



Building End-Use Energy Efficiency Research Whole Building and Envelope



The Texas Center for Applied Technology is part of the Texas A&M Engineering Experiment Station, a member of the Texas A&M University System. The A&M System is one of the largest and most comprehensive systems of higher education in the United States. Because of the Center's position within the Texas A&M Engineering program, TCAT's expertise can easily be extended by rounding out its team with world class faculty researchers, as appropriate. TCAT is in an excellent position for collaboration not only with the Texas A&M University System components and their customers but with new universities, institutions, centers, and industry. TCAT

Engineers have successfully performed energy and water assessments at numerous military installations throughout the continental United States and Alaska.

TECHNOLOGY OVERVIEW

Assessments varied in scope from Level 1 through investment grade audits (IGA's) and were comprised of a wide range of functional facility types. The TCAT team identified energy (electric, gas, steam, chilled water) and water savings measures affecting selected military facilities at these installations. TCAT reported energy/cost savings, investment return, alternative energy opportunities, and maintenance and operations recommendations as part of this effort. Overall, TCAT has performed in excess of 12M sf of assessments for government and civilian entities.

While a complete description of the capabilities of the A&M System is beyond the scope of this document, the A&M System has developed workshops addressing the Standards pertaining to the Water Efficiency Standards for State Buildings and Institutions of Higher Education Facilities from the State Energy Conservation Office. The workshops include information related to the following standards.

- Irrigation and Landscape design
- Heating, Ventilation and Air Conditioning
- Refrigeration and Water Treatment
- Rain Harvesting, Reclaimed Water, Recycled Water and Reuse
- Plumbing Fixtures
- Laundry
- Food Service
- Pumps and Metering
- Auto Service and Vehicle Washing
- Lab Services
- Pools, Spas and Special Water Features

TEXAS CENTER FOR APPLIED TECHNOLOGY

There are many problems that require the careful and proper integration of applied technologies to find solutions. The Texas Center for Applied Technology (TCAT) was created to focus on these specific problems and to develop effective and efficient solutions. TCAT's core competency is the innovative application of existing technologies and advanced research to solve complex real-world problems.

TCAT's primary objective is to apply and test technologies to address targeted problems and engage basic research as required. TCAT has employees in a variety of locations with the ability to perform research that cuts across multiple technologies, disciplines, and cultures. The Center's employees are knowledgeable regarding customers' requirements and are ready to respond effectively to provide the best value for the customers' needs including expertise in technology insertion, technology assessments, and test and evaluation.

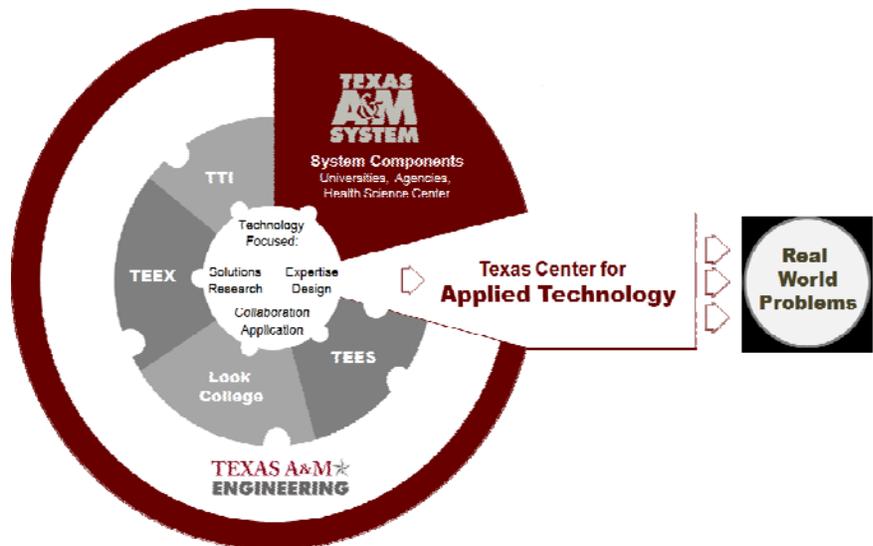
TCAT is part of the Texas A&M Engineering Experiment Station (TEES), a member of The Texas A&M University System. The A&M System is one of the largest and most comprehensive systems of higher education in the United States. Through a statewide network of eleven university campuses, seven state agencies, and a comprehensive health science center, the A&M System educates more than 120,000 students on its university campuses, conducts more than \$780 million in research, and reaches another 22 million people through service each year. TEES is an engineering research agency for the state of Texas and conducts over \$147 million in research annually. Because of the Center's position within the Texas A&M Engineering program, TCAT's expertise can easily be extended by rounding out its team with world class faculty researchers, as appropriate. TCAT is in an excellent position for collaboration not only with The Texas A&M University System components and their customers but with other universities, institutions, centers, and industry.

TCAT'S CORE COMPETENCIES

Energy Sustainability ★ Environmental Sustainability
Manufacturing & Systems Engineering ★ Information Technology ★ Modeling & Simulation
Technology Insertion ★ Test & Evaluation

TEXAS A&M ENGINEERING

Texas A&M Engineering consists of the Dwight Look College of Engineering, and three engineering agencies, including TEES: Texas A&M Transportation Institute (TTI) conducts research and professional education in all modes of transportation. The Texas A&M Engineering Extension Service (TEEX) works to develop a highly skilled and educated workforce and enhances public safety through training, continuing education, and technical assistance.



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