

Empire District Electric Company Rate Case No. ER-2004-0570
Adjusted Monthly Average Temperatures at Springfield Regional Airport, Missouri
 Data Sources: Official Documents from NOAA's National Climatic Data Center

Year	Months January	February	March	April	May	June	July	August	September	October	November	December	Annual Average
1971	31.80	34.55	44.35	56.60	63.45	78.75	77.25	77.65	73.15	63.95	47.30	43.55	57.70
1972	33.30	38.50	47.45	59.10	66.30	75.35	78.20	78.00	72.40	58.20	41.75	32.40	56.75
1973	33.55	36.10	51.95	53.90	61.85	73.85	78.25	78.70	72.65	63.70	51.00	35.50	57.58
1974	33.25	39.55	51.15	57.30	67.15	69.40	80.65	76.25	63.00	60.10	45.90	36.55	56.69
1975	36.80	34.50	40.75	55.25	67.45	75.60	78.70	77.95	64.85	60.00	48.80	39.35	56.67
1976	32.40	45.90	49.85	57.20	59.90	70.65	76.95	75.10	69.50	53.25	38.80	33.65	55.26
1977	18.70	37.50	49.05	59.60	69.30	76.10	80.55	79.80	73.35	58.60	48.05	35.80	57.20
1978	19.60	22.45	39.85	56.35	64.00	73.15	81.65	77.50	74.65	57.70	47.55	35.00	54.12
1979	17.05	26.50	44.80	53.25	62.15	70.25	74.75	75.30	68.45	60.75	43.55	41.05	53.15
1980	35.95	31.70	42.20	53.50	63.90	75.15	83.45	82.60	73.00	56.10	45.95	37.55	56.75
1981	33.10	37.85	46.65	62.25	61.60	75.60	79.85	75.05	69.55	57.00	48.95	33.90	56.78
1982	25.65	33.75	49.20	52.50	68.05	69.85	79.85	78.40	68.35	57.80	46.50	41.85	55.98
1983	34.40	39.80	46.15	50.30	61.70	72.00	79.30	83.10	70.75	60.35	48.55	21.25	55.64
1984	28.90	42.15	42.35	53.65	62.45	75.25	77.05	79.15	67.80	60.15	45.15	42.75	56.40
1985	24.55	30.85	50.10	59.10	67.35	72.85	79.85	76.05	69.50	59.95	46.60	28.35	55.43
1986	36.70	37.65	49.55	58.10	65.65	76.10	82.40	74.25	72.45	57.95	42.10	36.65	57.46
1987	32.80	41.50	48.50	56.75	71.05	75.00	78.85	79.55	68.10	53.50	47.35	37.50	57.54
1988	29.75	32.25	45.35	54.85	65.85	74.75	77.05	79.05	69.40	53.45	47.60	37.60	55.58
1989	39.75	27.40	45.50	57.05	62.75	69.85	75.65	75.85	64.25	60.05	47.05	26.00	54.26
1990	41.45	42.00	48.20	54.90	62.10	75.40	77.55	77.55	73.05	56.45	52.70	35.20	58.05
1991	30.35	42.30	48.15	57.40	68.55	74.75	78.20	78.00	67.60	58.95	42.10	40.05	57.20
1992	37.50	43.50	48.20	57.05	63.05	70.25	76.25	70.75	67.15	58.30	43.75	36.30	56.00
1993	33.30	33.55	42.50	52.30	63.45	72.85	79.80	78.90	65.60	53.85	41.50	37.75	54.61
1994	29.95	36.15	48.35	57.30	63.95	76.90	76.85	75.05	67.15	59.30	50.30	40.30	56.80
1995	33.50	38.75	48.10	55.55	62.00	71.85	77.90	81.85	66.15	58.60	42.70	34.10	55.92
1996	30.40	38.30	39.60	53.00	66.95	72.80	75.00	75.75	65.80	57.00	39.45	38.00	54.34
1997	29.05	39.95	47.30	50.55	59.75	70.75	77.75	73.85	68.95	57.70	42.60	35.10	54.44
1998	38.05	39.85	42.45	53.60	69.65	74.55	79.35	77.50	74.90	58.55	49.10	37.00	57.88
1999	35.10	44.05	43.05	56.95	63.05	72.45	79.75	78.05	66.75	58.75	53.40	39.25	57.55
2000	34.75	44.15	49.60	54.20	66.70	69.95	76.10	80.90	70.05	61.30	39.50	23.25	55.87
2001	30.76	37.52	41.35	61.52	65.58	72.88	79.23	77.69	66.93	56.55	50.52	38.81	56.61
2002	35.24	37.86	42.74	58.35	61.90	74.40	78.55	78.08	72.72	55.31	43.57	35.81	56.21
2003	28.73	33.66	45.90	57.60	64.18	69.78	79.21	79.94	66.12	58.50	48.27	37.50	55.78
2004	32.84	36.43	49.15										
Maximum	41.45	45.90	51.95	62.25	71.05	78.75	83.45	83.10	74.90	63.95	53.40	43.55	83.45
Minimum	17.05	22.45	39.60	50.30	59.75	69.40	74.75	70.75	63.00	53.25	38.80	21.25	17.05

Empire District Electric Company Rate Case No. ER-2004-0570
Recorded Observations of Monthly Average Temperatures at Springfield Regional Airport, Missouri
 Data Sources: Official Documents from NOAA's National Climatic Data Center

Year	Months January	February	March	April	May	June	July	August	September	October	November	December	Annual Average
1971	31.40	34.30	43.98	55.90	62.44	77.60	75.98	76.23	71.57	62.42	46.10	42.74	56.72
1972	32.85	38.26	47.10	58.40	65.29	74.23	76.94	76.53	70.80	56.68	40.55	31.65	55.77
1973	33.13	35.91	51.58	53.20	60.89	72.68	77.00	77.26	71.05	62.15	49.77	34.69	56.61
1974	32.87	39.38	50.82	56.58	66.13	68.27	79.39	74.77	61.40	58.52	44.73	35.76	55.72
1975	36.37	34.30	40.39	54.57	66.45	74.43	77.44	76.50	63.25	58.42	47.63	38.52	55.69
1976	32.56	46.31	50.15	57.23	59.65	70.35	76.56	74.53	68.72	52.34	38.13	33.37	54.99
1977	18.87	37.93	49.37	59.63	69.08	75.80	80.19	79.29	72.55	57.73	47.37	35.50	56.94
1978	19.71	22.82	40.11	56.38	63.74	72.83	81.27	76.92	73.87	56.82	46.90	34.69	53.84
1979	17.52	27.09	45.26	53.55	62.31	70.42	75.08	75.63	68.68	60.82	43.68	41.27	53.44
1980	36.45	32.33	42.69	53.82	64.03	75.33	83.74	82.92	73.23	56.27	46.08	37.77	57.06
1981	33.60	38.46	47.15	62.53	61.76	75.78	80.18	75.35	69.78	57.10	49.10	34.15	57.08
1982	26.15	34.36	49.69	52.77	68.18	70.05	80.16	78.73	68.62	57.89	46.63	42.06	56.27
1983	34.92	40.41	46.68	50.57	61.82	72.20	79.65	83.39	71.02	60.42	48.68	21.53	55.94
1984	29.42	42.74	42.82	53.95	62.60	75.42	77.32	79.47	68.02	60.26	45.32	42.97	56.69
1985	24.40	30.82	50.08	58.98	67.11	72.53	79.42	75.55	68.97	59.37	46.10	28.02	55.11
1986	36.53	37.59	49.55	57.98	65.44	75.77	81.98	73.73	71.92	57.32	41.62	36.31	57.14
1987	32.66	41.45	48.50	56.65	70.81	74.73	78.45	79.05	67.55	52.90	46.88	37.15	57.23
1988	29.61	32.21	45.34	54.73	65.56	74.45	76.63	78.55	68.85	52.82	47.10	37.24	55.26
1989	39.60	27.34	45.47	56.97	62.52	69.55	75.23	75.32	63.68	59.45	46.55	25.61	53.94
1990	41.32	41.96	48.16	54.80	61.85	75.10	77.15	77.05	72.50	55.85	52.20	34.84	57.73
1991	30.52	42.61	48.60	57.77	68.87	75.00	78.48	78.27	67.97	59.34	42.35	40.18	57.50
1992	37.63	43.78	48.61	57.43	63.35	70.52	76.52	71.05	67.52	58.68	44.00	36.40	56.29
1993	33.44	33.82	42.89	52.72	63.74	73.10	80.06	79.18	66.00	54.21	41.73	37.85	54.90
1994	30.13	36.48	48.74	57.70	64.23	77.15	77.10	75.39	67.53	59.65	50.57	40.40	57.09
1995	33.65	39.04	48.52	55.93	62.27	72.12	78.13	82.13	66.57	58.97	42.97	34.16	56.20
1996	30.44	38.29	39.60	53.02	66.95	72.80	74.98	75.71	65.78	57.00	39.47	38.03	54.34
1997	29.06	39.95	47.29	50.53	59.79	70.75	77.77	73.82	68.93	57.73	42.60	35.13	54.45
1998	38.06	39.86	42.47	53.60	69.65	74.57	79.37	77.53	74.92	58.56	49.10	36.97	57.89
1999	35.13	44.05	43.05	56.95	63.05	72.47	79.73	78.05	66.75	58.71	53.43	39.26	57.55
2000	34.74	44.17	49.56	54.23	66.66	69.95	76.06	80.94	70.07	61.32	39.47	23.26	55.87
2001	30.76	37.52	41.35	61.52	65.58	72.88	79.23	77.69	66.93	56.55	50.52	38.81	56.61
2002	35.24	37.86	42.74	58.35	61.90	74.40	78.55	78.08	72.72	55.31	43.57	35.81	56.21
2003	28.73	33.66	45.90	57.60	64.18	69.78	79.21	79.94	66.12	58.50	48.27	37.50	55.78
2004	32.84	36.43	49.15										
Maximum	41.32	46.31	51.58	62.53	70.81	77.60	83.74	83.39	74.92	62.42	53.43	42.97	83.74
Minimum	17.52	22.82	39.60	50.53	59.65	68.27	74.98	71.05	61.40	52.34	38.13	21.53	17.52

Empire District Electric Company Rate Case No. ER-2004-0570 Calculated Adjustments to Monthly Average Temperature at Springfield Regional Airport, Missouri Data Sources: Official Documents from NOAA's National Climatic Data Center													
Year	Months January	February	March	April	May	June	July	August	September	October	November	December	Annual Average
1971	0.40	0.25	0.37	0.70	1.01	1.15	1.27	1.42	1.58	1.53	1.20	0.81	0.97
1972	0.45	0.24	0.35	0.70	1.01	1.12	1.26	1.47	1.60	1.52	1.20	0.75	0.97
1973	0.42	0.19	0.37	0.70	0.96	1.17	1.25	1.44	1.60	1.55	1.23	0.81	0.97
1974	0.38	0.17	0.33	0.72	1.02	1.13	1.26	1.48	1.60	1.58	1.17	0.79	0.97
1975	0.43	0.20	0.36	0.68	1.00	1.17	1.26	1.45	1.60	1.58	1.17	0.83	0.98
1976	-0.16	-0.41	-0.30	-0.03	0.25	0.30	0.39	0.57	0.78	0.91	0.67	0.28	0.27
1977	-0.17	-0.43	-0.32	-0.03	0.22	0.30	0.36	0.51	0.80	0.87	0.68	0.30	0.26
1978	-0.11	-0.37	-0.26	-0.03	0.26	0.32	0.38	0.58	0.78	0.88	0.65	0.31	0.28
1979	-0.47	-0.59	-0.46	-0.30	-0.16	-0.17	-0.33	-0.33	-0.23	-0.07	-0.13	-0.22	-0.29
1980	-0.50	-0.63	-0.49	-0.32	-0.13	-0.18	-0.29	-0.32	-0.23	-0.17	-0.13	-0.22	-0.30
1981	-0.50	-0.61	-0.50	-0.28	-0.16	-0.18	-0.33	-0.30	-0.23	-0.10	-0.15	-0.25	-0.30
1982	-0.50	-0.61	-0.49	-0.27	-0.13	-0.20	-0.31	-0.33	-0.27	-0.09	-0.13	-0.21	-0.29
1983	-0.52	-0.61	-0.53	-0.27	-0.12	-0.20	-0.35	-0.29	-0.27	-0.07	-0.13	-0.28	-0.30
1984	-0.52	-0.59	-0.47	-0.30	-0.15	-0.17	-0.27	-0.32	-0.22	-0.11	-0.17	-0.22	-0.29
1985	0.15	0.03	0.02	0.12	0.24	0.32	0.43	0.50	0.53	0.58	0.50	0.33	0.31
1986	0.17	0.06	0.00	0.12	0.21	0.33	0.42	0.52	0.53	0.63	0.48	0.34	0.32
1987	0.14	0.05	0.00	0.10	0.24	0.27	0.40	0.50	0.55	0.60	0.47	0.35	0.31
1988	0.14	0.04	0.01	0.12	0.29	0.30	0.42	0.50	0.55	0.63	0.50	0.36	0.32
1989	0.15	0.06	0.03	0.08	0.23	0.30	0.42	0.53	0.57	0.60	0.50	0.39	0.32
1990	0.13	0.04	0.04	0.10	0.25	0.30	0.40	0.50	0.55	0.60	0.50	0.36	0.31
1991	-0.17	-0.31	-0.45	-0.37	-0.32	-0.25	-0.28	-0.27	-0.37	-0.39	-0.25	-0.13	-0.30
1992	-0.13	-0.28	-0.41	-0.38	-0.30	-0.27	-0.27	-0.30	-0.37	-0.38	-0.25	-0.10	-0.29
1993	-0.14	-0.27	-0.39	-0.42	-0.29	-0.25	-0.26	-0.28	-0.40	-0.36	-0.23	-0.10	-0.28
1994	-0.18	-0.33	-0.39	-0.40	-0.28	-0.25	-0.25	-0.34	-0.38	-0.35	-0.27	-0.10	-0.29
1995	-0.15	-0.29	-0.42	-0.38	-0.27	-0.27	-0.23	-0.28	-0.42	-0.37	-0.27	-0.06	-0.28
1996	-0.04	0.01	0.00	-0.02	0.00	0.00	0.02	0.04	0.02	0.00	-0.02	-0.03	0.00
1997	-0.01	0.00	0.01	0.02	-0.04	0.00	-0.02	0.03	0.02	-0.03	0.00	-0.03	0.00
1998	-0.01	-0.01	-0.02	0.00	0.00	-0.02	-0.02	-0.03	-0.02	-0.01	0.00	0.03	-0.01
1999	-0.03	0.00	0.00	0.00	0.00	-0.02	0.02	0.00	0.00	0.04	-0.03	-0.01	0.00
2000	0.01	-0.02	0.04	-0.03	0.04	0.00	0.04	-0.04	-0.02	-0.02	0.03	-0.01	0.00
2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.45	0.25	0.37	0.72	1.02	1.17	1.27	1.48	1.60	1.58	1.23	0.83	1.60
Minimum	(0.52)	(0.63)	(0.53)	(0.42)	(0.32)	(0.27)	(0.35)	(0.34)	(0.42)	(0.39)	(0.27)	(0.28)	(0.63)