# Why use Energy Information Systems at your facility?

**You heard that analytical software tools can enable energy efficiency savings, but are they *really* worth it? How can you be confident in your investment? What are the real costs & benefits?**

Better Buildings
U.S. DEPARTMENT OF ENERGY

Energy Information Systems (EIS) are the software, data acquisition hardware, and communication systems used to store, analyze, and display building energy data.

At left, EIS software displays energy use in one building, sub-metered by end use.

# EIS in Practice: A Cohort Study

26 industry leaders provided information on the costs and benefits of EIS and how they use these systems at their facilities and results are presented here.

For more details on this research study:
Energy Information Systems (EIS): Technology costs, benefits, and best practice uses. Lawrence Berkeley National Laboratory, 2013.
http://www4.eere.energy.gov/alliance/activities/technology-solutions-teams/energy-management-information-systems

Beaverton OREGON
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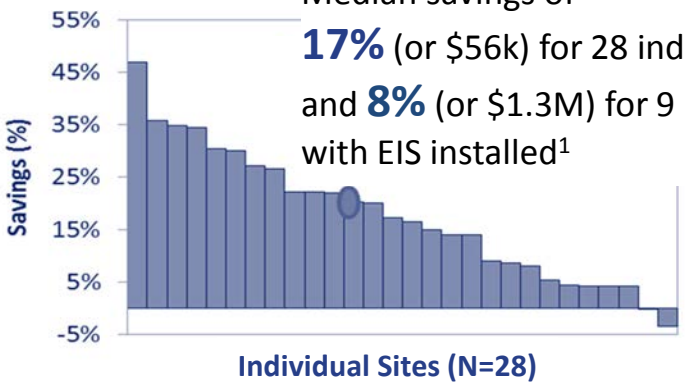
# What are the benefits of using EIS?

**Most frequently reported benefits of EIS**:

- Identify efficiency opportunities
- Track & compare performance
- Manage demand charges
- Utility billing validation
- Measure & verify project-specific savings
- Info to ground and set energy goals

## How much energy savings were reported by EIS users?




Median savings of **17%** (or $56k) for 28 individual sites and **8%** (or $1.3M) for 9 portfolios with EIS installed[1]

**91%** of users said they couldn't achieve this performance without EIS.

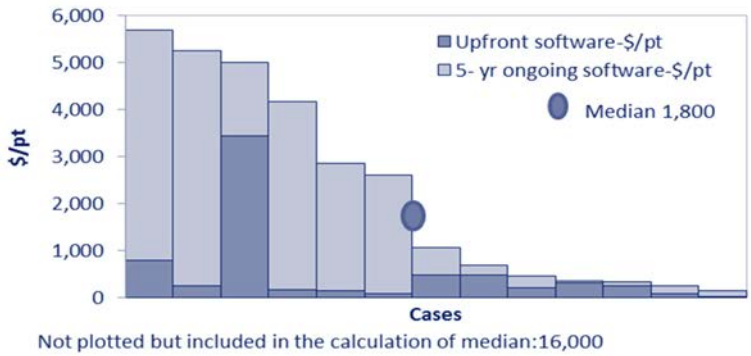
## What do EIS cost for a portfolio?

**Median 5-yr software procurement cost** for a portfolio was **$150,000** which is **$1800** per monitored point or $**0.06** per square foot.

**In 3 of 4 cases, the payback on EIS was 2 years or less.**

> *To realize savings you have to provide tools to enable people to measure their success-you can't put a price tag on that.*
> *- EIS user*

**Extrapolation: 5-yr cost of Ownership**




Not plotted but included in the calculation of median:16,000

Costs vary ***significantly***. Some of the variability is due to system size and complexity: number of monitored points (e.g., only whole building level energy usage vs. extensive sub-metering), extent of software features, and configuration needs. **How can you get a better deal?** There is no fixed rule of thumb for points per building or per square foot, so you need to determine your organization's metering needs. Be informed of the range in costs and be prepared to ask for a low price per point.

| | Range | Range per point | Median per point |
|---|---|---|---|
| Total upfront software cost | 0 to $1700-300,000 | 0 to $10-3,400/pt | $230/pt |
| Ongoing software costs | $1000-$135,000/yr | $5-3100/pt/yr | $200/pt/yr |

## What best practices were associated with larger savings?

- Installation of submetering, beyond whole-building level
- Load profiling on a regular basis
- Use of automated anomaly detection
- Monitoring of peak load and managing demand charges
- Regular use over time to accrue and deepen savings