



Facility Assessments

Creating cost-effective and energy efficient facilities that transcend the way *you* do business.



As an **ENERGY STAR partner** and **U.S. Building Council (USGBC) Member**, EDSS offers a unique model of energy and cost-saving strategies. By leveraging more than a dozen programs including facility energy efficiency studies, tax credit programs, utility rebates and incentives as well as grant writing, EDSS is able to offer clients a sustainable competitive advantage by delivering a custom solution that will reduce energy consumption, improve the bottom line and enhance aesthetics.



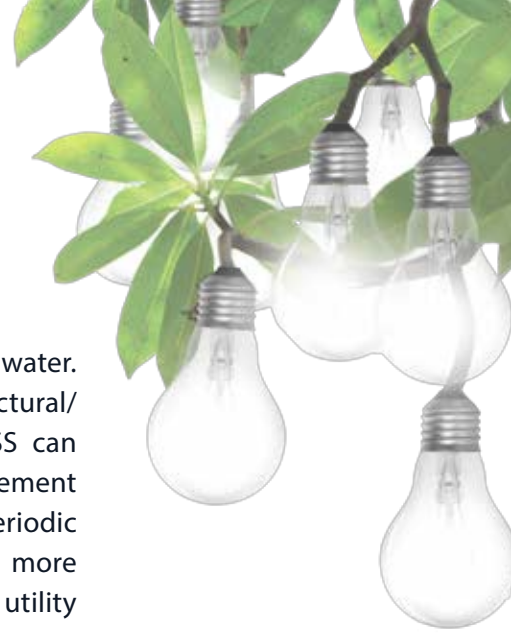
What We Do

When it comes to evaluating the health of your building, EDSS takes a holistic perspective. Our comprehensive approach assures that we have examined every building component for operating efficiency opportunities, evaluated all utility types (electric, gas and water), assessed occupant building comfort, and investigated all relevant utility rebates, incentives and tax credits available.



Facility Assessment Services Offered

- Retro-Commissioning (RCx)
- Facility Energy Assessment/Audit (FEA)
- Facility Water Audits (FWA)
- ENERGY STAR Benchmarking & Certification
- Energy Policy Act of 2005 (EPA) 179 Tax Deduction Certification
- Cost Segregation & Retirement of Assets Study
- Carbon Emissions Reduction & Tracking
- LEED® Commissioning & Certification
- State & Local Rebates & Incentives
- Lighting Assessments



Facility Energy Audits/Assessments (FEA)

An FEA is a detailed engineering review of how your building uses electricity, gas and water. Much like a physical examination, we look at all the major building systems (Architectural/Mechanical/Electrical/Plumbing) to determine if they are working correctly. EDSS can then make recommendations to improve your building's "health" through improvement of building system components that heat/cool/water/light your facility. Just as a periodic physical is important to your health, an FEA insures that your building operates more efficiently and doesn't waste energy or resources. Our goal is to help you reduce your utility and maintenance costs and improve employee/customer comfort within your facility.

In addition to the expected expertise in energy assessments (200 years of combined experience), EDSS also has a diverse professional team of engineers, architects, and technicians who focus on exploring all energy efficient incentive opportunities, including those offered by utility, state, local, and federal agencies. EDSS excels at consistently identifying all available financial incentives and tailoring our recommended measures to minimize initial cost after incentives and maximize energy savings.



How is an FEA Conducted?

EDSS has an expert engineering team that will conduct a building "physical" to determine if there are any opportunities to improve energy efficiency. There are **four phases** to our FEAs:

- 1. Benchmarking** – EDSS will determine how much energy is used relative to one's peers using square footage, building use type and other criteria. Data is analyzed monthly and annual to note consumption patterns versus climate and building activity.
- 2. Audit/Assessment** – We evaluate all architectural, mechanical, electrical and plumbing systems to determine their impact on energy usage.
- 3. Design/Implementation** – Recommended conservation measures are installed.
- 4. Evaluation** – We continue monitoring energy usage to insure recommended conservation measures are providing the expected savings as well as improving building occupant comfort.

During the Assessment Phase we look at the following building components to identify opportunities to improve on building energy and water consumption:

- **Building Envelope:** Exterior walls, windows, doorways and roofs
- **HVAC System:** Heating, cooling and ventilation systems
- **Lighting:** Interior and exterior illumination for work tasks and security
- **Plumbing:** Restrooms, chilled water use, manufacturing processes and landscape irrigation



RetroCommissioning (RCx)

RetroCommissioning is a facility assessment to evaluate energy-saving opportunities for an existing building to ensure all components are operating as intended and at maximum efficiency.

The RCx process is based on the building type and current usage, especially if the current usage differs from the original design. Typically, it does not include upgrading or replacing equipment, but rather focuses on “tuning up” your existing equipment for better performance. The process can provide commercial facilities with lower utility usage, operating costs, reduced maintenance, and improved comfort and productivity without making large capital investments.

An RCx facility assessment will investigate your facility for these typical operating issues which waste energy and reduce comfort:

- Thermostats are adjusted by staff throughout the year
- Lighting technology is outdated and inefficient
- Equipment (plug loads) are added/removed
- Set-points are not scheduled or they have drifted
- Change of space type/usage and/or frequency of occupation
- Hardware/mechanical systems fail
- Dirty heating and cooling coils
- Over-ventilated buildings



Our recommended improvement measures will stand the test of time and result in increased occupant comfort because of our focus on performance and maintenance as well as energy.

ASHRAE Standard Assessments/Audit Levels

EDSS offers 3 levels of energy audits based on the ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) standards. These standards are also recognized by the USGBC, who sets LEED® standards and certification details.

Preliminary Energy-use Benchmarking

- Compare to similar buildings
- Calculate kBtu/sf

Level 1 : Walk-through Assessment

- Rough costs & savings for ECMs
- Identify Capital Projects

Level 2 : Detailed Energy Survey & Analysis

- End-use breakdown
- Detailed Analysis
- Cost & Savings for ECM
- O & M Changes

Level 3 : Investment Grade Detailed Survey & Analysis

- Refined Analysis
- Additional Measurements
- Hourly Simulation

Facility Water Audit (FWA)

Water rates are the fastest increasing utility costs today. Droughts due to climate change are forcing utilities to restrict customer's water usage. A Facility Water Audit (FWA) is a key component of both responsible water use management and utility expense control.

Audit Structure:

Upon confirmation of a potential project, our water engineering team is sent to investigate the site and provide a written analysis with the following information:

- Baseline annual usage
- Projected usage post retrofit
- Quantified savings opportunities by building/system/type of fixture
- Specification documents for recommended products/systems
- Turnkey installation costs by building/system/type of fixture.
- Annual savings (utility, O&M)
- Written scope of work

Measurement and Verification (M&V) work can also be performed during and after installations to ensure savings are achieved. EDSS's Facility Water Assessments can include the following:

- Cooling Tower Efficiency and Water Filtration
- Plumbing Modification Design and Re-Pipe
- Meter Right Sizing Opportunity
- Landscape Irrigation Analysis
- Plumbing Fixture Retrofits
- Kitchen Equipment Analysis
- Water Cooled Equipment
- Solar Domestic Hot Water
- Alternate Water Sourcing
- Laundry System Analysis
- Submetering



EDSS: An Experienced Partner

EDSS is an experienced **engineering-based firm** with Professional Engineers, Architects, Energy Analysts, Designers, and Incentive Specialists on staff.

As an ENERGY STAR Partner, USGBC Member, IES Member, RESNET, HERS Rater, EDSS offers a holistic approach to Facility Assessments, customizing our services to provide you with a comprehensive solution that enhances your aesthetics, saves energy, reduces maintenance, and increases your return on investment. Serving a broad range of industries throughout the United States including academic institutions, healthcare facilities, restaurants, hotels, factories, retailers, and other large and small businesses alike, EDSS has become an authority on commercial energy efficiency.

Companies across the globe turn to EDSS to implement strategies that help save money and equipment while improving the employee and customer experience.