

Benson Kwong, PE, CVS, CCE,  
 CEM, LEED AP, BEMP  
 enVErgie consulting, LLC  
 1115 Pipestem Place  
 Rockville, MD 20854  
 Tel. 301-637-7688  
[bkwong@enVErgie.com](mailto:bkwong@enVErgie.com)  
[enVErgie@gmail.com](mailto:enVErgie@gmail.com)

# Newsletter



Issue 2

July 2011

[www.enVErgie.com](http://www.enVErgie.com)

## enVErgie broadens expertise in sustainability

In 2009, the Leadership in Environment & Energy (LEED) Professional Credentials began to differentiate into five specializations:

- Building Design + Construction (BD+C)
- Interior Design + Construction (ID+C)
- Operation + Maintenance (O+M)
- Neighborhood Development (ND)
- Homes (H)

enVErgie has obtained credentials in BD+C, ID+C, and O+M and is actively working in each of these areas.



Benson was recently accredited as a Building Energy Modeling Professional (BEMP)

## Benson Kwong presented paper at the SAVE Conference

Benson Kwong presented the paper "Energy Simulation in Facility VE Studies—A Paradigm Shift" at the annual SAVE International conference this June in Portland, Oregon. The following is an abstract of the paper.

energy savings resulted from changes in building envelopes, lighting and controls, and HVAC systems. The graphic feature offers opportunities in visualizing building geometry as well as HVAC system configurations. The use of eQUEST will make VE studies "greener" both for the environment and for owner's operating budget." A significant portion of the presentation was a live demonstration of the eQUEST software.

"Energy efficiency for buildings is becoming more crucial in VE studies as owners are looking for ways to reduce utility cost, achieve LEED, meet regulations, and be more eco-friendly. eQUEST, a free software developed by the U.S. Department of Energy, makes it possible to calculate energy savings for multiple alternatives within the duration of a VE study. This energy simulation software, based on DOE2, can be as detailed and powerful as desired when used for LEED and ASHRAE compliance calculations. Yet in the "wizard" modes it can quickly simulate

The paper is available for download at [www.envergie.com](http://www.envergie.com)

Benson was recently accredited as a Building Energy Modeling Professional (BEMP) by the American Society of Heating, Refrigeration & Air Conditioning Engineers (ASHRAE).

## enVErgie enrolled in minority and small business programs

enVErgie has been certified as a Minority Business Enterprise (MBE) and Disadvantaged Business Enterprise (DBE) by the Maryland Department of Transportation - the official certification agency for the State of Maryland. Maryland is participat-

ing in a Modified Reciprocity Certification Program (MRCP) with Virginia and the District of Columbia. enVErgie is also registered in the State of Maryland Small Business Reserve Program.

### Inside this issue:

enVErgie broadens expertise in sustainability	1
Benson Kwong presented paper at the SAVE Conference	1
enVErgie enrolled in minority and small business programs	1
What is the cost for sustainability?	2
Benson Kwong mentors solar decathlon team. Go Terps!	2
enVErgie provides support services to the A/E community	2



enVergie has performed Sustainability Study by conducting life cycle cost analyses on sustainable design measures.

### What is the cost for sustainability?

Many building owners would like to know the cost to be sustainable. Unfortunately, the cost for sustainability could vary greatly and there is no accurate means to predict the percentage premium cost for various levels of LEED certification. The cost for sustainable design is very project specific and would depend on the following factors:

- The project site selection - For many projects, the site is a given. Urban sites tend to be mass transit friendly and well connected to existing communities. Suburban sites face more challenges when they need to attain LEED.
- The starting point of the design - The standard requirements for many government agencies already require a certain level of energy efficiency and sustainable design measures (SDMs). It typically would not be a great burden to achieve basic LEED certification.
- The chosen sustainability measures -

Some SDMs are cost neutral (e.g., low-emitting paints and coatings); some may actually reduce first cost (e.g., limit parking capacity). However, there are those credits that would increase the construction cost, some by significant amounts.

- Return on Investments - Many of the high cost SDMs are chosen because they provide good return on investment. Other SDMs could improve occupant productivity and quality of life by enhancing the indoor environment quality. Yet there are some SDMs that would have no direct benefit on the project, but benefits society in general (e.g., rapidly renewable materials).

enVergie has performed Sustainability Studies by conducting life cycle cost analyses on SDMs. This is valuable at the start of the design process, to help select those SDMs that would be economically beneficial to the project.

### Benson Kwong mentors solar decathlon team. Go Terps!

Benson Kwong is a mentor for the University of Maryland (UM) 2011 Solar Decathlon team. UM, Benson's Alma Mater, is one of 20 selected teams worldwide to build a solar energy house this fall for the Department of Energy competition. "Watershed," UM's entry,

formed by two rectangular units capped by a butterfly roof, which is well-suited to capturing and using sunlight and rainwater.

The spacious and affordable house features:

- A rooftop photovoltaic array.
- An edible green wall and garden, as well as a green roof.
- Innovative, smart technologies that allow residents to control temperature, ventilation, humidity, and light for year-round comfort.
- Building and finish materials that are beautiful, sustainable, cost-effective, and durable.

One of the categories in the competition is "Affordability." The team must design a house that is not only energy efficient, appealing, but also affordable. Benson is working with the UMD team to accurately estimate the construction cost, and to find ways to optimize cost without compromising on functions and aesthetics.



**SOLAR DECATHLON**  
West Potomac Park,  
Washington DC  
Sep 23 - Oct 2, 2011

### enVergie provides support services to the A/E community

enVergie consulting, LLC, is a small firm providing support 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. Our areas of expertise include:

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