



**INDUSTRIAL ASSESSMENT CENTER**  
 Sponsored by the US Department Of Energy  
 at the School of Engineering of San Francisco State University

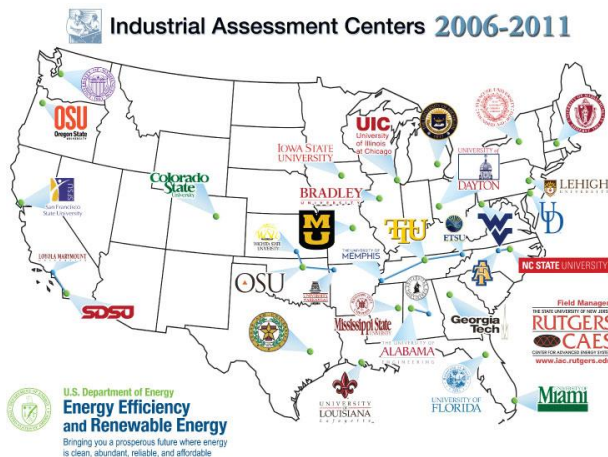
**NO COST PROFESSIONAL GRADE ENERGY AUDIT SERVICES**  
**BY THE INDUSTRIAL ASSESSMENT CENTER AT SFSU**

***This outstanding opportunity is financed by the US Department of Energy and offered free of charge to eligible industrial production facilities through a nationwide network of Industrial Assessment Centers***

**The nationwide Industrial Assessment Centers Program**, funded by the US Department of Energy (USDOE), was created in 1976 with the objective of facilitating the implementation of energy efficiency concepts and practices in small and medium-sized industrial production facilities, with the objective of helping them to cut production costs, thereby becoming more competitive. This Federal Program provides **no cost** energy audit services through a network of Centers located at the Engineering Departments of major Universities.

**The Industrial Assessment Center at the San Francisco State University School of Engineering (IAC/SFSU)** has been funded by the USDOE since 1992, and has since conducted over 450 Energy Audits of industrial production facilities in Central and Northern California. On average, each audit has identified savings for 10-20 % of the total energy costs of the audited facility, and in average more the 50% of the identified Energy Conserving Opportunities (ECOs) are implemented by the Facilities.

The audits are carried out by IAC/SFSU student engineers and faculty during a one full day non-intrusive visit at the facility.



To be eligible for this unique program, an industrial production facility must satisfy at least three of the following criteria:

- ✓ **Fewer than 500 employees**
- ✓ **Less than \$100 M gross sales per year**
- ✓ **Annual Utility bills more than \$100,000**
- ✓ **No in-house energy efficiency expertise**

Audited Facilities are under **NO OBLIGATION** to implement **ANY** of the proposed Energy Conserving Opportunities (ECOs)



Typical IAC/SFSU Auditing Team

The IAC/SFSU organizes and conducts Energy Efficiency Audits in strict compliance with industry wide accepted procedures. The auditing team, composed of student engineers and faculty, is well versed in energy efficiency principles and practices, industrial safety, and comes equipped with a complete set of data collecting instrumentation.



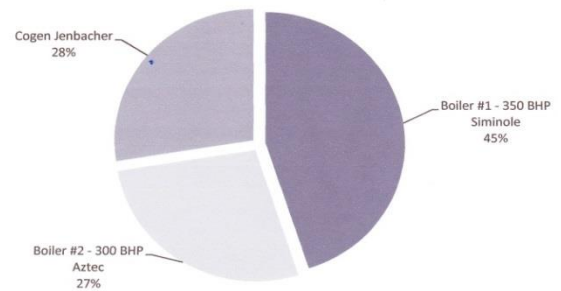
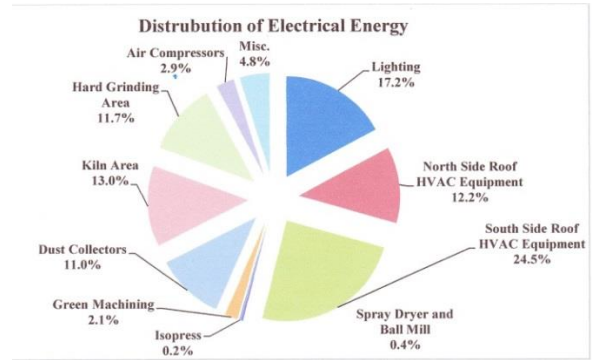
A typical energy assessment takes one full day of hands-off inspection and data collection at the facility site, and focus on all energy consuming equipment, both electric and fossil. The assessment also evaluates the facility's waste process (minimization, recycling, disposal), and water consumption. All data collected during the Audit are treated with the utmost confidentiality.

Within two months from the audit, the audited facility will receive a comprehensive Audit Report, which contains a complete energy analysis, both electricity and natural gas if applicable, of the facility's operation, as well as a complete description of the identified ECOs along with the calculations used to quantify the proposed energy savings, an estimate of the implementation costs, and of the simple pay-back period.

**FOR FURTHER INFORMATION PLEASE CONTACT:**

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**Typical Distribution Diagrams (electricity and Nat Gas) included in Audit Report**

Summary of Savings and Costs				
ECO No. & Description	Energy Savings (kWh/yr)	Demand Savings (kW)	Cost Savings (\$/yr)	Payback Period (yr)
1. Connect the Sludge Mixing Pumps to Fuel Cell Distribution	762,482	87	77,652	0
2. Reduce Mixing and Recirculation on Digester #3	182,896	20.9	18,634	0.4
3. Replace Multistage Blowers with VFD-Controlled Turbo Blowers	1,383,282	157.9	136,139	1.4
4. Install VFDs on Hot Water Circulation Pumps	75,958	-	5,606	2.1
5. Install Lighting Controls	29,278	4.1	3,106	3.4
6 - Install VFDs on Bulk Volume Fermenter Supply Pumps	67,002	7.6	6,582	4.3
7. Replace the SE Lighting with HE Lighting	111,995	20.8	12,603	4.8

**Typical Summary Table of proposed ECOs**

