

Industry Focused Services

The North Carolina Solar Center offers free and fee-based technical services for manufacturers and other industrial facilities in the state and southeast region including: Renewable Energy Assessments, Clean Energy Assessments, Industrial Energy Efficiency Assessments, and Industrial Energy Efficiency Training.

Renewable Energy Assessments

The Solar Center's renewable energy assessments focus on practical ways companies can incorporate renewable energy into their facilities and existing energy systems. The assessment includes a single day trip to the project site to inspect the site and collect technical information needed for developing the feasibility study and making appropriate recommendations. The focus of this visit is on identifying potential application options, examining possible installation locations and electrical interconnections, examining energy loads, and collecting field data regarding the facility's energy systems and operations. An assessment report will be provided outlining the study's findings and describing the technical and economic feasibility of implementing the renewable energy technologies.

Clean Energy Assessments

The North Carolina Solar Center, in partnership with Mississippi State University, hosts the US DOE's Southeast Clean Energy Application Center (SE-RAC). This program's mission is to promote applications of clean energy technologies with significant power generation and energy savings potential that include Combined Heat and Power (CHP), District Energy, and Waste Heat Recovery (WHR).

As part of the SE-RAC project, the North Carolina Solar Center offers project implementation support including site assessments to evaluate facilities for the feasibility of implementing CHP, District Energy, or WHR technologies or converting existing CHP plants to cleaner or renewable fuel sources.

These services are available to high-impact project candidates in industry sectors including forest products, chemical processing, textile, plastics and resins and agribusiness, as well as government, institutional and commercial building sectors.



There are three phases of clean energy assessments:

Initial Qualification Phase

During Initial Qualification, the objective is to determine whether CHP is worth considering at a candidate facility. Through an exchange of information we can establish whether a site has coincident electrical power and thermal demands that match the potential of CHP to meet these energy needs.

Level I Screening Analysis Phase

Once a potential CHP site has been identified as a strong candidate, we conduct a high level analysis intended to quickly filter through the broad possibilities and produce a recommendation. A Level I report presents potential energy and cost savings, installed costs, applicable financial incentives and a simple payback.

Level II Feasibility Analysis Phase

If the Level I Analysis shows that CHP is a viable option for a site and is compatible with the project owner's strategic energy and capital plan, a Level II Feasibility Analysis should be conducted. Several systems alternatives and a range of capacities are investigated to identify the optimal balance of generating output and thermal loading.

Southeast Clean Energy Application Center
www.chpcenterse.org

Industrial Energy Efficiency Assessments

In a joint effort led by the Mississippi Development Authority, with Mississippi State University and the University of Florida, the NC Solar Center participates in the Southeastern Center for Industrial Energy Intensity Reduction (SECIEIR). The Center is a regional partnership that supports the US DOE ITP's goals of reducing energy intensity by 2.5 percent annually through 2017 in nine Southeastern states. The Center's core energy saving activities include: Save Energy Now Assessments, Level I and II energy studies and custom assessments.

For industrial facilities with greater than one-half trillion BTUs of energy consumption per year, funded energy savings assessments may be available. Small- and medium-size facilities with less than 500 employees and gross annual sales below \$100 million may be interested in Industrial Assessment Center (IAC) energy and waste audits. For facilities between these ranges with energy reduction opportunities in the crosscutting areas, custom assessments are available on a limited basis.

Industrial Energy Efficiency Training

In addition to site assessments, the Southeastern Center for Industrial Energy Intensity Reduction program also hosts DOE Industrial Technologies Program training sessions, led by DOE Qualified Specialist instructors.

The crosscutting technology areas include:

- steam systems.
- process heating
- pumping systems
- compressed air systems
- motor systems
- fan systems
- data centers

These training programs last from one day to 2 ½ days. Participants gain knowledge and tools to evaluate energy at their facilities and champion energy savings projects.

**Southeastern Center for
Industrial Energy Intensity Reduction**
www.secieir.org



Courtesy of DOE/NREL, Credit - Dennis Schroeder



Courtesy of DOE/NREL, Credit - Capstone Turbine Corporation

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