

You Want Me to Do *What* Now?!

Understanding Seattle's New Energy Benchmark Ordinance

If you're one of the more than 800 large commercial property owners and managers who has recently received a letter from the City of Seattle requiring compliance with a new "Energy Benchmarking" ordinance, you may be asking yourself one or more key questions: *What exactly is Energy Benchmarking? Why should I be Energy Benchmarking? Where am I going to find the time to navigate, collect, understand and input all of this data?* If that's the case, you're not alone.

The Ordinance

In an effort to support the Seattle Green Building Capital Initiative goal of reducing energy consumption in Seattle's existing buildings by 20%, the City of Seattle has adopted an ordinance that requires all commercial properties in excess of 10,000 ft² to measure and report building energy performance.

What is Energy Benchmarking?

Simply put, energy benchmarking is your first step in energy conservation. You cannot improve upon what you don't measure. An energy benchmark will establish a baseline of the energy performance of your building, compare your building's performance to similar buildings in your market and provide valuable insight on areas for improvement.

Why Energy Benchmark Your Building?

Aside from the obvious law now requiring large commercial buildings to comply with energy benchmarking, there are some key reasons you should be looking seriously at your building's energy consumption performance:

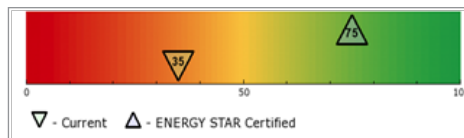
- Energy costs typically account for 30% of the total cost of operating a building
- Improving energy consumption can increase cash flow and reduce operating costs
- Improving your energy benchmark score can help retain and attract tenants, increase property valuation and enhance future transfer of ownership

Energy Services Process

PSF has the processes, people and products to assist you with complying with the new laws and provides technical and financial engineering solutions designed to optimize the performance of your building. Our comprehensive four-step energy services process is designed to help you increase your bottomline:

Step One: Establish Benchmark

An ENERGY STAR® Energy Performance Rating is established and used to compare your building's energy performance with peer buildings. In this example, the benchmarked building performed better than 35% of its peer buildings:



Step Two: Identify Improvement Areas

We focus on lowering your costs by identifying how your building consumes energy and outlining things you can do to immediately begin eliminating wasted energy.

Step Three: Implement Improvements

We will facilitate the implementation of energy-saving recommendations and work with you to plan and execute projects that meet your budget and payback criteria (see below).

(Continued on page 4)



RECENTLY AWARDED

Arnie Hanna Aquatic Center,
Energy Upgrades
Bellingham, WA

Seattle Genetics TI
Seattle, WA

Continental Mills, North Annex TI
Tukwila, WA

Nordstrom, City Creek
New Construction
Salt Lake City, UT

Lakeside School – Allen Gates Hall
Seattle, WA

Nordstrom Rack at
North Point Market Center TI
Alpharetta, GA

INSIDE

Featured Project 2
Tech Talk 3
PSF Community Spotlight 3
PSF People 4

Recommended Energy Conservation Measures	Estimated Savings			Estimated Cost	Simple Payback w/o Rebate	Estimated Rebate Amount	Simple Payback w/ Rebate
	Electricity (kWh)	Fuel (therms)	Total Yearly Savings				
Temperature Control							
Lower Heating Setpoint and Raise Cooling Setpoint				\$500		\$0	
SubTotal	25,612	1,678	\$3,963	\$500	0.1 Years	\$0	0.1 Year
Ventilation Control							
Reduce Ventilation Rate by 40%				\$3,500		\$0	
SubTotal	-243	9,355	\$11,164	\$3,500	0.3 Years	\$0	0.3 Year

**Lake Chelan School District
Energy Savings Performance Contract (ESPC)**

Energy Upgrades Enhance Lake Chelan Student Learning Environment



The Lake Chelan School District was one of many districts who submitted applications to the Office of Superintendent of Public Instruction (OSPI) in 2009 for energy grant funds. When the district contacted PSF about Morgan Owings Elementary and Chelan Junior/Senior High School, they were running out of options. They had failing HVAC and lighting systems, soaring facility expenses and unfortunately, a hot-off-the-press grant rejection letter from OSPI.

As a company pre-qualified by the State of Washington to develop and manage Energy Savings Performance Contracts (ESPCs), PSF was retained by the district to work out a solution. First on the agenda was to analyze the energy grant application and uncover why it had been rejected. The review found a few fatal flaws including:

- A payback that could not justify the investment
- A low ratio of leveraged local dollars to OSPI dollars
- No firm commitment on incentives from the utility company
- The lack of an Investment Grade Audit (IGA) by an Energy Services Company

An initial inspection of the elementary school facility showed that the comfort systems were inefficient, near the end of their useful life and, in some instances, non-functional. The same was true with nearly all of the lighting systems in both schools. Control systems were outdated, difficult to use and extremely inefficient. All told, the district was investing over \$25,000 annually in repair and replacement costs just to keep the systems functioning at minimal levels.

PSF Approach and Outcomes

As an Energy Services Company (ESCO), PSF was able to provide the energy savings guarantees needed to secure funding from the state. We also supported the district in a grant funding re-application, surveyed all the required systems including mechanical, controls and lighting, analyzed utility costs and researched additional funding sources.

As a result of these efforts, we were able to secure an OSPI energy grant of \$550,379, utility incentives of \$20,000, annual energy and maintenance savings of \$57,630 and a 10-year simple payback on a 20-year facility investment. Of course, the most important result was the overall improved air quality and learning environment for the kids.

AT A GLANCE

Project

57,000 ft² Morgan Owings Elementary School

115,000 ft² Chelan Junior and Senior High School

Location

Chelan, WA

Project Team

Owner – Lake Chelan School District
ESCO – PSF Mechanical, Inc.

PSF Mechanical, Inc. Team

Dan Hering – Project Executive
Marty Novini – Energy Engineer
Josh Doerr – Design Engineer
Andrea Hovey – Project Manager
Joe Marshall – General Foreman
Dale Fatland – Plumbing Lead
Chuck Dowling – TAB/Start-up
Chris Grantham – TAB/Start-up

Energy Saving Strategies

- Replaced aging, inefficient water source heat pumps with new, high efficiency heat pumps
- Added VFDs and variable flow control
- Replaced two antiquated DDC systems with single web-based EMCS
- Extensive lighting retrofits including electronic low power ballasts and XL HL T8 lamps
- Time-of-day scheduling and start/stop optimization
- Demand control ventilation

Why Projects Ultimately Succeed

by Randy Tuminello

A recent study by Fortune Magazine stated that the average failure rate among all projects managed in the U.S. is a whopping 70%! Astonishing as this may be, there's more to the story. Dig deeper and you'll find that most of these projects shared a common breakdown—the lack of early stakeholder alignment. In what is essentially a technically-oriented environment, the biggest challenge is not technical at all—it is the ability to effectively accommodate and engage the right people.

The good news is that after being slapped in the face a few times, the industry is finally beginning to catch on. Interest in stakeholder management has never been higher. This may be partly why we were invited by the Washington State Society for Healthcare Engineering (WSSHE) to speak on the subject at a recent educational program. The following is a brief summary.

The Importance of Stakeholder Management

Whenever there is mutual interest, there are stakeholders. That's why the involvement and management of stakeholders is quite naturally an everyday occurrence in almost every aspect of our lives. Given this broad spectrum, we will

limit our discussion as it pertains specifically to the inception and execution of projects.

Stakeholder management in projects is so important that the Project Management Book of Knowledge (PMBOK) mentions the issue directly or indirectly more than 100 times. Unfortunately, the book doesn't offer anything substantial on how to do it except for the one very eye-opening graphic shown in figure 1 below. A quick review reveals something we know intuitively but often feel powerless to resolve. Project costs increase as stakeholder



involvement decreases.

Three Keys to Effective Stakeholder Management

There are three absolutes when it comes to stakeholder management: 1) Do your homework;

2) Build the relationship; and 3) Find the common ground.

With respect to the first absolute, you have to account for all key stakeholders. Note the emphasis on 'key.' Key stakeholders include everyone with significant skin in the game. This includes the customers (whether those customers are internal or external), as well as your team. It's better to err on the side of more inclusivity rather than less because all it takes is one alienated stakeholder to drag down the entire process.

The next step after identification is relationship. It's important to build the relationship before building your case. The simple act of listening in such a way that makes a person feel important is crucial. Seek first to understand before being understood. Interview each stakeholder with a prepared list of questions. Determine their "hot buttons" and must-haves. Determine areas of compromise. Verify needs and expectations and make careful note of not only what was said, but who said it. Be honest, fair and respectful. Don't patronize. Don't be afraid to set reasonable limits or to say 'no' on certain items. Only a dead fish goes with the flow! Do these things and you'll not only have the information you need for the next vital

(Continued on page 4)

PSF Community & Industry Spotlight

Yesler Terrace Head Start Makeover

PSF is proud to have participated in the "Head Start Makeover" to help improve the Yesler Terrace Head Start Preschool in Seattle. The event is being partnered by The American Society for Healthcare Engineering (ASHE), the Washington State Society for Healthcare Engineering (WSSHE), Seattle University, Swedish Medical Center, and the Seattle Housing Authority.

PSF donated time and materials needed to refurbish the school's aging heating and air conditioning units. In addition, we supported the overall effort of the makeover which included new climbing equipment, a sandbox, gutters, lighting and landscaping improvements, kitchen flooring, and a remodeled utility room.

Quadrant I-5 Building A Receives Energy Efficiency Award

The Building Owners and Managers Association of Seattle King County (BOMA) recently awarded the 2011 "Kilowatt Crackdown" awards honoring commercial buildings that have achieved a superior level of energy efficiency. Of 71 competing properties, winners were selected in categories recognizing large and small buildings. In the Highest Performing Small Building category, Quadrant I-5 Building A Kidder Mathews, a 75,000 ft² office building located in Everett, received third place.

The building's reduction in energy consumption is the result of energy modifications made by PSF. A thorough site analysis by PSF revealed potential energy-saving opportunities, leading to new strategies and

changes in operating parameters.

Congratulations to Earl Wayman of Kidder Mathews, PSF sales executive Patrick Mulhall and the PSF project team on their contributions to this award-winning facility!



Step Four: Monitor Results

We'll monitor your building's energy use 24 x 7, immediately alerting you if issues arise. Daily scorecards concisely show your energy use, load profile and 5-day weather forecast with a risk of peak days. Interactive load charts help identify trends and problems. Email notifications and

alerts notify you if energy use falls outside expected levels.

The Clock is Ticking!

As of this writing, the City of Seattle has extended the reporting deadline for non-residential buildings in excess of 50,000 ft² to

October 3, 2011. Contact PSF should you need help navigating the ordinance requirements, understanding your facility performance, and developing low and no-cost ways to reduce your annual utility costs.

step, you'll also have rapport, sponsorship and alignment. Without this, it's next to impossible to achieve agreement on anything.

Finally, you have to build consensus based on common ground. There will always be divergent needs, conflicting agendas, and varying perspectives, priorities and expectations. The work accomplished in the previous two steps will pay big dividends here. Synthesize the

information gathered during steps one and two. I like to use a matrix for this purpose. Patterns will emerge that show where divergent and common areas exist. Build consensus on the common ground first and work to make sure everyone is an initial winner on at least one of their hot-buttons. Once this is done, you're in a much better position to work out compromises on more divergent issues. There are numerous

tools to facilitate discussion—brainstorming, work breakdown structures, mind-mapping and so forth. Knowing how to apply these is the easy part. The hard part is completing the three prerequisites just listed. You can't hopscotch over these. If you do, no amount of slick facilitation techniques will make a snail's tail worth of difference.

Meet the PSF People that Make Things Happen



Janet Upegui, Marketing Coordinator

Janet holds both a communications degree from City University and a graphic design degree from The Art Institute. Her expertise includes print design, corporate writing, and PR. She performs with local symphonic and jazz groups on the flute, piccolo and saxophone, and is very proud of her daughter Nadiya, age 14.



James Venable, Director of Energy Management & Technology Services

James specializes in energy services, building technologies and performance assurance in a variety of environments from office conventional to laboratory, military, and other mission critical facilities. He loves to spend time with his children, Nathan and Madalyn (ages 3 and 5), and enjoys skiing, hiking, running, biking and camping.



"Pops" Martinez, Network Engineer

Gualberto "Pops" Martinez holds a BA degree in Business Administration from The University of Washington. He has more than 22 years experience in network consulting and management. When not working, he enjoys spending time with his family and also working with his church's youth group as a mentor.



John Munson, HVAC Detailer

John Munson works within the sheet metal detailing group. He has been in the Sheet Metal Local 66 union for 21 years. When not at work, he enjoys spending time with his 6-month-old son, Garrett, working out at the gym, watching the Mariners or working in his shop.



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"Trusted to be the Better Choice"

9322 14th Avenue South
Seattle, WA 98108-5102

To get on our mailing list, please send your information to:

E-mail
newsletter@psfmech.com

or

Mail
PSF Mechanical, Inc.
9322 14th Avenue South
Seattle, WA 98108

For more information and PSF key contacts, visit:

www.psfmechanical.com