



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND
Office of Sustainable Practices

CONSERVATION

William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, TN 37243

Annual Post Energy Conservation Report

Clean Tennessee Energy Grants

Due 15 days post fiscal year (July 15th)

Submit report to: Green.Initiatives@tn.gov

Fiscal Year: 2017-2018
Project Completion Date: December 2017
Reporting Dates: July 1, 2017 to June 30, 2018
Grantee Name: East Tennessee State University

<p>1. Report any estimated or actual energy cost or usage reductions for FY2018 as a result of your completed project. If possible, please provide pre- and post-project completion annual utility bills to verify savings. Savings may be reported on a per unit basis (e.g. kWh, Therms, CO₂e, gallons of gasoline, dollar amount, etc.). Attach supporting documentation or U.S. EPA Energy Star Portfolio Manager Documentation as Appendix A.</p> <p>See Appendix A.</p>
<p>2. Briefly describe the activities carried out during this reporting period to meet benchmark goals and objectives (e.g., paybacks, credits, energy reductions, etc.).</p> <p>Operation of Low-NOX natural gas boilers vs. coal fired boilers with baghouses.</p>
<p>3. Describe any measurable ancillary benefits from the project for this reporting period. Examples may include additional economic development activity, increased productivity, reduced maintenance costs, improved lighting, greater employee and/or customer satisfaction, etc.</p> <p>See Appendix A.</p>
<p>4. What impact has the project had to date? List any ways in which the grantee acknowledged funding for the project (e.g., newspaper, magazine, website, social media, outreach, public awareness, improved community image, etc.). Please provide attachments if possible as Appendix B.</p> <p>A sign is displayed in Power House that acknowledges the Clean Tennessee Energy Grant funding.</p>
<p>5. Do you have any stories that capture the impact of this project? If so, please share one or two examples. Examples include: stories of people and/or communities the project has helped; lives that have been improved; work that has led to regulatory or legislative policy change; and/or research breakthroughs. You may include the stories in Appendix B.</p> <p>None.</p>
<p>6. During the continued operation, has anything transpired different from what you anticipated?</p> <p>Startup and operation of new boilers have been mostly trouble free as the installation was excellent.</p>
<p>7. When considering the design and implementation of this project, what lessons did you learn that might help other grantees implement similar work in this field?</p> <p>Ensure that instrumentation/meters as well as an emergency generator is part of base bid.</p>
<p>8. Have there been any organizational changes within the past year? If so, what are they?</p> <p>None.</p>



EAST TENNESSEE STATE UNIVERSITY

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Appendix A

Emission Summary Table of Actual Natural Gas/Fuel Oil Usage Versus Coal Equivalent

<u>Emissions Using Coal</u>	<u>Emissions Using Natural Gas/Oil</u>
0.08 tons of Particulate Matter	0.21 tons of Particulate Matter
77.98 tons of Nitrogen Oxide	4.90 tons of Nitrogen Oxide
13.52 tons of VOC	0.50 tons of VOC
62.39 tons of Carbon Monoxide	7.64 tons of Carbon Monoxide
363.92 tons of Sulfur Dioxide	1.53 tons of Sulfur Dioxide
517.89 tons TOTAL	14.78 tons TOTAL

- Total Reduction of 503.11 tons of regulated air emissions in 2017/2018 fiscal year by utilizing natural gas versus coal.

Equivalent Fuel Cost and Volume Comparison

Cost of Natural Gas \$915,627 (178,971 dekatherms)
Estimated Cost of Coal \$1,247,728 (20,795 tons)
Cost Savings \$332,101

Total Cost Savings

Fuel Cost \$332,101
Elimination of Ash Disposal \$20,000
Elimination of Baghouses \$7,300

Total Savings \$359,401