



## GreenGuard® XP-Series Siding Underlayment

### UNDERLAYMENT ENERGY CHART

#### How To Read This Chart

1. Find the State and City 'Where You Live' or are closest to. Highlight that entire row.
2. Go to the section headed 'Your Current Heat Source' and select the current heating source used in your home – choose either **All Electric** or **Gas Heating / Electric Cooling**.
3. Then, follow the Heat Source column down to the header titled 'Your Current Insulation Level' and select the one that currently applies to your home – select either **Low Insulation** or **Moderate Insulation**.
4. Finally, follow that column down to the row that corresponds to 'Where You Live' to see the **estimated potential savings** you can achieve by installing two alternative grades of this product.

#### Example

1. Kansas City, MO
2. Electric Heat
3. Low Insulation
4. By adding 3/8" Kingspan GreenGuard® XP-Series Siding Underlayment, this homeowner saved approximately \$605 per year.

				2: Your Current Heat Source							
				All Electric				Gas Heat / Electric Cooling			
				3: Your Current Insulation Level							
				Low Insulation		Moderate Insulation		Low Insulation		Moderate Insulation	
1: Where You Live				4: Kingspan GreenGuard® XP-Series Siding Underlayment Thickness							
State	City	Heating Degree Days	Cooling Degree Days	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"
				\$	\$	\$	\$	\$	\$	\$	\$
AK	Anchorage	10570	0	909	1106	257	323	491	597	130	163
AL	Birmingham	2918	1797	330	402	101	126	215	262	65	82
AL	Montgomery	2224	2212	289	351	88	110	201	244	61	77
AR	Fort Smith	3478	1894	377	459	115	144	239	291	73	91
AR	Little Rock	3155	2005	347	422	106	133	222	270	68	85
AZ	Phoenix	1350	4162	191	232	58	73	137	167	42	52
AZ	Tucson	1678	2954	255	310	78	97	188	229	57	72
CA	Los Angeles	1458	727	174	212	53	66	116	141	35	44
CA	Sacramento	2666	850	271	330	83	104	166	201	50	63
CA	San Diego	1256	984	134	163	41	51	84	102	26	32
CA	San Francisco	3016	65	245	298	75	94	126	153	38	48
CO	Colorado Springs	6415	419	526	640	160	201	272	331	83	104
CO	Denver	6020	679	499	608	79	191	261	318	152	100
CO	Grand Junction	5548	1183	465	566	75	94	245	299	142	178
CT	Hartford	6151	677	522	636	85	199	279	339	159	106
DC	Washington	5006	973	433	527	132	165	235	286	71	90
DE	Wilmington	4937	1046	441	536	134	168	245	298	75	94
FL	Jacksonville	1434	2551	237	289	72	91	181	220	55	69
FL	Miami	200	4198	182	221	55	69	174	212	53	66
FL	Tampa	725	3427	189	230	58	72	161	195	49	61
GA	Atlanta	2991	1667	332	404	101	127	214	260	65	82

1: Where You Live				2: Your Current Heat Source							
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				Low Insulation				Moderate Insulation			
1: Where You Live				4: Kingspan GreenGuard® XP-Series Siding Underlayment Thickness							
State	City	Heating Degree Days	Cooling Degree Days	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"
				\$	\$	\$	\$	\$	\$	\$	\$
GA	Savannah	1847	2365	248	301	75	95	175	212	53	67
IA	Des Moines	6497	1036	564	687	172	215	307	374	93	117
ID	Boise	5861	754	488	594	149	186	256	312	78	98
IL	Chicago	6536	752	566	688	172	216	307	374	93	117
IL	Rock Island	6500	579	556	677	169	212	299	364	91	114
IL	Springfield	5688	1141	511	622	156	195	286	348	87	109
IN	Evansville	4708	1376	444	541	135	170	258	314	79	98
IN	Indianapolis	5615	1014	499	607	152	190	277	337	84	105
IN	Merrillville	6000	728	518	631	158	198	281	342	85	107
IN	South Bend	6331	728	542	660	165	207	292	355	89	111
KS	Topeka	5265	1304	490	596	149	187	282	343	86	107
KY	Lexington	4783	1140	445	542	136	170	256	312	78	98
KY	Louisville	4514	1288	427	519	130	163	248	302	75	95
LA	Baton Rouge	1669	2690	248	301	75	95	182	221	55	69
LA	New Orleans	1513	2655	234	285	71	89	174	212	53	66
LA	Shreveport	2264	2368	291	354	88	111	201	245	61	77
MA	Boston	5641	678	479	583	141	177	256	311	75	95
MD	Baltimore	4707	1137	435	529	132	166	248	302	76	95
MD	Cumberland	5200	1289	467	568	142	178	261	318	79	100
MD	Frederick	5090	670	461	561	140	176	260	316	79	99
ME	Bangor	8000	220	645	785	196	246	329	400	100	125
ME	Portland	7378	268	598	728	182	228	306	373	93	117
MI	Detroit	6569	626	553	673	169	211	294	357	89	112
MI	Grand Rapids	6973	534	585	311	178	223	309	376	94	118
MI	St. Marie	9316	131	745	906	227	284	376	457	114	143
MN	Duluth	9818	180	785	955	239	300	396	482	120	151
MN	Minneapolis	7981	682	661	804	201	252	345	420	105	131
MN	Rochester	8250	472	683	831	208	261	356	433	108	136
MO	Kansas City	5249	1043	497	605	151	190	290	353	88	110
MO	Springfield	4638	1320	446	543	136	170	263	320	80	100
MO	St. Louis	4758	1534	447	544	136	171	259	315	79	99
MS	Jackson	2467	2215	309	375	94	118	211	257	64	80
MT	Great Falls	7741	388	621	756	189	237	315	383	96	120

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1: Where You Live				4: Kingspan GreenGuard® XP-Series Siding Underlayment Thickness							
State	City	Heating Degree Days	Cooling Degree Days	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"
				\$	\$	\$	\$	\$	\$	\$	\$
MT	Helena	8031	386	644	784	196	246	326	397	99	124
NC	Ashville	4308	787	402	489	122	153	231	281	70	88
NC	Charlotte	3341	1582	352	429	107	135	220	268	67	84
NC	Greensboro	3848	693	379	461	115	145	227	276	69	87
NC	Raleigh	3465	828	352	428	107	134	215	261	65	82
NC	Wilmington	2429	1005	270	328	82	103	174	211	53	66
ND	Bismarck	8968	488	734	894	224	280	380	462	115	145
NE	Omaha	6413	1037	567	689	173	216	313	381	95	119
NH	Concord	7554	328	624	760	190	238	325	396	99	124
NJ	Newark	4888	1201	437	532	133	167	244	297	74	93
NM	Albuquerque	4425	1244	400	487	122	153	225	274	68	86
NM	Roswell	3267	1776	334	406	102	127	205	249	62	78
NV	Las Vegas	2407	3201	246	300	75	94	151	184	46	58
NY	Albany	6894	507	581	706	177	222	308	375	94	117
NY	Buffalo	6747	477	558	679	170	213	291	354	88	111
NY	New York	5027	921	447	544	136	171	248	301	75	94
NY	Rochester	6713	229	558	679	170	213	293	356	89	112
NY	Syracuse	6785	195	568	691	173	217	299	364	91	114
OH	Akron / Canton	6148	270	519	631	158	198	275	335	84	105
OH	Cincinnati	4410	636	411	500	125	157	237	288	72	90
OH	Cleveland	6097	302	522	635	159	199	281	342	85	107
OH	Columbus	5708	797	497	604	151	190	271	329	82	103
OK	Dayton	5678	657	499	607	152	190	274	333	83	104
OK	Oklahoma City	3659	1859	387	471	118	148	243	295	74	93
OK	Tulsa	3691	2017	401	488	122	153	255	311	78	97
OR	Portland	4522	371	367	446	112	140	188	228	57	72
PA	Allentown	6409	378	553	672	168	211	299	364	91	114
PA	Harrisburg	5201	488	454	553	138	173	249	302	76	95
PA	Lancaster	5400	350	476	580	145	182	263	320	80	100
PA	Philadelphia	4954	1101	443	539	135	169	247	300	75	94
PA	Pittsburgh	5968	654	516	627	157	197	279	340	85	107
RI	Providence	5884	606	496	603	151	189	263	320	80	100
SC	Charleston	2013	2266	259	315	79	99	179	218	54	68

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1: Where You Live				4: Kingspan GreenGuard® XP-Series Siding Underlayment Thickness							
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				\$	\$	\$	\$	\$	\$	\$	\$
SC	Columbia	2649	1966	309	376	94	118	204	248	62	78
SC	Greenville	3272	1473	346	421	105	132	216	263	66	82
SD	Pierre	7283	550	617	750	188	236	329	400	100	125
TN	Knoxville	3937	1266	391	476	119	149	235	286	71	90
TN	Memphis	3082	2118	332	404	101	127	210	256	64	80
TN	Nashville	3729	1616	380	462	116	145	232	283	71	89
TX	Amarillo	4258	1354	412	501	125	157	243	296	74	93
TX	Dallas / Ft. Worth	2370	1787	300	365	91	114	206	251	63	79
TX	Houston	1599	2700	257	313	78	98	194	236	59	74
TX	Lubbock	3422	1053	365	444	111	139	230	279	70	88
UT	Salt Lake City	5765	1047	487	592	148	186	259	315	79	99
UT	St. George	3103	1684	312	380	95	119	189	231	58	72
VA	Norfolk	3495	1422	352	428	107	134	214	260	65	82
VA	Richmond	3963	1348	388	472	118	148	231	281	70	88
VA	Roanoke	4360	1052	410	499	125	157	238	289	72	91
VT	Burlington	7771	388	633	770	193	242	326	396	99	124
WA	Seattle	4908	167	392	477	119	150	198	241	60	76
WI	Spokane	6842	398	552	672	168	211	281	342	85	107
WI	Green Bay	8089	381	657	800	200	251	337	410	103	129
WI	Madison	7499	242	623	758	190	238	326	397	99	124
WI	Milwaukee	7324	479	607	739	185	232	317	386	96	121
WV	Charleston	4646	1031	426	519	123	154	243	295	70	88
WY	Casper	7534	149	611	744	186	233	313	381	95	119
WY	Cheyenne	7326	285	592	720	180	226	302	367	92	115

Assumptions used in model:  
 2,000 square feet of resided wall area • Heating efficiencies 70% for gas and 100% for electric resistance • Cooling unit with 7.0 seasonal efficiency rating (SEER) • Natural gas price – \$1.22 per CCF (100 cubic feet or 1 therm) • Electricity price – \$0.118 per kwh (based on 2011 data).

Heating and Cooling Degree Days are a measure devised by the U.S. Department of Energy to describe the variability of temperature over time, during a year, from a base of 65°F.

This is an estimate of savings potential from added R-value, not a promise of realized savings.

This estimate does not constitute an express or implied guarantee of energy savings. It is intended only as an illustration of the difference of added R-value where all other conditions are equal. The estimate of savings is based on the assumptions as stated, which are standardized numbers. Actual conditions for any given period of time vary for each home and lifestyle. Actual savings will be determined by many factors impossible to include in an energy model.



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