

Location

Country: USA
State: OKLAHOMA
City: OKLAHOMA_CITY_WILL_ROGERS_WOR
Elevation: 1,305 ft.
Bin Weather Data File Source: TMY3

Indoor Conditions Input

Indoor Space Dry-Bulb Temperature: 75.0 °F
Indoor Space Relative Humidity: 50.0 %
Actual Air: 0.073 lbs/cu.ft.

Air Movement Input

Makeup Airflow: 5,000 cfm
Fan Static Pressure: 1.25 in.WC
Fan Efficiency: 80.0 %
Draw Through Fan Configuration (Motor Re-Heat)
Belt Drive Fan Assembly
Motor Efficiency: 94.0 %

Cooling Data Input

Avg. Cooling Efficiency: 0.98 kW/ton
Free (Waste) Re-Heat (Dehumidification Mode): FALSE

Heating Data Input

Avg. Heating Efficiency: 1.00 COP
Free (Waste) Re-Heat (Humidification Mode): FALSE
Heating Energy Source: GAS

Humidifier Data Input

Humidification Type: GAS
Humidifier Static Pressure Drop: 0.45 in.WC
Pre-Heat Temperature Dry-Bulb (for Humidification): 65.0 °F

Energy Recovery Data Input

Energy Recovery Type: TOTAL
Energy Recovery Static Pressure Drop: 0.80 in.WC
Energy Recovery Effectiveness: 0.75 %

Blended Utility Rate Input

Electrical Rate: 0.10 \$/kWh
Gas Rate: 3.00 \$/MCF

Operating Schedule

January: True
February: True
March: True
April: True
May: True
June: True
July: True
August: True
September: True
October: True
November: True
December: True

Days Per Week: 7

12:00 AM to 01:00 AM: True
01:00 AM to 02:00 AM: True
02:00 AM to 03:00 AM: True
03:00 AM to 04:00 AM: True
04:00 AM to 05:00 AM: True
05:00 AM to 06:00 AM: True
06:00 AM to 07:00 AM: True
07:00 AM to 08:00 AM: True
08:00 AM to 09:00 AM: True
09:00 AM to 10:00 AM: True
10:00 AM to 11:00 AM: True
11:00 AM to 12:00 PM: True
12:00 PM to 01:00 PM: True
01:00 PM to 02:00 PM: True
02:00 PM to 03:00 PM: True
03:00 PM to 04:00 PM: True
04:00 PM to 05:00 PM: True
05:00 PM to 06:00 PM: True
06:00 PM to 07:00 PM: True
07:00 PM to 08:00 PM: True
08:00 PM to 09:00 PM: True
09:00 PM to 10:00 PM: True
10:00 PM to 11:00 PM: True
11:00 PM to 12:00 PM: True

Note: Output values are estimates only and actual results may vary.

MakeUpAir Energy Expense Detail

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
Total Energy Expense:	\$320	\$312	\$365	\$538	\$892	\$1,243	\$1,354	\$1,312	\$1,071	\$566	\$283	\$295	\$8,551
Total Electric Expense:	\$196	\$207	\$256	\$407	\$715	\$1,039	\$1,124	\$1,082	\$882	\$436	\$193	\$194	\$6,731
Total Gas Expense:	\$124	\$105	\$109	\$131	\$177	\$204	\$230	\$230	\$189	\$130	\$90	\$101	\$1,820
Air Moving Electric Expense:	\$152	\$137	\$152	\$147	\$152	\$147	\$152	\$152	\$147	\$152	\$147	\$152	\$1,789
Cooling Electric Expense:	\$44	\$70	\$104	\$261	\$563	\$892	\$973	\$931	\$735	\$284	\$46	\$42	\$4,945
Heating Gas Expense:	\$111	\$96	\$102	\$127	\$175	\$204	\$230	\$230	\$188	\$127	\$84	\$91	\$1,765
Humidification Gas Expense:	\$12	\$8	\$8	\$4	\$2	\$0	\$0	\$0	\$1	\$4	\$7	\$11	\$57

MakeUpAir Electric Usage Detail

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
Total Electric Usage (kWh):	1,960	2,074	2,557	4,073	7,148	10,386	11,243	10,823	8,820	4,359	1,928	1,939	67,310
Air Moving Electric Usage (kWh):	1,516	1,370	1,516	1,467	1,516	1,467	1,516	1,516	1,467	1,516	1,467	1,516	17,850
Cooling Electric Usage (kWh):	443	704	1,041	2,606	5,632	8,919	9,727	9,306	7,353	2,843	461	423	49,458
Heating Electric Usage (kWh):	0	0	0	0	0	0	0	0	0	0	0	0	0
Humidification Electric Usage (kWh):	0	0	0	0	0	0	0	0	0	0	0	0	0

MakeUpAir Gas Usage Detail

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
Total Gas Usage (MCF):	41	35	36	44	59	68	77	77	63	43	30	34	607
Heating Gas Usage (MCF):	37	32	34	42	58	68	77	77	63	42	28	30	588
Humidification Gas Usage (MCF):	4	3	3	1	1	0	0	0	0	1	2	4	19

MakeUpAir Cooling Load Detail

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
Total Cooling Load (mbh):	5,430	8,620	12,746	31,905	68,962	109,211	119,104	113,957	90,032	34,812	5,640	5,174	605,593
Motor Heat Load (mbh):	5,174	4,673	5,174	5,007	5,174	5,007	5,174	5,174	5,007	5,174	5,007	5,174	60,919
Net Cooling Load (mbh):	256	3,947	7,572	26,898	63,788	104,204	113,930	108,783	85,025	29,637	632	0	544,672

MakeUpAir Humidification Load Detail

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
Total Humidification Load (lbs):	29,101	19,356	17,795	8,794	4,172	455	84	82	2,263	9,198	15,716	25,201	132,217

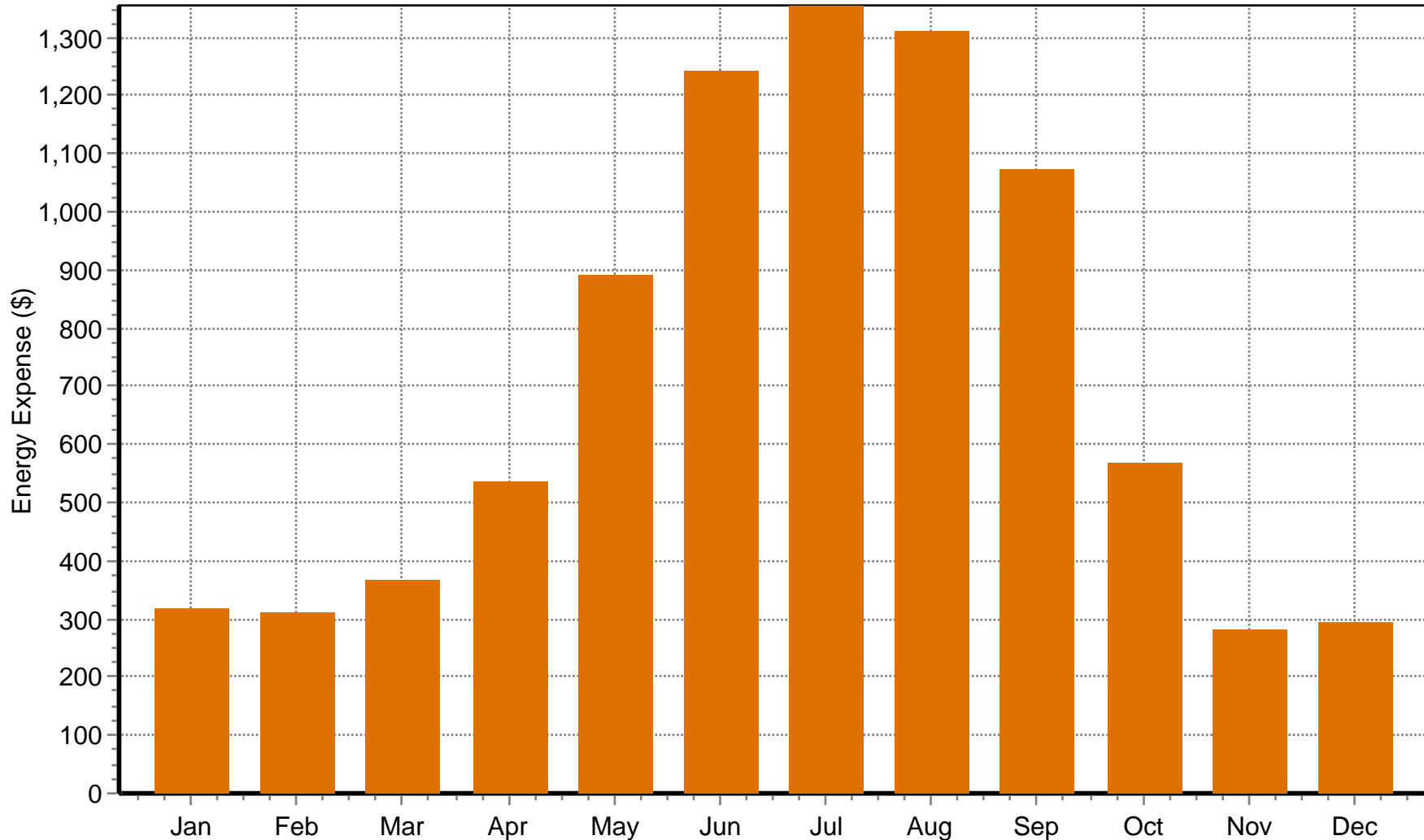
MakeUpAir Heating Load Detail

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
Total Heating Load (mbh):	42,228	36,795	39,111	47,361	63,631	72,929	81,875	81,706	67,578	47,354	32,927	35,373	648,868
Total Pre-Heating Load (mbh):	8,809	3,611	265	3	0	0	0	0	0	10	168	2,299	15,165
Motor Pre-Heating Load (mbh):	0	0	0	0	0	0	0	0	0	0	0	0	0
Heater Pre-Heating Load (mbh):	8,809	3,611	265	3	0	0	0	0	0	10	168	2,299	15,165
Total Re-Heating Load (mbh):	33,419	33,184	38,845	47,359	63,631	72,929	81,875	81,706	67,578	47,343	32,760	33,075	633,704
Motor Re-Heating Load (mbh):	5,174	4,673	5,174	5,007	5,174	5,007	5,174	5,174	5,007	5,174	5,007	5,174	60,919
Heater Re-Heating Load (mbh):	28,245	28,510	33,671	42,351	58,456	67,922	76,701	76,531	62,571	42,169	27,753	27,901	572,781

Note: Output values are estimates only and actual results may vary.

MakeUpAir TOTAL Energy Expense

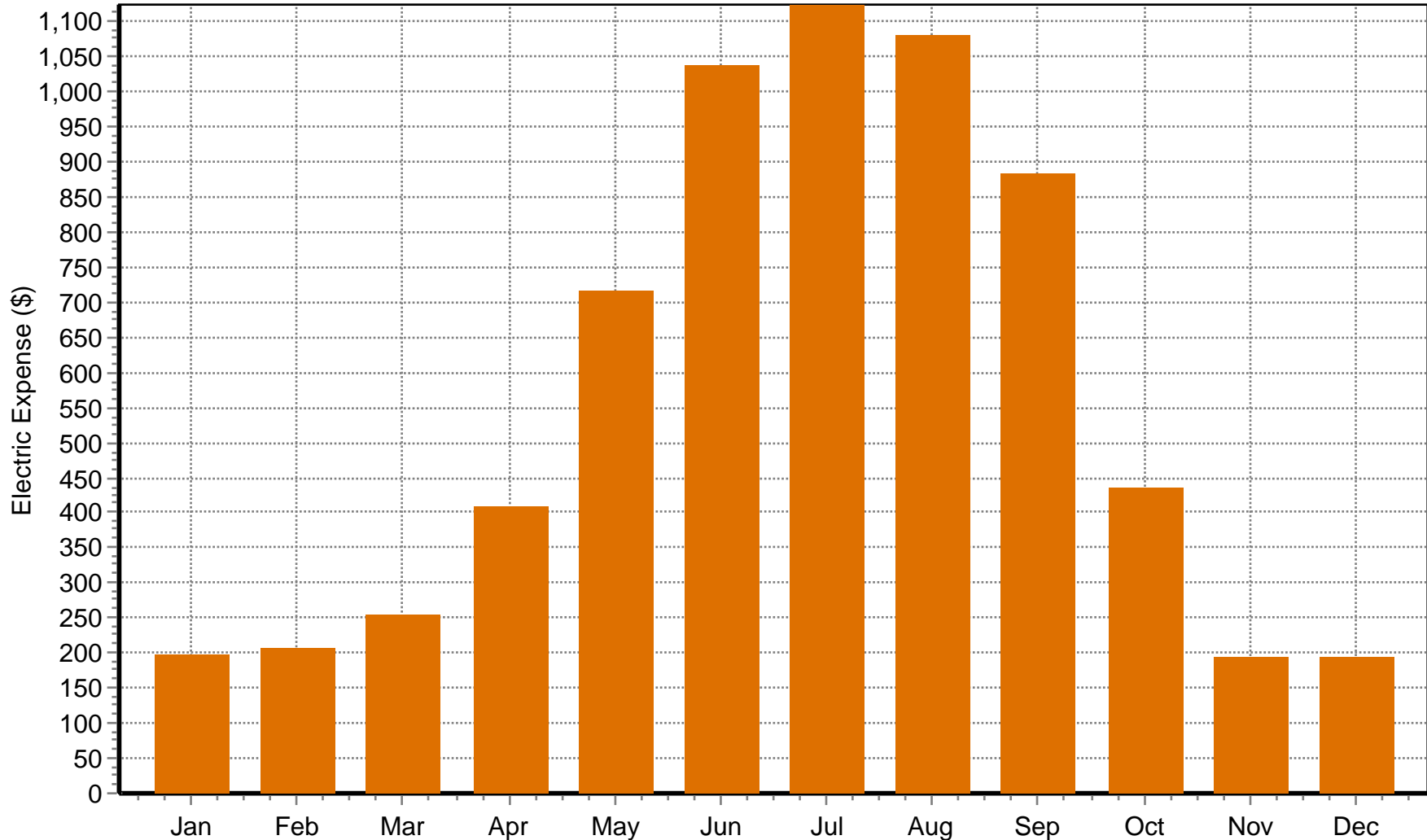
MakeUpAir TOTAL Energy Expense by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Electric Expense

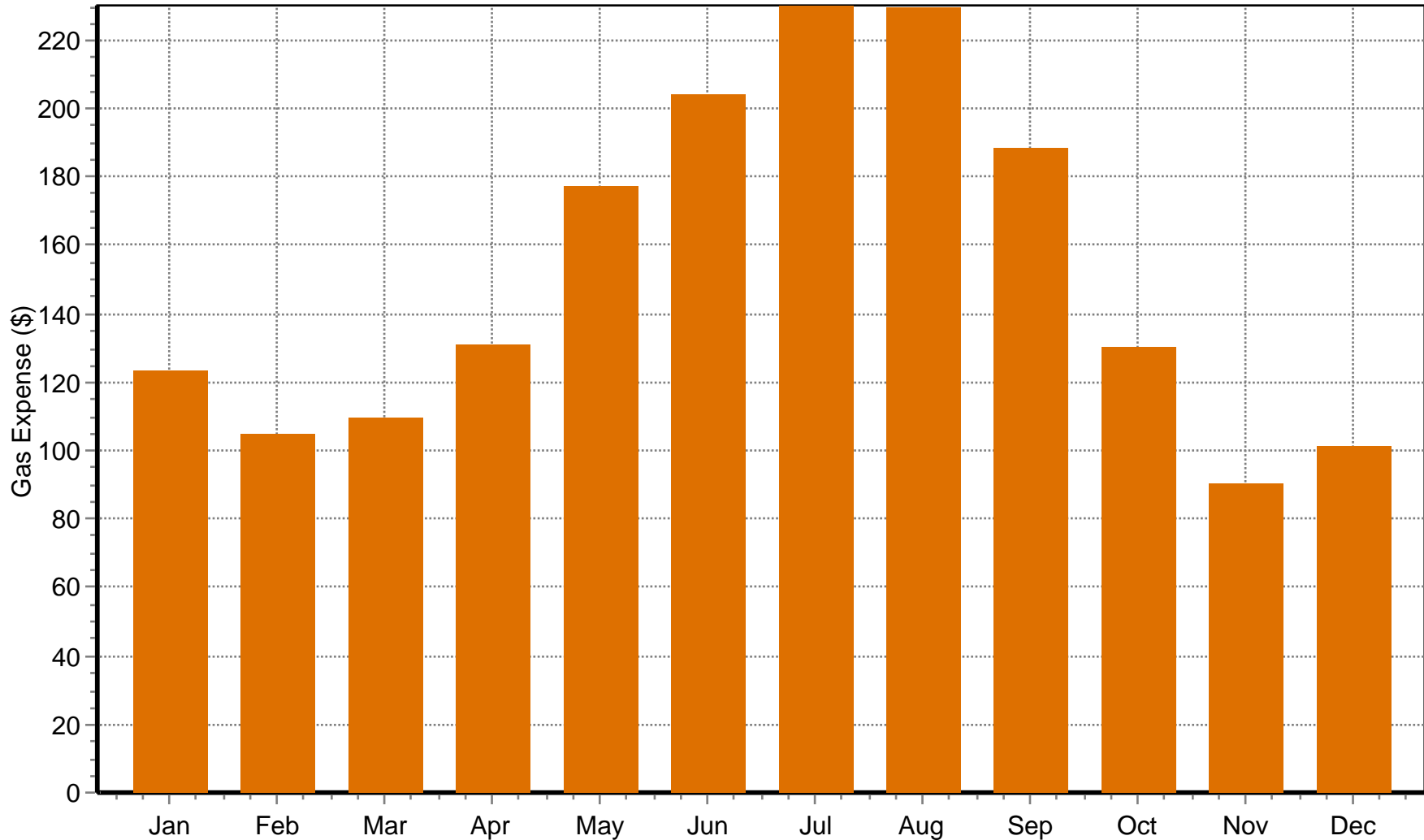
MakeUpAir Electric Expense by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Gas Expense

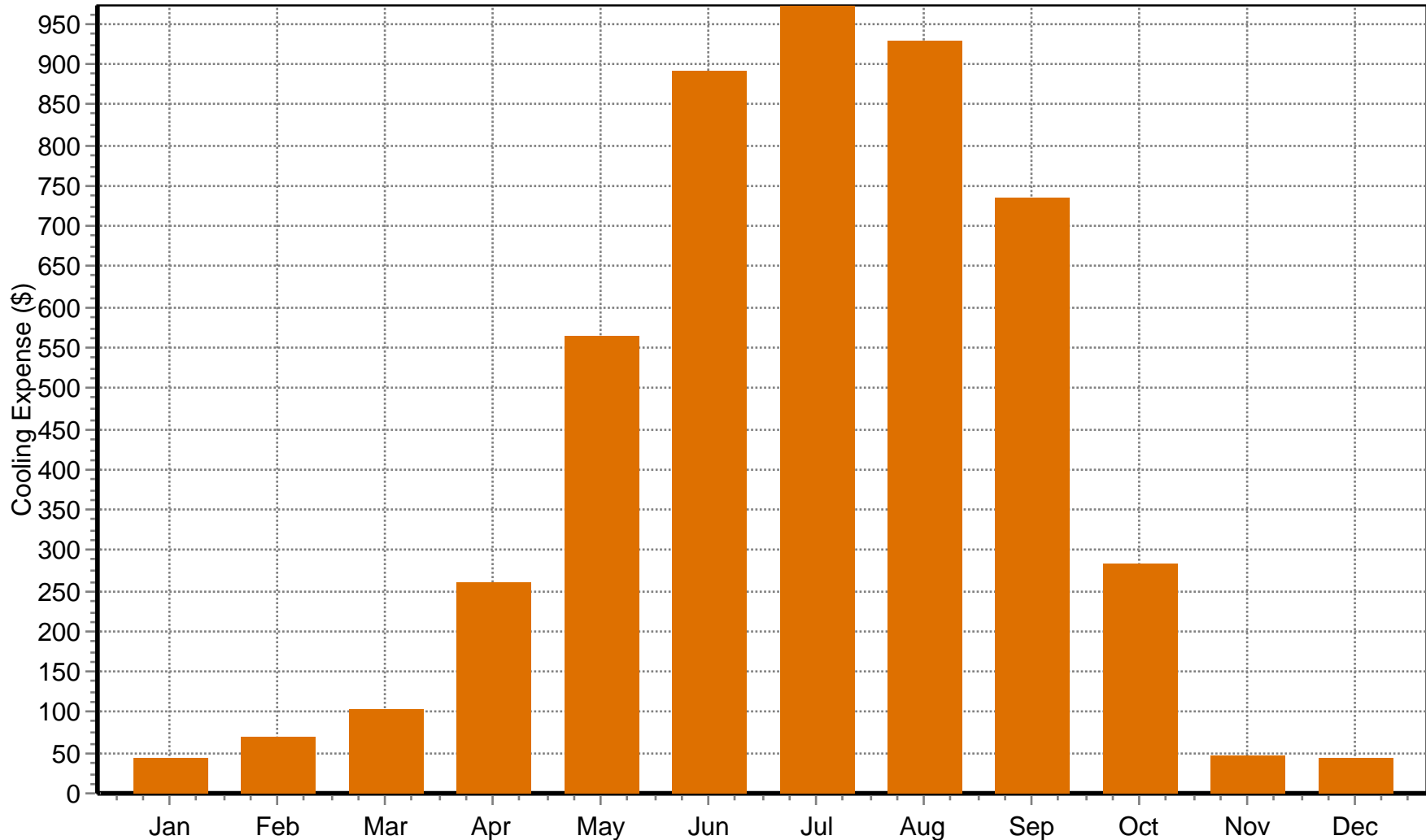
MakeUpAir Gas Expense by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Cooling Expense

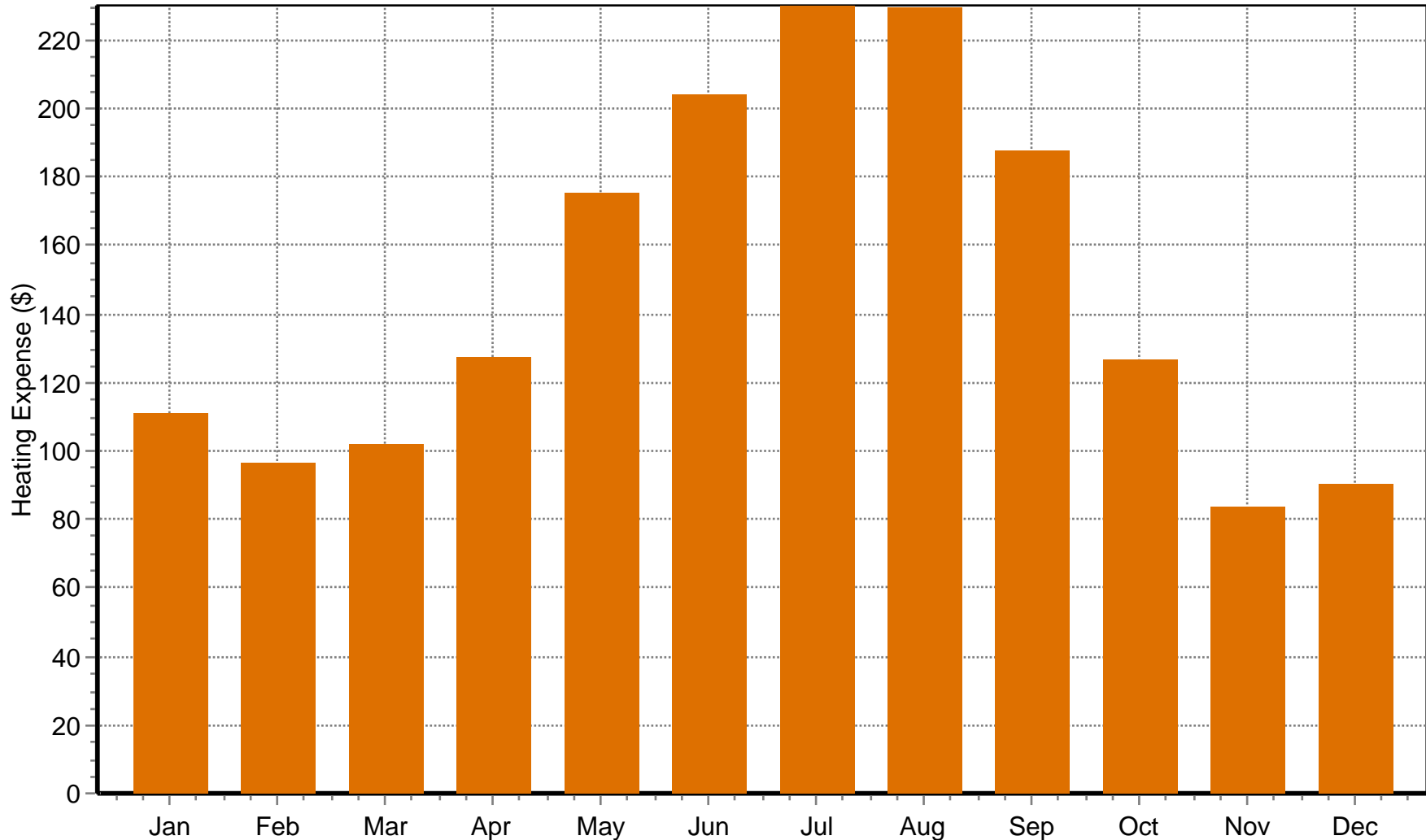
MakeUpAir Cooling Expense by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Heating Expense

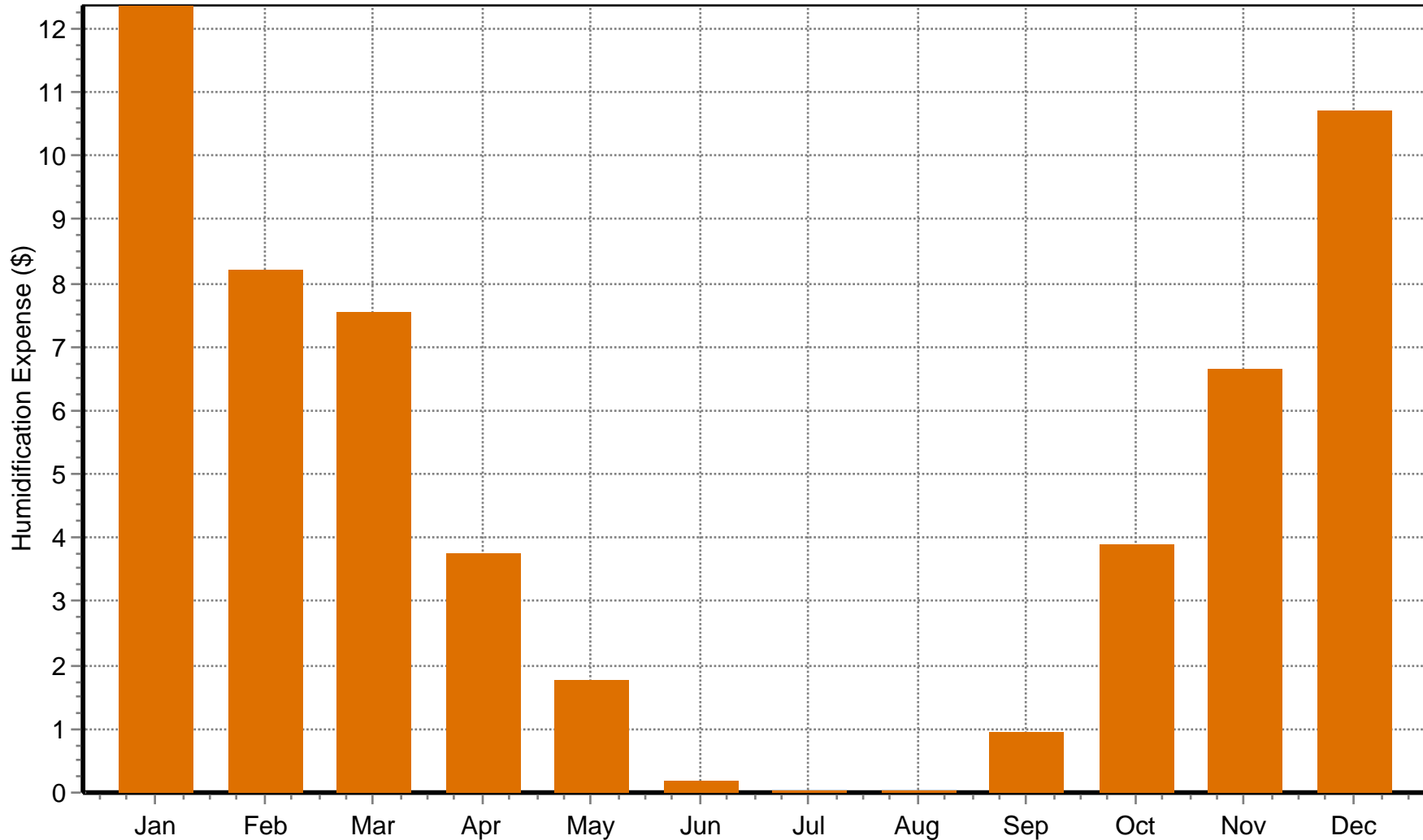
MakeUpAir Heating Expense by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Humidification Expense

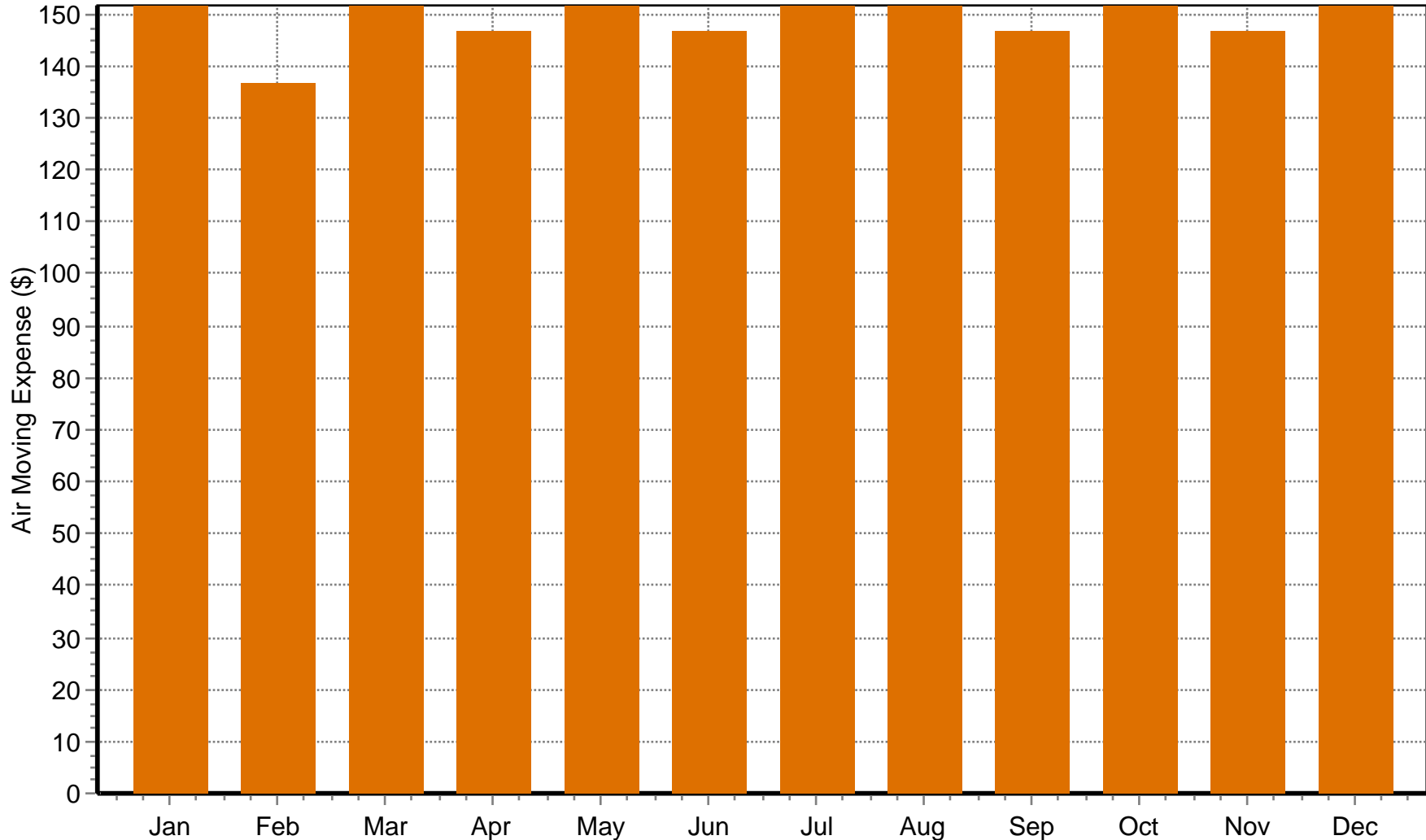
MakeUpAir Humidification Expense by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Air Moving Expense

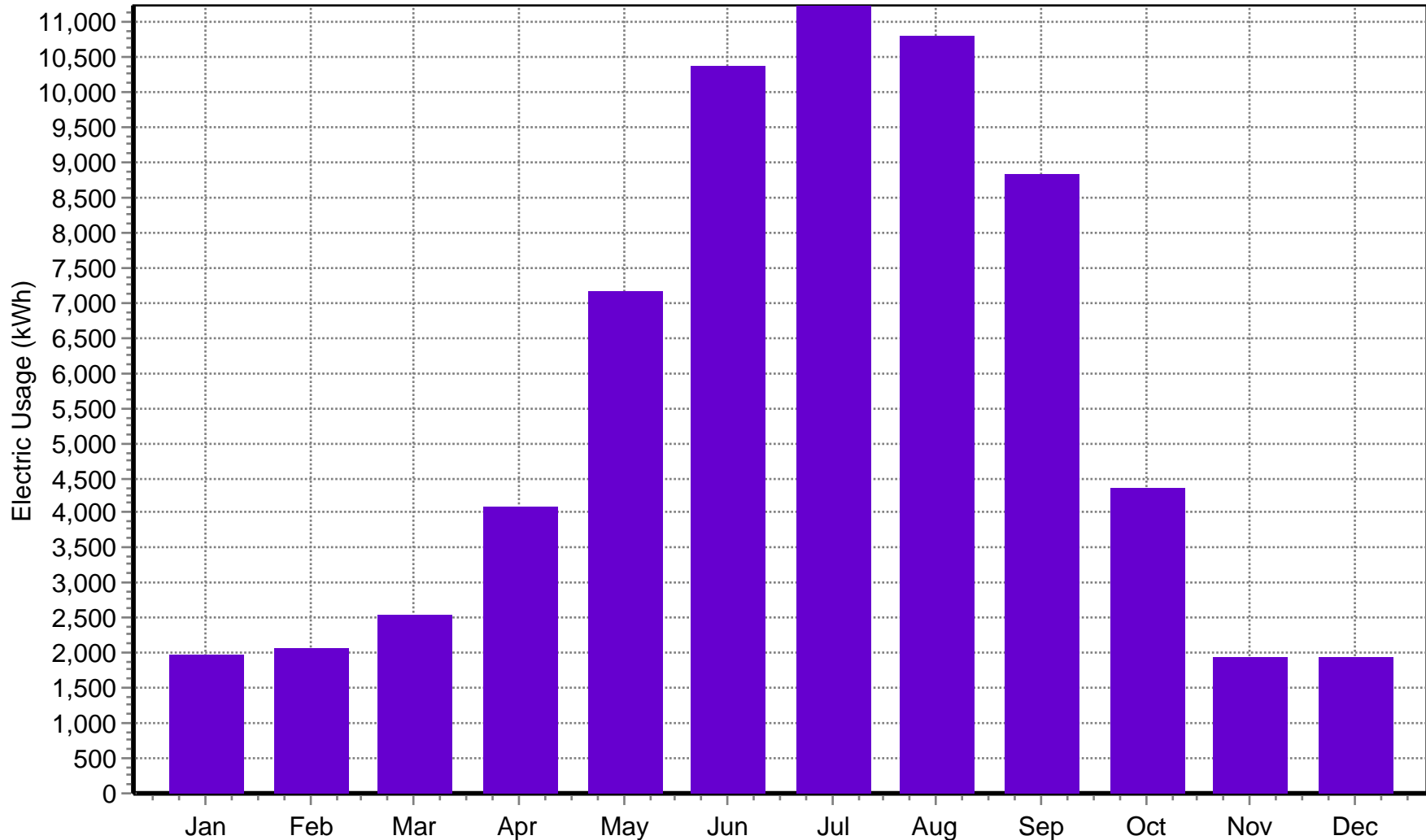
MakeUpAir Air Moving Expense by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir TOTAL Electric Usage

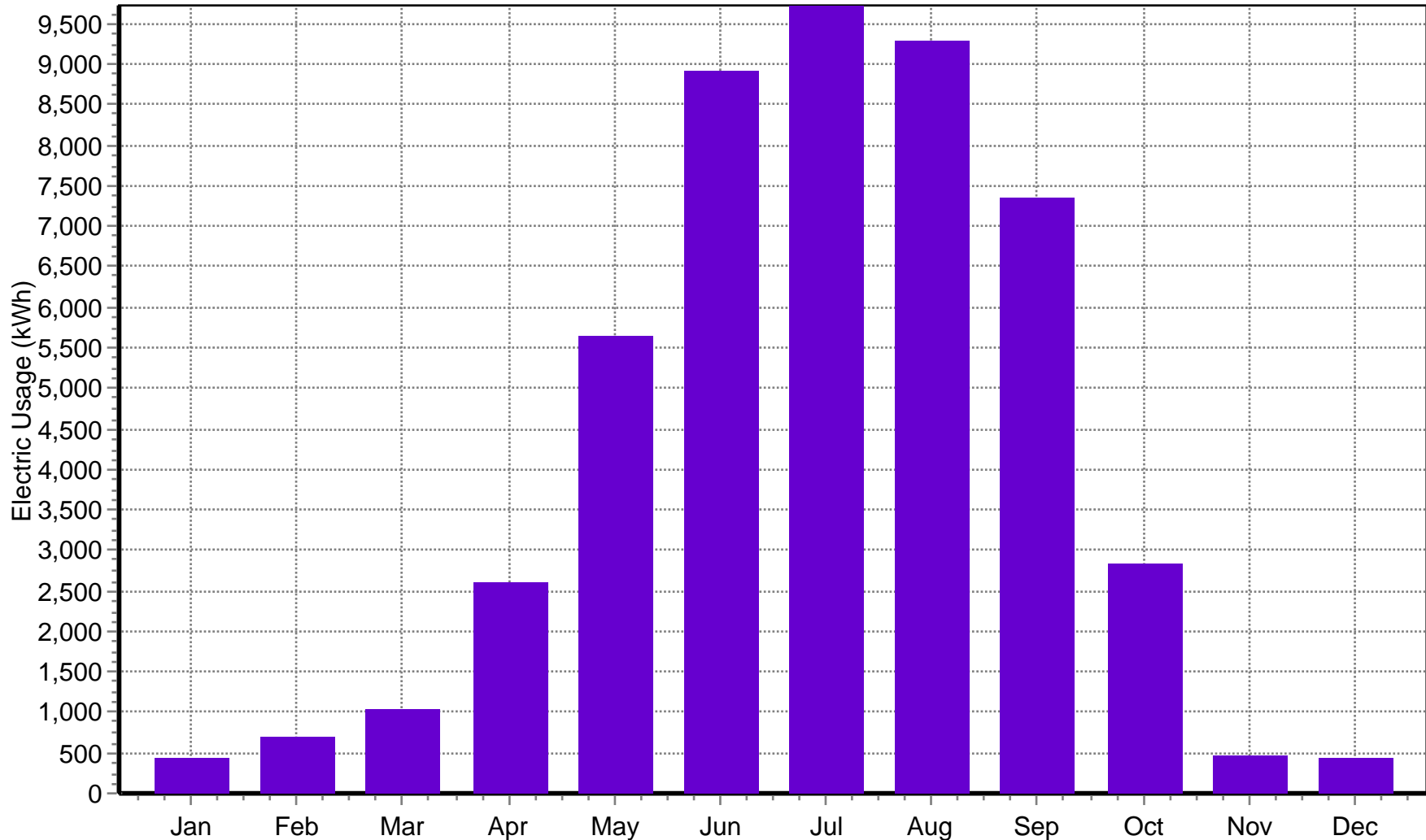
MakeUpAir TOTAL Electric Usage by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Cooling Electric Usage

MakeUpAir Cooling Electric Usage by Month



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MakeUpAir Heating Electric Usage

MakeUpAir Heating Electric Usage by Month



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MakeUpAir Humidifying Electric Usage

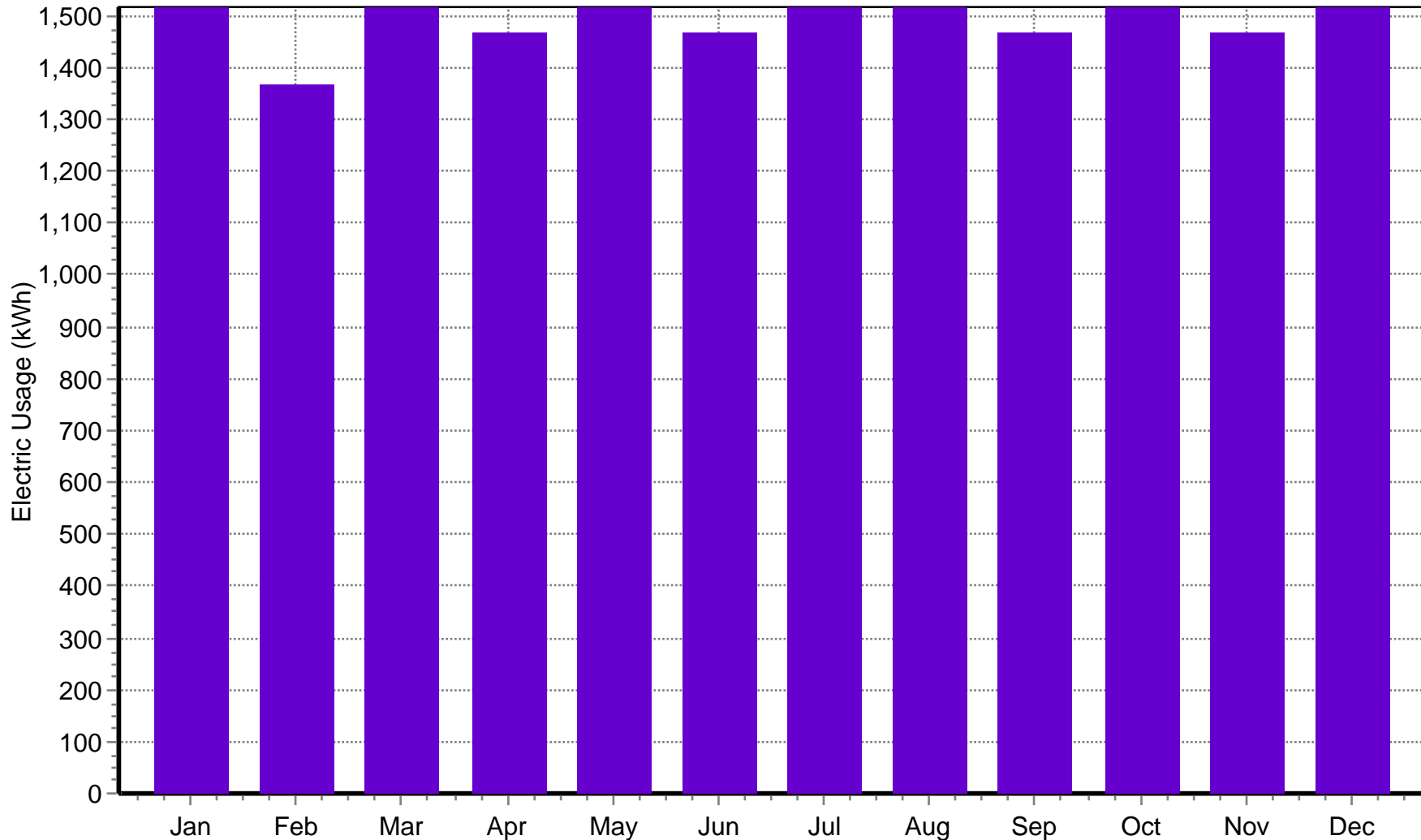
MakeUpAir Humidifying Electric Usage by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Air Moving Electric Usage

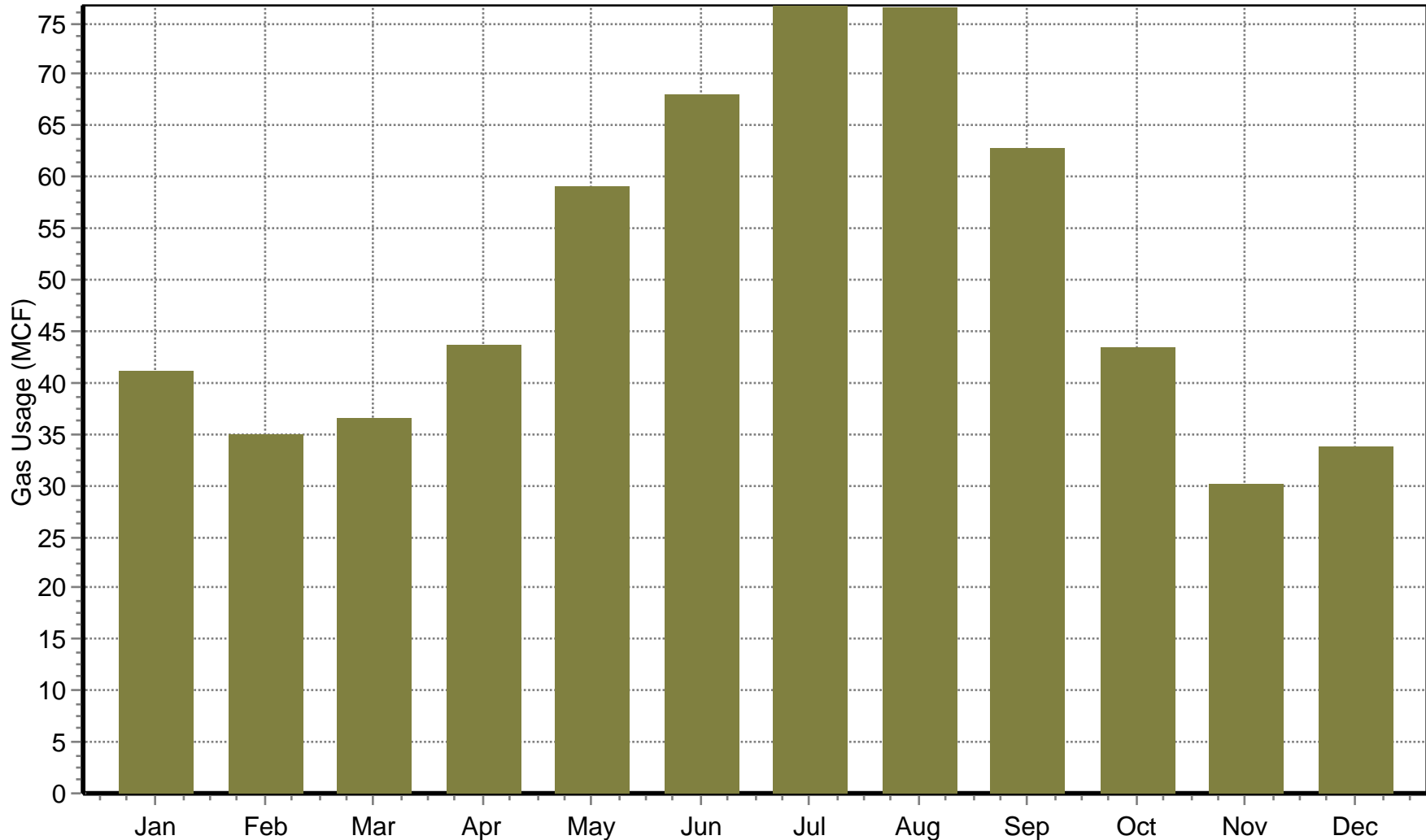
MakeUpAir Air Moving Electric Usage by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Total Gas Usage

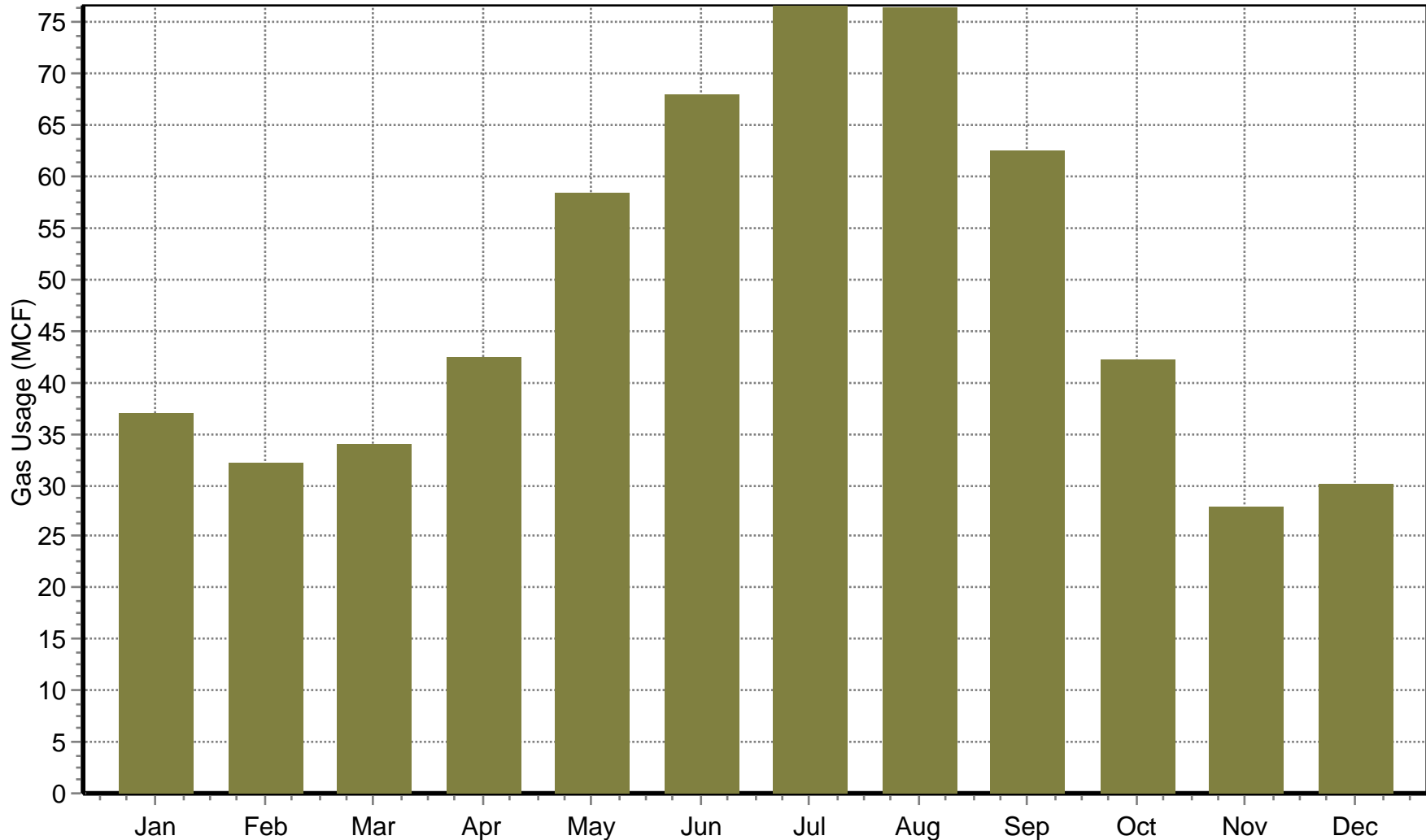
MakeUpAir Total Gas Usage by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Heating Gas Usage

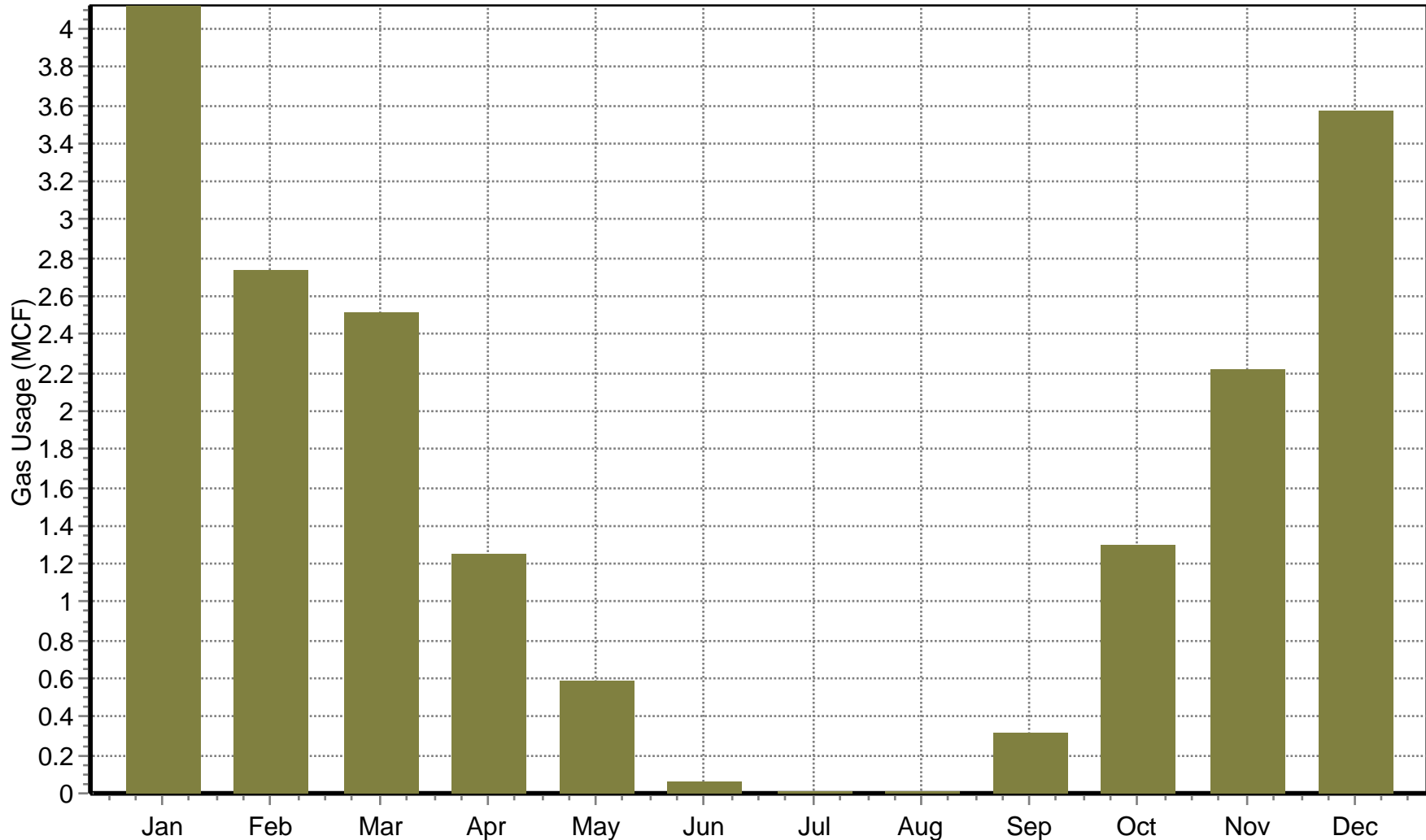
MakeUpAir Heating Gas Usage by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Humidifying Gas Usage

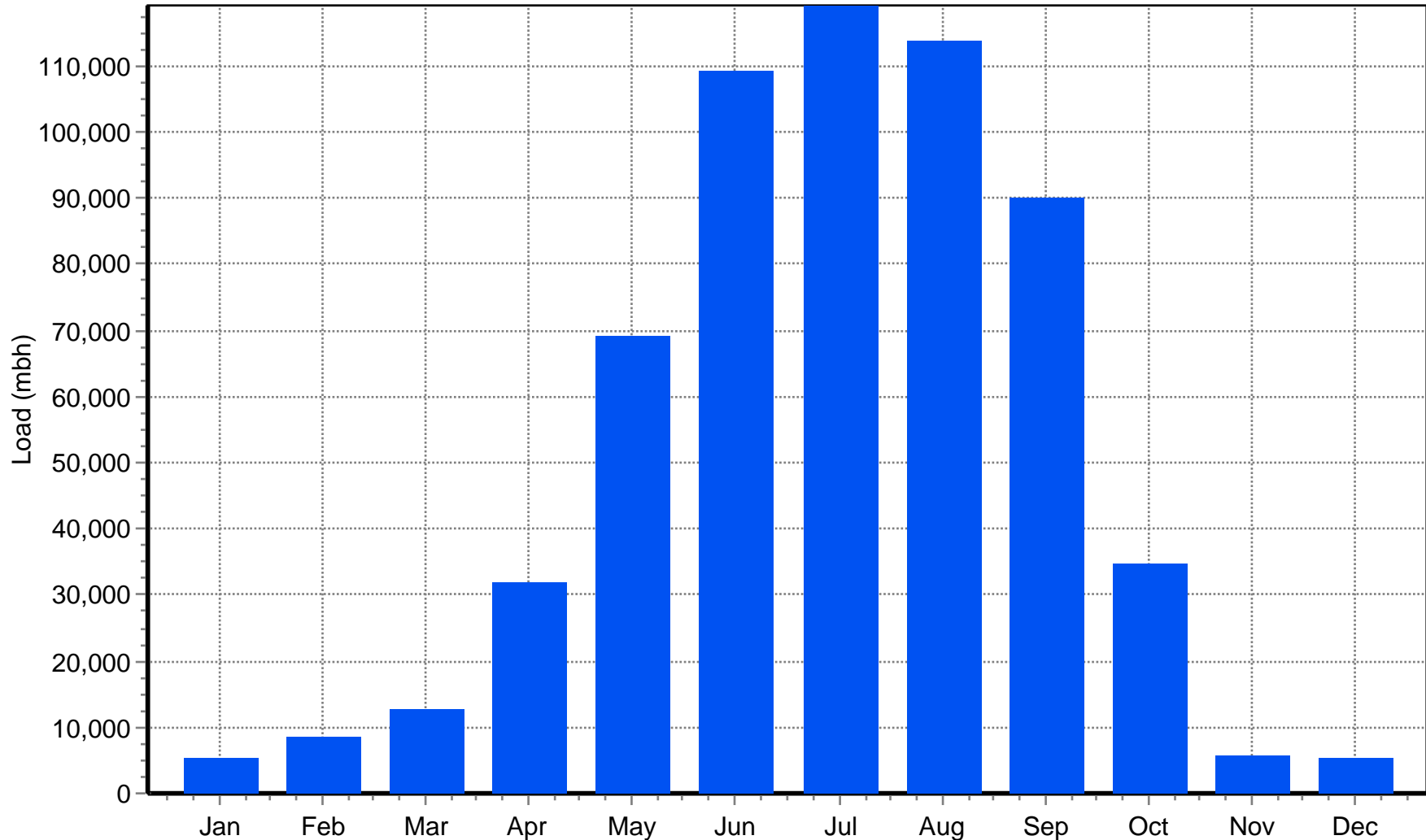
MakeUpAir Humidifying Gas Usage by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Cooling Total Load

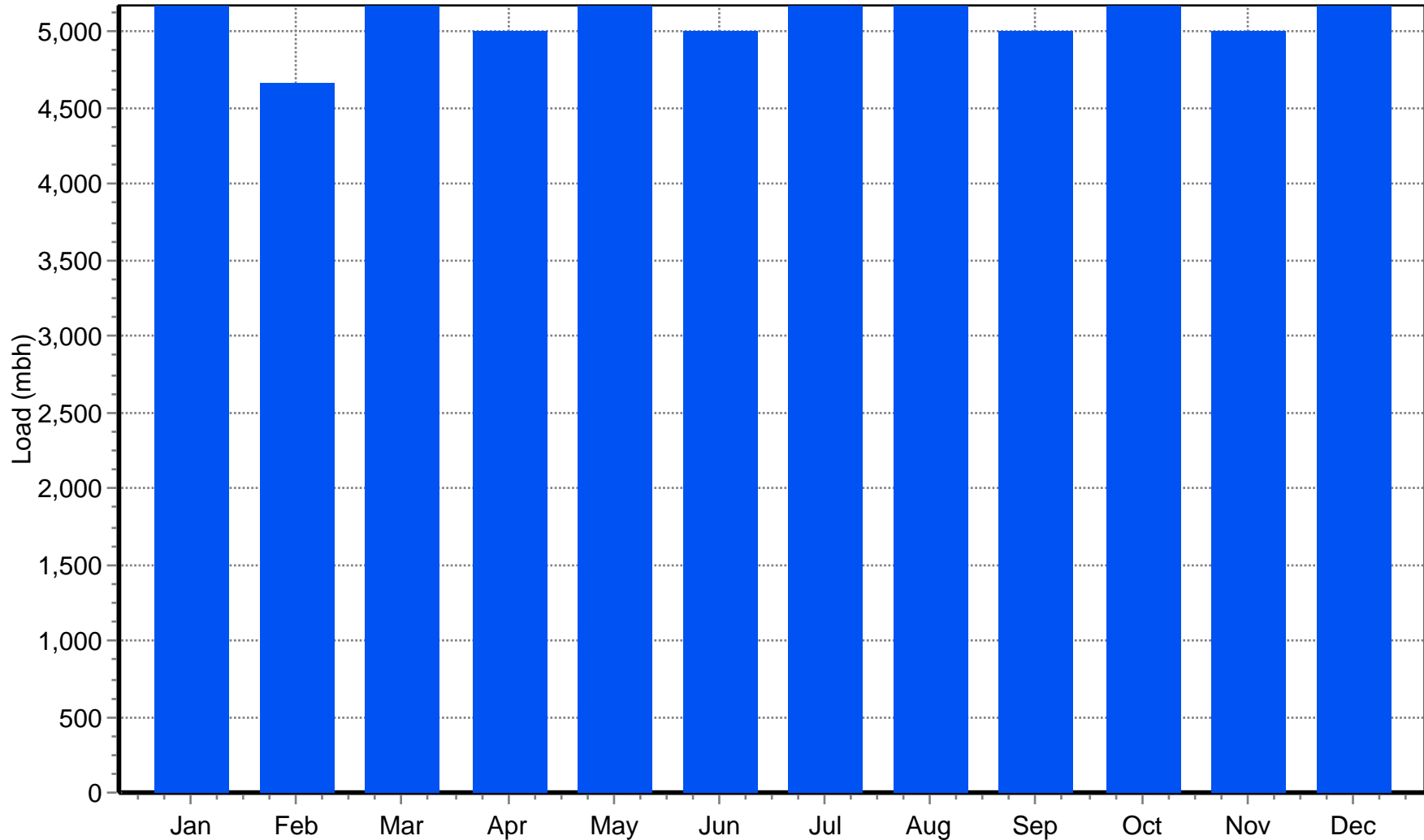
MakeUpAir Cooling Total Load by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Motor Heat Load

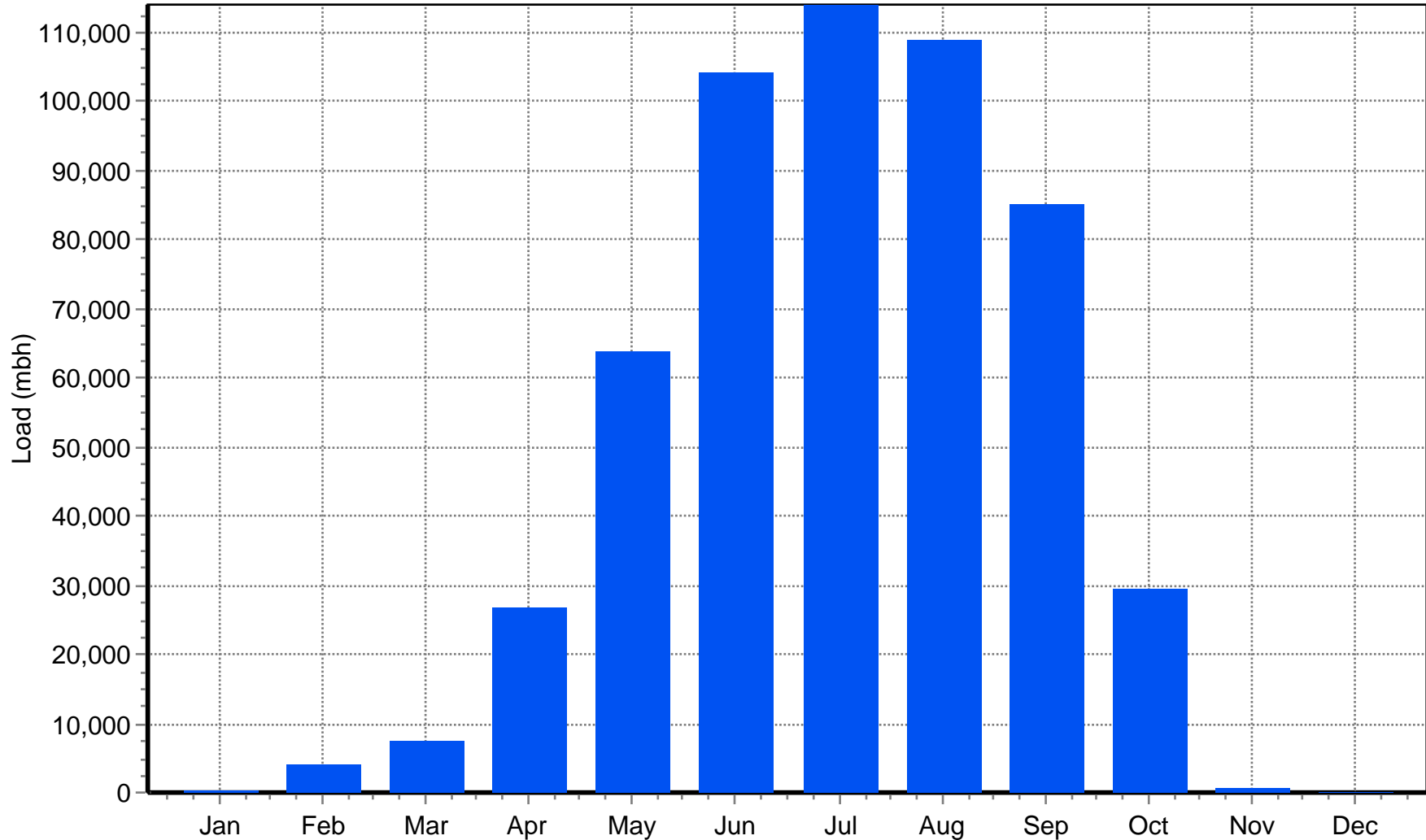
MakeUpAir Motor Heat Load by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Net Cooling Load

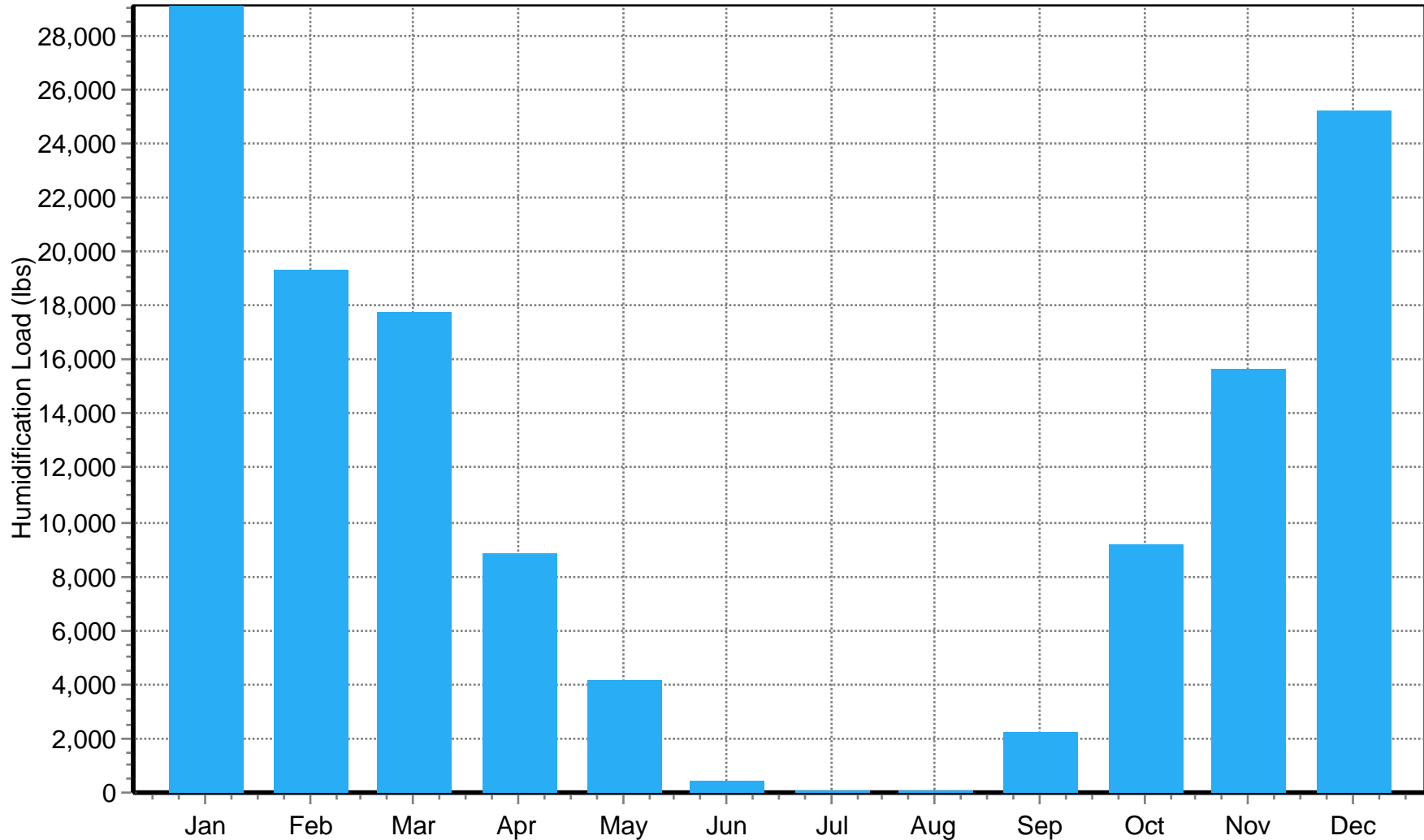
MakeUpAir Net Cooling Load by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Humidification Load

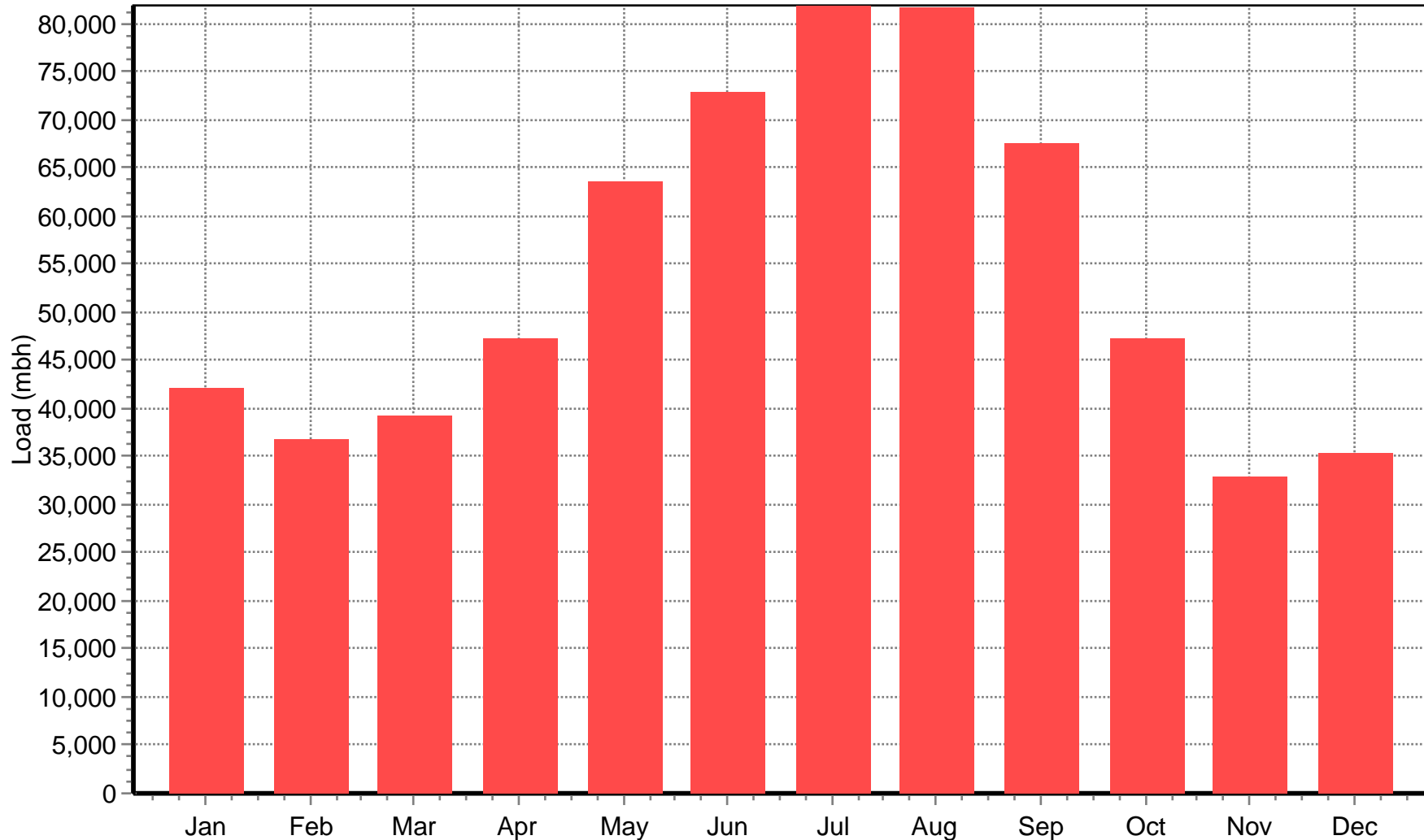
MakeUpAir Humidification Load by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Total Heating Load

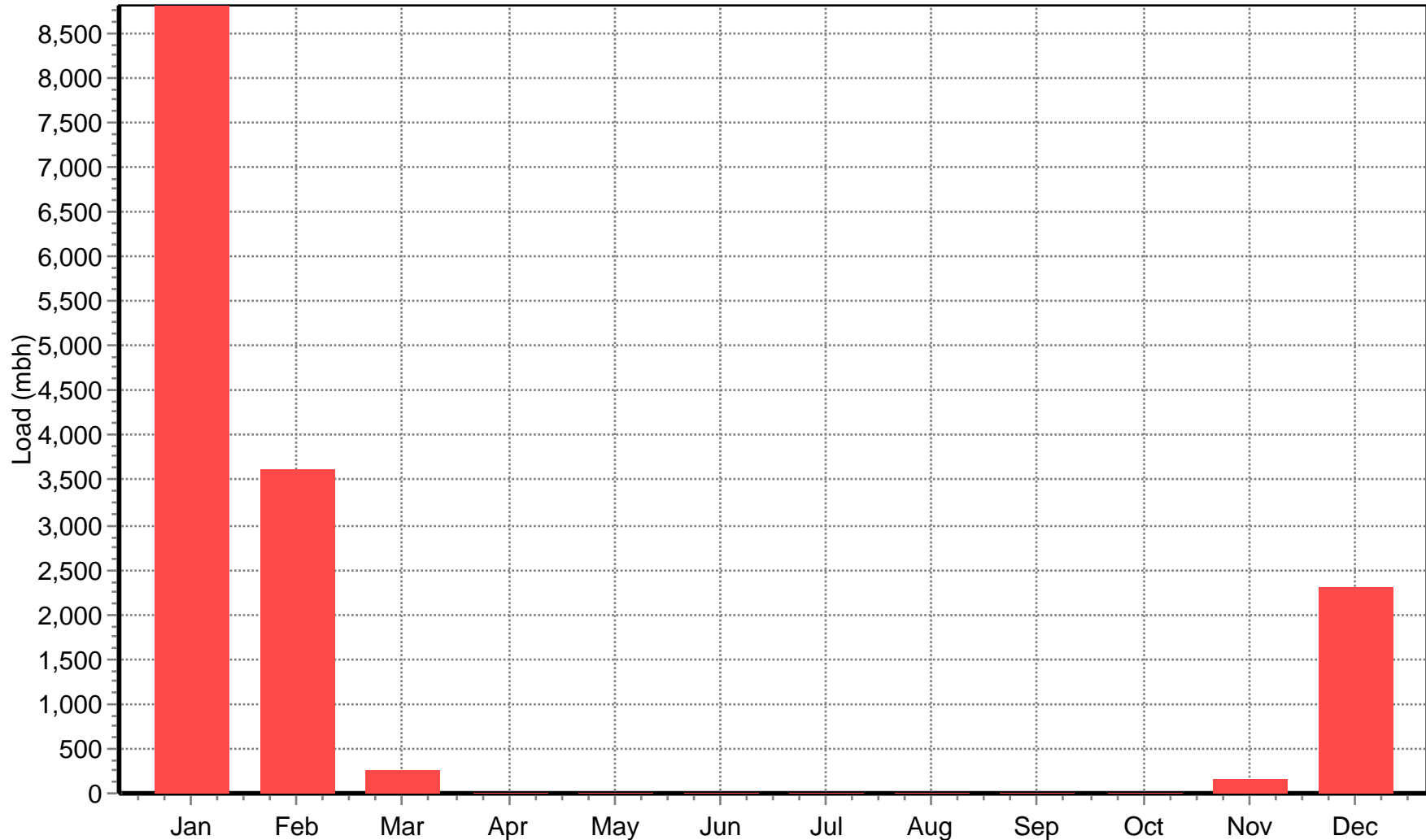
MakeUpAir Total Heating Load by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Total PRE-Heating Load

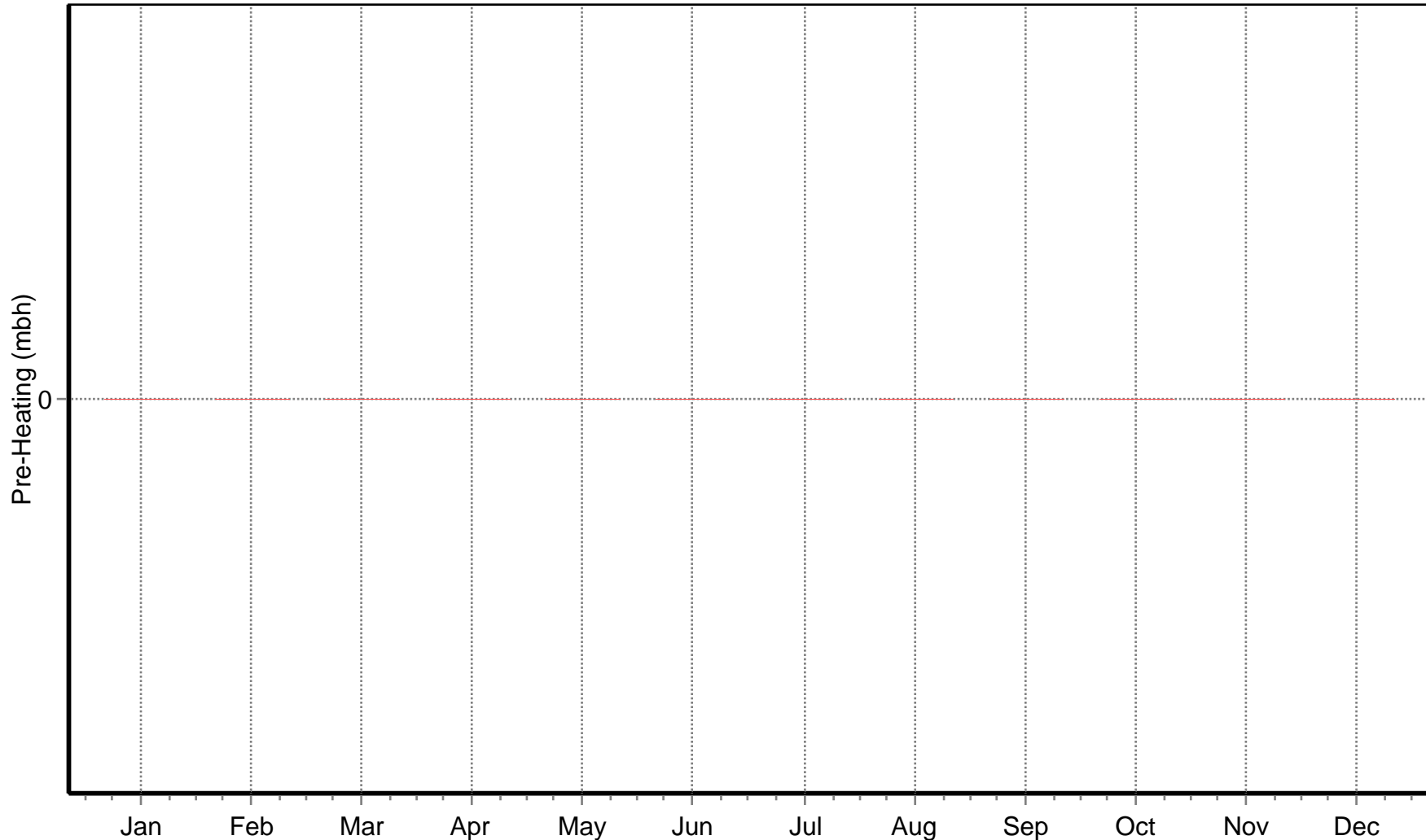
MakeUpAir Total PRE-Heating Load by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Motor PRE-Heating

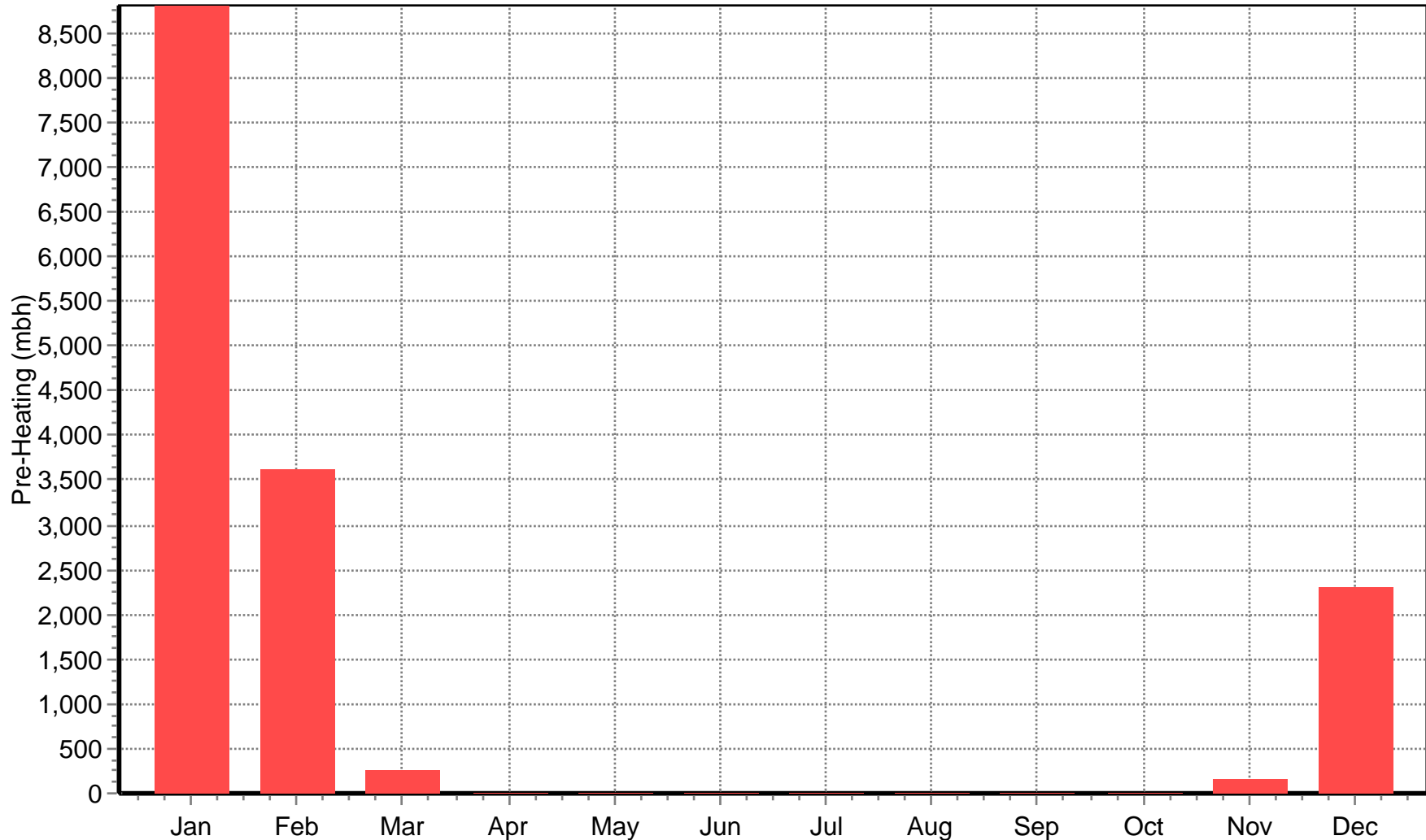
MakeUpAir Motor PRE-Heating by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Heater PRE-Heating

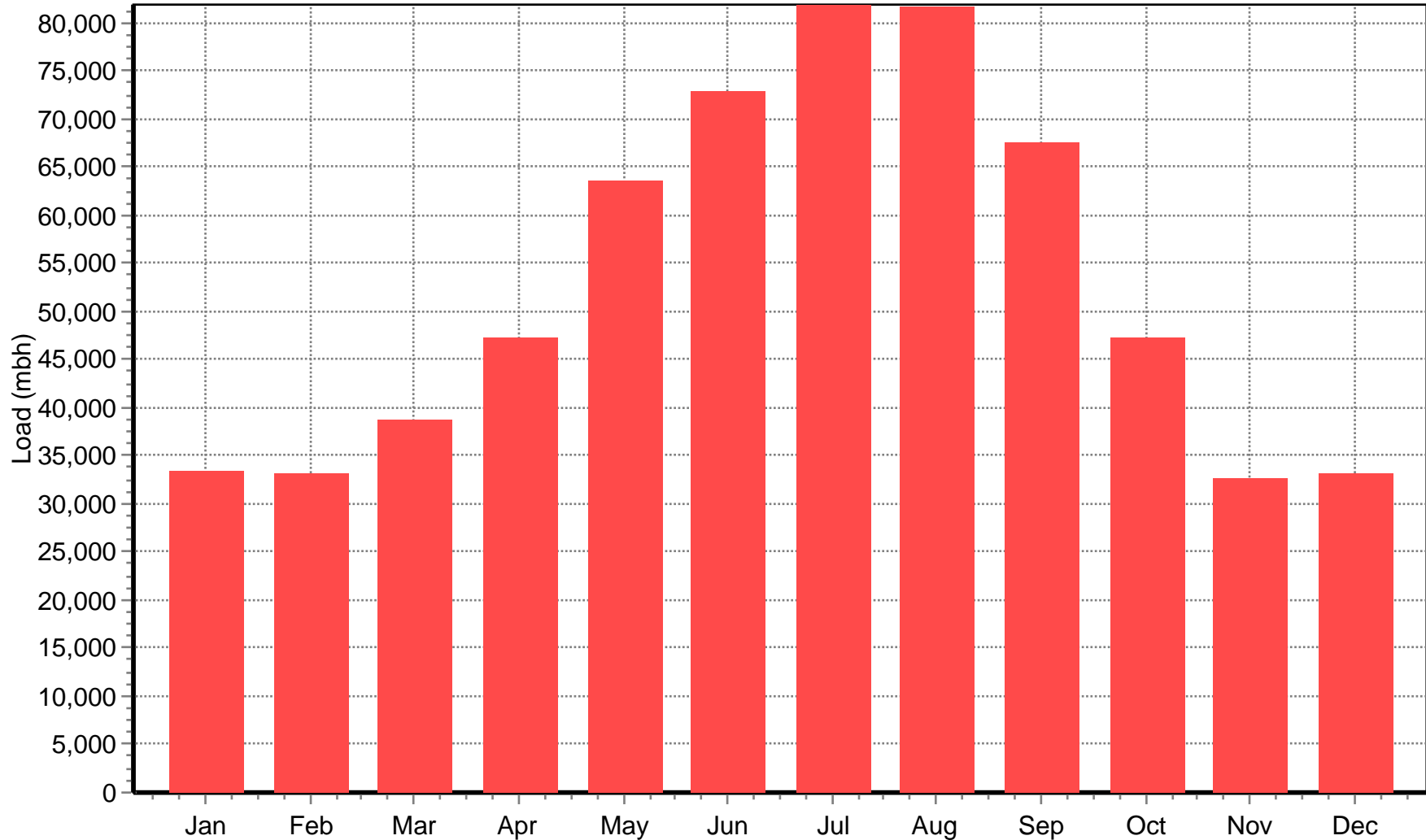
MakeUpAir Heater PRE-Heating by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Total RE-Heating Load

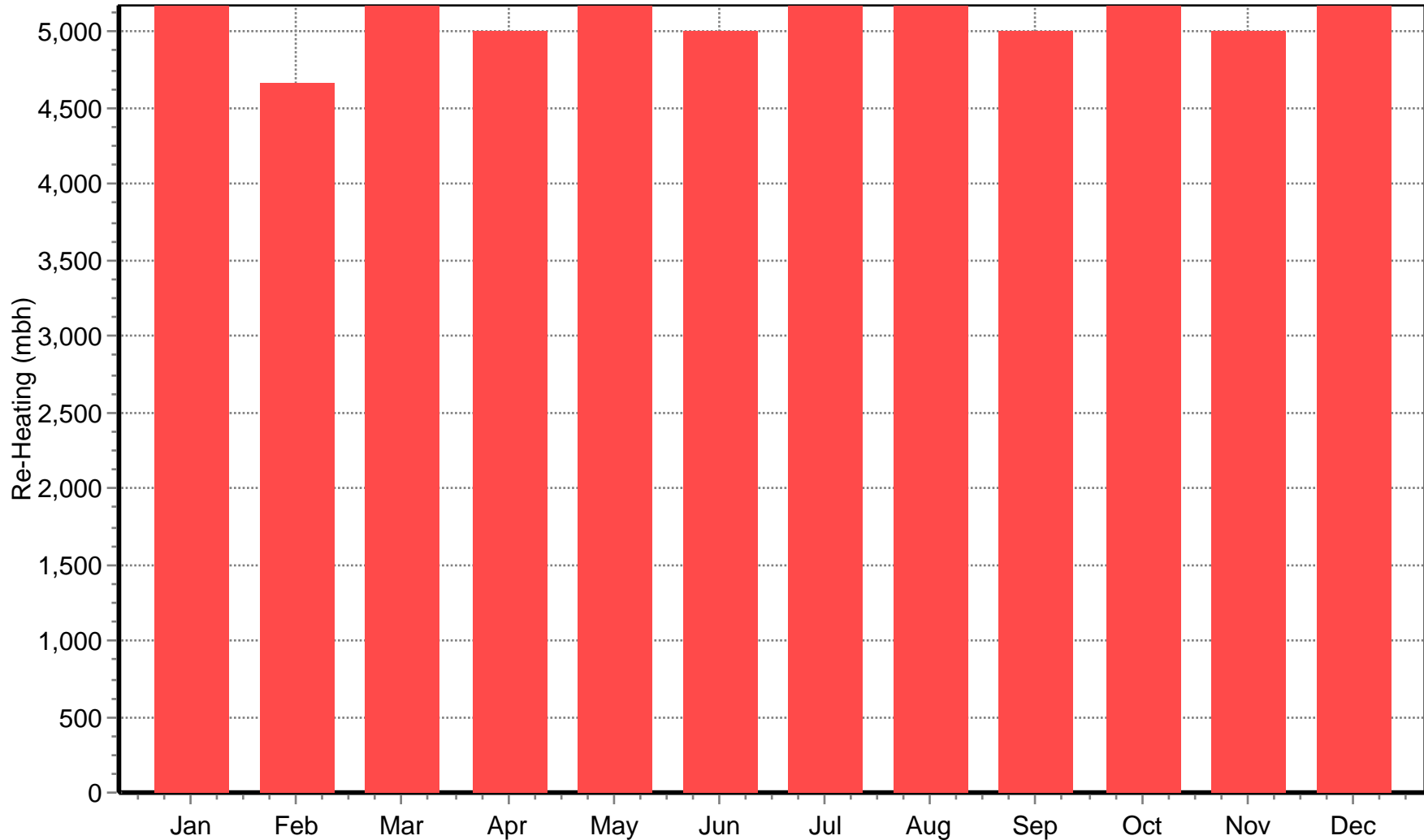
MakeUpAir Total RE-Heating Load by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Motor RE-Heating

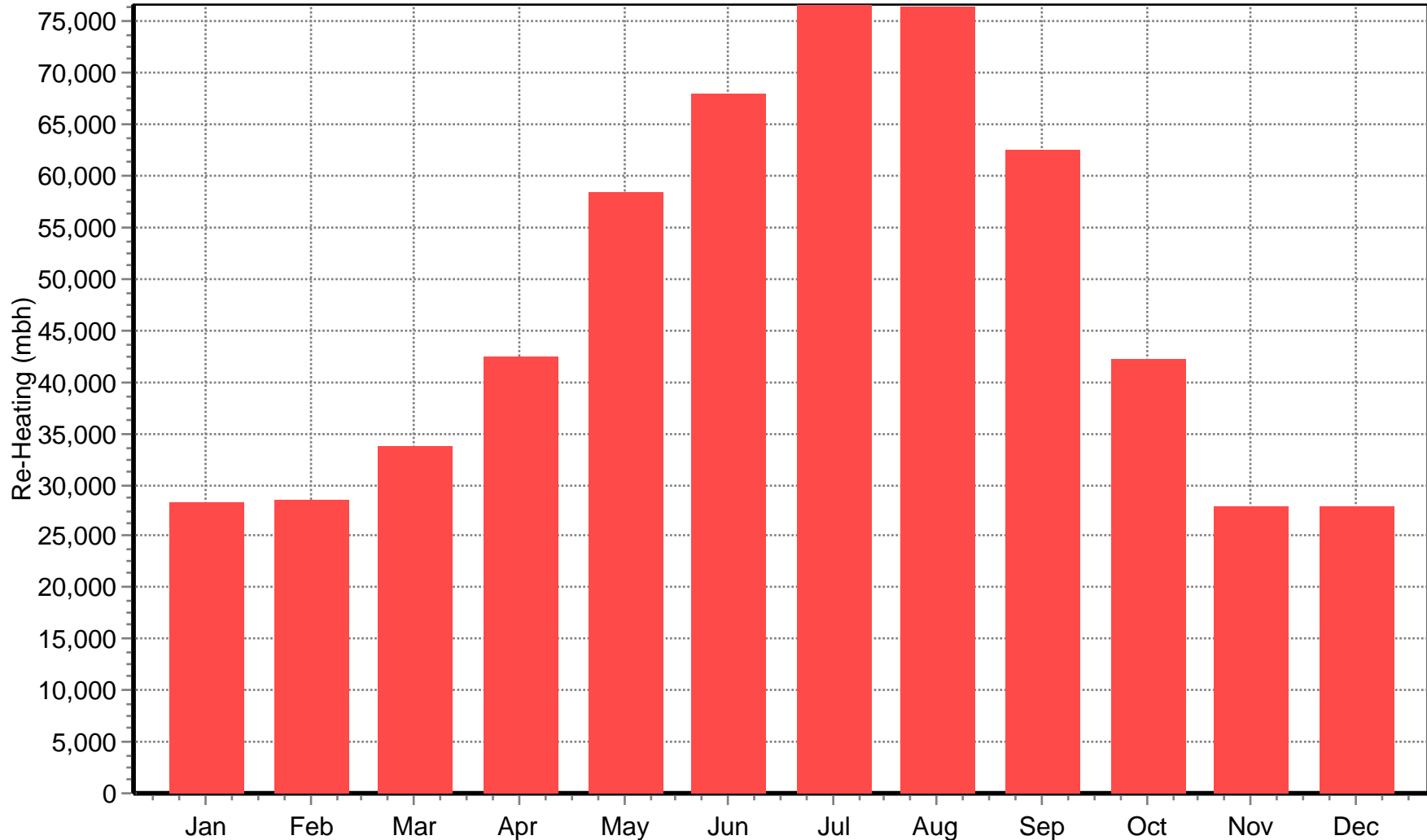
MakeUpAir Motor RE-Heating by Month



Note: Output values are estimates only and actual results may vary.

MakeUpAir Heater RE-Heating

MakeUpAir Heater RE-Heating by Month



Note: Output values are estimates only and actual results may vary.