



2017 Annual Report
**Implementation of Energy
Efficient Manufactured
Homes Incentive Program**

Section 48-52-870, Code of Laws of South Carolina

Annual Report on the Implementation of Energy Efficient Manufactured Homes Incentive Program

Pursuant to Section 48-52-870, South Carolina Code of Laws

October 2018

This document may be downloaded from the State Energy Office website

ENERGY.SC.GOV/Residential

South Carolina Office of Regulatory Staff

Energy Office

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Background

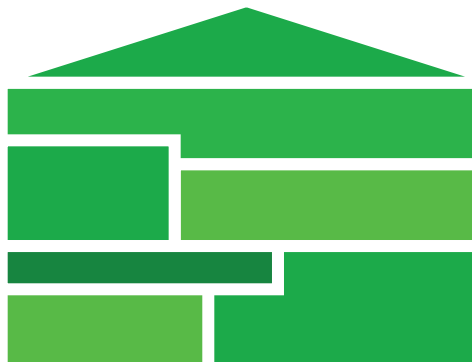
State Energy Office

The 1992 South Carolina Energy Efficiency Act established the State Energy Office (Energy Office) within the South Carolina Budget and Control Board to serve as the principal energy planning entity for the state. In 2015, the Budget and Control Board was dissolved, and the Energy Office was established within the Office of Regulatory Staff. The Energy Office carries out the state policy and programs mandated by the General Assembly and also administers the State Energy Program funded by the U.S. Department of Energy (DOE).

**Approximately
16 percent of
South Carolinians live in
manufactured housing,
one of the highest
percentages in
the nation.**

Manufactured homes are defined as homes built in a factory and transported to the site under a federal code administered by the U.S. Department of Housing and Urban Development. The federal standards went into effect in 1976. It should be noted that modular homes, also built in a factory, are constructed to state or regional building codes in the areas where they will be located.

According to the U.S. Census American Community Survey, 16.5 percent of South Carolinians were estimated to live in mobile homes (or “other” housing) in 2016. Further, the Survey reported that southeastern states (Alabama, Florida, Georgia, Kentucky, Mississippi, the Carolinas and Tennessee) accounted for 37 percent of manufactured home sales in 2016. According to the Corporation for Enterprise Development, “Owners of manufactured homes are disproportionately low-income: in 2013, the median annual household income for those living in manufactured housing was \$30,000, versus a national median of \$50,300. About 75 percent of manufactured home households earn less than \$50,000.”¹



¹U.S. Census Bureau; 2015 American Housing Survey; generated by Darcy Jones; using AHS Table Creator; <<https://www.census.gov/programs-surveys/ahs/data/interactive/ahstablecreator.html>>; (16 August 2018).

South Carolina Energy Efficient Manufactured Homes Programs

Energy Efficient Labeling Program

In 1992, the South Carolina General Assembly passed legislation designed to increase energy efficiency in manufactured homes sold in the state. Sections 12-36- 2110(B) and 40-29-360 of the South Carolina Code of Laws specify criteria for energy-efficient manufactured homes. Manufacturers constructing homes that meet the criteria may order labels from the Energy Office and affix the labels to the more energy-efficient homes. Individuals who purchase these energy-efficient homes would pay no more than \$300 in state sales tax on the home. Buyers of homes that do not meet the energy-efficient criteria would pay an additional two percent in state sales tax.

The program was originally managed by the SC Department of Labor, Licensing and Regulation. In 1998, the Energy Office assumed responsibility for managing the program. Initially, approximately 16 percent of all purchased manufactured homes met the more stringent energy efficiency criteria established by state legislation. After 11 years, between 70 and 80 percent of homes sold met these higher-level criteria (Manufactured Housing Institute of SC, 2008). The Energy Office estimates that these energy efficiency standards may have saved South Carolinians as much as \$130 million over the expected life of homes purchased, based on an estimated annual savings of \$152 for a standard manufactured home and \$252 in annual savings for a doublewide home. However, as industry standards improved, the amount of savings that can reasonably be attributed to the labeling program decreased.

1998: 16% met energy efficiency criteria
2008: 70-80% met energy efficiency criteria

Table 1: Energy Efficient Labels Requested by Manufacturers 1998-2017

Year	Labels Requested
1998	10,349
1999	11,722
2000	5,860
2001	5,595
2002	4,180
2003	3,182
2004	2,360
2005	2,331
2006	2,000
2007	1,820
2008	1,660
2009	1,175
2010	1,935
2011	941
2012	860
2013	1,446
2014	1,610
2015	2,064
2016	2,015
2017	2,999
Total	66,104

Since 1998, approximately 66,104 labels have been distributed to manufacturers. Participation was high during the first several years of the program, but the number of labels requested declined in recent years.

Table 1 summarizes the number of energy-efficient labels requested by manufacturers each year since 1998.

Energy Efficient Manufactured Homes Incentive Program

In 2001, the DOE and the U.S. Environmental Protection Agency (EPA) created standards for manufactured homes, which are at least 15 percent more energy-efficient than homes meeting the minimum energy code. In general, **ENERGY STAR®**-qualified homes include features and appliances that make them as much as 30 percent more efficient than most recently constructed manufactured or site-built homes.

Factors contributing to increased efficiency include:

- Effective insulation in walls and floors
- High-performance windows, including protective coatings and improved frame assemblies
- Tight construction and ducts so that cracks and holes are sealed to reduce drafts, dust and moisture problems
- High-efficiency heating and cooling equipment
- **ENERGY STAR®**-qualified lighting and appliances

In 2008, the Energy Efficient Manufactured Homes Incentive Program was established under Section 48-52-870 of the South Carolina Code of Laws. It was passed to create more significant incentives for ENERGY STAR®-labeled homes. Section 48-52-870 requires the Energy Office to “adopt rules pursuant to this article to develop tax credit applications and administer the issuance of tax credits and must track and report on the fiscal and energy impacts.” This incentive includes a \$750 nonrefundable state income tax credit for eligible homebuyers. In addition, Section 12-26-2110 eliminates any state sales tax on ENERGY STAR®-manufactured homes (but not optional furniture or drapes) from July 1, 2009, to July 1, 2019.

To implement the Energy Efficient Manufactured Homes Incentive Program, the Energy Office created retailer instructions (see Appendix A) and an application form (see Appendix B) for the \$750 tax credit. The Energy Office worked with the South Carolina Department of Revenue and the Manufactured Housing Institute of South Carolina to develop instructions for retailers and a form to certify the purchase that would be simple for homebuyers to complete.

Retailers that sell ENERGY STAR®-manufactured homes are required to certify that energy-saving measures have been installed in accordance with the guidelines. The retailer is required to return this certification to the manufacturer of the home. The manufacturer files the certification with the entity responsible for tracking ENERGY STAR® home sales nationally, on behalf of the EPA and DOE. In addition, retailers that sell ENERGY STAR® homes must supply the homebuyer with an Energy Office application form. The homebuyer must complete the application form and provide it to the Energy Office.

The Energy Office reviews the application form, ensures that the homebuyer has received the ENERGY STAR® certification from the retailer, and signs and returns the application form to the homebuyer. The homebuyer(s) must include these documents in their tax filing to claim the \$750 state income tax credit.

Energy Savings and Fiscal Impact

Based on applications received by the Energy Office for the \$750 tax credit, incentives have encouraged savings that average approximately \$551 per homeowner per year, or an average of approximately \$16,520 over the lifetime of the home (at current energy prices). Sixty-nine requests for the \$750 tax credit were received for homes purchased in 2017. This equates to an overall energy savings for these 69 homebuyers of approximately \$1,139,862 over the expected life of the homes, with an investment of only \$51,750 by the state. This also equates to a savings of 30,769 MMBTU in overall energy savings for all 69 homes over their expected useful life. To date, the Energy Office has approved 465 tax credit applications, representing an investment by the state of \$348,750 and cost savings to homeowners of \$9,993,159 over the lifetime of the home. In addition, the ENERGY STAR® homes for which tax credits have been requested to date for 2017 will collectively save over 6.6 million pounds of CO₂ over their estimated 30-year lifetime.

See **Table 2** for a summary of the ENERGY STAR® Manufactured Homes Tax Credit impact. It is important to note that the data for this year's report has been calculated using data updated in the 2016 report from the Energy Information Administration, DOE, and EPA for South Carolina energy rates; lifetime of a manufactured home; and CO₂ saved, respectively.

The Energy Office continues to work with the Manufactured Housing Institute of South Carolina to raise awareness of the program and to encourage dealers to give the tax credit application and the site installation checklist to the buyer, thus increasing the likelihood of the buyer applying for the tax credit.

However, as shown in **Table 2**, there is a noticeable difference between the number of ENERGY STAR®-labeled homes sold and the number of tax credit applications received. Possible causes for this discrepancy include dealers who are unaware of the program and homebuyers who are retired and may not file state tax returns.

Data from the Systems Building Research Alliance (Alliance), the entity which tracks ENERGY STAR®-manufactured homes for the federal government, indicates that approximately 1,948 ENERGY STAR® homes were produced for sale or installation in South Carolina in 2017. The Alliance also reports that a total of 3,797 homes were shipped to the state by the end of 2017, meaning that ENERGY STAR® homes shipped to South Carolina retailers represent approximately 51 percent of the market, a 10 percent decrease from 2016. Only 1,205 of the 1,948 ENERGY STAR®-manufactured homes produced for South Carolina retailers had been sited and certified by the end of 2017.

Table 3 shows the location and expected savings for those homes for which 2017 tax credit approvals have been sought through July 31, 2018.

Table 2: ENERGY STAR® Manufactured Homes Tax Credit Summary by Calendar Year

	2010	2011	2012	2013	2014	2015	2016*	2017	Total to Date
Estimated total ENERGY STAR® labeled homes certified/sited by SC retailers ²	230	229	179	275	422	834	1,424	1,205	4,798
Tax credit applications	43	59	84	48	35	52	75	69	465
Estimated energy savings per year (MMBTU)	602	786	1,160	642	481	716	988	1,026	6,401
Expected cost savings per year (\$)	\$18,620	\$24,315	\$35,896	\$22,413	\$17,584	\$22,170	\$36,613	\$37,995	\$215,606
Estimated energy savings over life of homes (MMBTU)	33,089	43,209	63,790	35,315	26,462	39,399	29,650	30,769	301,683
Expected cost savings over life of homes (\$)	\$1,024,102	\$1,337,312	\$1,974,260	\$1,232,711	\$967,125	\$1,219,398	\$1,098,389	\$1,139,862	\$9,993,159
Estimated CO ₂ savings per year (lbs)	228,618	298,538	440,727	243,994	182,829	272,215	212,162	220,173	2,099,256
Estimated CO ₂ savings over life of home (lbs)	12,573,962	16,419,563	24,240,029	13,419,681	10,055,617	14,971,819	6,364,872	6,605,193	104,650,736

²Data provided by the Systems Building Research Alliance.

*Calculations are based on 214 lb. CO₂/MMBTU (EPA 2014 eGrid data); the average statewide cost of electricity of \$0.1264/kWh (EIA March 2017 data); the estimated lifetime of a manufactured home of 30 years based on a 2016 DOE Manufactured Home Standard Technical Support Document; and EIA Table CE1.4 mobile home energy consumption per square foot.

Table 3: 2017 ENERGY STAR® Tax Credit Request Summary*

Location of Home	Expected Energy Savings (MMBTU/yr)	Expected Cost Savings	Expected Energy Savings over 30-yr life of home (MMBTU)	Expected Cost Savings over 30 yr life of home	Energy use intensity (MMBTU/sq. ft.)	CO ₂ Savings/yr	CO ₂ Savings over 30-yr life of home
Aiken	10.79	\$399.56	323.57	\$11,986.81	71.90	2,315.34	69,460.34
Aiken	9.15	\$338.91	274.46	\$10,167.38	60.99	1,963.91	58,917.25
Aiken	10.43	\$386.48	312.98	\$11,594.38	69.55	2,239.54	67,186.34
Aiken	15.92	\$589.83	477.65	\$17,694.81	106.14	3,417.89	102,536.70
Aynor	17.08	\$632.64	512.32	\$18,979.11	113.85	3,665.96	109,978.88
Batesburg	15.89	\$588.64	476.69	\$17,659.14	105.93	3,411.00	102,329.97
Batesburg	17.66	\$654.04	529.65	\$19,621.26	117.70	3,790.00	113,699.97
Camden	12.04	\$445.94	361.13	\$13,378.13	80.25	2,584.09	77,522.70
Central	15.89	\$588.64	476.69	\$17,659.14	105.93	3,411.00	102,329.97
Chesterfield	12.04	\$445.94	361.13	\$13,378.13	80.25	2,584.09	77,522.70
Clinton	17.01	\$630.26	510.39	\$18,907.76	113.42	3,652.18	109,565.42
Clinton	12.58	\$466.15	377.50	\$13,984.61	83.89	2,701.24	81,037.07
Conway	12.58	\$466.15	377.50	\$13,984.61	83.89	2,701.24	81,037.07
Darlington	17.66	\$654.04	529.65	\$19,621.26	117.70	3,790.00	113,699.97
Dillon	11.81	\$437.61	354.38	\$13,128.41	78.75	2,535.85	76,075.61
Edgemoor	12.84	\$475.67	385.20	\$14,270.01	85.60	2,756.36	82,690.88
Elloree	14.89	\$551.77	446.83	\$16,553.21	99.30	3,197.38	95,921.43
Enoree	19.26	\$713.50	577.80	\$21,405.01	128.40	4,134.54	124,036.33
Fountain Inn	9.76	\$361.51	292.75	\$10,845.21	65.06	2,094.84	62,845.07
Gallivants Ferry	11.24	\$416.21	337.05	\$12,486.26	74.90	2,411.82	72,354.52
Gaston	18.10	\$670.39	542.89	\$20,111.80	120.64	3,884.75	116,542.46
Georgetown	19.26	\$713.50	577.80	\$21,405.01	128.40	4,134.54	124,036.33
Georgetown	20.06	\$743.23	601.88	\$22,296.89	133.75	4,306.82	129,204.51
Georgetown	12.84	\$475.67	385.20	\$14,270.01	85.60	2,756.36	82,690.88
Great Falls	15.25	\$564.85	457.43	\$16,945.64	101.65	3,273.18	98,195.42
Greenwood	15.92	\$589.83	477.65	\$17,694.81	106.14	3,417.89	102,536.70
Honea Path	16.05	\$594.58	481.50	\$17,837.51	107.00	3,445.45	103,363.61
Hopkins	12.58	\$466.15	377.50	\$13,984.61	83.89	2,701.24	81,037.07
Irmo	10.75	\$398.37	322.61	\$11,951.13	71.69	2,308.45	69,253.62
Jamestown	17.98	\$665.93	539.28	\$19,978.01	119.84	3,858.91	115,767.24
Johnsonville	17.98	\$665.93	539.28	\$19,978.01	119.84	3,858.91	115,767.24
Johnston	15.92	\$589.83	477.65	\$17,694.81	106.14	3,417.89	102,536.70
Kershaw	10.79	\$399.56	323.57	\$11,986.81	71.90	2,315.34	69,460.34
Kershaw	13.48	\$499.45	404.46	\$14,983.51	89.88	2,894.18	86,825.43
Kingstree	20.54	\$761.07	616.32	\$22,832.02	136.96	4,410.18	132,305.41

Kingstree	13.64	\$505.40	409.28	\$15,161.89	90.95	2,928.64	87,859.06
Lake City	19.52	\$723.01	585.50	\$21,690.42	130.11	4,189.67	125,690.14
Lake City	9.76	\$361.51	292.75	\$10,845.21	65.06	2,094.84	62,845.07
Lamar	16.05	\$594.58	481.50	\$17,837.51	107.00	3,445.45	103,363.61
Leesville	14.45	\$535.13	433.35	\$16,053.76	96.30	3,100.91	93,027.24
Leesville	10.79	\$399.56	323.57	\$11,986.81	71.90	2,315.34	69,460.34
Leesville	18.94	\$701.61	568.17	\$21,048.26	126.26	4,065.64	121,969.05
Lexington	11.80	\$437.02	353.90	\$13,110.57	78.65	2,532.41	75,972.25
Lexington	11.65	\$431.67	349.57	\$12,950.03	77.68	2,501.40	75,041.98
Lexington	10.79	\$399.56	323.57	\$11,986.81	71.90	2,315.34	69,460.34
Lexington	15.41	\$570.80	462.24	\$17,124.01	102.72	3,307.64	99,229.06
Lexington	20.54	\$761.07	616.32	\$22,832.02	136.96	4,410.18	132,305.41
Lexington	18.30	\$677.83	548.91	\$20,334.76	121.98	3,927.82	117,834.51
Little River	10.91	\$404.32	327.42	\$12,129.51	72.76	2,342.91	70,287.25
Loris	20.06	\$743.23	601.88	\$22,296.89	133.75	4,306.82	129,204.51
Mullins	12.60	\$466.75	377.98	\$14,002.45	84.00	2,704.68	81,140.43
Nichols	16.05	\$594.58	481.50	\$17,837.51	107.00	3,445.45	103,363.61
Pamplico	14.89	\$551.77	446.83	\$16,553.21	99.30	3,197.38	95,921.43
Pelion	20.54	\$761.07	616.32	\$22,832.02	136.96	4,410.18	132,305.41
Pelion	15.41	\$570.80	462.24	\$17,124.01	102.72	3,307.64	99,229.06
Prosperity	14.45	\$535.13	433.35	\$16,053.76	96.30	3,100.91	93,027.24
Prosperity	17.66	\$654.04	529.65	\$19,621.26	117.70	3,790.00	113,699.97
Ridgeway	12.52	\$463.78	375.57	\$13,913.26	83.46	2,687.45	80,623.61
Ridgeway	17.90	\$662.96	536.87	\$19,888.83	119.31	3,841.68	115,250.42
Rock Hill	12.84	\$475.67	385.20	\$14,270.01	85.60	2,756.36	82,690.88
Salley	16.21	\$600.53	486.32	\$18,015.89	108.07	3,479.91	104,397.24
Saluda	14.85	\$549.99	445.39	\$16,499.70	98.98	3,187.04	95,611.33
Smoaks	14.38	\$532.75	431.42	\$15,982.41	95.87	3,087.13	92,613.79
Swansea	16.85	\$624.31	505.58	\$18,729.39	112.35	3,617.73	108,531.79
Travelers Rest	12.04	\$445.94	361.13	\$13,378.13	80.25	2,584.09	77,522.70
Turbeville	18.30	\$677.83	548.91	\$20,334.76	121.98	3,927.82	117,834.51
Walterboro	11.12	\$412.05	333.68	\$12,361.40	74.15	2,387.70	71,630.98
Warrenville	16.95	\$627.88	508.46	\$18,836.41	112.99	3,638.40	109,151.97
Winnsboro	13.48	\$499.45	404.46	\$14,983.51	89.88	2,894.18	86,825.43
Totals	1,025.64	\$37,995.39	30,769.05	\$1,139,861.64	6,837.57	220,173.09	6,605,192.77

*According to ENERGY STAR®, homes earning the ENERGY STAR® label use 15-30 percent less energy than typical new homes. The Energy Office used a conservative assumption of 15 percent savings to determine expected energy savings. Additionally, calculations are based on 214 lb. CO₂/MMBTU (EPA 2014 eGrid data); the average statewide cost of electricity of \$0.1264/kWh (EIA March 2017 data); the estimated lifetime of a manufactured home of 30 years based on a 2016 DOE Manufactured Home Standard Technical Support Document; and EIA Table CE1.4 mobile home energy consumption per square foot.

Conclusion

Approximately 16 percent of South Carolinians live in manufactured housing - one of the highest percentages in the nation. Legislation enacted in South Carolina has established incentives that include a full state sales tax exemption on manufactured homes as well as a \$750 nonrefundable state income tax credit for eligible home buyers. Sixty-nine requests for the \$750 tax credit were received for homes purchased in 2017. This equates to an overall energy savings for these 69 homebuyers of approximately \$1,139,862 over the expected life of the homes with an investment of \$51,750 by the state. To date, the Energy Office has approved 465 tax credit applications. This total represents an investment of \$348,750 by the state, and resulting in energy savings of approximately \$9.9 million for low- to moderate-income South Carolinians.

2017: 69 requests for the \$750 tax credit

**2017 Overall Energy Savings
\$1,139,862**

**ENERGY STAR® Manufactured Home Tax Credit
Program to Date:**

465 tax credit applications
\$348,750 in state investment
\$9.9 million in energy savings

APPENDIX A

**ENERGY STAR® Incentives for
Manufactured Homebuyers and Dealers**



ENERGY STAR® Incentives for Manufactured Homebuyers and Dealers

Customer's \$750 Income Tax Credit

In order for your customers to claim the \$750 non-refundable state income tax credit on their state tax returns, the following items must be completed:*

- Step 1.** Provide the customer with a copy of the ENERGY STAR® Tax Credit Application Form (available on the web at either www.ENERGY.SC.GOV or www.mhisc.com).

- Step 2.** Verify that the *Site Installation Checklist* provided by the manufacturer and shipped with the home is completed and signed (the gray ENERGY STAR® quality assurance label affixed inside the home should also be signed). Return a copy of the signed *Site Installation Checklist* to the manufacturer.

- Step 3.** Give the customer two copies of the bill of sale (clearly showing date of sale) and two copies of the signed *Site Installation Checklist* (must include customer's name and home address). The customer must forward one copy of each of these documents to the Energy Office along with the ENERGY STAR® *Tax Credit Application Form*. The address is on the application form.

- Step 4.** The Energy Office will approve the request and return the form to the customer. The customer must retain the form along with other income tax records, and must include a copy with his/her income tax filing if filing a paper form.

**Non-refundable tax credits cannot reduce the tax owed to less than zero.*

Sales Tax Elimination

South Carolina law eliminates sales tax on homes meeting ENERGY STAR® requirements. State law requires retailers to maintain records on each ENERGY STAR® manufactured home sold. In lieu of a special form, the State Energy Office will require that retailers simply retain copies of the *Site Installation Checklist*, which must include the customer's name and home address. By law, these records must be retained for three years and must be made available for inspection upon request of the Department of Consumer Affairs or the Energy Office.

APPENDIX B

Tax Credit Approval Form



Energy Efficient (ENERGY STAR®) Manufactured Home \$750 Tax Credit Application Form

Please follow instructions carefully and submit to:

South Carolina Energy Office
Attn: ENERGY STAR® Manufactured Home Credit
1401 Main St. Suite 900 Columbia, SC 29201

Applicant name: _____

(Note: Applicant name must match name on bill of sale)

Applicant Social Security Number* or Tax Identification Number *(if not an individual)*: _____

Address of home for which \$750 tax credit is sought: _____

Applicant mailing address, if different than above: _____

(Note: If neither fax nor email is included, your form will be returned via US Mail)

Applicant email: _____

(Needed only if you prefer to receive your approved application via email)

Applicant fax: _____

(Needed only if you prefer to receive your approved application via fax)

Applicant phone: _____

Date of sale: _____ / _____ / _____

(Note: You must attach a copy of your bill of sale and ENERGY STAR® Site Installation Checklist)

Description of home: ___ Single ___ Double ___ Triple

Approximate square footage: _____

I certify the above information is correct, and that I am the owner of the ENERGY STAR® home for which a bill of sale and Site Inspection Checklist is attached.

*Social Security Privacy Act : It is mandatory that you provide your social security number on this tax form. 42 USC 405(c)(2)(C)(i) permits a state to use an individual's social security number as means of identification in administration of any tax. SC Regulation 117-201 mandates that any person required to make a return to the SC Department of Revenue shall provide identifying numbers, as prescribed, for securing proper identification. Your social security number is used for identification purposes.

(Signature)

(Please print name)

-----**Energy Office Approval – Do not write below this line**-----

(Name)

(Title)

____ / ____ / ____
(Date)

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