

Energy Consulting

NEW BUILDS | RENOVATIONS | EVALUATIONS | COLLEGES AND UNIVERSITIES | HEALTH CARE | RESEARCH | OFFICE
RETAIL | MANUFACTURING AND INDUSTRIAL | FOOD PROCESSING | JUSTICE BUILDINGS | PERFORMING ARTS

Be certain your building operates efficiently. Anything else is just a waste of energy.

Energy consumption is a cost you can control—and Erdman Anthony has the experience to help you do exactly that. Our energy consulting services apply a meticulous process that involves an objective evaluation of your current energy usage, approaches to reducing it, expected costs to implement these strategies, and anticipated operating costs looking forward. Plus, real-time input from computer modeling of your building allows you to compare the likely outcomes of various energy-conservation strategies. Put our expertise to work for you. We can help you save significant energy—and major dollars.



University at Buffalo's Kapoor Hall – School of Pharmacy and Pharmaceutical Sciences

Energy-Saving Features:

- High-performance roof insulation
- High-performance window glazing to reduce solar heat gain
- High-efficiency, variable-speed, water-cooled centrifugal chillers
- Reduced laboratory airflow when spaces are unoccupied

Evaluate Existing Buildings

We use focused energy consulting to understand how your building is operating and target savings opportunities using the equipment you already have. Our rigorous process includes the following steps:

- Document existing systems
- Understand current usage
- Verify control sequences
- Analyze actual performance
- Identify areas for improvement
- Develop models and simulations
- Estimate the impact of potential changes
- Evaluate the life-cycle cost of energy-saving measures

Plan New Buildings or Substantial Renovations

As a member of the design team or an objective third party, we take an active, collaborative role in optimizing your design. Depend on us to:

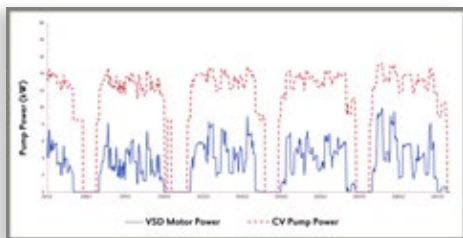
- Work with building users and operators to discover energy-saving opportunities that will fit the building and provide real savings
- Achieve improved comfort and productivity
- Reduce energy costs through improved efficiency
- Compare anticipated performance to existing or code-level performance
- Estimate predicted usage
- Calculate savings for incentives and certifications—LEED®, Green Globes, CHPS, NYSERDA, utility programs

Select the Right Level of Analysis

We work with you to determine the best approach for your situation and needs.
An evaluation can be a quick, high-level estimate, a comprehensive, in-depth model, or anything in between.

Simple, Isolated Energy-Saving Measures

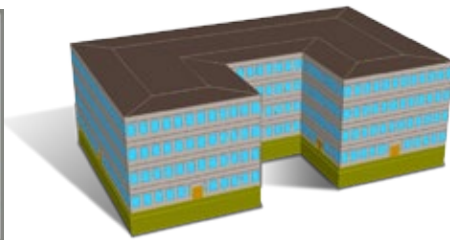
- Estimated impact of stand-alone measures
- Quick results
- Low cost
- Custom spreadsheet calculations



Energy savings for a variable-speed drive pump

Early-Stage Energy Modeling

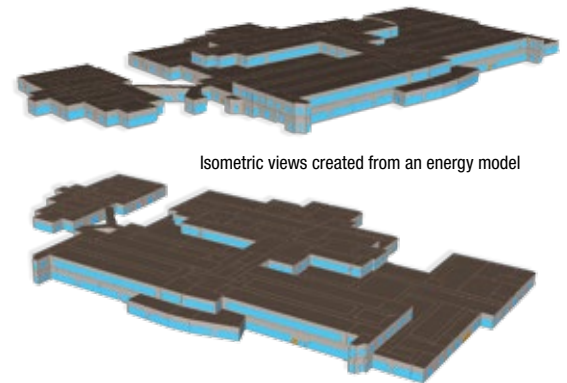
- Use the power of an energy model early in the design process
- Fast, low-cost analysis for decision-making
 - Location, size, shape
 - System comparisons
 - Renewables
 - Net-zero buildings



Simple concept-phase energy model

Detailed Models

- Calculate energy use for a full year, based on usage assumptions and local weather data
- Refine design
 - Envelope qualities
 - Equipment efficiencies
 - Control strategies
 - Synergistic impacts
- Use for incentives or certification (CHPS, LEED®, Green Globes, financial incentives, etc.)



Isometric views created from an energy model

Case Studies



Hobart and William Smith Colleges' Gearan Center for the Performing Arts

- 62,500 square feet, 2016
- **Services:** NYSERDA Technical Assistance, Enhanced Commissioning, LEED EAp1, EAp2, EAc1, EAc3
- **Energy Cost Improvement:** 42%
- **Anticipated Incentive:** \$159,500



Nazareth College – Integrated Center for Math and Science

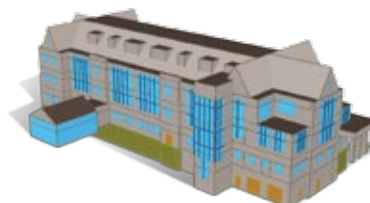
- 74,000 square feet, 2012
- **Services:** NYSERDA Technical Assistance, Enhanced Commissioning, LEED EAp1, EAp2, EAc1, EAc3
- **Energy Cost Improvement:** 32.6%
- **Incentive:** \$221,000



Photo courtesy of Gould Turner Group

Guthrie Corning Hospital

- 230,000 square feet, 2013
- **Services:** NYSERDA Technical Assistance, LEED EAp2, EAc1
- **Energy Cost Improvement:** 15.3%
- **Anticipated Incentive:** \$224,000
- **LEED Certification:** Pending





Rendering by Gould Turner Group

Existing Building Commissioning

Building performance often degrades over time. Minor repair needs, changed control settings, and lack of awareness of how systems were intended to operate all contribute to poor energy performance and comfort.

Our engineers are experienced in existing building commissioning and can help discover where your operation deviated from intent. We are familiar with utility- and state-based financial incentive programs and will help identify opportunities to leverage these programs to benefit your project. Excel through this money-saving process with the SustainabiliTEAM™, Erdman Anthony's approach to sustainable design and building operation, which combines the efforts of our engineers, energy analysts, and commissioning professionals.



Get proven energy consulting experience from Erdman Anthony.

Since 1954, we've been dedicated to developing superior infrastructure solutions by partnering with our clients, studying their unique situations, and listening carefully to their needs. Erdman Anthony is a full-service engineering firm that offers:

- **Energy Analysis and Consulting**
- **Mechanical, Electrical, and Plumbing (MEP) Engineering**
- **Refrigeration Engineering**
- **Commissioning (New and Existing Buildings)**

- **Named a "Top 500 Design Firm" by *Engineering News-Record* for 30 consecutive years**
- **Our quality management system is independently certified to the ISO 9001:2008 standard.**

To learn more about our experience in energy consulting, visit:

www.erdmananthony.com/energysavings

Our engineers' relevant certifications:

- **BEMP** (Building Energy Modeling Professional, American Society of Heating, Refrigerating, and Air-Conditioning Engineers—ASHRAE)
- **CEA** (Certified Energy Auditor, Association of Energy Engineers—AEE)
- **EBCP** (Existing Building Commissioning Professional, AEE)
- **CEM** (Certified Energy Manager, AEE)
- **CBCP** (Certified Building Commissioning Professional, AEE)
- **CCP** (Certified Commissioning Professional, Building Commissioning Association—BCA)
- **LEED AP®** and **LEED® Green Associate™** (Leadership in Energy and Environmental Design)

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