

Missouri Residential Building Practices Study Measure Level Savings calculated by US DOE, PNNL 2016

State: **MO**

Fuel Prices	
electricity	0.12 \$/kWh
natural gas	1.15 \$/therm

Note: Savings from HVAC Right Sizing (Manual J Block Load) has not been included, pending PNNL analysis.

Annual (first year) Maximum Savings Potential: Lighting - 2009 IECC Baseline

	Electricity Savings (kWh/home)	Natural Gas Savings (therms/home)	Total Savings (kBtu/home)	Electric Peak Demand Savings (kW/home)*	No. of homes	Total Electricity Savings (kWh)	Total Natural Gas Savings (therms)	Total Energy Savings (MMBtu)	Total Electric Demand Savings (MW)*	Total Electricity Savings (\$)	Total Natural Gas Savings (\$)	Total Energy Cost Savings (\$)
4A	467.48	-6.17	977.96	0.13	10061	4,703,307	-62,085	9,839	1.35	577,566	-71,164	506,402
5A	456.07	-7.03	852.96	0.14	278	126,788	-1,955	237	0.04	15,570	-2,241	13,329
State Total	467.17	-6.19	974.58	0.13	10,339.00	4,830,095	-64,040	10,076	1.39	593,136	-73,405	519,731

Annual (first year) Maximum Savings Potential: Ceiling Insulation - 2009 IECC Baseline

	Electricity Savings (kWh/home)	Natural Gas Savings (therms/home)	Total Savings (kBtu/home)	Electric Peak Demand Savings (kW/home)*	No. of homes	Total Electricity Savings (kWh)	Total Natural Gas Savings (therms)	Total Energy Savings (MMBtu)	Total Electric Demand Savings (MW)*	Total Electricity Savings (\$)	Total Natural Gas Savings (\$)	Total Energy Cost Savings (\$)
4A	21.45	2.1	283.19	0.02	10061	215,791	21,129	2,849	0.17	26,499	24,219	50,719
5A	23.02	2.66	344.07	0.02	278	6,400	738	96	0	786	846	1,632
State Total	21.49	2.12	284.84	0.02	10339	222,191	21,867	2,945	0.17	27,285	25,065	52,351

Annual (first year) Maximum Savings Potential: Duct Leakage - 2009 IECC Baseline

	Electricity Savings (kWh/home)	Natural Gas Savings (therms/home)	Total Savings (kBtu/home)	Electric Peak Demand Savings (kW/home)*	No. of homes	Total Electricity Savings (kWh)	Total Natural Gas Savings (therms)	Total Energy Savings (MMBtu)	Total Electric Demand Savings (MW)*	Total Electricity Savings (\$)	Total Natural Gas Savings (\$)	Total Energy Cost Savings (\$)
4A	359.18	38.85	5110.46	0.02	10061	3,613,667	390,865	51,416	0.21	443,758	448,027	891,785
5A	333.91	36.33	4772.04	0.01	278	92,826	10,099	1,327	0	11,399	11,576	22,975
State Total	358.49	38.78	5101.32	0.02	10339	3,706,493	400,964	52,743	0.21	455,157	459,603	914,760

Annual (first year) Maximum Savings Potential: Exterior Wall Insulation - 2009 IECC Baseline

	Electricity Savings (kWh/home)	Natural Gas Savings (therms/home)	Total Savings (kBtu/home)	Electric Peak Demand Savings (kW/home)*	No. of homes	Total Electricity Savings (kWh)	Total Natural Gas Savings (therms)	Total Energy Savings (MMBtu)	Total Electric Demand Savings (MW)*	Total Electricity Savings (\$)	Total Natural Gas Savings (\$)	Total Energy Cost Savings (\$)
4A	142.04	17.6	2244.85	0.11	10061	1,429,030	177,096	22,585	1.11	175,485	202,995	378,480
5A	702.45	95.66	11962.32	0.51	278	195,282	26,592	3,326	0.14	23,981	30,481	54,462
State Total	157.17	19.71	2507.22	0.12	10339	1,624,312	203,688	25,911	1.25	199,466	233,476	432,942

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Annual (first year) Maximum Savings Potential: Window U-Factor - 2009 IECC Baseline

	Electricity Savings (kWh/home)	Natural Gas Savings (therms/home)	Total Savings (kBtu/home)	Electric Peak Demand Savings (kW/home)*	No. of homes	Total Electricity Savings (kWh)	Total Natural Gas Savings (therms)	Total Energy Savings (MMBtu)	Total Electric Demand Savings (MW)*	Total Electricity Savings (\$)	Total Natural Gas Savings (\$)	Total Energy Cost Savings (\$)
4A	31.6	7.22	829.71	0.03	10061	317,926	72,629	8,348	0.3	39,041	83,251	122,292
5A	42.73	9.49	1095.01	0.03	278	11,880	2,639	304	0.01	1,459	3,025	4,484
State Total	31.9	7.28	836.87	0.03	10339	329,806	75,268	8,652	0.31	40,500	86,276	126,776

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Annual (first year) Maximum Savings Potential: Basement Wall Insulation - 2009 IECC Baseline

	Electricity Savings (kWh/home)	Natural Gas Savings (therms/home)	Total Savings (kBtu/home)	Electric Peak Demand Savings (kW/home)*	No. of homes	Total Electricity Savings (kWh)	Total Natural Gas Savings (therms)	Total Energy Savings (MMBtu)	Total Electric Demand Savings (MW)*	Total Electricity Savings (\$)	Total Natural Gas Savings (\$)	Total Energy Cost Savings (\$)
4A	80.99	98.16	10092.53	0.08	10061	674,336	817,345	84,035	0.66	82,808	936,877	1,019,686
5A	254.21	132.22	14089.45	0.12	278	58,486	30,420	3,242	0.03	7,182	34,869	42,051
State Total	85.66	99.08	10200.45	0.08	10339	732,822	847,765	87,277	0.69	89,990	971,746	1,061,737

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	Electricity Savings (kWh/home)	Natural Gas Savings (therms/home)	Total Savings (kBtu/home)	Electric Peak Demand Savings (kW/home)*	No. of homes	Total Electricity Savings (kWh)	Total Natural Gas Savings (therms)	Total Energy Savings (MMBtu)	Total Electric Demand Savings (MW)*	Total Electricity Savings (\$)	Total Natural Gas Savings (\$)	Total Energy Cost Savings (\$)
TOTALS	1,121.88	160.78	19,905.28	0.40	10,339	11,445,719	1,485,512	187,604	4.02	\$1,405,534	\$1,702,761	\$3,108,297

* Total Electric Demand Savings are for a typical year and are not suitable for cumulative calculations. The demand estimates do not account for the impact of interactions of different building components in a given home, nor do they account for the coincident peak demand of the entire population.