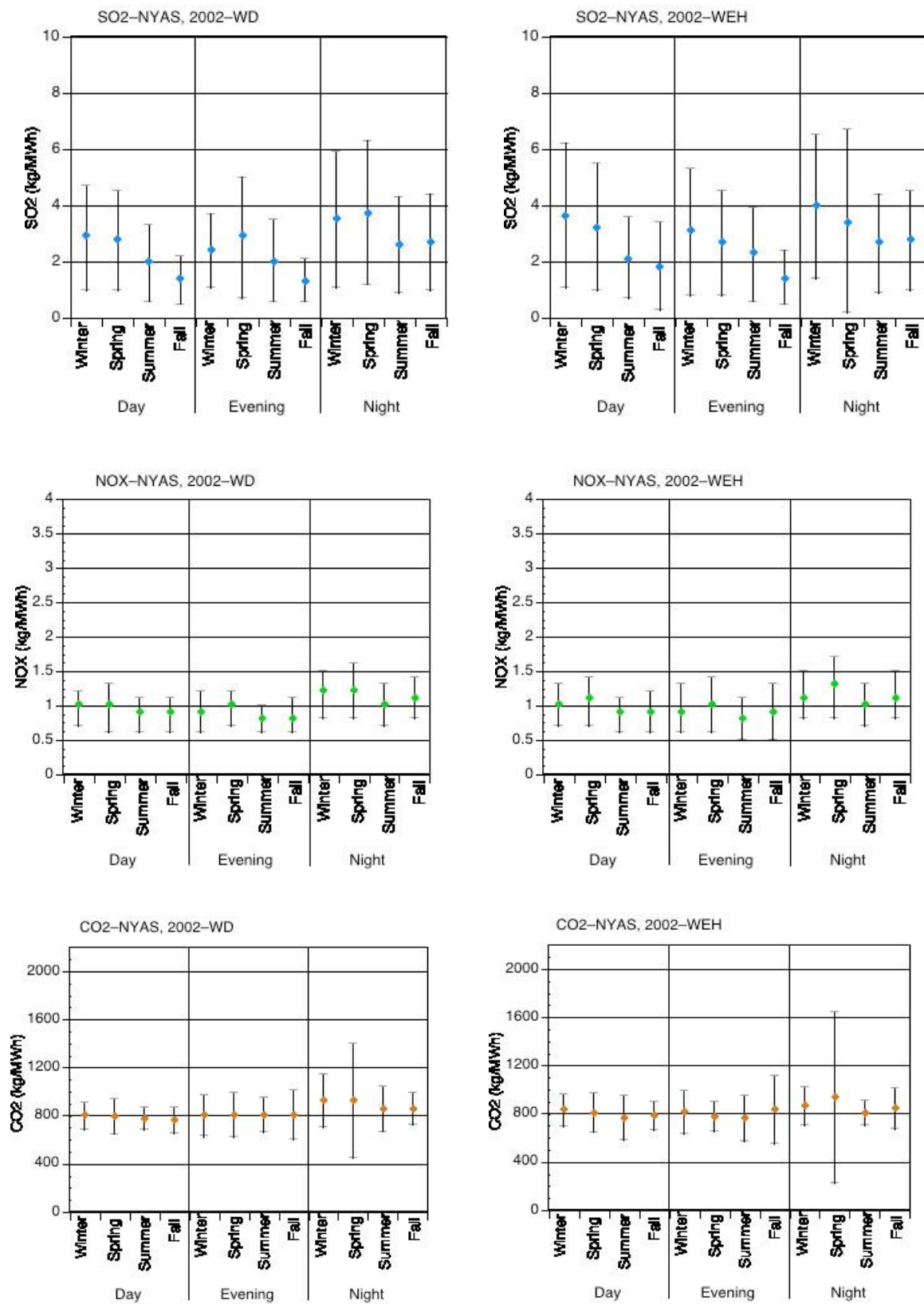


Figure BXI - 2. Emission Rate Statistics NYAS in 2002

		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
NYAS	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.9	1.8	11.3	0.2	3.6	2.5	14.3	0.2
	Spring	2.8	1.8	11.7	0.1	3.2	2.3	12.9	0.3
	Summer	2.0	1.3	11.7	0.2	2.1	1.5	8.3	0.2
	Fall	1.4	0.9	7.9	0.2	1.8	1.5	10.3	0.1
Evening	Winter	2.4	1.3	9.2	0.4	3.1	2.2	13.0	0.2
	Spring	2.9	2.2	12.0	0.2	2.7	1.8	9.2	0.5
	Summer	2.0	1.4	10.6	0.2	2.3	1.6	7.1	0.2
	Fall	1.3	0.8	5.0	0.2	1.4	0.9	5.0	0.2
Night	Winter	3.5	2.4	13.4	0.2	4.0	2.5	13.4	0.5
	Spring	3.7	2.6	34.3	0.5	3.4	3.2	34.3	0.3
	Summer	2.6	1.7	11.3	0.3	2.7	1.8	9.5	0.3
	Fall	2.7	1.7	10.7	0.2	2.8	1.8	11.1	0.1

		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
NYAS	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.0	0.3	2.4	0.2	1.0	0.3	2.5	0.2
	Spring	1.0	0.3	5.6	0.3	1.1	0.3	2.1	0.2
	Summer	0.9	0.2	2.2	0.4	0.9	0.2	2.6	0.4
	Fall	0.9	0.2	2.7	0.4	0.9	0.3	2.5	0.3
Evening	Winter	0.9	0.3	2.6	0.4	0.9	0.3	2.5	0.4
	Spring	1.0	0.3	2.2	0.2	1.0	0.4	3.3	0.4
	Summer	0.8	0.2	1.6	0.3	0.8	0.3	2.5	0.4
	Fall	0.8	0.3	2.0	0.4	0.9	0.4	2.5	0.5
Night	Winter	1.2	0.3	2.2	0.4	1.1	0.3	2.0	0.3
	Spring	1.2	0.4	4.8	0.4	1.3	0.5	4.8	0.4
	Summer	1.0	0.3	2.1	0.4	1.0	0.3	1.9	0.5
	Fall	1.1	0.3	2.2	0.5	1.1	0.3	2.1	0.5

		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
NYAS	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	793	110	2049	306	822	130	1254	446
	Spring	787	144	2795	345	802	159	2739	349
	Summer	770	97	1756	461	758	184	2788	426
	Fall	758	108	2045	463	774	116	1744	412
Evening	Winter	792	170	2021	363	804	180	1571	436
	Spring	801	184	2131	282	767	122	1138	412
	Summer	802	144	1596	375	754	188	2061	467
	Fall	798	204	1793	429	827	284	1985	481
Night	Winter	920	221	2562	443	859	157	1498	357
	Spring	922	475	9598	450	927	707	9598	474
	Summer	850	186	2991	383	801	105	1122	516
	Fall	853	132	1573	514	838	168	1738	460

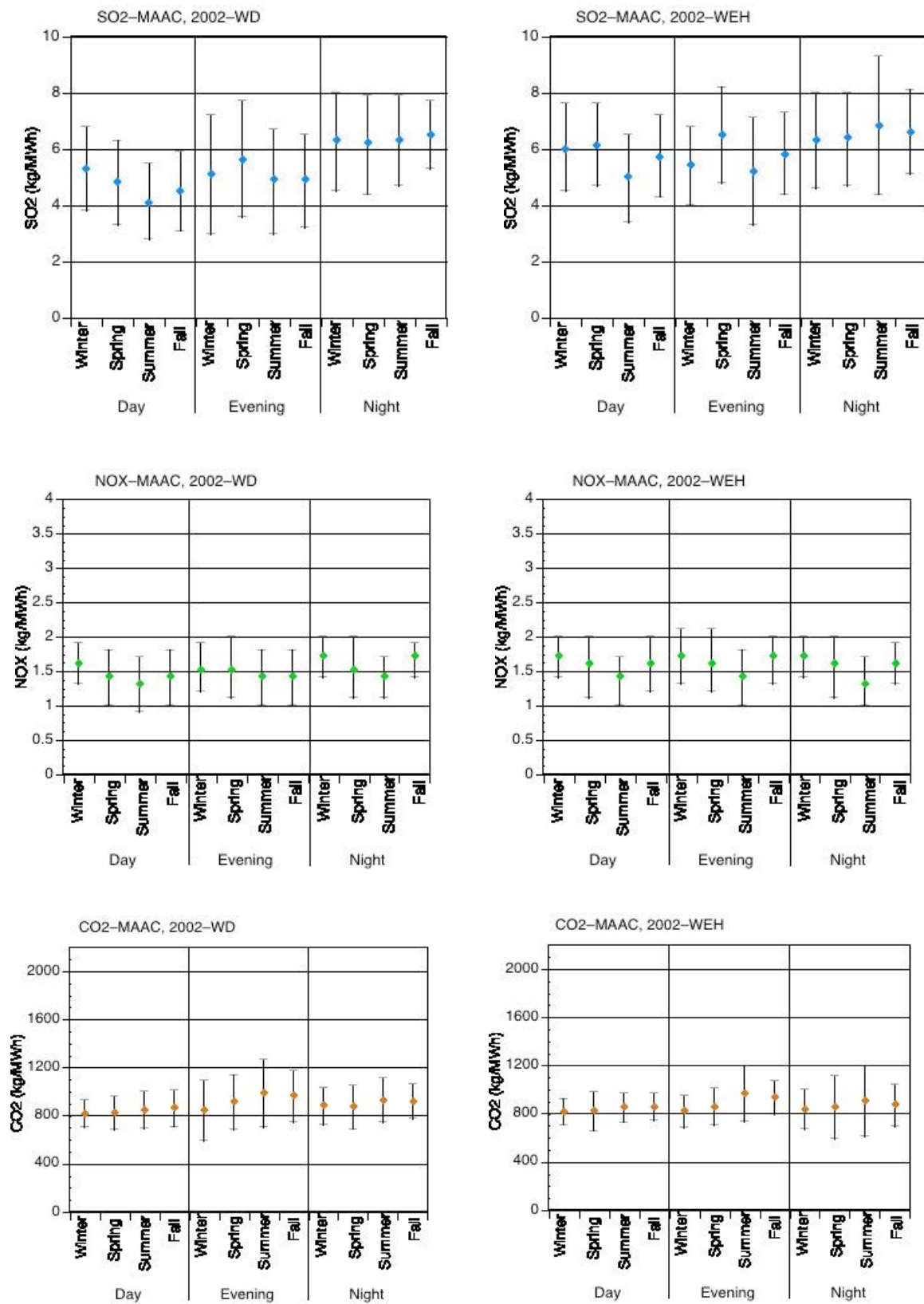


Figure BXI - 3. Emission Rate Statistics MAAC in 2002

		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
MAAC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	5.3	1.5	14.4	1.4	6.0	1.5	10.7	1.9
	Spring	4.8	1.5	14.2	1.0	6.1	1.5	9.5	1.4
	Summer	4.1	1.3	13.5	1.5	5.0	1.6	8.7	1.9
	Fall	4.5	1.4	10.9	1.0	5.7	1.4	10.9	2.1
Evening	Winter	5.1	2.1	21.1	1.8	5.4	1.4	9.4	1.8
	Spring	5.6	2.0	18.3	1.9	6.5	1.7	10.5	2.6
	Summer	4.9	1.9	13.3	1.2	5.2	1.9	9.1	1.4
	Fall	4.9	1.6	12.8	1.7	5.8	1.5	8.7	2.2
Night	Winter	6.3	1.7	11.3	0.7	6.3	1.7	11.3	1.2
	Spring	6.2	1.7	21.4	2.1	6.4	1.7	12.4	1.1
	Summer	6.3	1.6	19.0	2.1	6.8	2.5	31.3	2.4
	Fall	6.5	1.2	12.2	3.7	6.6	1.5	10.5	2.9

		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
MAAC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.6	0.3	3.2	0.6	1.7	0.3	2.6	0.8
	Spring	1.4	0.4	3.1	0.5	1.6	0.4	2.5	0.3
	Summer	1.3	0.4	3.7	0.4	1.4	0.3	2.9	0.6
	Fall	1.4	0.4	4.3	0.5	1.6	0.4	2.6	0.5
Evening	Winter	1.5	0.4	2.7	0.6	1.7	0.4	2.8	0.7
	Spring	1.5	0.4	3.4	0.5	1.6	0.5	3.1	0.8
	Summer	1.4	0.4	4.0	0.5	1.4	0.4	3.3	0.5
	Fall	1.4	0.4	2.7	0.5	1.7	0.4	2.6	0.8
Night	Winter	1.7	0.3	2.9	0.9	1.7	0.3	2.4	0.8
	Spring	1.5	0.4	2.6	0.4	1.6	0.5	3.0	0.4
	Summer	1.4	0.3	2.5	0.6	1.3	0.3	2.5	0.4
	Fall	1.7	0.3	2.5	0.8	1.6	0.3	2.4	0.7

		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
MAAC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	809	111	1664	357	812	108	1190	380
	Spring	814	139	1939	328	813	160	2507	233
	Summer	841	154	2970	382	842	118	1689	478
	Fall	854	150	3244	531	851	112	1239	434
Evening	Winter	835	248	2841	311	813	131	1139	361
	Spring	905	228	2456	382	850	153	1484	369
	Summer	979	280	2492	406	962	229	1884	355
	Fall	954	219	2066	579	928	138	1582	575
Night	Winter	873	153	2234	462	831	166	2163	500
	Spring	865	180	2533	441	849	259	3326	431
	Summer	922	183	2397	471	899	293	3478	526
	Fall	915	141	2177	473	865	175	2179	459

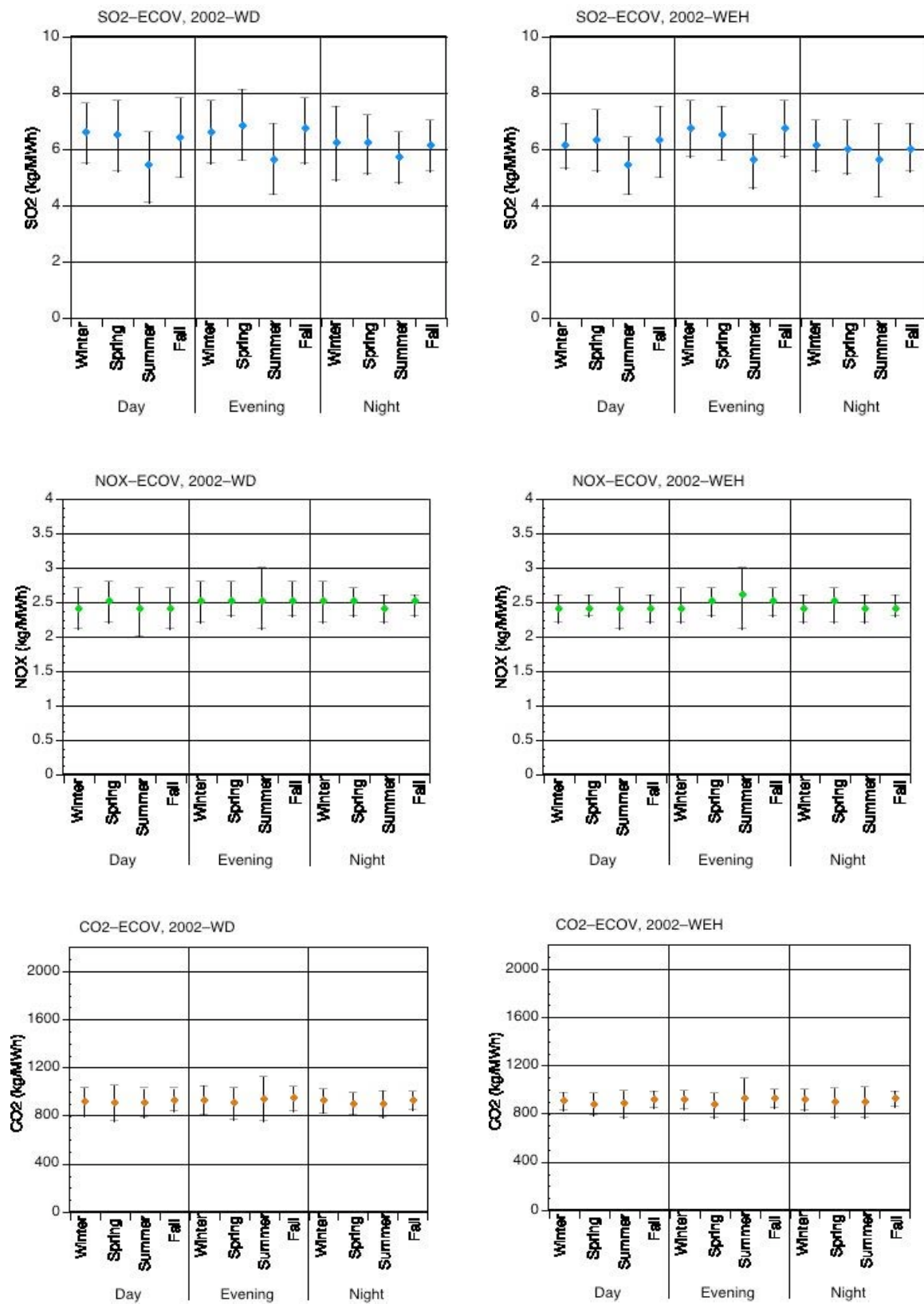


Figure BXI - 4. Emission Rate Statistics ECOV in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ECOV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	6.6	1.1	18.4	3.0	6.1	0.8	8.5	3.7
	Spring	6.5	1.3	11.2	2.5	6.3	1.1	11.4	3.4
	Summer	5.4	1.3	11.4	2.0	5.4	1.0	8.4	2.6
	Fall	6.4	1.4	19.4	2.0	6.3	1.3	20.1	2.7
Evening	Winter	6.6	1.1	10.1	3.1	6.7	1.0	10.9	4.6
	Spring	6.8	1.2	12.7	4.1	6.5	0.9	9.5	4.1
	Summer	5.6	1.2	10.2	2.4	5.6	1.0	7.4	2.9
	Fall	6.7	1.2	10.3	2.9	6.7	1.0	10.0	3.9
Night	Winter	6.2	1.3	17.7	3.9	6.1	0.9	9.8	3.8
	Spring	6.2	1.0	9.2	3.0	6.0	0.9	8.2	3.0
	Summer	5.7	0.9	9.2	2.7	5.6	1.3	14.0	3.2
	Fall	6.1	0.9	14.6	3.8	6.0	0.9	9.5	4.0

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ECOV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.4	0.3	7.1	1.5	2.4	0.2	3.5	1.8
	Spring	2.5	0.3	6.2	1.5	2.4	0.2	3.2	1.7
	Summer	2.4	0.3	4.5	1.2	2.4	0.3	3.9	1.5
	Fall	2.4	0.3	5.6	1.3	2.4	0.2	3.7	1.6
Evening	Winter	2.5	0.3	4.4	1.5	2.4	0.2	4.1	1.8
	Spring	2.5	0.3	4.8	2.0	2.5	0.2	3.4	2.1
	Summer	2.5	0.5	5.8	1.3	2.6	0.4	4.2	1.4
	Fall	2.5	0.2	3.8	1.8	2.5	0.2	3.4	2.1
Night	Winter	2.5	0.3	6.1	1.8	2.4	0.2	3.3	1.7
	Spring	2.5	0.2	4.7	2.0	2.5	0.3	4.6	1.7
	Summer	2.4	0.2	3.9	1.8	2.4	0.2	3.9	1.8
	Fall	2.5	0.2	3.2	2.1	2.4	0.2	3.1	2.0

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ECOV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	909	117	1837	510	896	75	1513	650
	Spring	900	150	2994	469	869	90	1182	514
	Summer	900	120	1828	589	874	112	1409	560
	Fall	924	96	1780	548	909	71	1340	713
Evening	Winter	919	122	1582	545	909	78	1438	627
	Spring	894	133	1936	627	865	103	1170	611
	Summer	933	181	1955	539	915	174	2000	600
	Fall	936	101	1664	693	918	74	1360	691
Night	Winter	917	100	1593	711	907	87	1343	687
	Spring	891	94	1379	647	886	122	1945	594
	Summer	889	110	1593	506	889	126	1445	610
	Fall	915	76	1679	733	915	65	1287	747

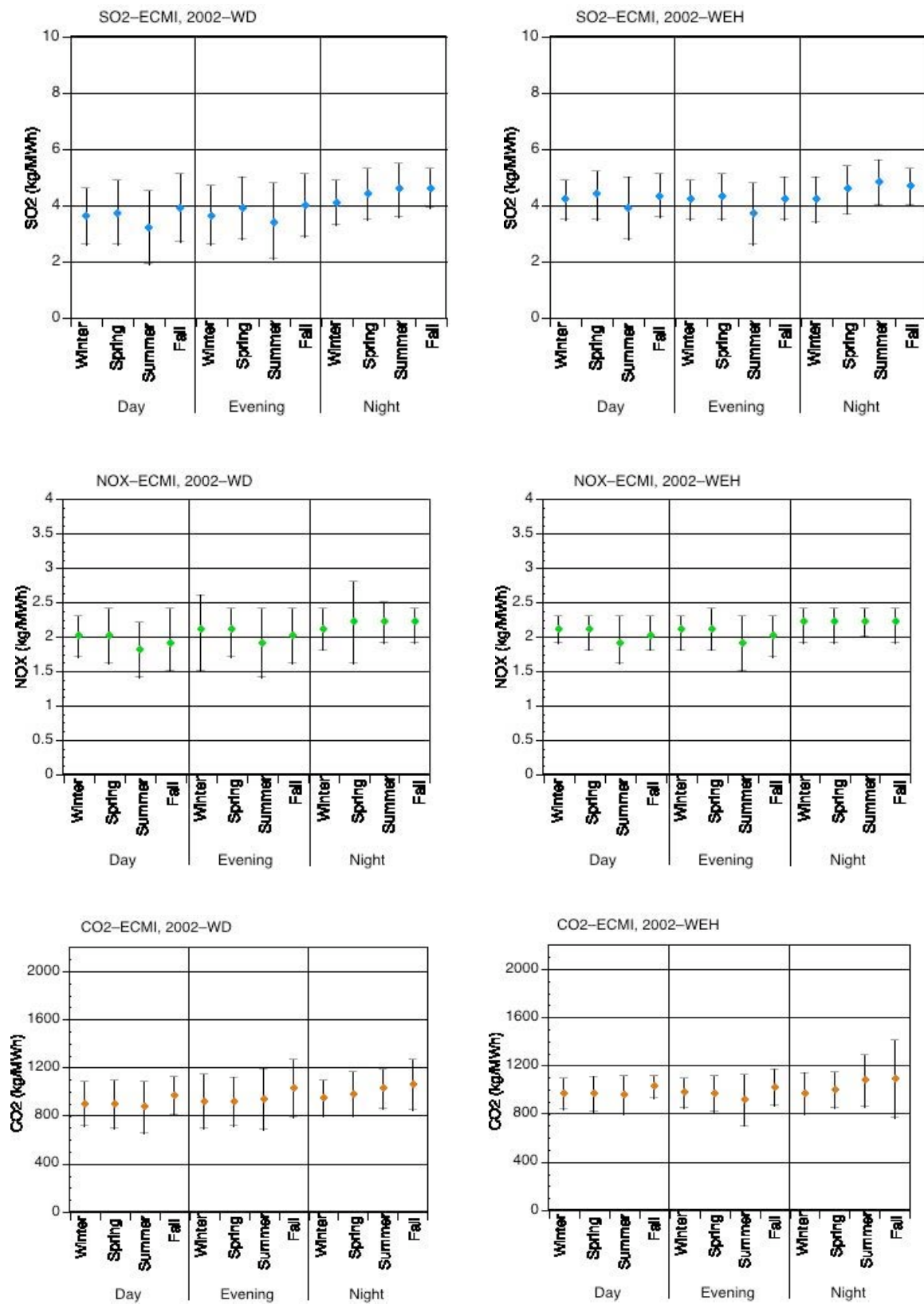


Figure BXI - 5. Emission Rate Statistics ECMI in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ECMI	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	3.6	1.0	6.9	0.5	4.2	0.7	6.3	1.5
	Spring	3.7	1.2	9.0	0.8	4.4	0.9	6.6	1.6
	Summer	3.2	1.3	7.2	0.5	3.9	1.1	7.2	0.7
	Fall	3.9	1.2	8.6	0.3	4.3	0.7	5.9	1.2
Evening	Winter	3.6	1.0	6.2	0.8	4.2	0.7	6.2	2.5
	Spring	3.9	1.1	6.4	1.0	4.3	0.8	6.1	2.0
	Summer	3.4	1.3	10.2	0.8	3.7	1.1	7.3	1.3
	Fall	4.0	1.1	7.5	0.6	4.2	0.8	5.7	1.4
Night	Winter	4.1	0.8	6.1	1.5	4.2	0.8	6.1	1.7
	Spring	4.4	0.9	7.1	1.3	4.6	0.9	6.7	1.1
	Summer	4.6	1.0	8.0	0.9	4.8	0.8	8.0	1.6
	Fall	4.6	0.7	8.0	1.6	4.7	0.7	8.4	2.5

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ECMI	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.0	0.3	3.9	0.2	2.1	0.2	3.1	1.2
	Spring	2.0	0.4	7.1	0.6	2.1	0.3	3.3	0.8
	Summer	1.8	0.4	4.3	0.7	1.9	0.4	3.2	0.7
	Fall	1.9	0.4	7.0	0.7	2.0	0.3	2.8	0.8
Evening	Winter	2.1	0.5	6.4	0.7	2.1	0.2	2.5	1.3
	Spring	2.1	0.3	3.5	0.9	2.1	0.3	2.8	1.1
	Summer	1.9	0.5	4.1	0.7	1.9	0.4	3.0	0.6
	Fall	2.0	0.4	4.4	0.5	2.0	0.3	3.0	1.0
Night	Winter	2.1	0.3	3.8	1.1	2.2	0.3	3.4	1.2
	Spring	2.2	0.6	12.0	1.1	2.2	0.3	2.9	0.8
	Summer	2.2	0.3	3.3	0.8	2.2	0.2	3.3	1.2
	Fall	2.2	0.3	4.6	1.2	2.2	0.2	4.0	1.6

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ECMI	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	892	182	2737	102	958	124	1416	312
	Spring	888	197	2038	166	958	144	1423	407
	Summer	866	214	2292	256	945	159	1632	332
	Fall	963	157	1705	372	1016	95	1958	583
Evening	Winter	912	224	1988	235	966	123	1264	551
	Spring	910	203	1561	245	959	148	1178	524
	Summer	930	253	1929	287	907	212	1652	273
	Fall	1017	239	2504	231	1015	149	2025	535
Night	Winter	938	150	1823	407	963	168	1948	417
	Spring	972	186	2865	298	988	150	1395	422
	Summer	1018	160	1746	273	1068	216	3408	573
	Fall	1049	208	4483	611	1082	320	5120	728

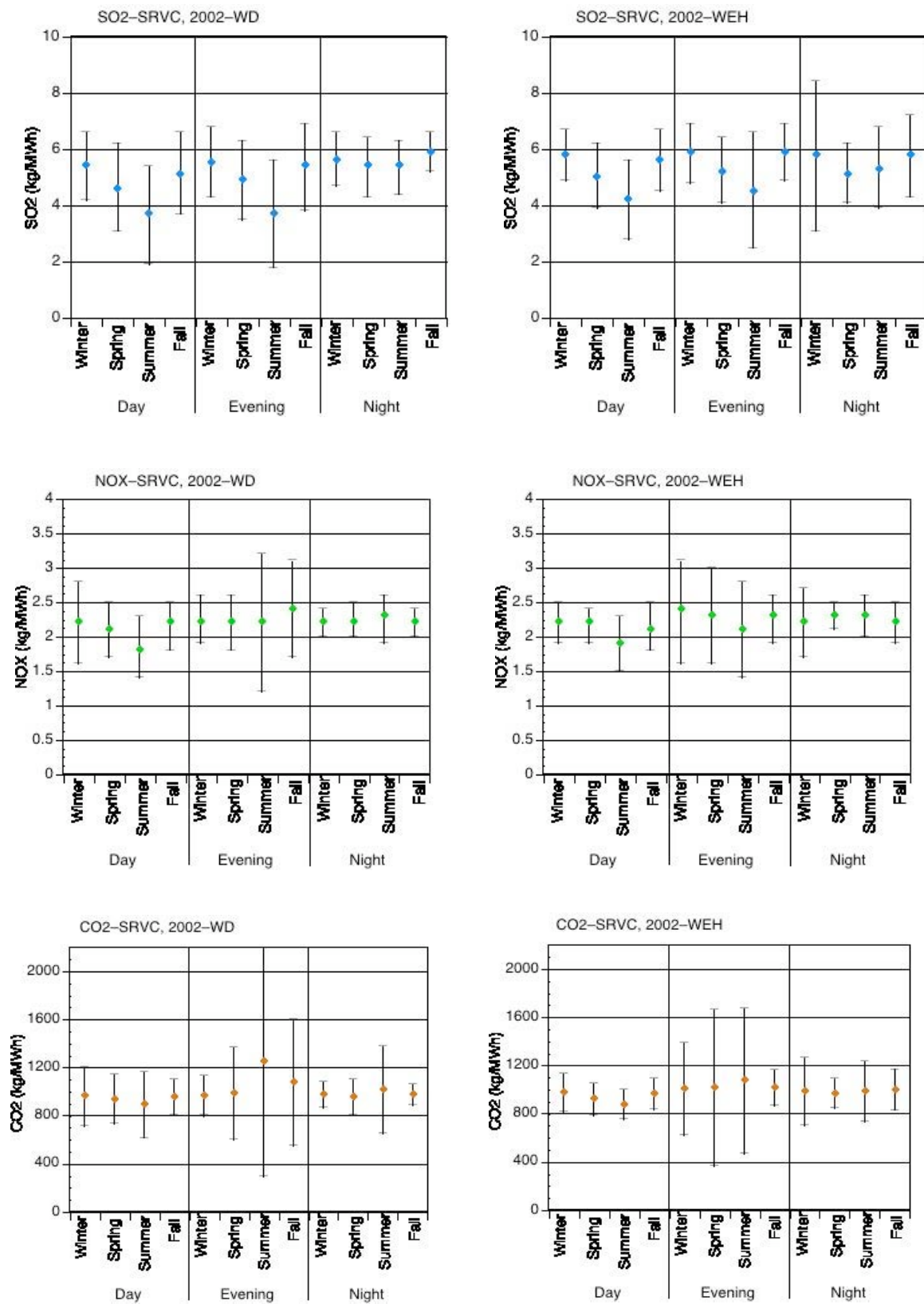


Figure BXI - 6. Emission Rate Statistics SRVC in 2002

		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SRVC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	5.4	1.2	16.0	0.6	5.8	0.9	11.5	2.5
	Spring	4.6	1.6	8.8	0.2	5.0	1.2	7.3	0.7
	Summer	3.7	1.7	9.4	0.4	4.2	1.4	9.4	0.5
	Fall	5.1	1.5	8.3	0.4	5.6	1.1	10.2	1.0
Evening	Winter	5.5	1.2	10.0	0.1	5.9	1.0	10.7	3.4
	Spring	4.9	1.4	9.0	0.9	5.2	1.1	7.4	1.3
	Summer	3.7	1.9	14.4	0.3	4.5	2.1	22.0	1.5
	Fall	5.4	1.6	9.0	0.6	5.9	1.0	10.5	2.6
Night	Winter	5.6	1.0	9.8	0.7	5.8	2.6	36.5	2.4
	Spring	5.4	1.0	11.0	0.8	5.1	1.1	9.4	1.7
	Summer	5.4	0.9	8.2	1.5	5.3	1.4	15.8	1.4
	Fall	5.9	0.7	8.5	3.5	5.8	1.4	20.6	3.2

		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SRVC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.2	0.6	16.9	0.9	2.2	0.3	7.1	1.3
	Spring	2.1	0.4	3.8	0.1	2.2	0.3	3.5	0.8
	Summer	1.8	0.5	8.4	0.6	1.9	0.4	3.1	0.7
	Fall	2.2	0.4	4.8	0.8	2.1	0.3	7.0	1.1
Evening	Winter	2.2	0.3	3.8	0.1	2.4	0.8	9.0	1.7
	Spring	2.2	0.4	5.6	1.1	2.3	0.7	6.8	1.4
	Summer	2.2	1.0	7.0	0.5	2.1	0.7	6.5	0.9
	Fall	2.4	0.7	7.7	1.1	2.3	0.3	4.0	1.4
Night	Winter	2.2	0.2	3.6	1.1	2.2	0.5	7.7	1.6
	Spring	2.2	0.3	4.5	1.3	2.3	0.2	3.3	1.7
	Summer	2.3	0.4	4.4	0.7	2.3	0.3	4.3	1.6
	Fall	2.2	0.2	3.9	1.7	2.2	0.3	5.2	1.5

		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SRVC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	956	245	6616	458	967	157	2874	350
	Spring	931	203	3501	41	915	131	1564	574
	Summer	886	274	7855	335	872	125	1356	455
	Fall	952	146	2329	526	961	125	2461	529
Evening	Winter	961	166	2447	25	1000	384	3690	532
	Spring	982	382	4768	478	1014	649	6310	506
	Summer	1242	949	6313	223	1067	599	4122	456
	Fall	1069	524	5674	452	1011	147	1691	590
Night	Winter	968	108	1875	367	979	281	4282	523
	Spring	952	149	2252	573	965	121	1510	457
	Summer	1010	366	3258	288	979	249	2912	372
	Fall	971	87	1553	679	995	169	2896	676

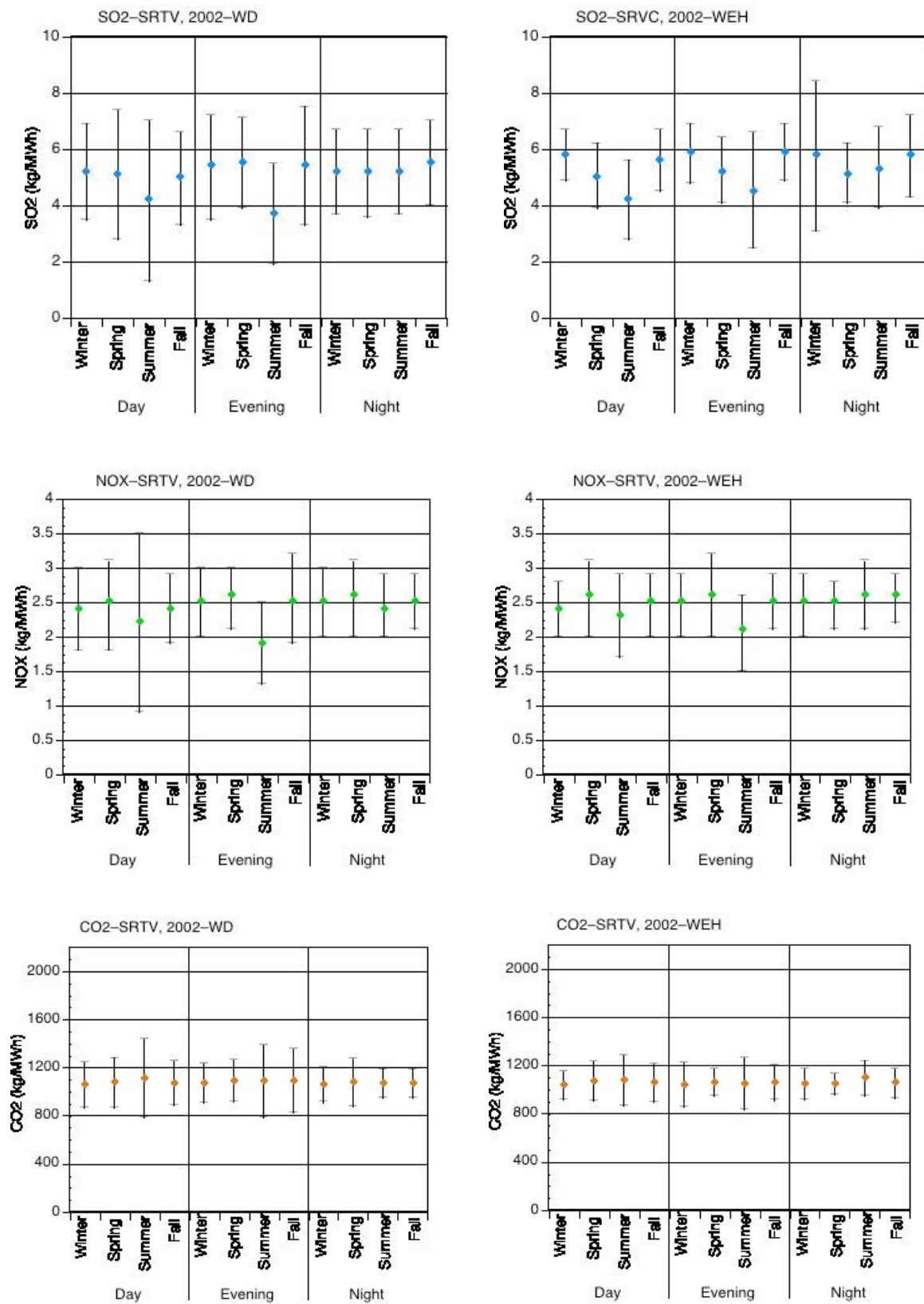


Figure BXI - 7. Emission Rate Statistics SRTV in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SRTV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	5.2	1.7	19.4	0.4	5.4	1.5	9.7	1.0
	Spring	5.1	2.3	40.6	0.3	5.4	2.7	44.0	1.2
	Summer	4.2	2.9	50.5	0.2	4.4	1.8	13.9	0.4
	Fall	5.0	1.6	11.0	0.3	5.2	1.5	15.2	0.5
Evening	Winter	5.4	1.9	17.9	1.0	5.4	1.5	9.8	1.5
	Spring	5.5	1.6	15.0	0.7	5.4	1.6	9.4	0.8
	Summer	3.7	1.8	8.9	0.3	4.3	1.9	10.0	0.2
	Fall	5.4	2.1	16.2	0.6	5.4	1.4	10.1	0.5
Night	Winter	5.2	1.5	13.1	0.5	5.4	1.2	9.6	1.5
	Spring	5.2	1.5	12.5	0.9	5.2	1.7	10.0	1.2
	Summer	5.2	1.5	9.6	0.9	5.1	1.9	11.1	0.9
	Fall	5.5	1.5	10.0	1.5	5.4	1.7	10.6	1.1

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SRTV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.4	0.6	9.5	0.5	2.4	0.4	5.3	1.1
	Spring	2.5	0.7	11.7	0.3	2.6	0.6	7.0	1.0
	Summer	2.2	1.3	26.8	0.4	2.3	0.6	5.0	0.6
	Fall	2.4	0.5	4.7	0.5	2.5	0.4	6.0	0.3
Evening	Winter	2.5	0.5	4.6	0.5	2.5	0.5	4.3	0.7
	Spring	2.6	0.5	5.2	1.2	2.6	0.6	5.7	0.6
	Summer	1.9	0.6	3.6	0.5	2.1	0.6	3.8	0.7
	Fall	2.5	0.6	5.7	0.9	2.5	0.4	3.9	1.4
Night	Winter	2.5	0.5	5.9	0.8	2.5	0.4	5.1	1.7
	Spring	2.6	0.6	8.1	1.1	2.5	0.4	3.8	1.8
	Summer	2.4	0.5	4.1	0.9	2.6	0.5	5.7	1.0
	Fall	2.5	0.4	3.8	0.7	2.6	0.4	3.6	0.5

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SRTV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1054	187	2523	309	1029	117	2203	528
	Spring	1072	204	3939	143	1063	165	2774	332
	Summer	1103	327	6459	353	1073	207	3261	422
	Fall	1064	181	2737	436	1053	162	2461	106
Evening	Winter	1066	162	1970	221	1033	183	2486	302
	Spring	1085	174	2542	498	1054	113	1498	263
	Summer	1083	301	2520	241	1044	214	2188	401
	Fall	1085	264	3108	427	1055	146	2030	657
Night	Winter	1055	147	2431	671	1038	128	1995	784
	Spring	1069	200	3038	399	1042	85	1342	596
	Summer	1062	121	1520	468	1090	144	1961	491
	Fall	1064	120	2453	626	1047	120	1275	172

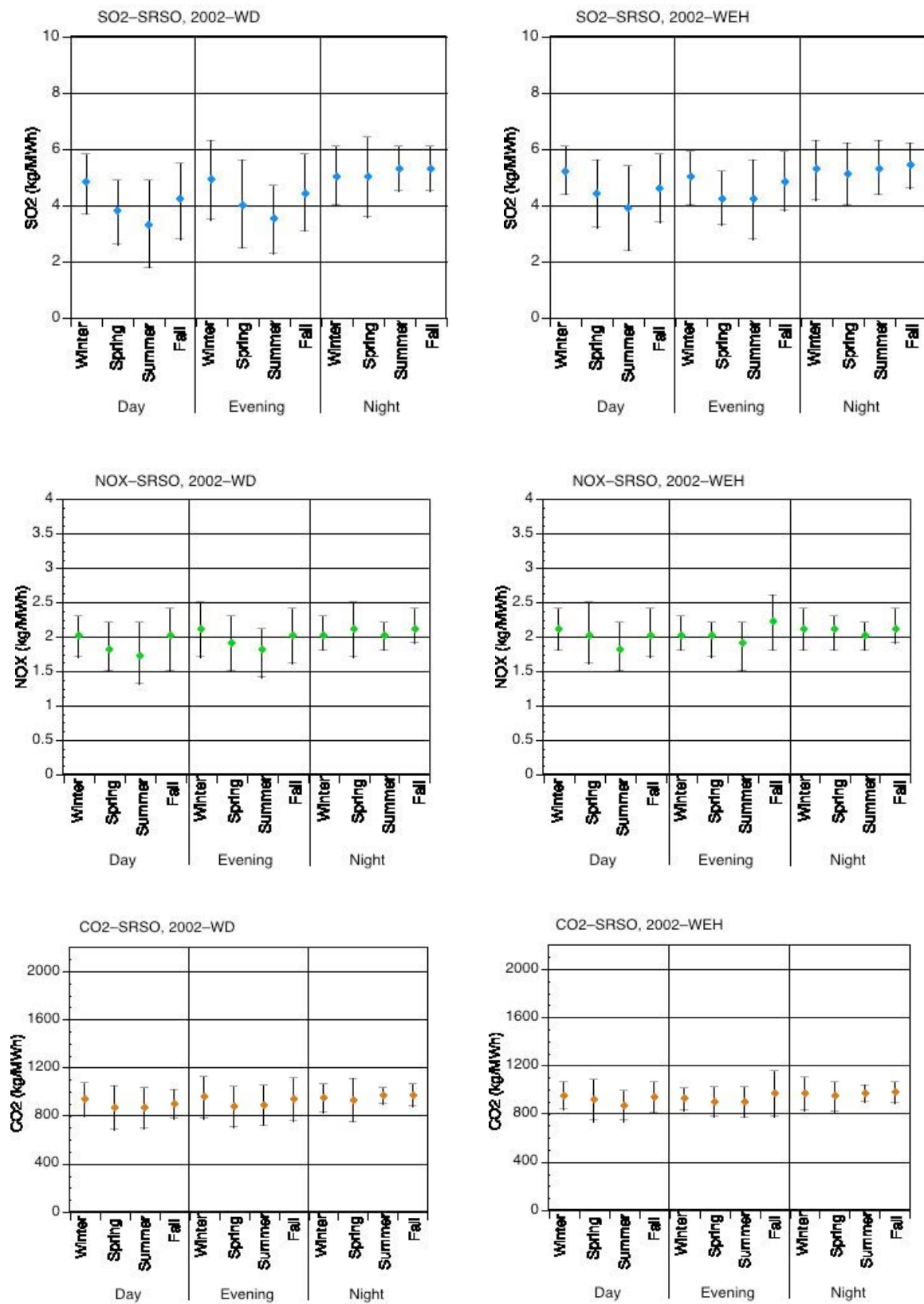


Figure BXI - 8. Emission Rate Statistics SRSO in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SRSO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	4.8	1.1	11.3	1.1	5.2	0.9	9.6	2.4
	Spring	3.8	1.2	9.0	0.6	4.4	1.2	8.2	0.5
	Summer	3.3	1.6	24.5	0.5	3.9	1.5	13.4	0.4
	Fall	4.2	1.4	8.7	0.5	4.6	1.2	7.7	0.8
Evening	Winter	4.9	1.4	19.5	2.1	5.0	1.0	7.1	2.3
	Spring	4.0	1.6	20.8	1.2	4.2	0.9	6.2	2.1
	Summer	3.5	1.2	10.8	1.0	4.2	1.4	7.3	0.9
	Fall	4.4	1.3	11.6	1.3	4.8	1.1	7.1	1.8
Night	Winter	5.0	1.1	14.1	1.1	5.3	1.1	13.2	3.1
	Spring	5.0	1.4	18.2	1.7	5.1	1.1	9.4	2.0
	Summer	5.3	0.8	7.6	2.6	5.3	1.0	7.6	2.4
	Fall	5.3	0.8	12.2	3.3	5.4	0.8	7.9	3.1

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SRSO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.0	0.3	4.1	0.9	2.1	0.3	4.0	1.1
	Spring	1.8	0.4	5.4	0.7	2.0	0.4	6.5	0.9
	Summer	1.7	0.5	7.3	0.6	1.8	0.4	3.4	0.8
	Fall	2.0	0.4	4.8	0.6	2.0	0.4	3.7	0.7
Evening	Winter	2.1	0.4	4.5	0.8	2.0	0.2	2.7	1.5
	Spring	1.9	0.4	4.0	1.0	2.0	0.3	2.5	1.0
	Summer	1.8	0.4	3.8	0.8	1.9	0.3	2.5	1.1
	Fall	2.0	0.4	3.6	1.0	2.2	0.4	4.3	1.0
Night	Winter	2.0	0.3	3.4	0.8	2.1	0.3	4.9	1.5
	Spring	2.1	0.4	6.7	1.0	2.1	0.2	3.1	1.3
	Summer	2.0	0.2	2.8	1.3	2.0	0.2	2.9	1.1
	Fall	2.1	0.2	3.8	1.3	2.1	0.2	3.0	1.2

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SRSO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	927	140	3010	334	941	114	2362	509
	Spring	862	180	3458	281	905	170	2634	565
	Summer	858	166	3505	416	858	123	1657	456
	Fall	890	121	1979	510	929	127	2100	607
Evening	Winter	946	174	2369	614	916	90	1164	479
	Spring	867	172	2159	271	890	123	1546	618
	Summer	878	165	1696	515	890	124	1474	474
	Fall	929	176	2407	490	962	188	1929	593
Night	Winter	940	116	1948	385	960	140	2294	689
	Spring	924	179	3007	525	936	123	1451	460
	Summer	957	65	1207	640	962	71	1175	700
	Fall	966	91	1756	522	968	86	1419	558

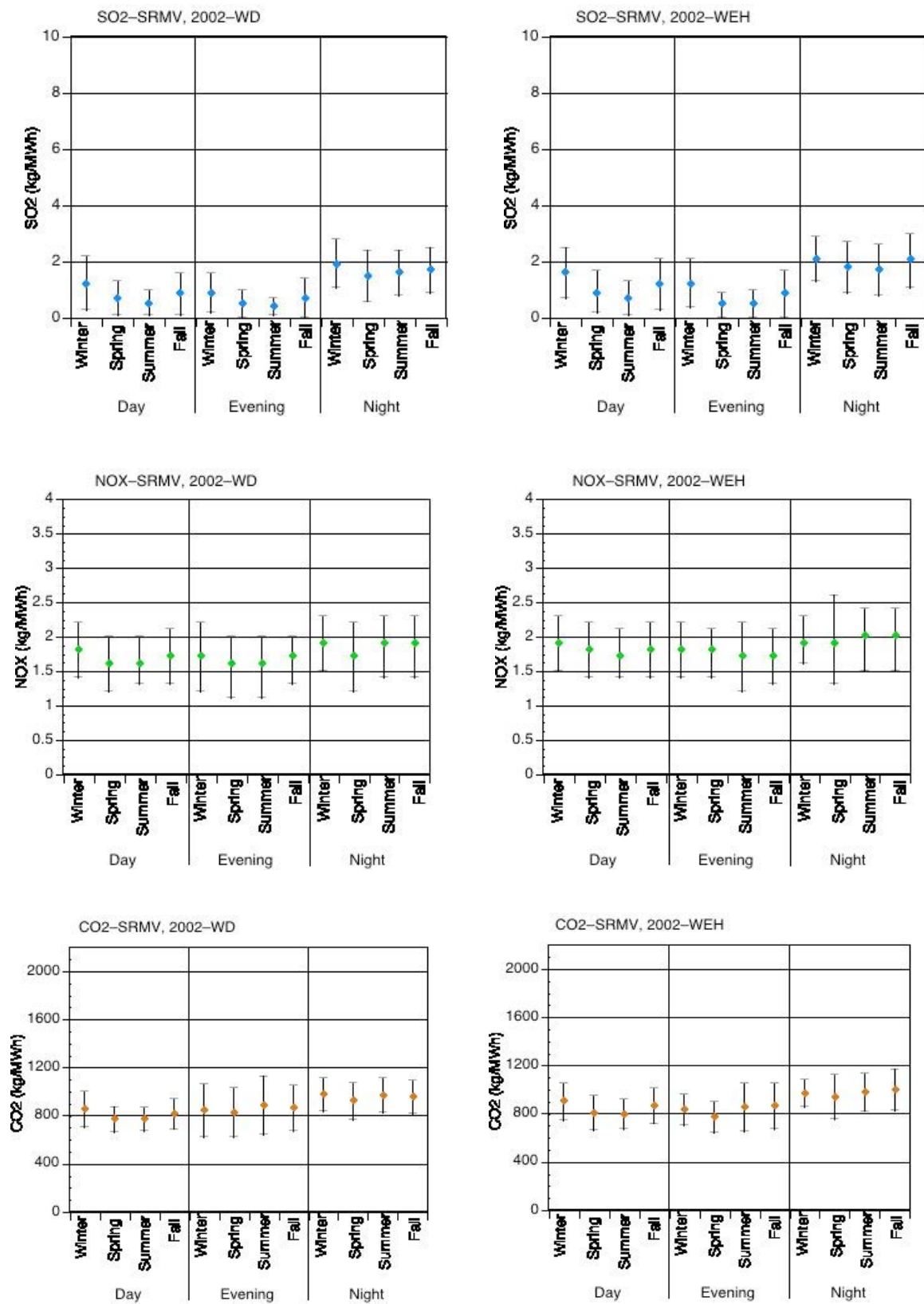


Figure BXI - 9. Emission Rate Statistics SRMV in 2002

		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SRMV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.2	0.9	7.0	0.1	1.6	0.9	4.1	0.1
	Spring	0.7	0.6	3.5	0.0	0.9	0.7	3.4	0.0
	Summer	0.5	0.5	3.3	0.0	0.7	0.6	3.0	0.0
	Fall	0.9	0.7	4.0	0.1	1.2	0.9	4.0	0.1
Evening	Winter	0.9	0.7	3.7	0.1	1.2	0.8	4.5	0.1
	Spring	0.5	0.5	3.5	0.0	0.5	0.5	2.6	0.0
	Summer	0.4	0.3	2.2	0.0	0.5	0.5	4.0	0.0
	Fall	0.7	0.7	6.1	0.0	0.9	0.8	3.2	0.1
Night	Winter	1.9	0.9	4.2	0.1	2.1	0.8	4.0	0.2
	Spring	1.5	0.9	4.8	0.0	1.8	0.9	4.4	0.0
	Summer	1.6	0.8	5.0	0.1	1.7	0.9	4.3	0.1
	Fall	1.7	0.8	4.0	0.1	2.1	1.0	6.2	0.1

		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SRMV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.8	0.4	4.0	0.7	1.9	0.4	3.8	0.6
	Spring	1.6	0.4	4.5	0.3	1.8	0.4	4.0	0.7
	Summer	1.6	0.3	5.3	0.7	1.7	0.4	3.2	0.6
	Fall	1.7	0.4	3.4	0.6	1.8	0.4	3.2	0.7
Evening	Winter	1.7	0.5	6.0	0.7	1.8	0.4	3.1	0.8
	Spring	1.6	0.5	3.1	0.5	1.8	0.4	2.7	0.7
	Summer	1.6	0.4	3.7	0.7	1.7	0.5	4.3	0.8
	Fall	1.7	0.4	3.2	0.3	1.7	0.4	3.0	0.6
Night	Winter	1.9	0.4	3.3	0.9	1.9	0.4	3.6	1.1
	Spring	1.7	0.5	4.8	0.5	1.9	0.7	8.5	0.8
	Summer	1.9	0.5	5.0	0.6	2.0	0.5	3.5	0.8
	Fall	1.9	0.5	3.7	0.8	2.0	0.4	3.9	0.8

		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SRMV	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	845	146	2247	504	897	152	1507	254
	Spring	762	106	1398	424	801	142	1854	333
	Summer	763	99	1902	395	787	123	1895	529
	Fall	809	124	1379	586	861	147	1501	624
Evening	Winter	836	224	2713	336	827	125	1131	393
	Spring	820	204	1722	499	765	129	1256	253
	Summer	882	240	2431	497	845	199	1719	465
	Fall	861	189	1751	286	860	189	1809	500
Night	Winter	968	138	1656	638	961	113	1226	616
	Spring	916	153	2169	592	934	180	2420	435
	Summer	964	143	1722	643	971	155	1678	609
	Fall	950	141	2135	518	993	171	2212	669

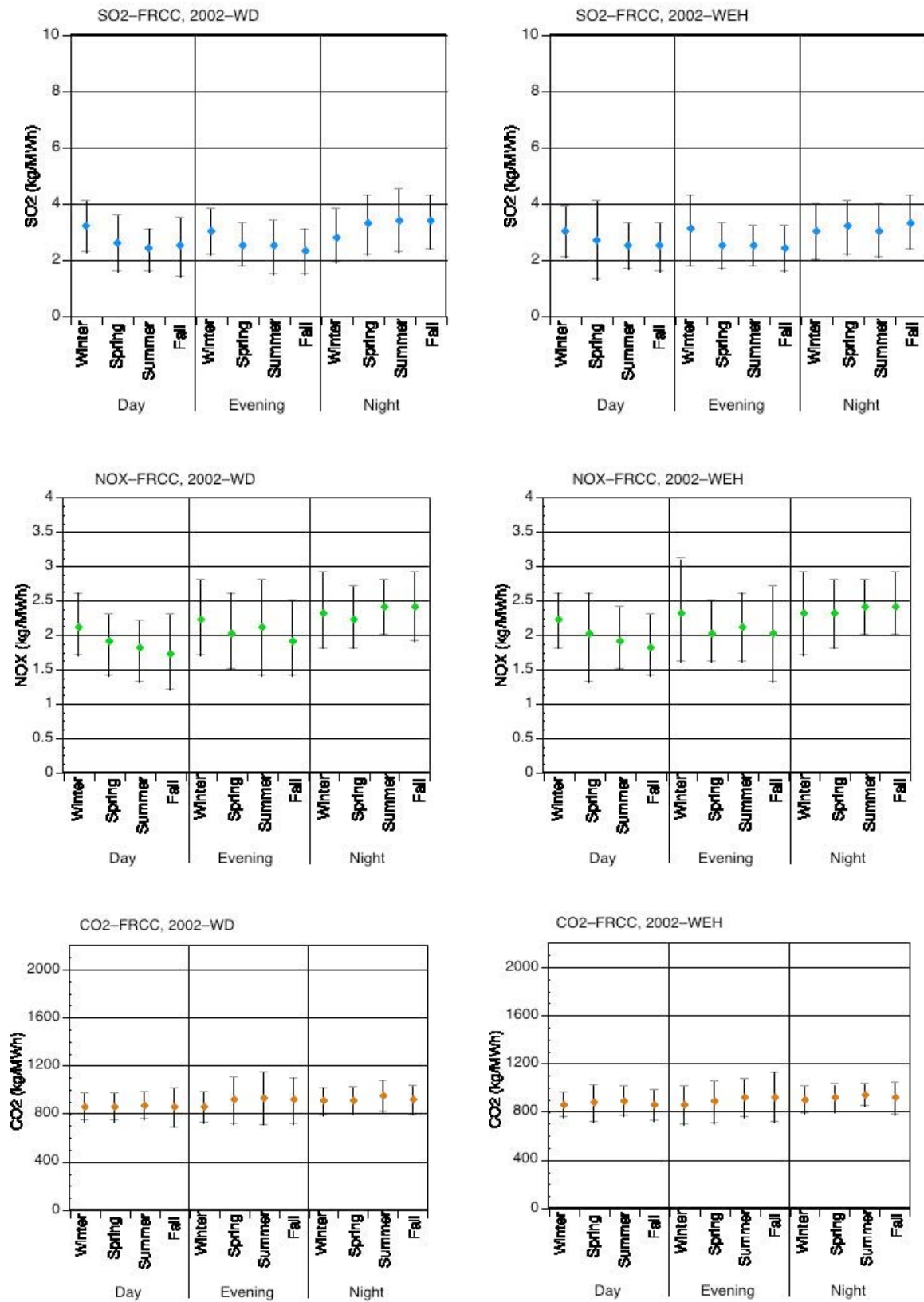


Figure BXI - 10. Emission Rate Statistics FRCC in 2002

		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
FRCC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	3.2	0.9	11.1	0.8	3.0	0.9	5.7	0.9
	Spring	2.6	1.0	12.9	0.4	2.7	1.4	21.6	0.5
	Summer	2.4	0.8	5.6	0.5	2.5	0.8	6.4	0.6
	Fall	2.5	1.0	14.7	0.4	2.5	0.8	5.3	0.6
Evening	Winter	3.0	0.8	5.5	1.2	3.1	1.3	10.3	1.1
	Spring	2.5	0.8	6.2	0.9	2.5	0.8	5.1	0.5
	Summer	2.5	1.0	9.4	0.7	2.5	0.7	4.5	1.2
	Fall	2.3	0.8	4.4	0.5	2.4	0.8	4.9	0.9
Night	Winter	2.8	1.0	8.3	0.8	3.0	1.0	5.6	0.7
	Spring	3.3	1.0	8.8	0.7	3.2	0.9	5.9	1.0
	Summer	3.4	1.1	16.5	1.3	3.0	1.0	6.1	1.1
	Fall	3.4	1.0	9.6	1.2	3.3	0.9	6.4	1.3

		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
FRCC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.1	0.4	6.2	1.2	2.2	0.4	4.0	1.3
	Spring	1.9	0.5	5.6	0.8	2.0	0.7	10.4	0.5
	Summer	1.8	0.5	5.0	0.8	1.9	0.4	5.0	0.9
	Fall	1.7	0.5	7.5	0.7	1.8	0.4	3.4	0.7
Evening	Winter	2.2	0.6	5.9	1.4	2.3	0.8	6.2	1.4
	Spring	2.0	0.6	5.1	1.2	2.0	0.4	3.8	0.9
	Summer	2.1	0.7	7.0	0.7	2.1	0.5	4.4	1.3
	Fall	1.9	0.5	4.4	0.9	2.0	0.7	6.6	1.1
Night	Winter	2.3	0.5	5.8	1.3	2.3	0.6	5.1	1.0
	Spring	2.2	0.4	4.7	1.0	2.3	0.5	4.3	1.4
	Summer	2.4	0.4	5.7	1.3	2.4	0.4	4.8	1.4
	Fall	2.4	0.5	5.5	1.3	2.4	0.4	4.1	1.4

		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
FRCC	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	850	115	1887	440	853	103	1756	554
	Spring	847	113	1697	570	865	151	2591	574
	Summer	863	115	1719	499	883	120	1640	557
	Fall	846	162	2900	541	847	127	1892	572
Evening	Winter	849	130	1472	614	851	157	1605	625
	Spring	903	195	1839	515	876	174	2088	577
	Summer	921	217	2248	625	907	160	1862	708
	Fall	903	190	1508	476	914	208	2114	620
Night	Winter	896	114	1298	513	890	111	1494	579
	Spring	900	111	1537	508	907	114	1432	659
	Summer	944	128	2587	750	932	93	1343	659
	Fall	907	122	2103	649	903	131	1924	620

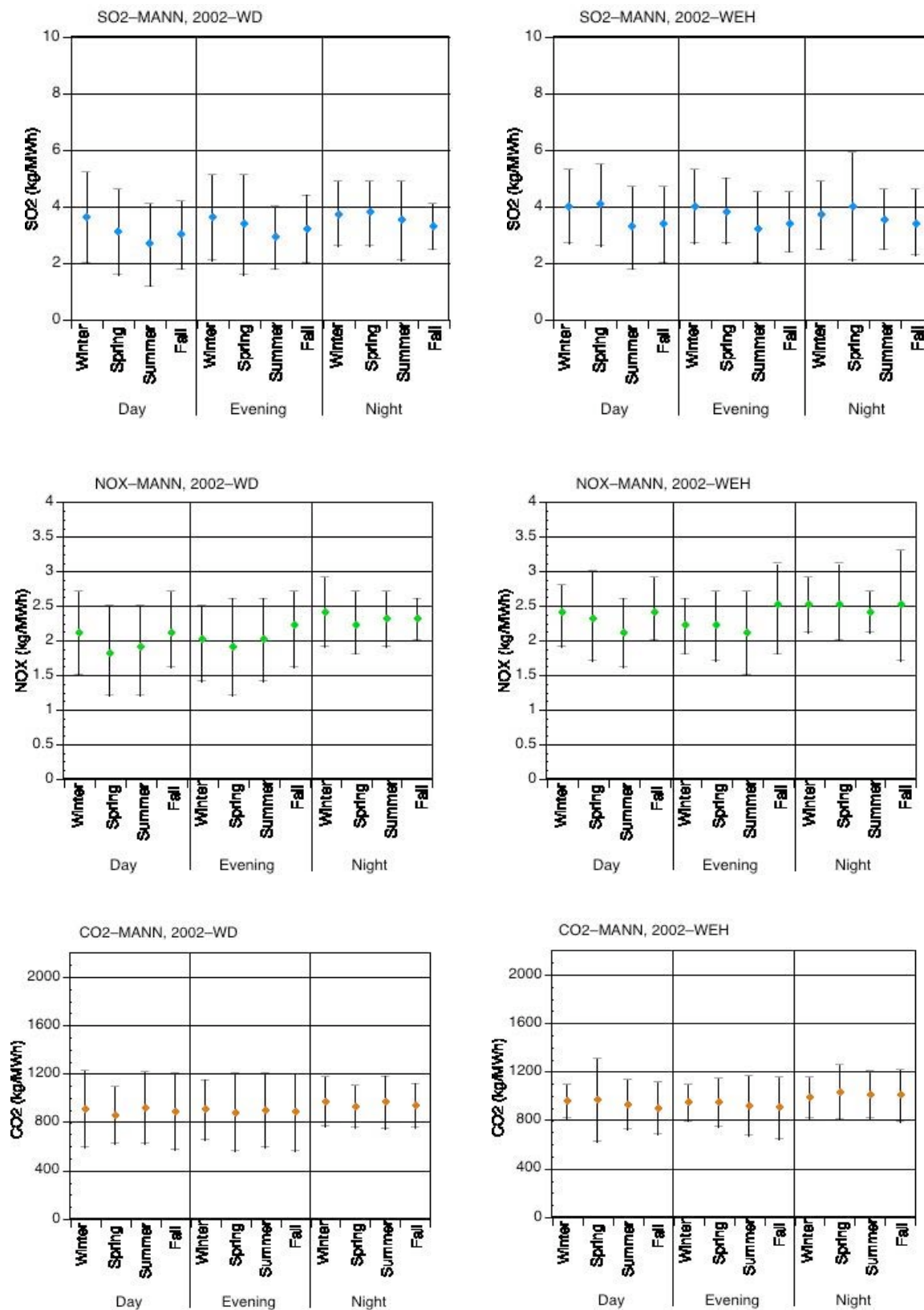


Figure BXI - 11. Emission Rate Statistics MANN in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MANN	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	3.6	1.6	17.7	0.6	4.0	1.3	9.9	1.0
	Spring	3.1	1.5	8.5	0.2	4.1	1.4	12.7	1.2
	Summer	2.7	1.4	12.2	0.2	3.3	1.4	8.8	0.3
	Fall	3.0	1.2	10.4	0.1	3.4	1.3	17.5	0.3
Evening	Winter	3.6	1.5	8.7	0.6	4.0	1.3	8.2	1.1
	Spring	3.4	1.8	21.3	0.4	3.8	1.2	7.1	0.3
	Summer	2.9	1.1	5.7	0.3	3.2	1.2	7.0	0.4
	Fall	3.2	1.2	10.6	0.3	3.4	1.1	8.8	1.1
Night	Winter	3.7	1.2	9.6	1.1	3.7	1.2	9.9	1.1
	Spring	3.8	1.2	9.9	0.7	4.0	1.9	23.6	1.5
	Summer	3.5	1.4	23.7	1.2	3.5	1.1	8.8	0.8
	Fall	3.3	0.8	7.3	1.0	3.4	1.2	13.8	1.4

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MANN	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.1	0.6	12.7	0.5	2.4	0.4	4.4	1.1
	Spring	1.8	0.7	9.3	0.5	2.3	0.6	10.2	0.7
	Summer	1.9	0.6	7.6	0.6	2.1	0.5	3.5	0.6
	Fall	2.1	0.6	6.9	0.7	2.4	0.5	5.8	0.7
Evening	Winter	2.0	0.6	4.8	0.8	2.2	0.4	3.3	1.3
	Spring	1.9	0.7	6.8	0.6	2.2	0.5	3.1	0.5
	Summer	2.0	0.6	4.5	0.5	2.1	0.6	4.5	0.6
	Fall	2.2	0.6	8.1	1.0	2.5	0.6	7.3	1.3
Night	Winter	2.4	0.5	8.8	1.0	2.5	0.4	4.7	1.3
	Spring	2.2	0.4	3.9	0.7	2.5	0.6	7.1	1.1
	Summer	2.3	0.4	5.7	1.2	2.4	0.3	3.0	1.3
	Fall	2.3	0.3	4.5	0.7	2.5	0.8	12.5	1.6

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MANN	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	900	316	7842	281	948	137	1685	425
	Spring	852	235	3830	284	960	344	6228	492
	Summer	915	296	5395	355	923	205	2255	300
	Fall	883	317	4595	377	892	214	2335	177
Evening	Winter	895	249	3042	440	938	153	1314	519
	Spring	873	322	3945	336	942	198	1978	376
	Summer	892	307	3107	286	911	245	2386	262
	Fall	873	320	4799	362	894	254	2781	315
Night	Winter	964	203	2988	468	978	167	1418	308
	Spring	924	173	1589	302	1026	226	2849	627
	Summer	959	214	3115	338	1004	196	1590	227
	Fall	931	181	1504	262	996	214	2185	493

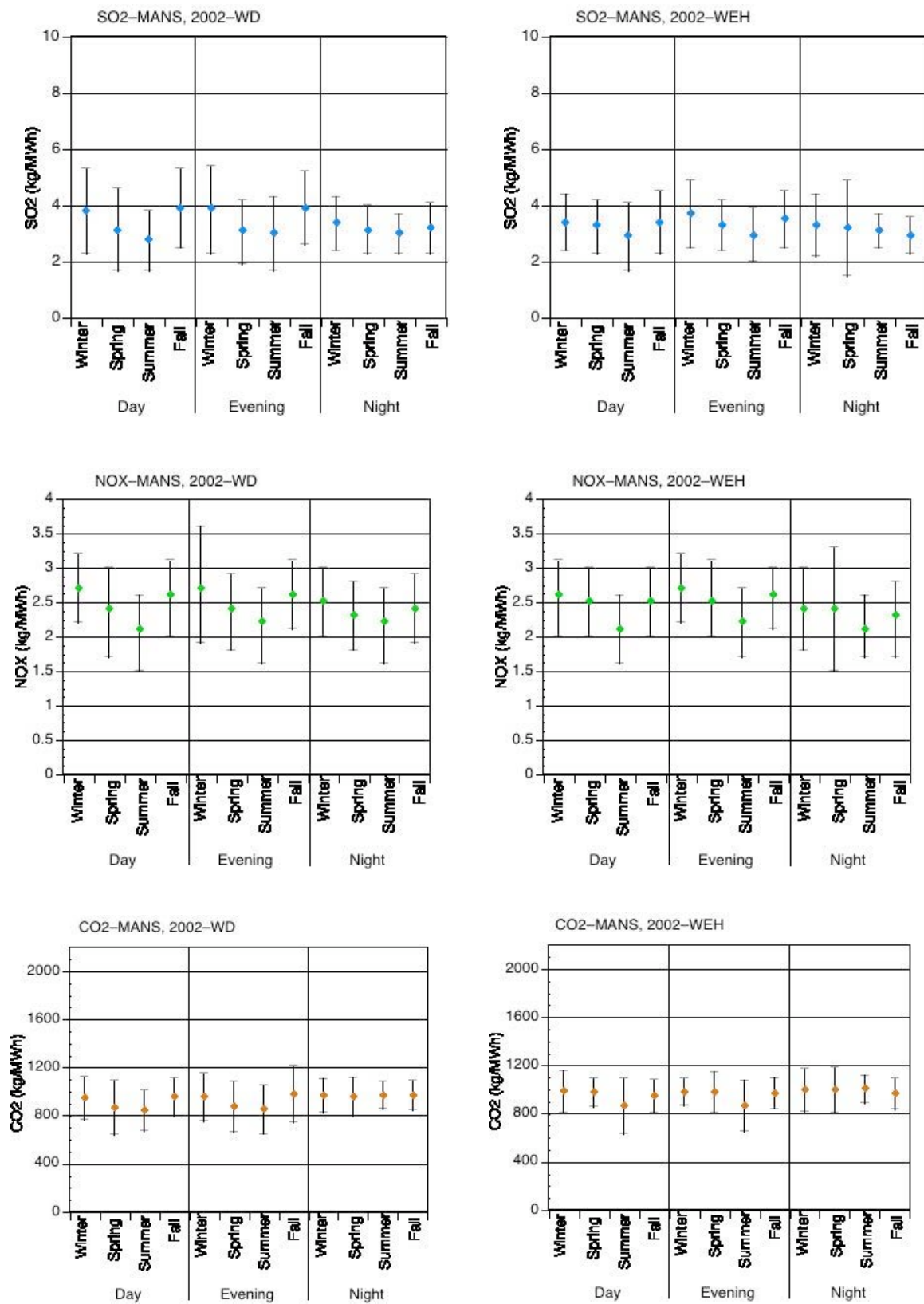


Figure BXI - 12. Emission Rate Statistics MANS in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MANS	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	3.8	1.5	31.3	1.2	3.4	1.0	7.0	1.5
	Spring	3.1	1.4	28.6	0.5	3.3	1.0	11.0	0.9
	Summer	2.8	1.0	7.5	0.6	2.9	1.2	10.8	0.8
	Fall	3.9	1.4	13.3	0.9	3.4	1.1	9.4	0.8
Evening	Winter	3.9	1.6	18.1	1.0	3.7	1.2	7.3	2.0
	Spring	3.1	1.1	8.8	0.6	3.3	0.9	6.8	0.9
	Summer	3.0	1.3	13.5	0.4	2.9	0.9	5.8	0.6
	Fall	3.9	1.3	12.9	1.1	3.5	1.0	8.3	1.4
Night	Winter	3.4	1.0	8.0	0.9	3.3	1.1	10.4	1.5
	Spring	3.1	0.8	7.7	1.5	3.2	1.7	22.5	1.4
	Summer	3.0	0.7	6.8	1.7	3.1	0.6	4.6	1.6
	Fall	3.2	0.9	11.4	1.5	2.9	0.6	5.1	1.5

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MANS	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.7	0.5	6.8	1.2	2.6	0.6	7.7	1.2
	Spring	2.4	0.6	11.8	0.9	2.5	0.5	4.8	1.0
	Summer	2.1	0.5	7.1	0.8	2.1	0.5	3.6	0.9
	Fall	2.6	0.6	8.9	1.0	2.5	0.5	4.0	1.1
Evening	Winter	2.7	0.9	13.8	1.3	2.7	0.5	4.1	1.4
	Spring	2.4	0.6	5.3	0.9	2.5	0.6	6.1	1.4
	Summer	2.2	0.6	5.0	0.6	2.2	0.5	4.2	0.9
	Fall	2.6	0.5	7.1	1.3	2.6	0.4	4.3	1.4
Night	Winter	2.5	0.5	4.3	1.1	2.4	0.6	5.1	1.2
	Spring	2.3	0.5	6.2	1.1	2.4	0.9	11.0	1.3
	Summer	2.2	0.6	6.7	1.0	2.1	0.5	3.2	1.1
	Fall	2.4	0.5	6.1	1.2	2.3	0.5	3.8	1.0

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MANS	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	941	180	3460	419	978	176	3330	643
	Spring	862	224	2857	228	967	118	1454	435
	Summer	837	171	1437	231	857	232	3391	273
	Fall	948	157	2461	219	938	138	1352	306
Evening	Winter	949	201	2491	365	974	112	1256	600
	Spring	865	211	1813	267	975	170	1917	412
	Summer	844	201	1398	255	859	211	1961	421
	Fall	975	237	3993	382	964	128	1219	310
Night	Winter	964	139	1585	245	990	178	2155	532
	Spring	950	163	2611	419	988	188	2666	476
	Summer	962	114	1829	584	998	114	1518	588
	Fall	962	125	1936	496	958	124	1574	489

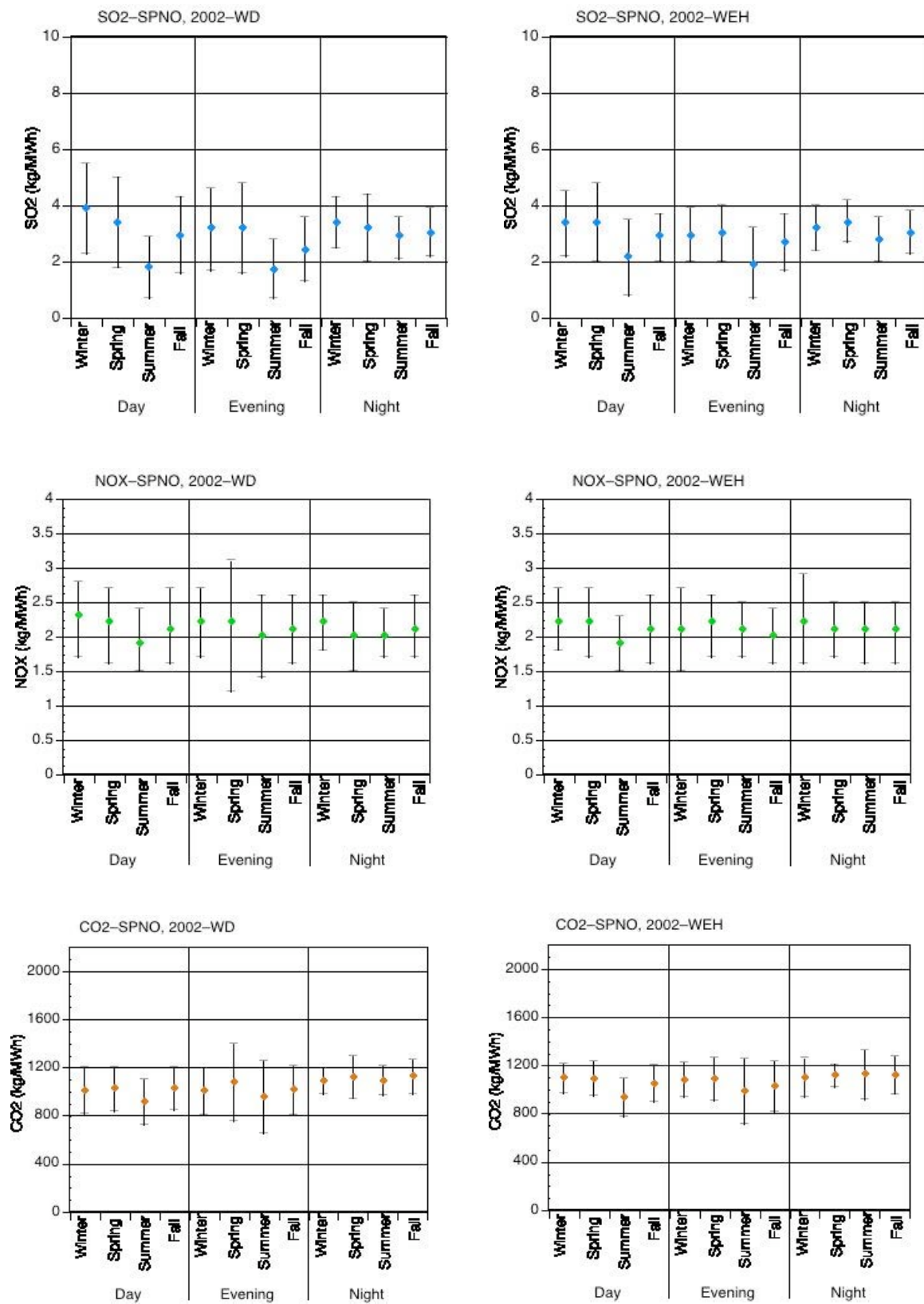


Figure BXI - 13. Emission Rate Statistics SPNO in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SPNO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	3.9	1.6	12.3	0.5	3.4	1.2	16.7	0.9
	Spring	3.4	1.6	10.6	0.3	3.4	1.4	17.4	0.6
	Summer	1.8	1.1	9.1	0.1	2.2	1.3	8.4	0.1
	Fall	2.9	1.3	9.3	0.2	2.9	0.9	6.0	0.4
Evening	Winter	3.2	1.4	12.5	0.7	2.9	0.9	6.7	0.9
	Spring	3.2	1.6	15.1	0.6	3.0	1.0	5.4	0.7
	Summer	1.7	1.0	5.6	0.2	1.9	1.2	6.2	0.1
	Fall	2.4	1.1	6.2	0.2	2.7	1.0	4.9	0.4
Night	Winter	3.4	0.9	9.5	0.9	3.2	0.8	5.0	1.0
	Spring	3.2	1.2	14.2	0.5	3.4	0.7	6.4	1.3
	Summer	2.9	0.8	5.8	0.7	2.8	0.8	6.4	0.8
	Fall	3.0	0.9	7.8	0.5	3.0	0.8	5.4	1.0

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SPNO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.3	0.5	7.5	0.5	2.2	0.4	5.4	1.1
	Spring	2.2	0.6	6.4	0.5	2.2	0.5	6.1	0.9
	Summer	1.9	0.5	5.3	0.7	1.9	0.4	3.5	0.9
	Fall	2.1	0.5	5.1	0.6	2.1	0.5	6.9	0.8
Evening	Winter	2.2	0.5	4.9	0.8	2.1	0.6	6.2	0.5
	Spring	2.2	1.0	11.8	0.7	2.2	0.5	4.1	1.0
	Summer	2.0	0.6	6.9	0.5	2.1	0.4	3.6	1.1
	Fall	2.1	0.5	5.4	0.5	2.0	0.4	3.0	0.4
Night	Winter	2.2	0.4	4.8	0.9	2.2	0.7	8.0	1.0
	Spring	2.0	0.5	7.3	0.5	2.1	0.4	3.6	1.2
	Summer	2.0	0.4	3.1	1.0	2.1	0.5	5.3	0.9
	Fall	2.1	0.5	5.8	0.9	2.1	0.4	4.7	1.0

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
SPNO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1004	193	3758	288	1090	121	2436	698
	Spring	1016	182	3133	469	1085	144	2226	430
	Summer	909	192	2878	407	930	161	1477	471
	Fall	1019	181	2130	363	1043	151	1719	507
Evening	Winter	996	191	2402	393	1076	143	1473	297
	Spring	1073	320	4205	398	1084	180	2328	737
	Summer	948	300	2864	323	980	274	2613	531
	Fall	1009	202	1510	267	1020	211	1644	345
Night	Winter	1086	107	1676	645	1093	162	2207	343
	Spring	1117	178	2887	512	1109	96	1465	716
	Summer	1085	124	2001	495	1121	204	2955	617
	Fall	1121	142	2196	693	1117	158	2153	461

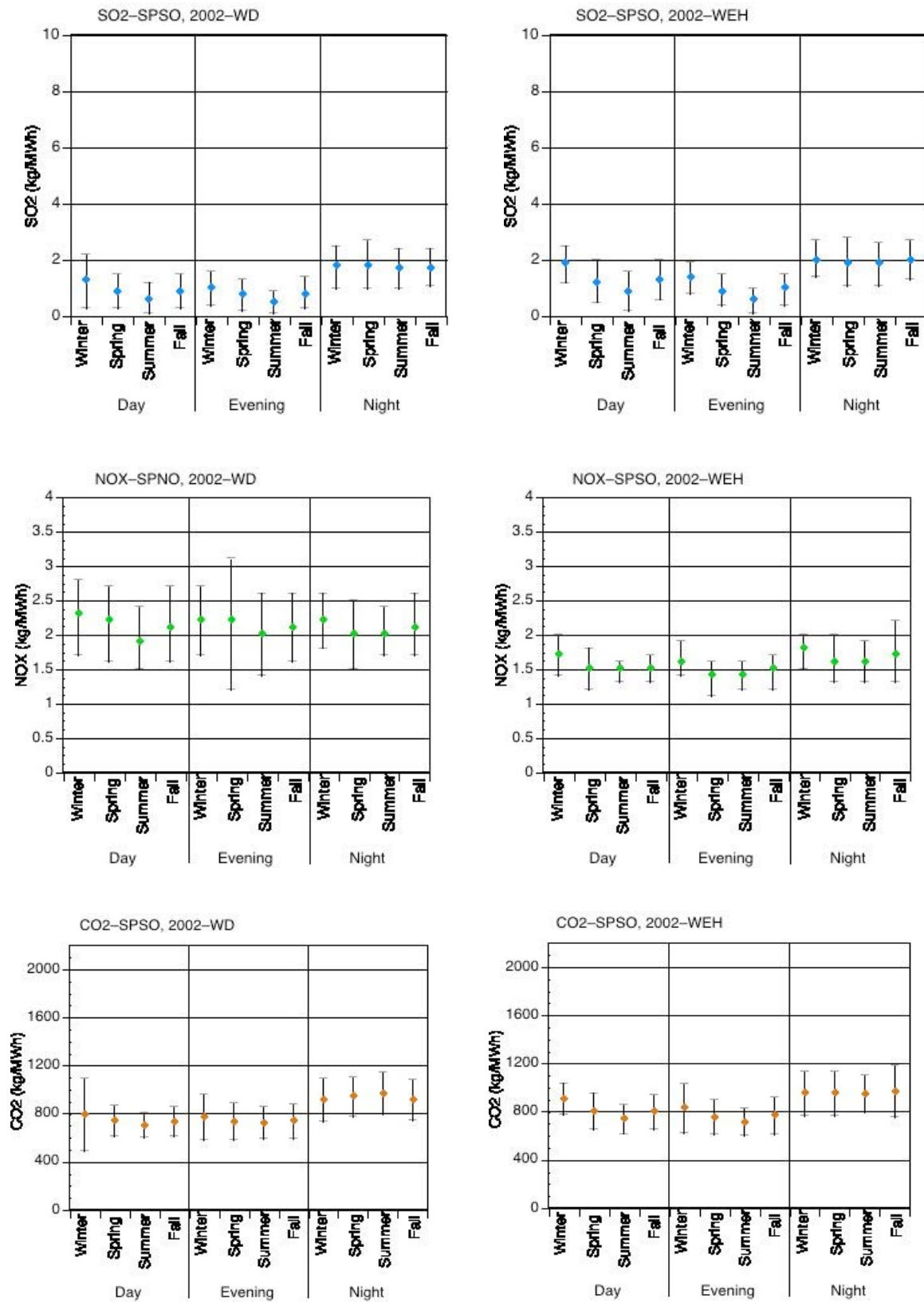


Figure BXI - 14. Emission Rate Statistics SPSO in 2002

		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SPSO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.3	0.9	18.8	0.1	1.9	0.6	3.8	0.2
	Spring	0.9	0.6	3.5	0.1	1.2	0.7	3.8	0.1
	Summer	0.6	0.5	2.6	0.1	0.9	0.7	3.0	0.1
	Fall	0.9	0.6	3.7	0.1	1.3	0.7	3.0	0.1
Evening	Winter	1.0	0.6	3.2	0.1	1.4	0.6	2.7	0.3
	Spring	0.8	0.6	5.0	0.1	0.9	0.6	2.7	0.0
	Summer	0.5	0.4	2.5	0.1	0.6	0.4	2.1	0.1
	Fall	0.8	0.6	2.9	0.1	1.0	0.6	2.5	0.1
Night	Winter	1.8	0.7	4.5	0.2	2.0	0.7	3.5	0.5
	Spring	1.8	0.8	5.4	0.1	1.9	0.8	3.7	0.3
	Summer	1.7	0.7	3.8	0.1	1.9	0.7	4.5	0.3
	Fall	1.7	0.7	4.3	0.3	2.0	0.7	4.8	0.5

		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SPSO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.5	0.6	17.3	0.6	1.7	0.3	3.6	1.0
	Spring	1.4	0.3	3.9	0.4	1.5	0.3	4.0	0.7
	Summer	1.4	0.2	2.3	0.7	1.5	0.2	1.9	1.0
	Fall	1.5	0.3	2.6	0.6	1.5	0.2	2.3	0.8
Evening	Winter	1.4	0.3	2.3	0.7	1.6	0.2	2.4	0.9
	Spring	1.3	0.3	3.9	0.7	1.4	0.3	2.0	0.8
	Summer	1.4	0.3	3.2	0.8	1.4	0.2	2.0	1.0
	Fall	1.5	0.2	2.1	0.8	1.5	0.2	2.1	0.8
Night	Winter	1.6	0.3	3.8	0.7	1.8	0.2	2.6	1.1
	Spring	1.6	0.4	6.5	0.7	1.6	0.3	3.4	0.8
	Summer	1.5	0.3	3.5	0.7	1.6	0.3	2.7	1.0
	Fall	1.6	0.3	4.0	0.9	1.7	0.4	5.1	0.8

		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
SPSO	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	786	302	8223	357	901	131	1573	481
	Spring	733	127	1934	365	796	152	2085	488
	Summer	697	99	1122	420	733	122	1099	527
	Fall	727	123	1258	345	790	140	1367	443
Evening	Winter	763	188	1985	280	822	203	2450	468
	Spring	728	153	1587	432	748	145	1148	460
	Summer	716	132	1409	440	707	113	1070	405
	Fall	733	143	1347	420	763	152	1574	401
Night	Winter	911	178	2515	340	944	181	2075	458
	Spring	935	166	1837	468	945	180	2141	473
	Summer	963	171	1554	526	944	154	1483	555
	Fall	912	167	2328	472	963	215	2328	386

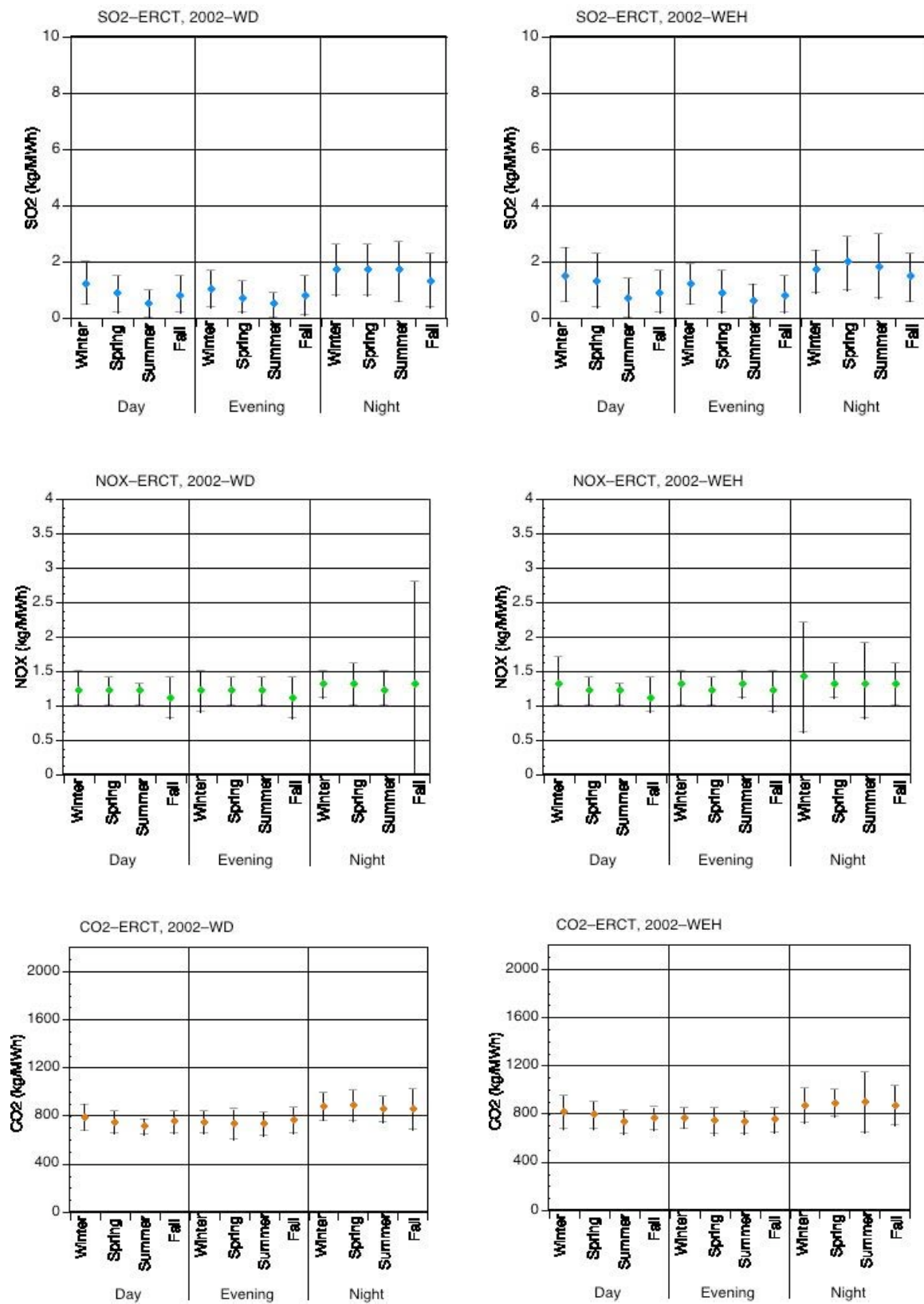


Figure BXI - 15. Emission Rate Statistics ERCT in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ERCT	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.2	0.8	4.5	0.1	1.5	1.0	7.3	0.1
	Spring	0.9	0.6	3.6	0.0	1.3	0.9	4.4	0.0
	Summer	0.5	0.5	2.7	0.0	0.7	0.7	3.3	0.0
	Fall	0.8	0.7	4.2	0.0	0.9	0.8	3.9	0.1
Evening	Winter	1.0	0.7	4.5	0.1	1.2	0.7	3.8	0.2
	Spring	0.7	0.6	2.9	0.1	0.9	0.8	2.8	0.1
	Summer	0.5	0.5	2.9	0.0	0.6	0.6	2.7	0.1
	Fall	0.8	0.7	4.5	0.1	0.8	0.7	2.8	0.1
Night	Winter	1.7	0.9	5.8	0.1	1.7	0.7	4.0	0.3
	Spring	1.7	0.9	5.6	0.1	2.0	0.9	4.2	0.2
	Summer	1.7	1.1	5.1	0.1	1.8	1.2	11.2	0.1
	Fall	1.3	1.0	5.9	0.1	1.5	0.9	4.0	0.1

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ERCT	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.2	0.3	3.1	0.5	1.3	0.3	5.1	0.6
	Spring	1.2	0.2	3.3	0.7	1.2	0.2	2.8	0.7
	Summer	1.2	0.2	1.9	0.7	1.2	0.2	1.8	0.6
	Fall	1.1	0.3	5.3	0.4	1.1	0.2	1.9	0.5
Evening	Winter	1.2	0.3	3.1	0.6	1.3	0.2	1.9	0.4
	Spring	1.2	0.2	2.0	0.6	1.2	0.2	1.6	0.6
	Summer	1.2	0.2	1.9	0.7	1.3	0.2	2.2	0.7
	Fall	1.1	0.3	2.3	0.4	1.2	0.3	2.6	0.6
Night	Winter	1.3	0.2	1.9	0.6	1.4	0.8	10.7	0.6
	Spring	1.3	0.3	2.8	0.6	1.3	0.2	2.0	0.7
	Summer	1.2	0.2	2.2	0.5	1.3	0.6	7.9	0.8
	Fall	1.3	1.5	26.1	0.5	1.3	0.3	2.4	0.6

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ERCT	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	780	108	1696	500	806	135	2382	591
	Spring	741	89	1569	486	782	111	1212	534
	Summer	701	64	1103	533	725	95	1072	533
	Fall	742	90	1801	377	754	93	1088	507
Evening	Winter	741	93	1135	527	758	85	1000	549
	Spring	720	127	2136	527	733	110	1037	518
	Summer	726	95	1072	422	719	90	1262	572
	Fall	754	105	1333	559	741	100	1036	429
Night	Winter	872	116	1183	477	862	141	1755	477
	Spring	877	127	1659	574	882	114	1144	618
	Summer	850	107	1207	558	886	252	3863	572
	Fall	848	164	2915	530	862	166	2276	629

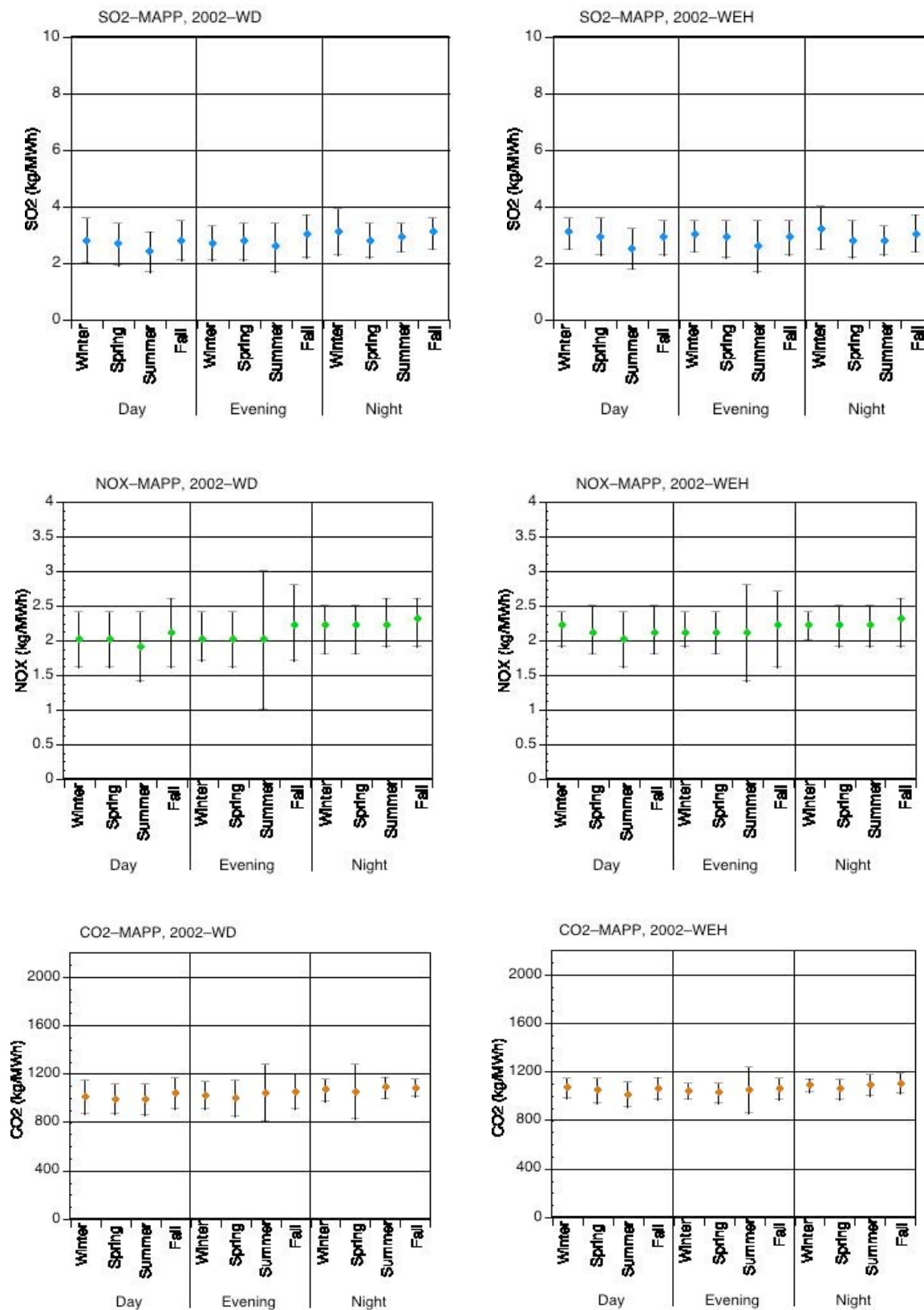


Figure BXI - 16. Emission Rate Statistics MAPP in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MAPP	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.8	0.8	15.9	1.0	3.1	0.6	6.0	1.6
	Spring	2.7	0.8	8.6	0.8	2.9	0.7	6.4	1.4
	Summer	2.4	0.7	7.3	0.5	2.5	0.7	5.4	0.5
	Fall	2.8	0.7	6.3	0.5	2.9	0.6	5.4	1.0
Evening	Winter	2.7	0.6	5.1	0.9	3.0	0.6	5.1	1.7
	Spring	2.8	0.7	5.8	1.0	2.9	0.7	4.8	1.4
	Summer	2.6	0.9	6.8	1.0	2.6	0.9	6.1	0.7
	Fall	3.0	0.8	6.0	0.9	2.9	0.6	4.6	1.3
Night	Winter	3.1	0.8	9.3	1.4	3.2	0.7	7.5	1.9
	Spring	2.8	0.6	6.0	0.8	2.8	0.6	5.5	1.5
	Summer	2.9	0.5	4.5	1.5	2.8	0.5	4.4	1.8
	Fall	3.1	0.6	6.4	1.5	3.0	0.6	6.1	1.8

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MAPP	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.0	0.4	8.6	0.7	2.2	0.3	4.1	1.6
	Spring	2.0	0.4	4.0	0.9	2.1	0.3	5.1	1.4
	Summer	1.9	0.5	7.1	0.8	2.0	0.4	5.1	0.6
	Fall	2.1	0.5	11.1	0.4	2.1	0.4	3.5	1.0
Evening	Winter	2.0	0.4	5.2	1.2	2.1	0.2	3.0	1.7
	Spring	2.0	0.4	4.9	0.7	2.1	0.3	2.9	1.2
	Summer	2.0	1.0	15.6	0.8	2.1	0.7	6.4	0.6
	Fall	2.2	0.5	6.8	0.5	2.2	0.5	6.8	1.2
Night	Winter	2.2	0.3	4.1	1.1	2.2	0.2	3.2	1.6
	Spring	2.2	0.4	6.5	1.0	2.2	0.3	3.4	1.3
	Summer	2.2	0.4	7.0	1.4	2.2	0.3	4.5	1.5
	Fall	2.3	0.3	4.6	1.2	2.3	0.3	4.6	1.7

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
MAPP	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	998	136	2732	481	1058	81	2024	818
	Spring	985	126	2585	549	1037	102	2286	759
	Summer	978	128	2452	360	1002	102	1561	624
	Fall	1030	131	2959	257	1056	89	1677	698
Evening	Winter	1013	110	1792	456	1035	64	1249	812
	Spring	991	152	1640	363	1018	84	1287	705
	Summer	1034	237	2994	460	1044	189	1642	475
	Fall	1046	139	2186	263	1049	85	1442	674
Night	Winter	1059	93	1574	569	1078	54	1308	774
	Spring	1043	226	4446	737	1048	79	1536	692
	Summer	1077	87	1661	729	1082	83	1585	764
	Fall	1075	71	1471	657	1098	84	1962	883

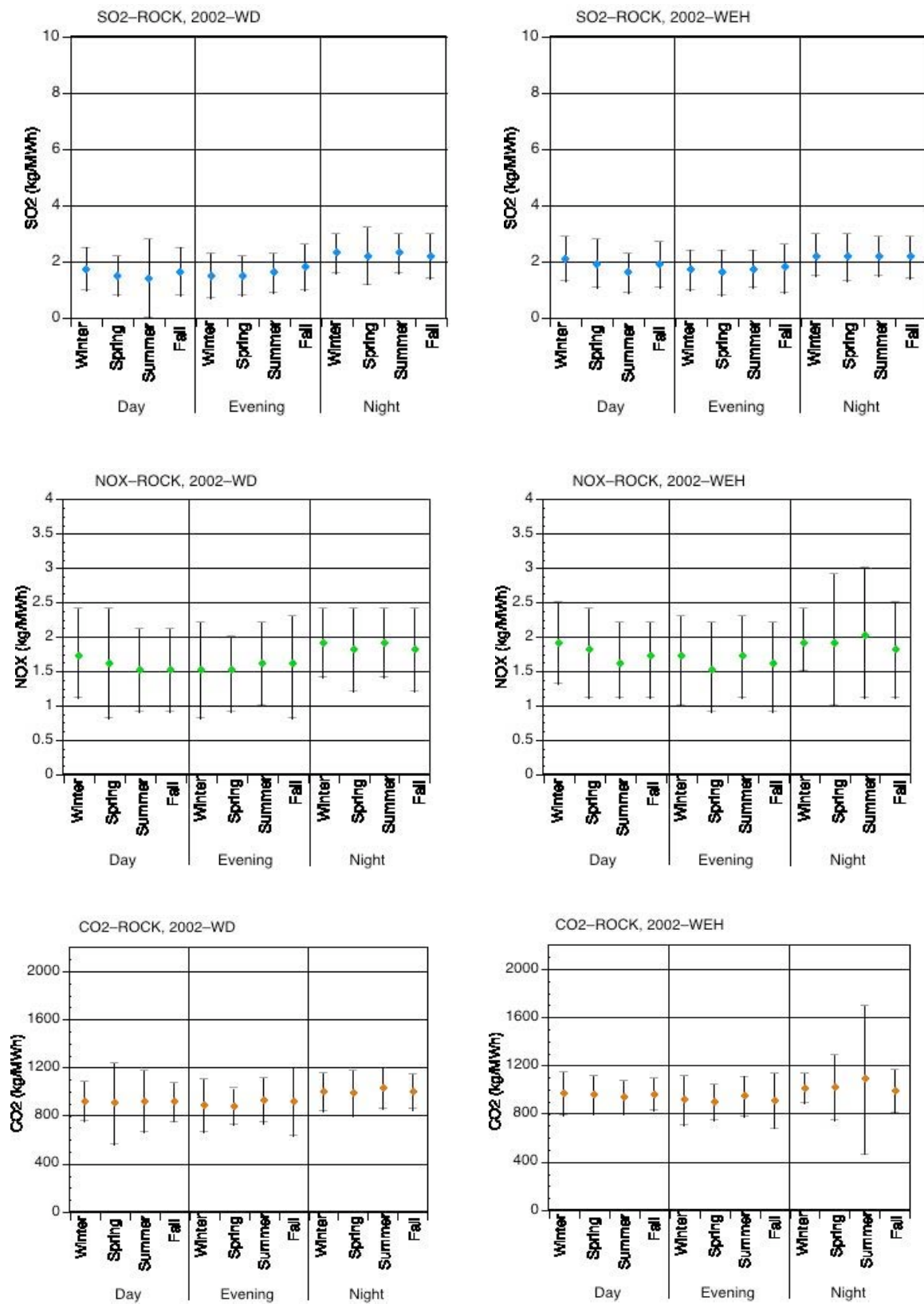


Figure BXI - 17. Emission Rate Statistics ROCK in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ROCK 2002		Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.7	0.8	4.3	0.2	2.1	0.8	4.1	0.4
	Spring	1.5	0.7	4.4	0.2	1.9	0.8	3.8	0.2
	Summer	1.4	1.5	38.6	0.1	1.6	0.7	3.6	0.2
	Fall	1.6	0.8	4.4	0.2	1.9	0.8	4.0	0.1
Evening	Winter	1.5	0.8	5.3	0.2	1.7	0.7	4.0	0.3
	Spring	1.5	0.7	4.0	0.3	1.6	0.8	3.5	0.2
	Summer	1.6	0.7	5.8	0.3	1.7	0.6	3.4	0.2
	Fall	1.8	0.8	7.4	0.3	1.8	0.8	3.8	0.2
Night	Winter	2.3	0.7	4.3	0.6	2.2	0.7	3.9	0.5
	Spring	2.2	1.0	14.4	0.4	2.2	0.9	6.4	0.5
	Summer	2.3	0.7	6.9	0.5	2.2	0.7	3.7	0.6
	Fall	2.2	0.8	5.6	0.4	2.2	0.8	4.1	0.7

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ROCK 2002		Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.7	0.7	4.5	0.4	1.9	0.6	5.7	0.5
	Spring	1.6	0.8	17.5	0.4	1.8	0.6	3.6	0.4
	Summer	1.5	0.6	12.1	0.4	1.6	0.6	3.6	0.6
	Fall	1.5	0.6	3.9	0.2	1.7	0.6	3.3	0.5
Evening	Winter	1.5	0.7	6.1	0.4	1.7	0.7	3.4	0.4
	Spring	1.5	0.5	3.4	0.4	1.5	0.6	3.6	0.5
	Summer	1.6	0.6	4.7	0.4	1.7	0.6	4.2	0.6
	Fall	1.6	0.7	8.6	0.3	1.6	0.7	3.6	0.3
Night	Winter	1.9	0.5	3.2	0.7	1.9	0.5	3.5	0.7
	Spring	1.8	0.6	7.7	0.5	1.9	1.0	11.7	0.5
	Summer	1.9	0.5	4.6	0.3	2.0	1.0	12.7	0.7
	Fall	1.8	0.6	5.7	0.5	1.8	0.7	7.1	0.6

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
ROCK 2002		Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	911	161	2196	165	961	182	3105	501
	Spring	893	334	9584	282	950	158	1655	429
	Summer	913	253	6716	411	926	137	1425	519
	Fall	907	162	2059	127	952	135	1388	498
Evening	Winter	878	218	1983	385	905	205	1859	369
	Spring	872	149	1569	505	890	147	1330	559
	Summer	921	186	1979	380	935	167	1889	538
	Fall	906	280	3659	229	900	228	2229	315
Night	Winter	991	159	2507	428	1005	123	1582	672
	Spring	981	189	2817	366	1010	273	3711	380
	Summer	1020	169	2730	345	1077	617	8876	668
	Fall	992	146	2291	518	981	181	2315	326

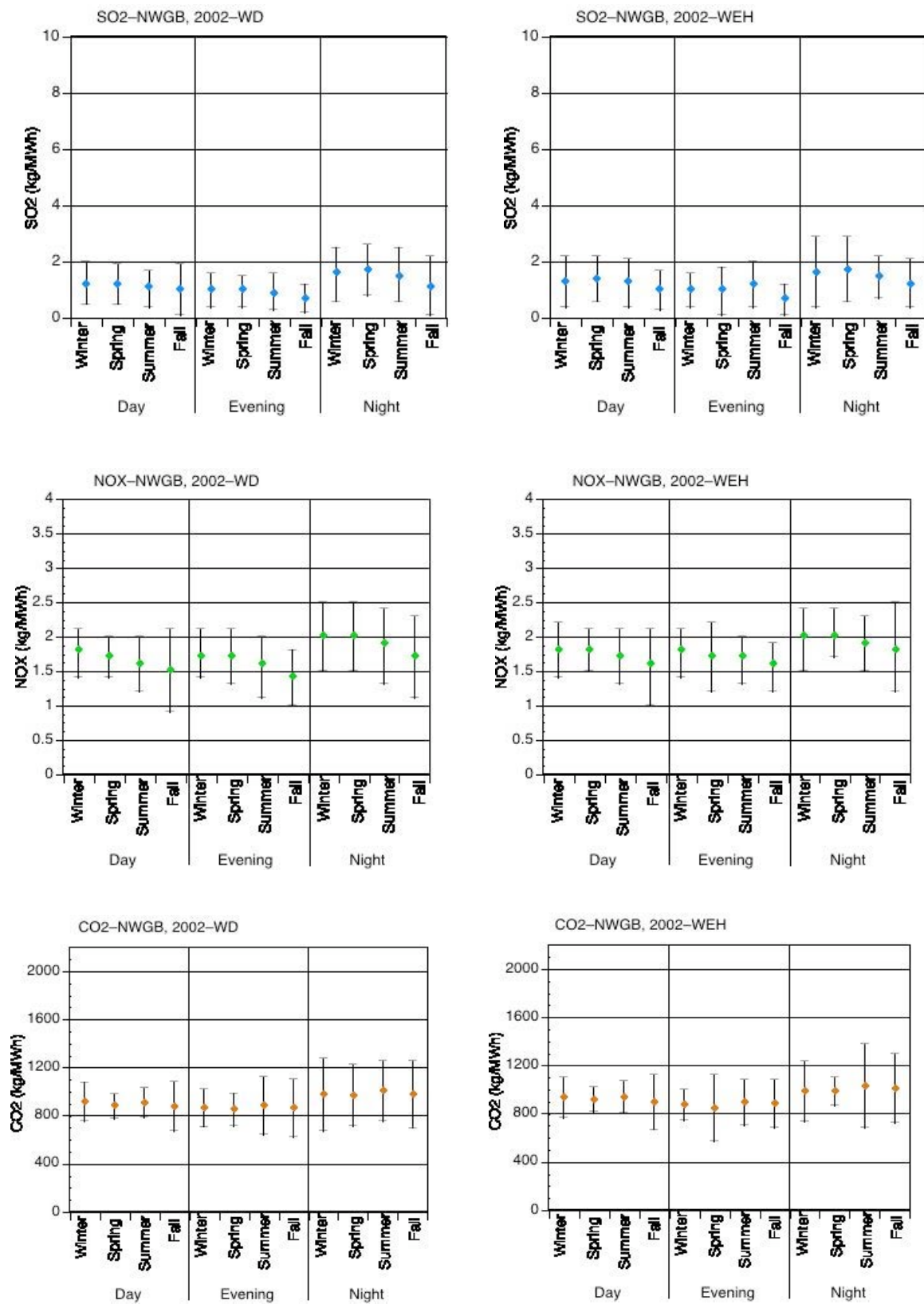


Figure BXI - 18. Emission Rate Statistics NWGB in 2002

		SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
NWGB	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.2	0.8	8.3	0.1	1.3	0.9	8.3	0.1
	Spring	1.2	0.7	6.1	0.2	1.4	0.8	4.2	0.2
	Summer	1.1	0.6	4.5	0.1	1.3	0.8	10.0	0.2
	Fall	1.0	0.9	9.5	0.1	1.0	0.7	5.0	0.1
Evening	Winter	1.0	0.6	3.4	0.1	1.0	0.6	2.8	0.2
	Spring	1.0	0.6	3.9	0.2	1.0	0.9	5.3	0.2
	Summer	0.9	0.7	3.7	0.2	1.2	0.8	4.2	0.1
	Fall	0.7	0.5	3.2	0.1	0.7	0.5	3.4	0.1
Night	Winter	1.6	0.9	6.6	0.2	1.6	1.2	12.0	0.2
	Spring	1.7	0.9	4.5	0.2	1.7	1.1	7.3	0.3
	Summer	1.5	1.0	10.1	0.1	1.5	0.7	5.0	0.2
	Fall	1.1	1.0	14.3	0.1	1.2	0.9	4.7	0.1

		NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)							
NWGB	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.8	0.4	3.9	0.5	1.8	0.4	3.0	0.5
	Spring	1.7	0.3	3.3	0.6	1.8	0.3	2.5	1.1
	Summer	1.6	0.4	3.7	0.5	1.7	0.4	3.2	0.5
	Fall	1.5	0.6	11.7	0.3	1.6	0.5	8.0	0.4
Evening	Winter	1.7	0.4	4.0	0.3	1.8	0.3	2.8	0.5
	Spring	1.7	0.4	5.2	0.9	1.7	0.5	5.8	0.8
	Summer	1.6	0.5	6.2	0.4	1.7	0.4	3.0	0.6
	Fall	1.4	0.4	2.9	0.4	1.6	0.4	2.4	0.5
Night	Winter	2.0	0.5	5.9	0.5	2.0	0.4	5.3	0.9
	Spring	2.0	0.5	9.1	0.5	2.0	0.3	3.7	0.8
	Summer	1.9	0.5	6.1	0.4	1.9	0.4	4.3	0.8
	Fall	1.7	0.6	7.2	0.5	1.8	0.7	7.5	0.5

		CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)							
NWGB	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	913	158	2762	374	929	166	1925	425
	Spring	875	103	1442	304	913	99	1256	686
	Summer	902	121	1733	394	931	133	1651	314
	Fall	872	201	4052	383	891	228	3999	207
Evening	Winter	862	158	2277	154	866	129	1535	443
	Spring	847	134	2363	600	841	276	3379	566
	Summer	876	240	3101	214	888	190	1902	318
	Fall	856	243	2423	192	878	198	1805	349
Night	Winter	968	304	4590	269	979	249	3491	594
	Spring	962	256	5293	238	983	118	1512	434
	Summer	998	251	2883	167	1024	345	4793	434
	Fall	971	276	3494	407	1003	285	3535	355

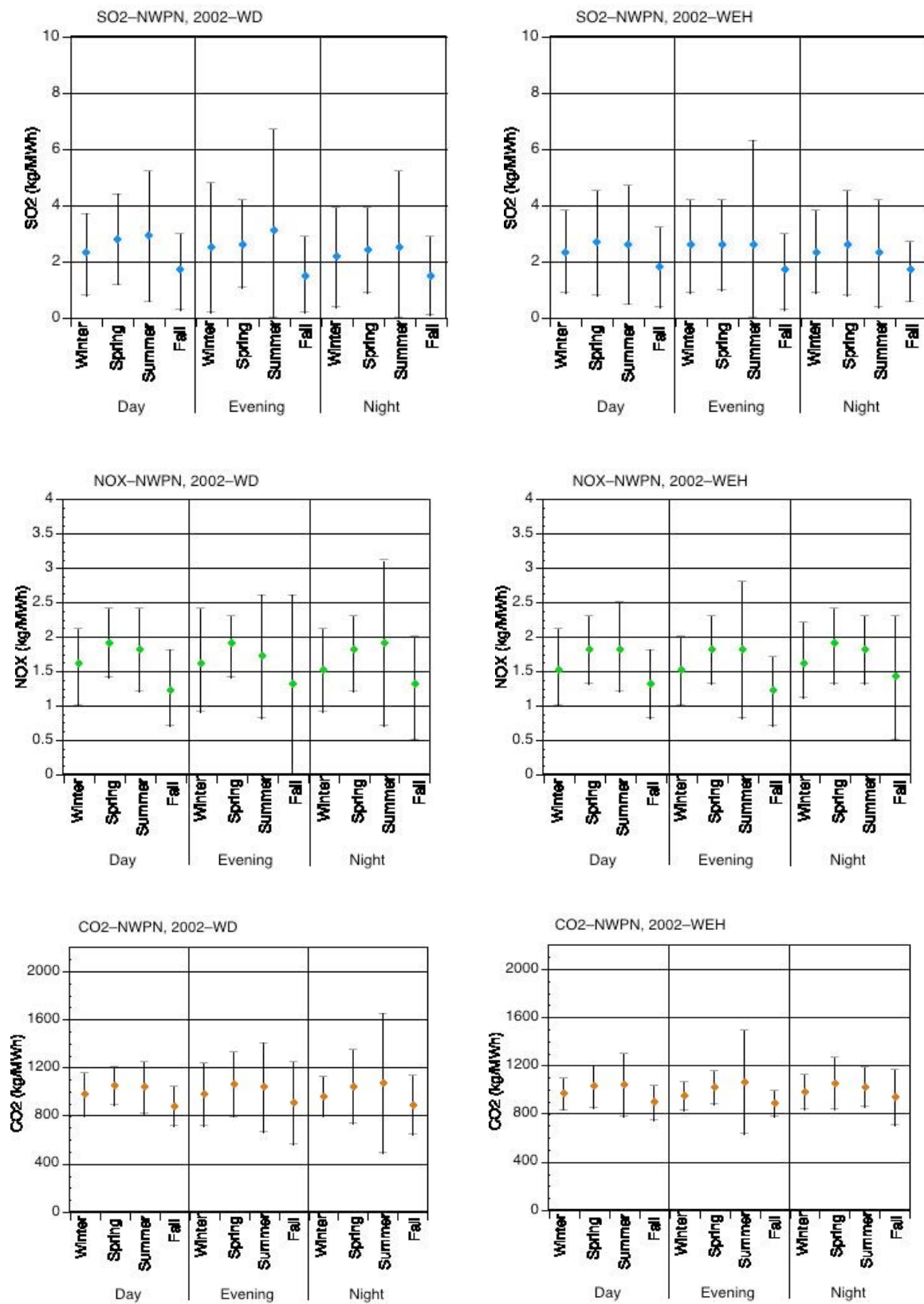


Figure BXI - 19. Emission Rate Statistics NWPB in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
NWPN	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	2.3	1.5	9.0	0.2	2.3	1.4	7.6	0.3
	Spring	2.8	1.6	8.1	0.1	2.7	1.9	18.3	0.0
	Summer	2.9	2.3	17.6	0.0	2.6	2.1	18.2	0.0
	Fall	1.7	1.3	16.5	0.1	1.8	1.4	7.8	0.1
Evening	Winter	2.5	2.3	31.6	0.2	2.6	1.7	8.3	0.2
	Spring	2.6	1.5	9.5	0.2	2.6	1.6	6.9	0.2
	Summer	3.1	3.6	46.9	0.1	2.6	3.6	35.6	0.1
	Fall	1.5	1.4	7.7	0.1	1.7	1.3	6.2	0.2
Night	Winter	2.2	1.8	15.1	0.2	2.3	1.4	8.0	0.1
	Spring	2.4	1.5	11.2	0.0	2.6	1.9	12.3	0.2
	Summer	2.5	2.7	42.5	0.2	2.3	1.9	9.0	0.1
	Fall	1.5	1.4	21.1	0.0	1.7	1.1	5.5	0.1

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
NWPN	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.6	0.5	6.1	0.2	1.5	0.5	4.6	0.3
	Spring	1.9	0.5	6.9	0.2	1.8	0.5	5.4	0.0
	Summer	1.8	0.6	6.3	0.1	1.8	0.6	7.5	0.0
	Fall	1.2	0.5	4.5	0.2	1.3	0.5	2.5	0.2
Evening	Winter	1.6	0.7	8.7	0.1	1.5	0.5	2.2	0.3
	Spring	1.9	0.4	3.5	0.2	1.8	0.5	3.1	0.4
	Summer	1.7	0.9	11.4	0.2	1.8	1.0	9.8	0.3
	Fall	1.3	1.3	15.7	0.1	1.2	0.5	2.2	0.2
Night	Winter	1.5	0.6	3.6	0.2	1.6	0.5	2.6	0.1
	Spring	1.8	0.5	5.2	0.0	1.9	0.6	4.1	0.3
	Summer	1.9	1.2	19.0	0.2	1.8	0.5	4.0	0.0
	Fall	1.3	0.8	11.4	0.1	1.4	0.9	10.1	0.2

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
NWPN	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	969	176	2607	498	955	128	1764	670
	Spring	1041	160	3604	217	1015	175	2760	0
	Summer	1028	213	2933	220	1030	261	3950	0
	Fall	870	162	2364	142	884	144	2204	227
Evening	Winter	970	262	4480	90	939	120	1137	567
	Spring	1053	269	4883	307	1015	138	1439	250
	Summer	1029	369	5890	446	1052	429	5057	683
	Fall	894	342	4708	124	878	105	1185	660
Night	Winter	953	161	1844	494	974	143	1374	46
	Spring	1035	305	5956	0	1043	215	2137	228
	Summer	1064	579	9978	279	1014	164	2085	14
	Fall	882	243	3529	117	927	231	3304	234

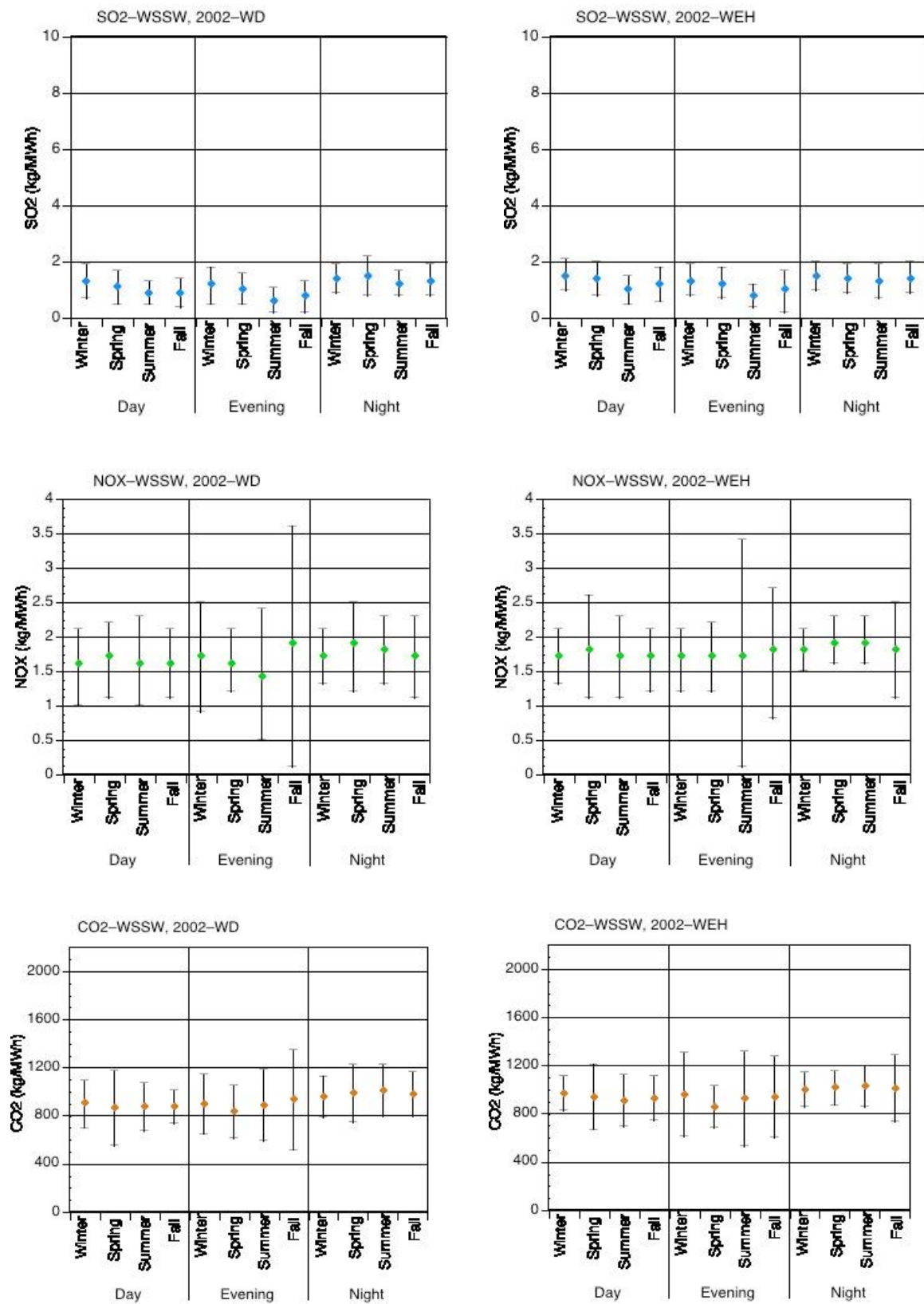


Figure BXI - 20. Emission Rate Statistics WSSW in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
WSSW	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.3	0.6	3.0	0.1	1.5	0.5	3.9	0.3
	Spring	1.1	0.6	3.2	0.1	1.4	0.6	3.4	0.2
	Summer	0.9	0.4	3.6	0.1	1.0	0.5	3.6	0.1
	Fall	0.9	0.5	4.3	0.1	1.2	0.6	5.7	0.1
Evening	Winter	1.2	0.6	4.7	0.2	1.3	0.5	2.8	0.3
	Spring	1.0	0.6	2.9	0.2	1.2	0.6	2.4	0.1
	Summer	0.6	0.4	3.5	0.1	0.8	0.4	2.0	0.1
	Fall	0.8	0.5	5.5	0.1	1.0	0.7	5.5	0.2
Night	Winter	1.4	0.5	4.1	0.2	1.5	0.5	2.9	0.3
	Spring	1.5	0.7	8.6	0.1	1.4	0.5	2.6	0.3
	Summer	1.2	0.5	2.6	0.2	1.3	0.6	5.3	0.3
	Fall	1.3	0.6	6.1	0.3	1.4	0.5	2.9	0.2

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
WSSW	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	1.6	0.5	7.8	0.3	1.7	0.4	4.5	0.7
	Spring	1.7	0.6	14.0	0.5	1.8	0.7	13.5	0.7
	Summer	1.6	0.6	11.1	0.7	1.7	0.6	9.2	0.5
	Fall	1.6	0.5	5.9	0.6	1.7	0.4	5.6	0.7
Evening	Winter	1.7	0.8	9.8	0.6	1.7	0.5	4.3	0.9
	Spring	1.6	0.4	4.5	0.5	1.7	0.5	4.5	0.9
	Summer	1.4	0.9	9.4	0.5	1.7	1.7	13.5	0.6
	Fall	1.9	1.7	13.4	0.5	1.8	0.9	7.3	0.5
Night	Winter	1.7	0.4	4.0	0.4	1.8	0.3	3.2	0.9
	Spring	1.9	0.6	10.8	0.7	1.9	0.3	3.6	0.5
	Summer	1.8	0.5	5.2	0.5	1.9	0.3	3.4	0.7
	Fall	1.7	0.6	8.6	0.5	1.8	0.7	6.2	0.6

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
WSSW	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	893	199	2618	197	962	142	2361	473
	Spring	856	314	8517	259	934	271	5192	348
	Summer	868	200	3335	474	902	212	3335	481
	Fall	869	135	2255	495	922	182	2678	454
Evening	Winter	890	248	2514	396	953	347	3940	518
	Spring	828	219	1830	339	852	177	1670	447
	Summer	882	299	2661	313	919	395	3326	364
	Fall	927	416	3623	303	931	338	3623	483
Night	Winter	953	170	1580	386	993	144	1898	591
	Spring	982	239	4082	391	1007	139	1968	234
	Summer	1004	212	2338	453	1022	170	1878	404
	Fall	975	185	2125	294	1003	278	3511	482

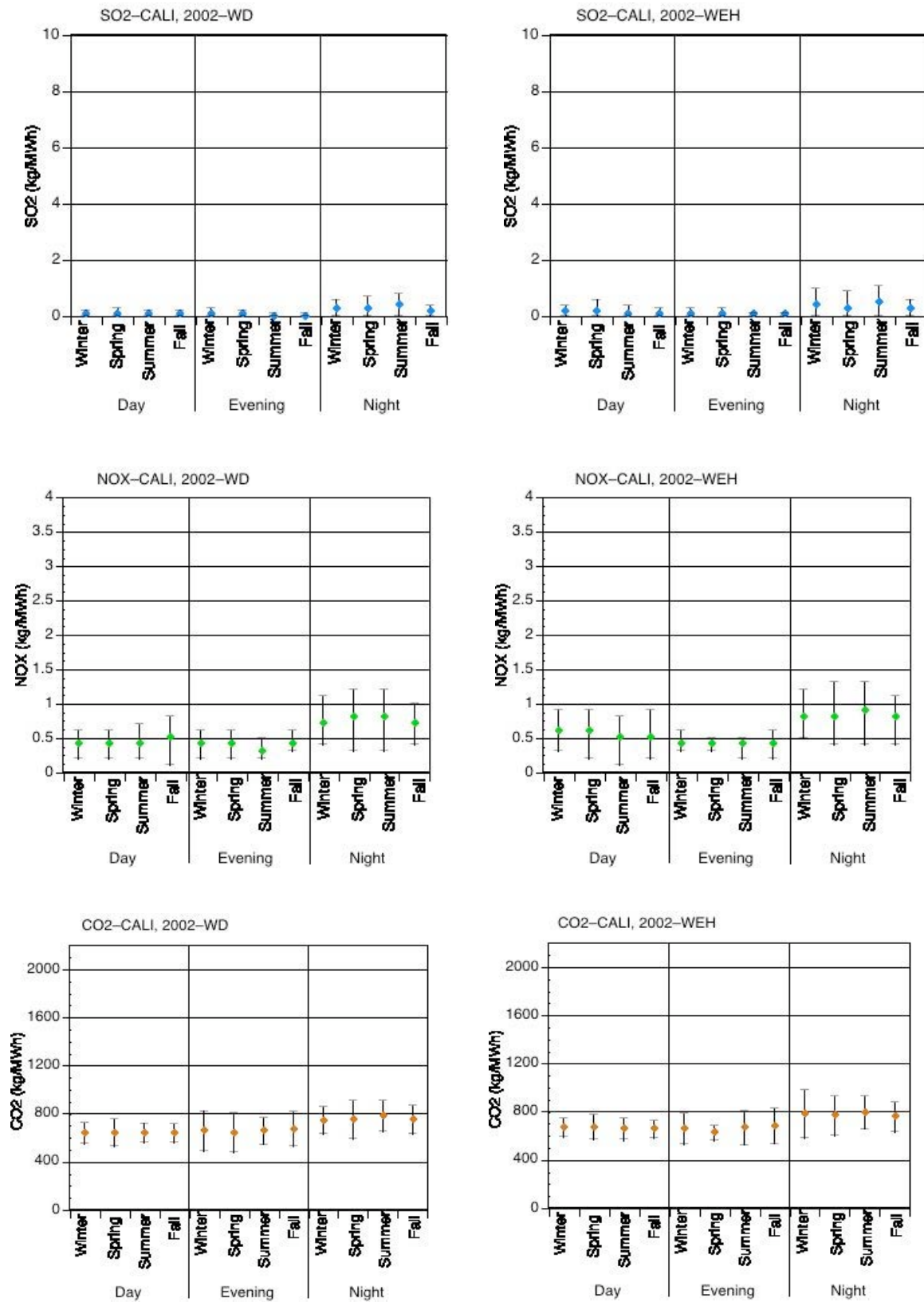


Figure BXI - 21. Emission Rate Statistics CALI in 2002

SO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
CALI	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	0.1	0.2	2.4	0.0	0.2	0.2	1.7	0.0
	Spring	0.1	0.2	2.6	0.0	0.2	0.4	2.6	0.0
	Summer	0.1	0.1	1.4	0.0	0.1	0.2	1.6	0.0
	Fall	0.1	0.1	0.8	0.0	0.1	0.2	1.4	0.0
Evening	Winter	0.1	0.2	3.5	0.0	0.1	0.2	1.7	0.0
	Spring	0.1	0.1	0.9	0.0	0.1	0.2	1.0	0.0
	Summer	0.0	0.1	0.8	0.0	0.1	0.1	0.6	0.0
	Fall	0.0	0.1	0.9	0.0	0.1	0.1	0.3	0.0
Night	Winter	0.3	0.4	3.0	0.0	0.4	0.6	3.7	0.0
	Spring	0.3	0.4	3.0	0.0	0.3	0.5	3.0	0.0
	Summer	0.4	0.4	2.3	0.0	0.5	0.6	2.6	0.0
	Fall	0.2	0.3	1.8	0.0	0.3	0.4	2.5	0.0

NOX Emissions – Load Shape Following Emission Statistics (kg/MWh)									
CALI	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	0.4	0.2	2.5	0.2	0.6	0.3	2.2	0.2
	Spring	0.4	0.2	2.2	0.1	0.6	0.3	2.0	0.2
	Summer	0.4	0.2	3.0	0.1	0.5	0.3	2.9	0.1
	Fall	0.5	0.3	3.2	0.2	0.5	0.4	3.4	0.2
Evening	Winter	0.4	0.2	2.1	0.2	0.4	0.1	1.1	0.2
	Spring	0.4	0.2	2.6	0.2	0.4	0.1	1.1	0.2
	Summer	0.3	0.1	1.2	0.2	0.4	0.1	1.0	0.2
	Fall	0.4	0.2	1.6	0.2	0.4	0.2	2.1	0.3
Night	Winter	0.7	0.3	2.9	0.2	0.8	0.4	1.8	0.2
	Spring	0.8	0.4	4.3	0.2	0.8	0.5	2.0	0.2
	Summer	0.8	0.4	3.4	0.2	0.9	0.4	2.1	0.2
	Fall	0.7	0.3	1.9	0.2	0.8	0.4	2.7	0.2

CO2 Emissions – Load Shape Following Emission Statistics (kg/MWh)									
CALI	2002	Weekdays				Weekends and Holidays			
	Season	Ave	StdDev	Max	Min	Ave	StdDev	Max	Min
Day	Winter	631	87	1456	387	660	76	1108	523
	Spring	638	111	2560	211	666	101	1098	544
	Summer	636	77	1538	468	650	88	1536	327
	Fall	634	78	1655	436	651	72	1107	351
Evening	Winter	650	167	1877	369	653	128	1333	486
	Spring	638	162	2630	348	621	62	829	416
	Summer	651	110	1592	364	662	142	1592	491
	Fall	665	143	1475	370	675	144	1228	482
Night	Winter	741	115	1622	286	775	200	2338	256
	Spring	746	160	2096	573	764	163	1806	532
	Summer	777	128	1353	465	787	134	1259	472
	Fall	746	119	1536	206	753	122	1315	496

Appendix B Section XII – NH₃, VOC, PM₁₀, PM_{2.5} and Hg Emission Offsets, and PV Generation and Capacity

This appendix includes estimated emission offsets for NH₃, VOC, PM₁₀, PM_{2.5}, and Hg from PV generation as described in Section 3.3. Subregions without PV generation in a year are left blank. Emissions estimates for MAAC are not available.

Average Monitored PV Capacity (kW)
(averaged over all hours in year)

	1998	1999	2000	2001	2002
CALI	377	769	461	214	100
ECMI	65	66	66	64	34
ECOV		3	6	32	32
ERCT	22	167	172	138	89
FRCC					
MAAC	3	25	130	207	194
MANN	46	56	59	57	52
MANS					
MAPP	8	8	8	6	6
NEWE	12	34	95	114	114
NWGB					
NWPN	19	26	4	3	
NYAS	380	547	280	223	37
ROCK	28	6	4	4	
SPNO					
SPSO		9	9	9	
SRMV					
SRSO		18	18	18	18
SRTV					
SRVC	4				
WSSW	169	312	229	45	6

Net PV Generation (MWh)

	1998	1999	2000	2001	2002
CALI	449	1032	567	247	124
ECMI	78	71	70	60	29
ECOV		1.1	1.5	30	30
ERCT	21	220	217	165	117
FRCC					
MAAC	2.4	17	120	198	144
MANN	53	66	60	55	52
MANS					
MAPP	7.8	8.3	7.2	5.5	5.7
NEWE	13	36	87	102	95
NWGB					
NWPN	5.2	1.7	0.4	1.0	
NYAS	179	229	198	77	34
ROCK	2.8	3.1	3.0	3.3	
SPNO					
SPSO		4.6	13	2.4	
SRMV					
SRSO		15	11	18	17
SRTV					
SRVC	2.7				
WSSW	323	601	434	72	2.7

VOC Annual Offsets (g)

	1998	1999	2000	2001	2002
CALI	2029	5597	2799	1259	528
ECMI	655	453	506	443	201
ECOV		8	11	182	194
ERCT	225	2368	2318	1595	1115
FRCC					
MAAC	35	-	-	-	-
MANN	366	428	373	337	308
MANS					
MAPP	837	59	83	35	35
NEWE	174	503	1084	1135	1288
NWGB					
NWPN	40	12	3	7	
NYAS	2963	3416	2437	1081	542
ROCK	19	20	20	19	
SPNO					
SPSO		33	102	16	
SRMV					
SRSO		116	94	158	150
SRTV					
SRVC	12				
WSSW	2910	6166	4342	654	20

NH3 Annual Offsets (g)

	1998	1999	2000	2001	2002
CALI	1326	3673	2013	844	351
ECMI	177	84	144	117	55
ECOV		0	0	3	3
ERCT	99	1104	1089	707	487
FRCC					
MAAC	5	-	-	-	-
MANN	3	5	4	4	3
MANS					
MAPP	372	1	17	1	1
NEWE	122	311	556	566	593
NWGB					
NWPN	0	0	0	0	
NYAS	1392	1535	930	394	149
ROCK	1	1	1	1	
SPNO					
SPSO		14	46	7	
SRMV					
SRSO		5	4	3	3
SRTV					
SRVC	1				
WSSW	575	1587	1152	184	4

PM10 Annual Offsets (kg)

	1998	1999	2000	2001	2002
CALI	12	35	17	7.8	3.0
ECMI	2.2	1.7	1.6	1.4	0.6
ECOV		0.0	0.1	1.0	1.1
ERCT	0.5	4.9	4.6	3.7	2.6
FRCC					
MAAC	0.2	-	-	-	-
MANN	3.0	1.8	1.8	1.4	1.5
MANS					
MAPP	0.4	0.3	0.2	0.2	0.2
NEWE	0.7	1.5	4.4	5.1	7.6
NWGB					
NWPN	0.4	0.1	0.0	0.1	
NYAS	2.8	3.6	3.2	1.0	0.4
ROCK	0.1	0.1	0.1	0.1	
SPNO					
SPSO		0.2	0.4	0.1	
SRMV					
SRSO		1.3	0.9	1.4	1.3
SRTV					
SRVC	0.2				
WSSW	23	38	26	3.7	0.1

PM2.5 Annual Offsets (kg)

	1998	1999	2000	2001	2002
CALI	11	34	17	7.6	2.9
ECMI	1.8	1.3	1.3	1.1	0.5
ECOV		0.02	0.03	0.5	0.6
ERCT	0.4	4.0	3.8	2.8	1.9
FRCC					
MAAC	0.1	-	-	-	-
MANN	2.8	1.5	1.6	1.1	1.3
MANS					
MAPP	0.2	0.2	0.1	0.1	0.1
NEWE	0.5	1.1	2.8	3.2	4.3
NWGB					
NWPN	0.2	0.05	0.01	0.03	
NYAS	1.8	2.3	1.9	0.7	0.3
ROCK	0.1	0.1	0.1	0.1	
SPNO					
SPSO		0.1	0.3	0.1	
SRMV					
SRSO		0.8	0.6	0.8	0.8
SRTV					
SRVC	0.1				
WSSW	15	27	19	2.6	0.1

Hg Annual Offsets (g)

	1998	1999	2000	2001	2002
CALI	193	517	186	73	35
ECMI	1590	1357	1186	1092	494
ECOV		29	40	707	669
ERCT	195	1382	1173	1265	865
FRCC					
MAAC	54	-	-	-	-
MANN	769	1098	920	850	758
MANS					
MAPP	172	187	154	111	110
NEWE	15	14	21	39	105
NWGB					
NWPN	102	34	7	16	
NYAS	1047	1335	1219	380	194
ROCK	24	26	26	21	
SPNO					
SPSO		34	74	22	
SRMV					
SRSO		321	233	363	328
SRTV					
SRVC	51				
WSSW	5705	9026	5884	797	36