



Georgia Clean Energy Property Tax Credit Economic Impact Model

On May 14, 2008, Georgia House Bill 670 was signed into law establishing the Georgia Clean Energy Property Tax Credit (CEPTC). HB670 created an income tax credit for a variety of energy-efficient technologies. The credits are available to taxpayers placing qualified clean energy property in service between July 1, 2008, and December 31, 2014. The program’s annual cap was \$2.5 million for 2008 through 2011, and this amount increased to \$5 million for 2012 through 2014.

In 2011, the Georgia Environmental Finance Authority (GEFA) developed the Georgia Clean Energy Property Tax Credit Impact Model to analyze the energy, environmental and economic impacts associated with the CEPTC. The model utilizes formulas and default values derived from sources such as the National Renewable Energy Laboratory, the U.S. Environmental Protection Agency (EPA) and the U.S. Energy Information Administration. Depending on the specific technology, certain data is taken into consideration, such as the cost and size of the system installed, the relevant fuel cost rate and the applicant’s previous energy use. The model then calculates information such as energy savings, electricity savings, energy avoided and carbon dioxide emissions avoided.

Included in this report are the model results from CEPTC applications received between January 1, 2011, and January 4, 2012. Data is analyzed annually by the individual clean energy technology types. In 2011, a total of 266 applications were approved (195 residential and 71 nonresidential). The clean energy property projects generated \$1,361,841 in sales tax revenue from a total investment of \$20,240,710. The projects also produced:

- \$893,078 in annual energy savings
- 10,070,462 kilowatt hours (kWh) of annual electricity savings
- 34.917 million British thermal units (Btus) of annual energy savings
- 6,930 tons of annual carbon dioxide emissions avoided

Tax Credit Limits

Clean Energy Technology	credit limit (max. 35 percent of cost)	
	residential	commercial
Solar energy equipment for domestic water heating	\$2,500 per dwelling unit	\$100,000 per installation
Solar energy equipment for solar electric (PV), other solar thermal electric applications or active space heating	\$10,500 per installation	\$500,000 per installation
Wind	35 percent of the cost	\$500,000 per installation
Biomass gasification and pyrolysis	N/A	\$500,000 per installation
Energy Efficiency Technology		
Energy Conservation Projects (Lighting)	N/A	\$0.60/sq. ft. price cap of \$100,000
Geothermal Heat Pump (GHP) Systems	\$2,000 per installation	\$100,000 per project
Energy Efficient Buildings	N/A	\$1.80/sq. ft. price cap of \$100,000
Wood Residuals	Georgia Forestry Commission determines the value of the tax credits based on a voucher system.	

Tax Credit 2011 Applications

Clean Energy Type	Solar Electric*	Solar Hot Water**	Geothermal Heat Pump***	Active Solar Space Heating	Lighting****	Wind	Total*****
Total Applicants	144	53	31	1	36	1	266
Residential Applicants	111	51	31	1	0	1	195
Non-Residential Applicants	33	2	0	0	36	0	71
Sales Tax Generated	\$1,167,593	\$26,812	\$68,442	\$1,507	\$95,704	\$1,783	\$1,361,841
Investment (system cost)	\$17,345,096	\$387,560	\$988,721	\$21,530	\$1,472,329	\$25,474	\$20,240,710
Annual Energy Savings	\$428,402	\$117,331	\$16,236	\$914	\$329,825	\$370	\$893,078
Annual Electricity Savings (kWh)	4,862,678	1,331,798	117,643	10,376	3,743,762	4,205	10,070,462
Annual Energy Avoided (mmBtu)	16,596	4,545	948	35	12,777	14	34,917
Annual Carbon Dioxide Emissions Avoided (tons)	3,331	912	112	7	2,564	3	6,930

Several applications were received that did not have sufficient data to calculate the energy savings, electricity savings, energy avoided, and carbon dioxide emissions avoided. The data in these applications was included for the following categories: total applicants; residential applicants; nonresidential applicants; sales tax generated; and investment (system cost). A summary of this information is below:

- * Seven of the residential solar electric applications. The total installed system cost was \$43,265 and the sales tax generated was \$2,664.
- ** Two of the solar hot water applications. The total installed system cost was \$8,930 and the sales tax generated was \$566.
- *** Nine of the geothermal heat pump applications. The total installed system cost was \$3,126 and the sales tax generated was \$26,483.
- **** Two of the lighting applications. The total installed system cost was \$208,016 and the sales tax generated was \$14,561.

About the Georgia Environmental Finance Authority

The [Georgia Environmental Finance Authority](http://www.gefa.org) (GEFA) provides energy, land and water resources resulting in an improved quality of life for today and future generations. GEFA is the lead agency for state energy programs and is home to the Center of Innovation for Energy; directs the Georgia Land Conservation Program and maintains state-owned fuel storage tanks; and offers financing for reservoir and water supply, water quality, storm water and solid waste infrastructure. Since 1985, GEFA has approved financial commitments totaling more than \$3 billion to local governments, businesses and nonprofit organizations. For more information, visit www.gefa.org, [Facebook](#) or [Flickr](#).