

Liberty Utilities Missouri - Normalized Sales Estimates

	2022			2023									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Residential													
Sales (MWh)	110,088	97,005	153,853	207,935	169,664	137,822	128,243	93,077	124,948	157,993	174,480	175,787	1,730,898
WN Sales (MWh)	111,299	96,035	146,776	212,926	193,078	147,607	127,859	95,590	124,323	154,675	167,501	172,096	1,749,766
Custs	136,589	137,136	137,438	137,705	137,824	138,087	137,997	138,169	138,338	138,581	138,795	138,882	137,962
kWh per Cust	806	707	1,119	1,510	1,231	998	929	674	903	1,140	1,257	1,266	12,541
WN kWh per Cust	815	700	1,068	1,546	1,401	1,069	927	692	899	1,116	1,207	1,239	12,678
Small General													
Sales (MWh)	31,091	26,743	33,608	41,900	35,595	31,629	31,659	26,150	34,007	38,741	41,521	42,620	415,265
WN Sales (MWh)	31,340	26,689	32,835	42,529	37,944	32,673	31,659	26,438	33,768	38,160	40,442	41,896	416,373
Custs	21,872	21,913	21,928	21,915	21,920	21,948	21,978	22,030	22,093	22,075	22,092	22,132	21,991
kWh per Cust	1,421	1,220	1,533	1,912	1,624	1,441	1,440	1,187	1,539	1,755	1,879	1,926	18,878
WN kWh per Cust	1,433	1,218	1,497	1,941	1,731	1,489	1,440	1,200	1,528	1,729	1,831	1,893	18,930
Large General													
Sales (MWh)	94,295	85,815	93,780	104,943	90,104	84,771	89,234	82,256	100,588	107,194	110,180	115,199	1,158,361
WN Sales (MWh)	94,955	85,815	92,843	105,573	92,627	85,958	89,323	82,421	99,783	105,908	108,087	113,702	1,156,994
Custs	2,772	2,774	2,773	2,776	2,774	2,776	2,774	2,775	2,776	2,777	2,774	2,778	2,775
kWh per Cust	34,017	30,935	33,819	37,804	32,482	30,537	32,168	29,642	36,235	38,601	39,719	41,468	417,427
WN kWh per Cust	34,255	30,935	33,481	38,031	33,391	30,965	32,200	29,701	35,945	38,138	38,964	40,929	416,935

Weather Adjusted Sales

Revenue Class	Actual	Weather Normal	Adjustment	Pct
Residential	1,730,898	1,749,766	18,868	1.1%
Sml General Service	415,265	416,373	1,108	0.3%
Lrg General Service	1,158,361	1,156,994	-1,367	-0.1%
Total	3,304,523	3,323,133	18,610	0.6%

Test-Year Sales and Bill Adjustments

Residential

	2022			2023									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Total													
Wthr Sales (MWh)	1,211	(970)	(7,077)	4,990	23,414	9,785	(385)	2,513	(625)	(3,318)	(6,979)	(3,692)	18,868
Total Adjusted Sales (MWh)	1,211	(970)	(7,077)	4,990	23,414	9,785	(385)	2,513	(625)	(3,318)	(6,979)	(3,692)	18,868
NS-RG Residential													
Wthr Sales (MWh)	1,211	(619)	(40)	24	123	47	(2)	14	(3)	(18)	(36)	(18)	683
Total Adjusted Sales (MWh)	1,211	(619)	(40)	24	123	47	(2)	14	(3)	(18)	(36)	(18)	683
TC-RG Time Choice													
Wthr Sales (MWh)	-	(351)	(7,034)	4,965	23,282	9,733	(383)	2,498	(621)	(3,298)	(6,940)	(3,672)	18,179
Total Adjusted Sales (MWh)	-	(351)	(7,034)	4,965	23,282	9,733	(383)	2,498	(621)	(3,298)	(6,940)	(3,672)	18,179
TP-RG Time Choice Plus													
Wthr Sales (MWh)	-	(0)	(3)	2	9	5	(0)	1	(0)	(2)	(4)	(2)	6
Total Adjusted Sales (MWh)	-	(0)	(3)	2	9	5	(0)	1	(0)	(2)	(4)	(2)	6

Small General Service

	2022			2023									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Total (MWh)													
Wthr Sales (MWh)	249	(53)	(773)	629	2,349	1,044	-	288	(238)	(581)	(1,080)	(725)	1,108
Total Adjusted Sales (MWh)	249	(53)	(773)	629	2,349	1,044	-	288	(238)	(581)	(1,080)	(725)	1,108
NS-GS General Service													
Wthr Sales (MWh)	249	(36)	(34)	24	95	41	-	12	(9)	(23)	(41)	(20)	258
Total Adjusted Sales (MWh)	249	(36)	(34)	24	95	41	-	12	(9)	(23)	(41)	(20)	258
TC-RG Time Choice													
Wthr Sales (MWh)	-	(18)	(739)	605	2,255	1,003	-	275	(229)	(558)	(1,038)	(704)	850
Total Adjusted Sales (MWh)	-	(18)	(739)	605	2,255	1,003	-	275	(229)	(558)	(1,038)	(704)	850
TP-RG Time Choice Plus													
Wthr Sales (MWh)	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Adjusted Sales (MWh)	-	-	-	-	-	-	-	-	-	-	-	-	-

Large General Service

	2022			2023									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Total (MWh)													
Wthr Sales (MWh)	660	-	(938)	630	2,523	1,187	89	165	(805)	(1,286)	(2,093)	(1,498)	(1,367)
Total Adjusted Sales (MWh)	660	-	(938)	630	2,523	1,187	89	165	(805)	(1,286)	(2,093)	(1,498)	(1,367)
NS-SP Small Primary													
Wthr Sales (MWh)	63	-	(81)	49	227	106	8	14	(65)	(105)	(169)	(120)	(73)
Total Adjusted Sales (MWh)	63	-	(81)	49	227	106	8	14	(65)	(105)	(169)	(120)	(73)
NS-LG Large General													
Wthr Sales (MWh)	597	-	(756)	113	493	220	16	32	(137)	(229)	(358)	(240)	(246)
Total Adjusted Sales (MWh)	597	-	(756)	113	493	220	16	32	(137)	(229)	(358)	(240)	(246)
TC-SP Time Choice													
Wthr Sales (MWh)	-	-	(10)	6	28	11	1	1	(5)	(8)	(19)	(11)	(6)
Total Adjusted Sales (MWh)	-	-	(10)	6	28	11	1	1	(5)	(8)	(19)	(11)	(6)
TC-LG Time Choice													
Wthr Sales (MWh)	-	-	(91)	461	1,775	850	65	117	(598)	(944)	(1,548)	(1,127)	(1,041)
Total Adjusted Sales (MWh)	-	-	(91)	461	1,775	850	65	117	(598)	(944)	(1,548)	(1,127)	(1,041)

Liberty Utilities Missouri - Weather Normalized Sales Estimates

	2022			2023									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Residential													
Sales (MWh)	110,088	97,005	153,853	207,935	169,664	137,822	128,243	93,077	124,948	157,993	174,480	175,787	1,730,898
Wthr Adjustment Factor	1.011	0.990	0.954	1.024	1.138	1.071	0.997	1.027	0.995	0.979	0.960	0.979	
WN Sales (MWh)	111,299	96,035	146,776	212,926	193,078	147,607	127,859	95,590	124,323	154,675	167,501	172,096	1,749,766
Custs	136,589	137,136	137,438	137,705	137,824	138,087	137,997	138,169	138,338	138,581	138,795	138,882	137,962
kWh per Cust	806	707	1,119	1,510	1,231	998	929	674	903	1,140	1,257	1,266	12,541
WN kWh per Cust	815	700	1,068	1,546	1,401	1,069	927	692	899	1,116	1,207	1,239	12,678
NS-RG Residential													
Sales (MWh)	110,088	61,906	880	1,009	889	668	595	507	607	867	903	836	179,756
Wthr Adjustment Factor	1.011	0.990	0.954	1.024	1.138	1.071	0.997	1.027	0.995	0.979	0.960	0.979	
WN Sales (MWh)	111,299	61,287	840	1,033	1,011	716	593	521	604	849	867	819	180,438
Custs	136,531	1,081	657	625	643	598	594	666	682	557	638	616	11,991
kWh per Cust	806	57,267	1,340	1,614	1,382	1,117	1,001	762	890	1,557	1,415	1,358	70,509
WN kWh per Cust	815	56,695	1,278	1,653	1,573	1,197	998	782	885	1,525	1,359	1,329	70,088
TC-RG Time Choice													
Sales (MWh)	0	35,093	152,917	206,855	168,712	137,088	127,586	92,521	124,276	157,048	173,488	174,863	1,550,447
Wthr Adjustment Factor	1.011	0.990	0.954	1.024	1.138	1.071	0.997	1.027	0.995	0.979	0.960	0.979	
WN Sales (MWh)	0	34,742	145,883	211,820	191,994	146,821	127,203	95,019	123,655	153,750	166,548	171,191	1,568,626
Custs	58	136,042	136,742	137,040	137,129	137,433	137,338	137,429	137,582	137,951	138,084	138,191	125,918
kWh per Cust	0	258	1,118	1,509	1,230	997	929	673	903	1,138	1,256	1,265	11,279
WN kWh per Cust	0	255	1,067	1,546	1,400	1,068	926	691	899	1,115	1,206	1,239	11,412
TP-RG Time Choice Plus													
Sales (MWh)	0	6	56	71	64	66	63	49	64	78	89	88	695
Wthr Adjustment Factor	1.011	0.990	0.954	1.024	1.138	1.071	0.997	1.027	0.995	0.979	0.960	0.979	
WN Sales (MWh)	0	6	54	73	73	70	63	50	64	76	86	86	701
Custs	0	13	39	40	52	56	65	74	74	73	73	75	53
kWh per Cust	0	487	1,439	1,787	1,229	1,170	967	657	872	1,067	1,226	1,177	12,076
WN kWh per Cust	0	482	1,373	1,830	1,398	1,253	964	675	867	1,044	1,177	1,152	12,215

ADJUSTMENTS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Total													
Wthr Sales (MWh)	1,211	-970	-7,077	4,990	23,414	9,785	-385	2,513	-625	-3,318	-6,979	-3,692	18,868
Total Adjusted Sales	1,211	-970	-7,077	4,990	23,414	9,785	-385	2,513	-625	-3,318	-6,979	-3,692	18,868
NS-RG Residential													
Wthr Sales (MWh)	1,211	-619	-40	24	123	47	-2	14	-3	-18	-36	-18	683
Total Adjusted Sales	1,211	-619	-40	24	123	47	-2	14	-3	-18	-36	-18	683
TC-RG Time Choice													
Wthr Sales (MWh)	-	(351)	(7,034)	4,965	23,282	9,733	(383)	2,498	(621)	(3,298)	(6,940)	(3,672)	18,179
Total Adjusted Sales	0	-351	-7,034	4,965	23,282	9,733	-383	2,498	-621	-3,298	-6,940	-3,672	18,179
TP-RG Time Choice Plus													
Wthr Sales (MWh)	0	0	-3	2	9	5	0	1	0	-2	-4	-2	6
Total Adjusted Sales	0	0	-3	2	9	5	0	1	0	-2	-4	-2	6

Liberty Utilities Missouri - Weather Normalized Sales Estimates

	2022			2023									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Small General	21,872												
Sales (MWh)	31,091	26,743	33,608	41,900	35,595	31,629	31,659	26,150	34,007	38,741	41,521	42,620	415,265
Wthr Adjustment Factor	1.008	0.998	0.977	1.015	1.066	1.033	1.000	1.011	0.993	0.985	0.974	0.983	
WN Sales (MWh)	31,340	26,689	32,835	42,529	37,944	32,673	31,659	26,438	33,768	38,160	40,442	41,896	416,373
Custs	21,872	21,913	21,928	21,915	21,920	21,948	21,978	22,030	22,093	22,075	22,092	22,132	21,991
kWh per Cust	1,421	1,220	1,533	1,912	1,624	1,441	1,440	1,187	1,539	1,755	1,879	1,926	18,878
WN kWh per Cust	1,433	1,218	1,497	1,941	1,731	1,489	1,440	1,200	1,528	1,729	1,831	1,893	18,930
NS-GS General Service													
Sales (MWh)	31,091	17,806	1,457	1,592	1,434	1,227	1,178	1,127	1,260	1,518	1,587	1,180	62,458
Wthr Adjustment Factor	1.008	0.998	0.977	1.015	1.066	1.033	1.000	1.011	0.993	0.985	0.974	0.983	
WN Sales (MWh)	31,340	17,770	1,424	1,616	1,529	1,268	1,178	1,139	1,252	1,495	1,545	1,160	62,716
Custs	21,862	1,045	1,022	1,018	1,003	1,001	998	996	987	985	962	943	2,735
kWh per Cust	1,422	17,039	1,426	1,564	1,430	1,226	1,181	1,131	1,277	1,541	1,649	1,251	32,138
WN kWh per Cust	1,434	17,005	1,393	1,587	1,525	1,267	1,181	1,144	1,268	1,518	1,606	1,230	32,157
TC-GS Time Choice													
Sales (MWh)	0	8,937	32,151	40,309	34,161	30,401	30,480	25,023	32,746	37,222	39,934	41,440	352,804
Wthr Adjustment Factor	1.008	0.998	0.977	1.015	1.066	1.033	1.000	1.011	0.993	0.985	0.974	0.983	
WN Sales (MWh)	0	8,919	31,411	40,913	36,415	31,405	30,480	25,299	32,517	36,664	38,896	40,735	353,654
Custs	10	20,868	20,905	20,896	20,915	20,945	20,978	21,032	21,103	21,087	21,127	21,186	19,254
kWh per Cust	0	428	1,538	1,929	1,633	1,451	1,453	1,190	1,552	1,765	1,890	1,956	16,786
WN kWh per Cust	0	427	1,503	1,958	1,741	1,499	1,453	1,203	1,541	1,739	1,841	1,923	16,828
TP-GS Time Choice Plus													
Sales (MWh)	0	0	0	0	0	0	0	0	0	1	1	1	3
Wthr Adjustment Factor	1.008	0.998	0.977	1.015	1.066	1.033	1.000	1.011	0.993	0.985	0.974	0.983	
WN Sales (MWh)	0	0	0	0	0	0	0	0	0	1	1	1	3
Custs	0	0	1	1	2	2	2	2	3	3	3	3	2
kWh per Cust			0	38	13	88	78	72	57	178	251	222	996
WN kWh per Cust			0	39	13	91	78	73	57	176	244	218	988

ADJUSTMENTS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Total													
Wthr Sales (MWh)	249	-53	-773	629	2,349	1,044	0	288	-238	-581	-1,080	-725	1,108
Total Adjusted Sales	249	-53	-773	629	2,349	1,044	0	288	-238	-581	-1,080	-725	1,108
NS-GS General Service													
Wthr Sales (MWh)	249	-36	-34	24	95	41	0	12	-9	-23	-41	-20	258
Total Adjusted Sales	249	-36	-34	24	95	41	0	12	-9	-23	-41	-20	258
TC-GS Time Choice													
Wthr Sales (MWh)	-	(18)	(739)	605	2,255	1,003	-	275	(229)	(558)	(1,038)	(704)	850
Total Adjusted Sales	0	-18	-739	605	2,255	1,003	0	275	-229	-558	-1,038	-704	850
TP-GS Time Choice Plus	* No Test-Year Sales												
Wthr Sales (MWh)													
Total Adjusted Sales													

* Allocated all rate class customer growth to TC-GS

LRG General Service Wthr Normal Sales

	2022			2023										Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Large General														
Sales (MWh)	94,295	85,815	93,780	104,943	90,104	84,771	89,234	82,256	100,588	107,194	110,180	115,199	1,158,361	
Wthr Adjustment Factor	1.007	1.000	0.990	1.006	1.028	1.014	1.001	1.002	0.992	0.988	0.981	0.987		
WN Sales (MWh)	94,955	85,815	92,843	105,573	92,627	85,958	89,323	82,421	99,783	105,908	108,087	113,702	1,156,994	
Custs	2,772	2,774	2,773	2,776	2,774	2,776	2,774	2,775	2,776	2,777	2,774	2,778	2,775	
kWh per Cust	34,017	30,935	33,819	37,804	32,482	30,537	32,168	29,642	36,235	38,601	39,719	41,468	417,427	
WN kWh per Cust	34,255	30,935	33,481	38,031	33,391	30,965	32,200	29,701	35,945	38,138	38,964	40,929	416,935	
NS-SP Small Primary														
Sales (MWh)	8,990	8,109	8,072	8,211	8,090	7,570	7,826	7,161	8,090	8,716	8,913	9,254	99,001	
Wthr Adjustment Factor	1.007	1.000	0.990	1.006	1.028	1.014	1.001	1.002	0.992	0.988	0.981	0.987		
WN Sales (MWh)	9,053	8,109	7,991	8,260	8,316	7,676	7,834	7,176	8,025	8,612	8,743	9,133	98,928	
Custs	57	43	43	43	43	43	42	40	42	40	40	39	43	
kWh per Cust	157,726	188,579	187,720	190,952	188,133	176,036	186,331	179,032	192,611	217,908	222,813	237,275	2,325,116	
WN kWh per Cust	158,830	188,579	185,843	192,097	193,401	178,500	186,518	179,390	191,070	215,293	218,580	234,190	2,322,291	
NS-LG Large General														
Sales (MWh)	85,305	77,200	75,555	18,871	17,617	15,714	16,136	16,181	17,095	19,078	18,816	18,431	395,999	
Wthr Adjustment Factor	1.007	1.000	0.990	1.006	1.028	1.014	1.001	1.002	0.992	0.988	0.981	0.987		
WN Sales (MWh)	85,902	77,200	74,800	18,984	18,110	15,934	16,152	16,213	16,958	18,849	18,459	18,192	395,753	
Custs	2,715	2,717	350	345	346	354	354	345	337	335	318	311	736	
kWh per Cust	31,420	28,414	215,873	54,699	50,915	44,390	45,583	46,901	50,726	56,950	59,170	59,264	744,305	
WN kWh per Cust	31,640	28,414	213,714	55,027	52,341	45,011	45,628	46,995	50,320	56,267	58,046	58,494	741,897	
TC-SP Time Choice														
Sales (MWh)	0	506	1,025	1,078	999	785	700	417	610	707	975	857	8,659	
Wthr Adjustment Factor	1.007	1.000	0.990	1.006	1.028	1.014	1.001	1.002	0.992	0.988	0.981	0.987		
WN Sales (MWh)	0	506	1,015	1,085	1,027	796	701	418	605	698	956	846	8,653	
Custs	0	14	14	14	14	14	14	18	15	17	18	19	14	
kWh per Cust		36,148	73,203	77,010	71,344	56,066	50,016	23,189	40,650	41,581	54,158	45,119	568,486	
WN kWh per Cust		36,148	72,471	77,472	73,342	56,851	50,066	23,236	40,325	41,082	53,129	44,533	568,655	
TC-LG Time Choice														
Sales (MWh)	0	0	9,128	76,783	63,399	60,703	64,571	58,497	74,794	78,693	81,477	86,657	654,702	
Wthr Adjustment Factor	1.007	1.000	0.990	1.006	1.028	1.014	1.001	1.002	0.992	0.988	0.981	0.987		
WN Sales (MWh)	0	0	9,037	77,244	65,174	61,552	64,636	58,614	74,196	77,748	79,929	85,531	653,660	
Custs	0	0	2,366	2,374	2,371	2,365	2,364	2,372	2,382	2,385	2,398	2,409	1,982	
kWh per Cust			3,858	32,343	26,739	25,667	27,314	24,661	31,400	32,995	33,977	35,972	274,927	
WN kWh per Cust			3,819	32,537	27,488	26,026	27,342	24,711	31,148	32,599	33,331	35,505	274,507	

* Sales Adjustments for Customers and Bills mapped to NS Large General Service for the first three months and to TC Large Choice the next 9 months (2023)

Adjustments

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Total													
Wthr Sales (MWh)	660	0	-938	630	2,523	1,187	89	165	-805	-1,286	-2,093	-1,498	-1,367
Total Adjusted Sales	660	0	-938	630	2,523	1,187	89	165	-805	-1,286	-2,093	-1,498	-1,367
NS-SP Small Primary													
Wthr Sales (MWh)	63	0	-81	49	227	106	8	14	-65	-105	-169	-120	-73
Total Adjusted Sales	63	0	-81	49	227	106	8	14	-65	-105	-169	-120	-73
NS-LG Large General													
Wthr Sales (MWh)	597	0	-756	113	493	220	16	32	-137	-229	-358	-240	-246
Total Adjusted Sales	597	0	-756	113	493	220	16	32	-137	-229	-358	-240	-246
TC-SP Time Choice													
Wthr Sales (MWh)	0	0	-10	6	28	11	1	1	-5	-8	-19	-11	-6
Total Adjusted Sales	0	0	-10	6	28	11	1	1	-5	-8	-19	-11	-6
TC-LG Time Choice													
Wthr Sales (MWh)	0	0	-91	461	1,775	850	65	117	-598	-944	-1,548	-1,127	-1,041
Total Adjusted Sales	0	0	-91	461	1,775	850	65	117	-598	-944	-1,548	-1,127	-1,041

Year	Month	HDD40	HDD55	HDD60	HDD65	CDD60	CDD65	CDD75	NHDD40	NHDD55	NHDD60	NHDD65	NCDD60	NCDD65	NCDD75
2022	10	10	71	138	238	75	20	-	2	75	148	251	85	33	1
2022	11	102	356	473	603	30	10	-	46	290	419	562	9	1	-
2022	12	217	589	739	894	-	-	-	178	562	713	867	1	0	-
2023	1	140	499	649	804	-	-	-	255	662	814	969	1	-	-
2023	2	83	360	494	634	-	-	-	172	509	642	781	2	0	-
2023	3	48	317	457	600	13	1	-	51	292	420	562	17	4	-
2023	4	-	60	144	254	62	22	-	5	93	173	282	63	22	0
2023	5	-	4	26	60	239	118	2	0	13	42	98	200	100	5
2023	6	-	-	-	-	443	293	51	-	0	1	7	429	285	55
2023	7	-	-	-	-	608	453	147	-	-	-	0	572	418	130
2023	8	-	-	-	-	576	421	137	-	-	0	1	540	387	113
2023	9	-	-	-	-	338	188	9	-	3	13	39	302	179	28
Total		600	2,256	3,120	4,087	2,384	1,526	346	709	2,499	3,387	4,419	2,223	1,430	332

Calendar-Month TY-Degree Days

Month	HDD 60		CDD 65	
	Actual	Normal	Actual	Normal
October	138	148	20	33
November	473	419	10	1
December	739	713	-	0
January	649	814	-	-
February	494	642	-	0
March	457	420	1	4
April	144	173	22	22
May	26	42	118	100
June	-	1	293	285
July	-	-	453	418
August	-	0	421	387
September	-	13	188	179
Total	3,120	3,387	1,526	1,430

(267)
-7.9%

96
6.7%