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Newsletter

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www.enVErgie.com

“Our mission is to provide tools to project teams to deliver designs that are sustainable, energy efficient, functional, and economical.”

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enVErgie celebrates first anniversary

enVErgie consulting, LLC, is a small firm started by Benson Kwong in 2009 to provide consulting services for the building architectural and engineering community. Our mission is to provide tools to project teams to deliver designs that are sustainable, energy efficient, functional, and economical. In our first year we have provided consulting services in the following areas:

- Sustainable Design
- Energy Conservation
- Value Engineering
- Cost Estimating
- Life Cycle Cost Management

Goals for the second year include:

- Continuing to fulfill our mission as we work with existing and new clients.
- Participating in the 2011 Solar Decathlon as a mentor to the University of Maryland team.
- Registering as a Maryland minority business enterprise.

Federal government aims for 30% better energy efficiency over industry standard

The current energy efficiency requirements for new Federal facility projects are spelled out in the Energy Policy Act (EPAAct) of 2005 and the Code of Federal Regulations (CFR) 433.5. All new Federal buildings are required to meet ASHRAE 90.1-2004. Furthermore, energy consumption level should be at least 30% below the ASHRAE 90.1 baseline level, if life-cycle cost effective. The same requirement, but without the life-cycle cost-effectiveness stipulations, was repeated in the Executive Order (EO) 13423 signed by President Bush on Jan, 24, 2007, and in EO 13514 signed by President Obama on Oct. 5, 2009. The implications of these laws and regulations are that:

- Federal building design must continually strive for lower energy consumptions.
- Energy modeling has become crucial in the design of federal facilities.
- Life cycle cost analysis should form the basis for evaluating energy conservation measures.

Over 80% of enVErgie's projects are for the Federal government. enVErgie wishes to continue to contribute to the reduction of Federal energy budget by providing the following services:

- Identify energy conservation measures (ECMs).
- Use energy modeling to measure the effectiveness of the ECMs.
- Use life cycle cost analyses to evaluate the cost effectiveness of the ECMs.



enVergie combines energy analysis and VE to create synergy

Benson Kwong presented the paper “How to Conduct Energy Savings Analysis in a Facility Value Engineering (VE) Study” at the 2009 SAVE International annual conference in Detroit, Michigan. Energy cost analysis during the design phase can lead to substantial life cycle savings in facility projects. VE study is a good forum to address energy conservation since it requires an interdisciplinary approach. A systematic understanding of energy cost analysis is helpful to de-

velop quick, accurate, and versatile calculations of energy savings in a VE setting. This paper surveys the different approaches for energy cost analysis (computer modeling, engineering calculations, and standard energy cost) in a VE study and discuss the merits and drawbacks for each. A copy of the paper can be downloaded from enVergie’s website. enVergie aims at integrating more energy analyses into VE studies.



enVergie provides cost and life cycle cost estimates for energy systems such as this solar photovoltaic system

“VE study is a good forum to address energy conservation”

DC buildings required to be LEED Silver

The Council of the District of Columbia enacted the Green Building Act of 2006, which requires all commercial construction projects with 50,000 square feet or more, to meet the Leadership in Energy & Environmental Design (LEED) version 2.2 SILVER standards and to achieve an Energy Star rating of 75. Currently there is a bill in the D.C. Council to amend the law to the current version of LEED, which is LEED 2009. The law requires that the projects be registered with the US Green Building Council, submit a statement of energy design intent and a LEED Checklist prior to getting a green building permit. The LEED certification provides a benchmark for sustainability by measuring a facility’s performance in the following categories:

- Sustainable Site
- Energy & Atmosphere
- Water Efficiency
- Materials & Resources
- Indoor Environment Quality
- Innovations

To reach the Silver level under LEED 2009, a project must achieve a minimum of 50 out of 110 possible credit points. Last year enVergie coordinated the planning and documentations for five LEED projects, including three that are LEED Silver.



enVergie provided construction cost estimate for a hospital radiology suite

“Last year enVergie coordinated the planning and documentations for five LEED projects”

enVergie provides cost estimating services

In its first year, enVergie has provided cost estimating services for many government agencies, including National Institute of Standards & Technology, Department of State, General Services Administrations, Veteran Affairs Medical Center, University of Maryland Medical Center, Montgomery County Fire Department, Northern Virginia Community College, and District of Columbia Public Schools. Most of these projects involve mechanical and electrical systems, including the following:

- Photo-voltaic solar power
- Emergency generators
- Chillers and cooling towers replacement
- Chiller cross-ties piping & controls
- Communication closet cooling systems
- Air distribution systems
- Hospital radiology rooms renovation
- Campus master plan

www.enVergie.com website and logo designer

enVergie’s logo and website are being designed and maintained by Claire Kwong, a student in computer science and modern media & culture at Brown University. Claire has developed several other websites, including her own, at <http://claire.pciot.com/>.