Energy Systems Lab

Texas A&M Engineering Experiment Station

MISSION

The Energy Systems Laboratory (ESL) conducts applied research and technology development on energy efficiency and renewables, and deploys technologies, solutions and training that meet clients' needs worldwide.

GROUPS

- RELLIS Energy Efficiency Lab (REEL)
- Industrial Assessment Center (IAC)
- Texas Emissions Reduction Plan (TERP)
- Continuous Commissioning® (CC®)
- Energy & Sustainability Management (ESM)
- Building Performance Assessment Center (BPAC)
- Building Performance Analysis

IMPACT

World-renowned research and building operation modeling laboratory, focused on energy efficiency in buildings through simulation, data analysis, technology development and outreach. The ESL is instrumental in the development of many international industry standards, protocols and guidelines.

EXPERTISE & SERVICES

- Comprehensive Energy Efficiency and Mechanical System Upgrade Program for Local Governments and School Districts
- Optimization of commercial, institutional and central plant facilities operation, and comfort enhancement, through the CC® process, developed and trademarked by the ESL-TEES
- Development of cutting edge technology for building operation optimization
- Energy use analysis and implementation of energy efficiency in industrial facilities
- Measurement and Verification (M&V) of energy savings
- Building energy code analysis and training for residential and commercial construction
- Development of building energy code compliance tools
- Calculation of emissions reduction benefits from EE and RE initiatives
- Energy and sustainability management
- Research and testing of HVAC systems and technical support to the air moving industry
- Opportunities for undergraduate and graduate students to gain hands-on practical training in industrial energy assessments, CC®, and in research and testing of HVAC systems

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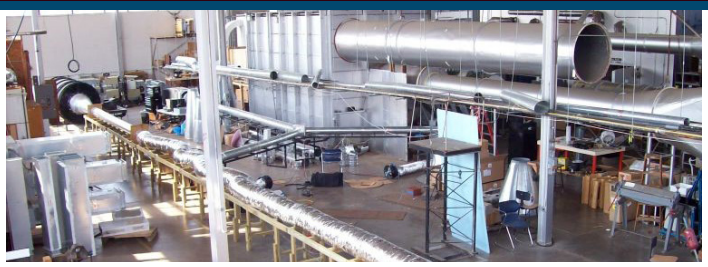
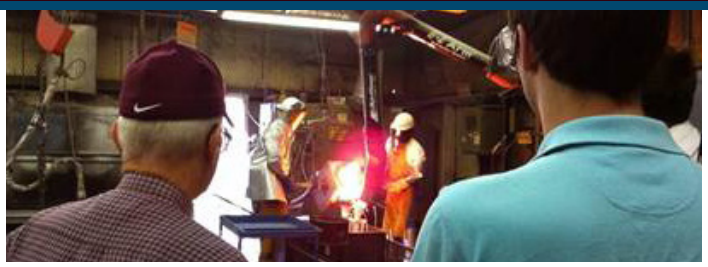


RELLIS ENERGY EFFICIENCY LAB (REEL)

75+ years of testing and research for the HVAC industry, helping commercial, industrial and governmental clients.

- Fan airflow and acoustic performance testing
- HVAC testing and research of components and systems
- Solar test facility
- Membrane dehumidifier and air conditioning
- Certified ISO 17025 Quality Laboratory
- Energy Star and Home Ventilating Institute certified testing facility



INDUSTRIAL ASSESSMENT CENTER (IAC)

U.S. Department of Energy (DOE) funded center since 1986.

Awarded 2017 Center of Excellence Award by the DOE.

$265 million verified savings for Texas industries.

- No cost energy audits for over 820 industrial clients
- Trained over 385 students to conduct industrial energy audits

TEXAS EMISSIONS REDUCTION PLAN (TERP)

Designated by the U.S. Environmental Protection Agency as a NATIONAL CENTER OF EXCELLENCE ON DISPLACED EMISSION REDUCTIONS - one of only two in the nation!
Helped Texas reach more than $9 billion savings from energy code-compliant residential construction.
Mandated by the Texas Legislature in 2001 to play important roles under the TERP.

- Evaluate reduction in air pollution and energy savings resulting from energy efficiency (EE) and renewable energy (RE) programs
- Provide statewide building-energy codes assistance

CONTINUOUS COMMISSIONING® (CC®)

Developed, trademarked & licensed by the ESL-TEES, the Continuous Commissioning® (CC®) process has saved hundreds of millions of dollars since the mid-1990's.

The CC® process is the gold standard for achieving comfort and energy savings with correctly operated existing buildings.

The ESL & Licensees deliver cost effective existing building commissioning with a 2-4 year payback and long term measurement & verification for sustainable savings.

- Integrate cost-effective measures, including operational strategies/processes, and cutting-edge tools and technologies

CONTACT

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The Texas A&M Experiment Station (TEES) is a state research agency that solves problems through applied engineering research and development in collaboration with industry, government and academia. As part of The Texas A&M University System, we are connected with world-class researchers and facilities throughout the Texas A&M System.