



Alternative Energy Solutions



ARCHITECTS • ENGINEERS



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Why SSOE?

Cleaner burning fuels, environmentally safe manufacturing, alternative energy experts who deliver the total project ... a perfect-world fantasy? At SSOE we don't think so. Our experts are making an impact through engineering and design services for the fuel cell, solar and wind energy supply chain as well as in ethanol and biodiesel production. SSOE has already developed a proprietary process (patent pending) that saves space, energy, and cost in the production of biodiesel. We're also shaping the future of the energy market by designing facilities and pilot plants dedicated to alternative energies research.

What makes us unique? Our alternative energy team is made up of production experts with backgrounds in the food, glass, and petroleum industries as well as specialists with strong resumes in research-driven fields like chemical and pharmaceutical. This experience ensures your processes and facility will incorporate the best technology available today and will have the flexibility to accommodate growth and change in this evolving industry.

In addition, we can design your facility to be just as environmentally friendly as the product you are manufacturing. Our multi-disciplined LEED™ accredited experts focus on designing facilities that are better for the environment, more energy efficient, cost effective, and healthy for your workforce.

Testimonials

"SSOE is an exceptional firm. In almost two decades of work involving construction of research facilities, I don't think I've met a better group.

I am a University of South Carolina faculty member who has served as liaison between our science and engineering researchers and the planners, engineers, architects, and contractors who design and build their facility. Although the phrase is badly overused, SSOE is 'user friendly.' They are willing to share their expertise and to engage the end users in the planning stages, a process that creates a far superior product.

SSOE has performed the MEP and fire protection design for a 125,000 SF state-of-the-art fuel cell research facility. They have been with the project since programming: they met with the researchers, listened to their needs, and were able to suggest practical solutions. They are exceptionally knowledgeable, understand deadlines, and are clearly dedicated to providing the best possible facility. Most importantly, their definition of 'best facility' is not the most expensive or impressive, but rather the facility that will best support the research of the occupants."

*Professor Scott Goode, Ph.D.
Department of Chemistry and Biochemistry
University of South Carolina*

Client List

Ethanol and Biodiesel

- American Biodiesel, LLC
- Blue Earth Biofuels, LLC
- Floyd Valley Ethanol
- Freedom Fuels Biodiesel
- Greater Ohio Ethanol
- Lakota Biofuels, LLC
- Memphis Biofuels
- Missouri Valley Energy
- Yellowstone Ethanol

Fuel Cell

- Ovonic Battery Division of Energy Conversion Devices
- GrafTech International
- University of South Carolina, Columbia
- The University of Toledo

Solar

- Hemlock Semiconductor
- First Solar

LEED™ Facility Design

- Honda of America
- Toyota
- Ford
- University of South Carolina, Columbia

Technical Specialties

- Clean room technology
- Conservation of materials and resources
- Energy efficiency and renewable energy
- Ethanol balance of plant design
- Front end engineering and feasibility studies
- Hydrogen storage and fuel cell research
- Indoor environmental quality
- LEED™ certification
- Material handling
- Power generation and distribution, peak shaving, and cogeneration
- Process design for hydrogen production, distribution and storage
- Project management
- Proprietary biodiesel process
- Recycling and chemical separation
- Safeguarding water and water efficiency
- Sustainable facility design and evaluation
- Sustainable site selection and planning

Project Types

- Battery
- Biodiesel production
- Biomass
- Coal gasification
- Ethanol production
- Fuel cell
- Hydro
- Hydrogen
- Landfill gas
- LEED™ facility design
- Solar energy component production
- System integration
- Wind energy



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SSOE Overview

SSOE, Inc. is an international leader in providing comprehensive architectural and engineering services to diverse clients. For 60 years, we've applied our skill, creativity and cutting-edge technology to solutions that enable them to meet their business goals.

Approach

Our goal on any project is to provide the best possible process or facility for your needs, earn your future business, and assure you that the relationship we build will make future projects even more successful.



SSOE Facts

- Full-service architecture and engineering consulting firm
- Ranked 8th nationally among Engineering/Architecture Firms (*Building Design + Construction*, 2007)
- Ranked 4th in Industrial Design Firms (*Building Design + Construction*, 2007)
- Ranked 13th in Chemical Plant Design Firms (*ENR*, 2007)
- Named "Best AEC Firm to Work For" (*Building Design + Construction*, 2007)
- Frontrunner in the practical utilization of Building Information Modeling. SSOE is aggressively implementing BIM to give our clients a competitive edge in terms of the quality, schedule, and cost of constructing and operating their facilities.
- Utilizes creative project approaches such as design/build, joint ventures, and MBE partnerships to access and manage a full range of services
- Focuses on long-term relationships resulting in 85% repeat business
- Founded in 1948
- Global experience includes projects in 32 countries and 48 states
- Serving national and international clients from 18 locations worldwide

Services

- Architecture
- Civil
- Chemical
- Control systems
- Electrical
- Environmental
- Fire protection
- Industrial ventilation
- Interior design
- Landscape architecture
- Machine design
- Master planning
- Mechanical
- Packaging
- Process
- Procurement
- Project management
- Structural
- Sustainable solutions



Markets

- Healthcare
- Retail
- Energy

Alternative energy

Biofuels

Petroleum refining
Pipeline and terminals

- Industrial
 - Automotive
 - Chemical
 - Food and beverage
 - Glass
 - Manufacturing
 - Personal care
- **Science and technology**
 - Education
 - Government
 - Pharmaceutical

Locations

- Carlsbad, CA
- Cedar Rapids, IA
- Chicago, IL
- Cincinnati, OH
- Irvine, CA
- Kalamazoo, MI
- Lima, OH
- Midland, MI
- Nashville, TN
- Omaha, NE
- Phoenix, AZ
- Raleigh-Durham, NC
- St. Paul, MN
- Seattle, WA
- Shanghai, China
- Toledo, OH
- Troy, MI
- Washington, D.C.



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