

Efficiency Management Surveys



Reducing your energy costs makes great business sense, and has a direct positive impact on the environment. Energy efficiency measures have always been win-win options, and represent some of the best low risk return on investment that you can find. With the high level of energy insecurity and environmental awareness continuing to impact trade and domestic regulations, it makes more sense than ever to take action. If energy costs make up a quarter of the costs of running your business, then 20 percent energy savings would reflect a 5 percent increase in your overall profit.

There are many valid reasons to conduct an Energy Management Survey and address consumption:

- ⇒ **Risk management:** Taking a careful look at the structure of your costs is good business practice. This past summer's spike in energy costs have shown that the risks associated with energy use are high, so anything you can do to understand and manage them better will help to protect you from the uncertainties of the future.
- ⇒ **Internal operational benefits:** Taking a look at efficiency gains in your company tends to highlight many related improvements you can make in your daily processes and activities.
- ⇒ **Improve comfort:** Most of the actions you can take to improve energy efficiency also improve the comfort of your workers, such as improving the quality or appropriate level of lighting, or making temperatures more stable and uniform.



ECO Zero consultants provide a superior service to our clients in energy management services, in what is a fast developing and complex market. We offer the full range of energy services to manage consumption, reduce costs and lessen the impact on our environment. A balanced combination of technical skills, business acumen and management expertise allows us to offer energy solutions that deliver results.

We have various auditing tools, including the following:

1. **Benchmarking:** Assess your current and historical energy use.
2. **Walkthrough:** Get a rough idea of what your retrofits will cost.
3. **H₂O Consumption:** Review your water consumption bills and identify areas where you can cut usage
4. **Zero Waste Management:** Identify areas to cut waste.
5. **Ready Savings Analysis:** Identify "no cost/low cost" retrofit options by reviewing:
 - A. Lighting
 - B. Building improvements and design
 - C. Heating, ventilation and air conditioning (HVAC) systems

Every use of energy is an opportunity for savings.

This includes office lighting, heating, cooling, hot water, and office equipment. You can make changes without compromising the function of the equipment or the comfort of occupants. Current technology offers better heating, lighting and office systems that are more energy efficient. Savings of 25% or more are typical. That means \$4,000 per year for a 10,000 square foot office.

Did you know?

- Properly designed and implemented daylighting strategies can save 50 to 80 percent of lighting energy.
- Daytime air temperatures can be three to six degrees cooler in tree-shaded neighborhoods than in treeless areas.
- The amount of solar radiation that reaches the earth's surface in approximately three days equals roughly the total energy content of all known supplies of fossil fuels.



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- D. Office equipment
- E. Motors, pumps, fans and compressors
- F. Refrigeration and freezers
- G. Managing your fleet
6. **Analysis of Renewable Energies:** Identify solar, wind and geothermal energies potentials for your facility.
7. **Best Utilities Management Practices:** Develop a detailed retrofit plan and budget for actions which require some financial investment.
8. **Building Performance:** Evaluate tenant satisfaction with building systems.
9. **Corporate Sustainability Reporting.**
10. **Level II ASHRAE Studies.**

Energy savings you can reap:

- A Spokane wholesaler replaced T-12 fluorescent lamps and magnetic ballasts with more efficient T-8 lamps and electronic ballasts. The company's lighting bill dropped by one-third. In addition to the utility savings, the lamps provide improved color rendition, enabling employees to see their work better.
- Occupancy sensors were installed to control lighting in an elementary school. They replaced conventional light switches in classrooms, offices, and other spaces. Detailed before and after monitoring showed that the sensors saved 10% of their lighting energy. Even more, if you include the reduced load on the air conditioning system. These savings occurred in spite of an aggressive energy management program already in place. The sensors paid for themselves in five years—equal to a 21% simple rate of return.
- IBM estimates it saved \$17.8 million worldwide in one year by encouraging employees to turn off equipment and lights when not needed. The company estimates that the effect of these simple changes is the same as if 50,000 cars were removed from the road avoiding some 190,000 metric tons of carbon dioxide emissions.
- Owens Corning made all of its offices worldwide "paperless." Having previously had 14,000 file cabinets around the world, the company has already saved \$30 million in lease costs.
- An insurance company in Oregon upgraded its HVAC system. The primary goal was to improve employee comfort and productivity. The old system, with inefficient HVAC equipment and an undersized air conditioner, left employees either too warm or too cold. The company replaced its old furnace with a unit that reduced gas consumption 28% and will allow employees to eliminate portable electric space heaters. A new, properly sized air conditioner provided the same amount of cooling with 50% less electricity. A continuous speed fan was replaced with a variable speed fan that reduced fan electric load by 42%. While the energy savings are significant, the improved employee productivity made possible by a more comfortable office delivers far more in dollar savings. A 2% labor productivity improvement would pay for the entire retrofit in one year.
- A landlord replaced the exit signs in its building with electroluminescent exit signs. These exit signs draw only one watt each. There are 21 of them in the building and they are on all the time. Substituting the electroluminescent lighting for incandescent saves the landlord over \$350 per year on his electric bill.