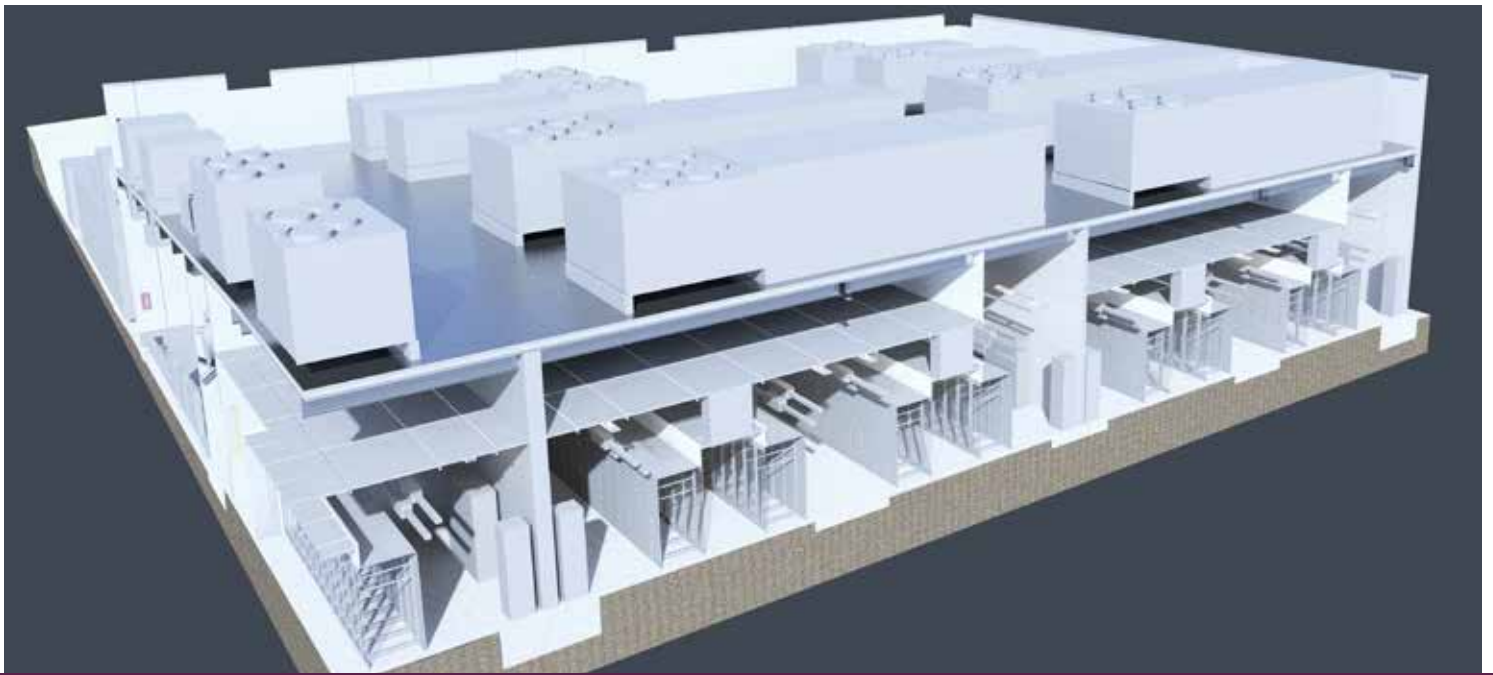




data center design

ssoe®. making clients successful.



Our Design Strategy. Providing cost effective and practical solutions for world-class mission-critical facilities, data centers, and high-performance computing facilities.

Mission-critical facility design and construction requires flexibility, scalability, and energy efficiency in order to meet ever-changing requirements. SSOE Group understands these requirements and will create the most cost-effective solution for your facility. Our integrated architectural and engineering design services provide collaborative teams with experience in customized solutions including site selection, engineering, design, and construction management. We understand the dynamic nature of the industry and deliver customized, cost-effective and practical design solutions for your facility.

Technological advancements and demands for energy efficiency have a significant impact on mechanical and electrical designs, as well as the architecture of the facility. We recognize that mission-critical facility design for the future requires greater flexibility and scalability in the engineering of building systems to meet dynamic requirements of the industry. Additionally, more and more owners are looking for the benefits of facilities designed to meet sustainable building certification guidelines.

With a thorough understanding of your unique requirements, our collaborative approach engages your stakeholders and allows us to create functional, sustainable solutions. The result is a flexible and reliable facility that meets today's technical requirements, while allowing for future growth as capacity and needs change. We identify the need for equipment redundancies for mission-critical systems, and we strive to design to your budget and schedule. Planning for the future brings significant value to our clients' projects.

Reliable, Right-Sized, Cost Effective.

3D / BIM Modeling – CFD Thermal Modeling

Using advanced analytical tools such as computational fluid dynamics (CFD) thermal modeling, research, combined with our years of experience, we are able to thoroughly and quickly investigate all alternatives to optimize existing and new cooling system options. Unlike equipment suppliers who provide this service, we are vendor neutral and specify equipment based on what will deliver the best result for you.

Sustainable

We follow the sustainable design principles set forth by organizations such as LEED®, ASHRAE, and the Green Grid consortium. Our LEED accredited professionals have been responsible for more than a billion dollars worth of LEED facilities—including the largest LEED platinum project in the U.S. This experience brings a broad perspective and creative approach to design to budget using energy efficient and renewable energy options.

Data / Fire / Security Design

We are an industry leader in selecting and specifying low current devices for fire, closed-circuit television (CCTV), access control, and data communications. Our expertise includes the complete design of telecommunications, fire alarms, local area network (LAN), wide area network (WAN), and metropolitan area network (MAN) security, in addition to CCTV and access control.

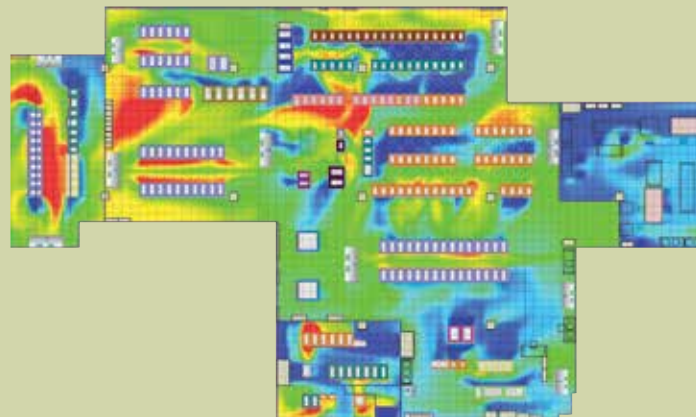


Technical Specialties

- 3D / BIM modeling
- CFD air flow modeling for heat load analysis
- Data / Fire / Security design
- Design
 - New facilities
 - Expansions
 - Retrofit
- Energy efficient evaluations and upgrades for the expansion of existing facilities
- Information technology systems design
- Program management
- Master planning
- Security and surveillance design

Energy Efficiency Concepts

- Higher efficiency UPS equipment
- DC instead of AC power to reduce transformation loss
- Implementation of equipment operating limits to set operating environment
- Incorporate hot or cold aisle enclosures



Thermal modeling allows us to optimize cooling systems by exploring and evaluating options that balance cost and performance.

Locations

Albany, NY
Alliance, OH
Atlanta, GA
Birmingham, AL
Chandler, AZ
Cincinnati, OH
Columbus, OH
Denver, CO
Hamburg, Germany
Huntsville, AL
Kalamazoo, MI
León, Mexico
Lima, OH
Midland, MI
Mobile, AL
Monterrey, Mexico
Mumbai, India
Nashville, TN
Omaha, NE
Penang, Malaysia
Portland, OR
Raleigh-Durham, NC
Riverside, CA
Santa Clara, CA
São Paulo, Brazil
Shanghai, China
St. Paul, MN
Toledo, OH
Troy, MI
Washington, DC

Markets

Energy
Life Sciences
Manufacturing / Process
Telecommunications

Services

Architecture
Construction management
Data / Fire / Security
Energy consulting
Engineering
Master planning
Procurement
Project / Program management
Site selection
Tool install
Virtual Design and Construction (VDC)

Rankings

Engineering News-Record (ENR), 2014

- 4th Green Industrial and Manufacturing Design Firm
- 10th Manufacturing Design Firm

Building Design + Construction, 2014

- 5th Industrial Sector Engineering Firm
- 7th Engineering / Architecture Firm
- 12th International Engineering Firm

Named "Best AEC Firm to Work For"
(Building Design + Construction)

SSOE Facts

- SSOE was founded in 1948 and currently has more than 20 locations worldwide.
- We are an international engineering, procurement, and construction management (EPCM) firm with projects in more than 30 countries.
- SSOE offers program management services from design through construction, to commissioning and start-up, for seamless project delivery.
- Our project management standards are drawn from the Project Management Institute. In fact, SSOE's goal is to have all of our project managers earn its prestigious designation of Certified Project Management Professional (PMP).
- Our energy consulting group offers a holistic approach to meeting your renewable energy, conservation, and sustainable design goals. We have more than \$1 billion in projects that have been LEED® certified.



www.ssoe.com



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