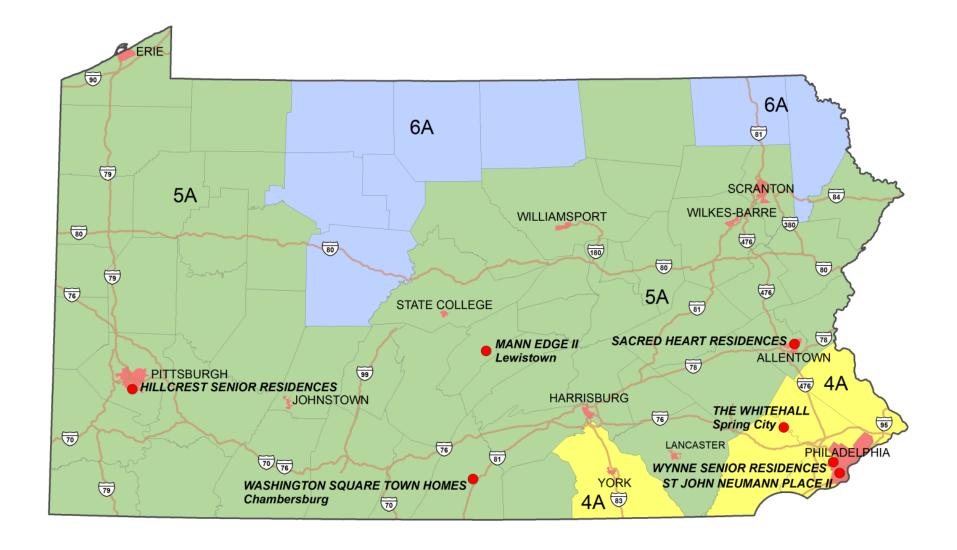
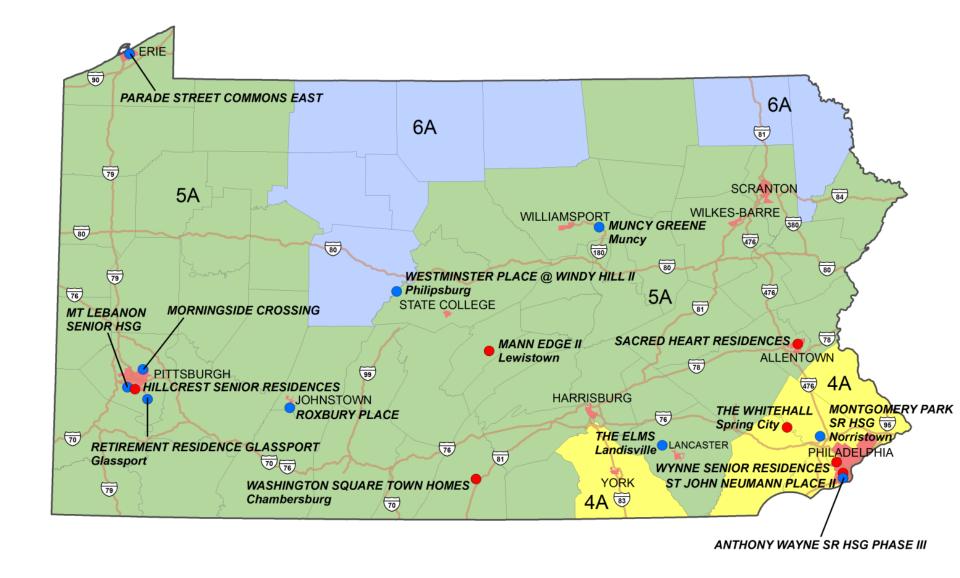
## PHFA and Passive House 2015 - 2016



20157 Passive House projects funded



2016
10 additional Passive House projects funded

## 2015 Cost Comparison

					-				sts		Applicati		
					20.00							-	
	Proj. No.	County	Climate Zone	0	its (b	2	3	4+	Total Units	Resid. Bldg. Area	Resid. Constr. \$	\$ /Unit	\$/SF
	SF-1	Franklin	5A			33	21		54	70,218	7,051,522	130,584	10
	SF-2	Schuylkill	5A	¥	3	9	5	-	17	21,151	2,238,725	131,690	10
	SF-3	Philadelphia	4A		5	19	31	5	60	79,795	9,363,626	156,060	11
	SF-5	Lycoming	5A		16	34			50	66,147	8,141,437	162,829	12
	SF-6	Bradford	5A		10	24	16		50	62,956	7,984,823	159,296	12
	SF-4	Allegheny	5A			26	19		45	63,548	8,863,631	196,970	13
Ф	SF-7	Centre	5A		13	20	20	-	40	53,652	7,523,233	188,081	14
120	SF-8	Lebanon	5A		9	46	16		62	84,168	11,742,459	189,395	14
Townhouse	SF-9	Bradford	5A	1	2	26	12	- 8	40	59,954	8,369,296	209,232	14
Ė	SF-10	Butler	5A		3	39	18		60	67,904	9,827,275	163,788	14
8	SF-11	Erie	5A			9	34		43	53,454	7,870,669	183,039	14
Ĕ	SF-12	Dauphin	5A		3	3	25	4	35	61,504	9,192,750	262,650	14
2	SF-13	Berks	5A	3	22	20	16		58	62,097	9,305,340	160,437	15
Family	SF-14	Franklin	5A		7	25	24		56	77,469	11,791,991	210,571	15
a	SF-15	Luzeme	5A		26	15	15		56	56,250	8,968,491	160,152	15
-	SF-16	Union	5A	8	5	12	8	6	31	43,868	7,071,066	228,099	16
Single	SF-17	Chester	4A		48	12	- 6		60	58,349	9,809,238	163,487	16
=	SF-18	Allegheny	5A		4	30	18		52	77,351	12,979,386	249,604	16
ഗ	SF-19	Berks	5A	3	10	21	11		42	57,722	9,785,000	232,976	17
	SF-20	Montgomery	4A	1	16	24	15		55	61,480	11,113,700	202,087	18
	SF-21	Delaware	4A		8	34	14		56	65,790	12,184,074	217,573	18
	SF-24	Westmoreland	5A	8	28	8	33	2	36	43,872	8,331,567	231,432	19
	SF-22	Philadelphia	4A		93	17	16	2	35	45,476	8,905,240	254,435	19
	SF-23	Allegheny	5A	1	14	9			23	28,205	5,552,583	241,417	19
	SF-25	Philadelphia	4A		10	19	11	- 3	40	46,757	11,453,809	286,345	24

	market and		Climate Zone		Units	(by B	R Qty	()	Total	Resid.	Resid.		-0105
	Proj. No.	County		0	1	2	3	4+	Units	Bldg. Area	Constr. \$	\$ /Unit	\$/SF
	AR-1	Lehigh	5A		34	4	11		49	65,339	6,392,809	130,465	9
	AR-2	Erie	5A		29	16	9 0		45	53,021	6,152,972	136,733	11
	AR-3	Philadelphia	4A	12	54	- 1	1 10		66	77,975	9,751,707	147,753	12
10231	AR-4	Allegheny	5A	2	49	4			55	65,577	9,514,764	172,996	14
Se	AR-5	Delaware	4A		53				53	51,690	8,030,480	151,518	15
Reuse	AR-7	Montgomery	4A		33	3	7		43	55,832	9,119,564	212,083	163
œ	AR-6	Philadelphia	4A		44	- 3			44	49,406	8,381,579	190,036	16
e	AR-8	Philadelphia	4A		5 55	28	10		38	53,840	9,515,893	250,418	17
Adaptive	AR-9	Dauphin	5A	5	17	6			28	45,434	8,075,084	288,395	17
ab	AR-15	Philadelphia	4A		62		8 00		62	70,991	13,117,091	211,566	18
P	AR-10	Allegheny	5A		33	3			36	50,664	9,436,523	262,126	18
•	AR-11	Philadelphia	4A		46				46	56,478	10,795,027	234,675	19
	AR-12	Philadelphia	4A		27	10			37	48,768	9,658,098	261,030	19
	AR-13	Philadelphia	4A		30	21	3 0		51	62,509	13,609,683	266,857	21
	AR-14	Washington	4A		17	7	2 (3)	3	24	35,299	7,856,113	327,338	22

		Constru	action C	os	t S	um	ma	iry	fron	n PHFA	Applicati	ions	
						20	15	Co	sts				
	Proj. No.	County	Climate Zone	0	Units 1	(by B	R Qty	r) 4+	Total Units	Resid. Bldg. Area	Resid. Constr. \$	\$ /Unit	\$/SF
	MS-1	Northumberland	5A		35			7	35	40,397	4,276,084	122,174	106
	MS-2	Dauphin	5A	95 3	22	14	14	10 01	50	88.314	9.980.562	199,611	113
	MS-3	Dauphin	5A	8 3	18	59		1 10	77	92.000	10.528.511	136,734	114
	MS-4	Lancaster	5A		46	6			52	71.758	8.456.719	162,629	118
	MS-5	Blair	5A		33	20			53	82.070	9.727.007	183.528	119
	MS-6	Chester	4A	57 - P	46	15			61	76.340	9,638,964	158,016	126
	MS-7	Lancaster	5A	8	13	39	26	7 7	78	88,910	11,681,226	149.759	131
	MS-8	Clearfield	6A	00 0	24	8		4	30	42.254	5.551.584	185.053	131
	MS-9	Indiana	5A	% 3	40			0 0	40	36.743	4.898.995	122,475	133
	MS-10	Bradford	5A		50	6			56	57.817	7.738.172	138,182	134
	MS-25	Centre	5A		-	12			12	16.796	2 333 900	194,492	139
	MS-11	Cambria	5A		32	11			43	44.887	6.341.616	147,479	141
	MS-12	Dauphin	5A	-	38	16			54	58.335	8.201.250	151.875	141
	MS-13	Mifflin	5A		30	4		0. 0.	34	39,447	5,559,187	163,506	141
	MS-14	Fayette	5A	4.	12	12		1	24	29,586	4.192.325	174,680	142
	MS-20	Fayette	5A	8 3	21	3			24	36,064	5.144.971	214.374	143
	MS-15	Allegheny	5A	60, 3	24	12	13		49	67,340	9.698.634	197.931	144
	MS-16	Lackawanna	5A	00 0	44	4	10	1 1	48	49.460	7,159,738	149,161	145
Multi-Story / Elevator	MS-17	Lehigh	5A		54	7			61	63,949	9,318,159	152,757	146
/a	MS-18	Centre	5A		37	11			48	57,959	8,490,644	176,888	146
<u>e</u>	MS-19	Chester	4A	NN 6	41	3	5	7 13	49	54,287	8,007,477	163,418	148
Ш	MS-21	Chester	4A	3. 3	61	3	9	2 7	64	70.083	10.557.500	164,961	151
>	MS-21	Allegheny	5A	2 2	54	12			66	70,083	10,787,052	163,440	153
ō	MS-23	Allegheny	5A	24. 3	40	8		1 /	46	58,617	9.134.790	198.582	156
Š	MS-24	Wayne	6A	27 - 7	36	4			40	40.959	6.460.530	161,513	158
≢	MS-26	Beaver	5A	(A) (A)	40	12		8 8	52	55,361	9.468.440	182.085	171
₹	MS-27	Lancaster	5A	8. 5	51	12		2 2	51	51,500	8.871.635	173.954	172
1000	MS-28	Allegheny	5A		52	8		5,0 5,0	60	66.733	11,716,729	195,279	176
	MS-29	Montgomery	4A		40	4			44	44.687	8.202.314	186,416	184
	MS-30	Montgomery	4A	20 0	50	-		-	50	42.265	8.029.015	160,580	190
	MS-31	Crawford		0 0				-	-				
	MS-32	Philadelpia	5A	00 0	36 9	8	7	5 0	40	38,953	7,490,675	187,267	192
	MS-32	Westmoreland	4A 5A	27 3	47	8	/	× 2	24	31,220	6,031,050	251,294	193
	MS-34	Philadelphia		2 2	58	4		10 53	47 62	49,080	9,825,224	209,047	200
	MS-35	Philadelphia	4A 4A	60	28	4		-	60	56,120 57,672	11,262,762	181,657	201
	MS-36	Philadelphia	4A 4A	00	20	4		-	24	26,284	5,523,620	230,151	210
	MS-37	Philadelphia	4A	8 3	34	11		ğ B	45	42,523	8,984,723	199,216	210
	MS-38	Philadelphia	4A		52	11			52	50,275	10,703,403	205,835	213
	MS-39	Philadelphia	4A	7	39	11		-	50	53,416	11,371,112	227,422	213
	MS-40	Philadelphia	4A	80 0	45	5		R 2	50	55,099	11.747.269	234.945	213
	MS-41	Philadelphia	4A	8 1	24	1		8. 3	24	24,284	5,194,462	216,436	214
	MS-42	Philadelphia	4A		45				45	46,754	10.118.014	224.845	216
	MS-43	Philadelphia	4A		53				53	50,312	10,900,733	205,674	217
	MS-44	Philadelphia	4A	C	54	-		-	54	48,965	10,664,381	197,489	218
	MS-45	Philadelphia	4A	88		g 8			88	79,650	17,553,862	199,476	220

32 of 85 applications certified to meet Passive House standards

## 2016 Cost Comparison

	51		Construc	tion					HFA 201	6 Application			
	Proj. No.	County	Climate		Unit	s by B	R Qty		Total	Resid. Bldg.	Resid.	\$ / Unit	s / si
	. roji itor	county	Zone	0	1	2	3	4+	Units	Area	Constr. \$	97 01111	V / U
	SF-01	Dauphin	5A		14	16	15	15	60	99,625	10,419,031	173,651	108
	SF-02	Lebanon	5A		9	32	14	76 57	55	78,627	8,446,000	153,564	10
	SF-03	Lycoming	5A		20	40			60	82,730	9,436,382	157,273	11
	SF-04	Columbia	5A	0	25 8	7	17	8 9	24	48,499	5,669,777	236,241	117
	SF-05	Philadelphia	4A		5	19	31	5	60	79,795	9,739,093	162,318	12
	SF-06	Wyoming	5A			30	12	z 65	42	72,100	9,168,380	218,295	12
	SF-07	Erie	5A		8	20	18		46	85,819	10,964,900	238,367	12
	SF-08	Lancaster	5A		6	33	21		60	78,825	10,259,118	170,985	130
	SF-09	Cumberland	5A			18	34		52	75,275	9,921,606	190,800	133
	SF-10	Centre	5A		6	24	18		48	75,737	10,193,457	212,364	133
	SF-11	Lehigh	5A		19	27	16	0.0	62	71,254	9,631,860	155,353	133
e	SF-12	Lancaster	5A		41	79	18	9 6	138	154,370	21,137,388	153,169	137
S	SF-13	Erie	5A	4	2	9	31	8	40	53,454	7,870,669	196,767	14
든	SF-14	Montgomery	4A		ġ į	19	29	8 8	48	59,976	8,858,000	184,542	14
Single Family / Townhouse	SF-15	Lebanon	5A		, ,	49	13	0 5	62	82,974	12,349,192	199,181	149
_	SF-16	Cumberland	5A		25 8	10	30	10	50	72,707	10,865,524	217,310	149
~	SF-17	Schuylkill	5A		1	11	5		17	21,544	3,225,548	189,738	150
E	SF-18	Berks	5A		10	21	11		42	57,722	8,755,000	208,452	157
E E	SF-19	Berks	5A		22	20	16		58	62,097	9,440,383	162,765	157
18	SF-20	Franklin	5A		6	21	21		48	66,583	10,404,256	216,755	156
Si	SF-21	Lehigh	5A		9	15	20	4	48	53,333	8,377,963	174,541	15
	SF-22	Chester	4A		19	18	11	S 00	48	58,541	9,248,927	192,686	150
	SF-23	Cumberland	5A		5	22	8	0.0	35	44,186	7,656,200	218,749	17
	SF-24	Montgomery	4A		8	21	15	6	50	65,907	11,589,411	231,788	176
	SF-25	Allegheny	5A		35	16	14	S - 33	65	87,255	15,376,648	236,564	17
	SF-26	Delaware	4A		8	34	14	0 8	56	65,212	11,914,849	212,765	18
	SF-27	Philadelphia	4A			17	16	2	35	45,476	9,441,620	269,761	20
	SF-28	Armstrong	5A			24			24	28,812	6,017,450	250,727	209
	SF-29	Philadelphia	4A			28	14		42	47,964	10,022,268	238,625	20
	SF-30	Philadelphia	4A		11	10	11		32	31,619	6,732,433	210,389	21
	SF-31	Philadelphia	4A		8	19	24	4	55	66,383	19,011,723	345,668	28
	SF-32	Philadelphia	4A	45		8	-	0 75	45	23,302	7,408,602	164,636	31

	Construction Cost Summary for PHFA 2016 Applications													
	Dual Na	County	Climate Zone		Unit	s by B	R Qty	1	Total	Resid. Bldg.	Resid. Constr. \$	\$ / Unit	\$ / SF	
	Proj. No.	County		0	1	2	3	4+	Units	Area			5 / SF	
	AR-01	Monroe	5A		36	4	97	9 10	40	54,215	5,753,672	143,842	106	
	AR-02	Luzerne	5A	6	54	2		100	62	88,489	9,900,711	159,689	112	
si.	AR-03	Philadelphia	4A	12	54	Z.	100	Ç 33	66	77,978	10,123,117	153,381	130	
Reuse Bidgs.	AR-04	Allegheny	5A	8	33	8	-	8 - 32	41	70,409	9,181,888	223,948	130	
e B	AR-05	Butler	5A	8	44	18	à l		62	73,114	10,046,992	162,048	137	
Sna	AR-06	Washington	5A	8	24		2	a 16.	24	41,046	6,169,663	257,069	150	
	AR-07	Allegheny	5A	2	49	4			55	65,190	10,592,039	192,583	162	
Adaptive	AR-08	Delaware	4A		50				50	50,548	8,727,828	174,557	173	
ab	AR-09	Philadelphia	4A		60				60	65,041	11,803,992	196,733	181	
Ad	AR-10	Philadelphia	4A		74				74	93,285	20,223,060	273,285	217	
	AR-11	Philadelphia	4A	20	37			2 23	57	63,960	14,005,881	245,717	219	
	AR-12	Perry	5A		28	3		2 (2	31	36,152	8,548,665	275,763	236	

1			Construc	tion	Cost	Sumr	nary	for PH	IFA 201	6 Application	S		
	A CONTRACTOR	12/2007/00	Climate	0	Unit	s by B	R Qty		Total	Resid. Bldg.	Resid.	Vigorous and	Acres 6
	Proj. No.	County	Zone	0	1	2	3	4+	Units	Area	Constr. \$	\$ / Unit	\$/SF
	MS-01	Berks	5A		40	20			60	62,149	7,432,636	123,877	120
	MS-02	Tioga	6A	57	34	6		W 20	40	48,735	5,999,734	149,993	123
	MS-03	Dauphin	5A	- 13	35	2		8 8	37	43,964	5,421,065	146,515	123
	MS-04	Bradford	5A	- 35	38	12	6	. F	56	63,768	8,446,000	150,821	132
	MS-05	Lancaster	5A	93	46	6			52	92,370	12,565,629	241,647	136
	MS-06	Fayette	5A		12	12			24	28,904	3,942,323	164,263	136
	MS-07	Cambria	5A		32	11			43	49,491	6,879,001	159,977	139
1	MS-08	Clearfield	6A		24	6			30	41,915	5,855,263	195,175	140
1	MS-09	Chester	4A		56	3			59	64,180	9,033,100	153,103	141
4	MS-10	Centre	5A	- 22	16	34			50	60,912	8,666,068	173,321	142
4	MS-11	Clinton	5A	67	28	4		(S) (F)	32	37,454	5,333,806	166,681	142
1	MS-12	Allegheny	5A	20	24	12	13	(K 1)	49	67,340	9,698,634	197,931	144
	MS-13	Luzerne	5A	25	32	3		(S)	35	44,543	6,503,636	185,818	146
	MS-14	Dauphin	5A	- 33	20			8	20	19,157	2,803,860	140,193	146
	MS-15	Butler	5A	- 3	68			e 9	68	66,845	9,821,302	144,431	147
	MS-16	Westmoreland	5A		15	13	8		36	46,095	6,855,424	190,428	149
	MS-17	Lackawanna	5A		12	12	8	4	36	50,019	7,560,000	210,000	151
	MS-18	Northumberland	5A		32				32	38,240	5,789,694	180,928	151
	MS-19	Centre	5A	Ü	37	11			48	57,959	8,781,136	182,940	152
100	MS-20	Lackawanna	5A		44	4			48	49,460	7,493,999	156,125	152
Bu	MS-21	Allegheny	5A	231	30	34		e5 e	64	69,605	10,837,117	169,330	156
Ē	MS-22	Dauphin	5A	(2)	43	11		(9) y	54	51,319	8,411,465	155,768	164
Bu	MS-23	Montgomery	4A	- 67	60	0 0		0 7	60	58,681	9,643,959	160,733	164
ō	MS-24	Adams	5A	20	39	4		(S)	43	50,532	8,515,443	198,034	169
vat	MS-25	Clarion	5A	- 8	48	S 19		8 8	48	53,668	9,090,720	189,390	169
Ele	MS-26	Allegheny	5A	- 8	40	6		9 3	46	56,969	10,124,143	220,090	178
Multi-Story / Elevator Buildings	MS-27	Allegheny	5A	- 5.	28	8			36	42,500	7,582,274	210,619	178
6	MS-28	Chester	4A		47	13			60	61,551	10,982,435	183,041	178
-S	MS-29	Delaware	4A		38	3			41	47,797	8,539,207	208,273	179
불	MS-30	Allegheny	5A		52	8			60	63,861	11,647,354	194,123	182
Σ	MS-31	Philadelphia	4A		37	44			81	93,000	17,635,125	217,718	190
1	MS-32	Crawford	5A	- 22	36	4		0 0	40	38,953	7,552,475	188,812	194
1	MS-33	Westmoreland	5A	-	47	-			47	49,080	9,801,657	208,546	200
2	MS-34	Bucks	4A	- 50	56	10			66	61,576	12,448,922	188,620	202
1	MS-35	Lycoming	5A	5-	23	11		· ·	34	35,437	7,169,151	210,857	202
	MS-36	Philadelphia	4A	20	61	(S) (S)		(K 1)	61	60,137	12,416,322	203,546	206
	MS-37	Bradford	5A	- 6	40	10		1	50	56,580	11,852,026	237,041	209
4	MS-38	Philadelphia	4A	- 0	58	4		0 0	62	57,653	12,079,768	194,835	210
3	MS-39	Philadelphia	4A	-	52				52	46,619	9.903.739	190,457	212
	MS-40	Philadelphia	4A	60		10 10		0	60	56,672	12,174,301	202,905	215
	MS-41	Philadelphia	4A	68	45	S 10		10 10	45	48,351	10,464,750	232,550	216
5	MS-42	Montgomery	4A	(8)	50	0 0		0 0	50	42,265	9,236,729	184,735	219
-	MS-43	Allegheny	5A	- 8	29	4		Q 9	33	37,592	8,284,054	251,032	220
	MS-44	Philadelphia	4A	- 32	46	4		(C)	50	46,640	10,701,164	214,023	229
	MS-45	Philadelphia	4A		53				53	50,312	11,711,200	220,966	233
	MS-46	Philadelphia	4A		34	11			45	42,520	10,560,747	234,683	248
1	MS-47	Philadelphia	4A	- 17	24				24	24,284	6,040,593	251,691	249
	MS-48	Philadelphia	4A	-	60				60	65,340	17,249,402	287,490	264
	MS-49	Luzerne	5A	- 8	36	23 7		53 5	36	27,296	7,653,000	212.583	280
- 0	MS-50	Philadelphia	4A	- 53	48	B 9		3 -	48	46,000	12,915,822	269,080	281

27 of 94 applications certified to meet Passive House standards

## Increases in Construction Costs from Application to Construction Closing 2015 Projects

(Application costs are based on schematic drawings and specs)

- 2 projects: Approx. 1.5%
- 2 projects: Approx. 3%
- 2 projects: Approx. 9%
- 1 project: Approx. 13%



The Whitehall – Spring City



Sacred Heart Residences - Allentown



Hillcrest Senior Residences - Pittsburgh