

## Meetings, Conferences, Symposia and Workshops

### 2004

November 10-12, 2004	GreenBuild Int'l Conference	To be held in Portland, OR • <a href="http://www.greenbuildexpo.com">www.greenbuildexpo.com</a>
December 1-3, 2004	35 <sup>th</sup> International Congress on Heating, Ventilation and Air Conditioning	To be held in Belgrade, Serbia • <a href="mailto:contact.todorob@eunet.yu">contact.todorob@eunet.yu</a>
December 5-10, 2004	Performance of the Exterior Envelopes of Whole Buildings IX International Conference	To be held in Clearwater Beach, FL • <a href="http://www.ornl.gov/buildings/">www.ornl.gov/buildings/</a>



### 2005

February 5-9, 2005	ASHRAE Winter Meeting	To be held in Orlando, FL • <a href="http://www.ashrae.org">www.ashrae.org</a>
May 12-13, 2005	Canadian Building Science and Technology Conference	To be held in Ottawa, Canada • <a href="http://www.nbec.net/conference.htm">www.nbec.net/conference.htm</a>
May 30-June 02, 2005	IEA Heat Pump Conference	To be held at Caesars Palace in Las Vegas, NV • <a href="http://www.ornl.gov/hp2005">www.ornl.gov/hp2005</a>
June 25-29, 2005	ASHRAE Annual Meeting	To be held in Denver, CO • <a href="http://www.ashrae.org">www.ashrae.org</a>
July 06-09, 2005	HVAC Asia, Singapore	Contact • <a href="mailto:hqlink@singnet.com.sg">hqlink@singnet.com.sg</a>
August 08-12, 2005	ASES/ISES Solar World Congress 2005	To be held in Orlando, Florida • <a href="http://www.swc2005.org/">http://www.swc2005.org/</a>
August 15-18, 2005	IBPSA's BS 2005	To be held at École Polytechnique de Montréal in Montreal, Canada • <a href="http://www.ibpsa.org/">http://www.ibpsa.org/</a>
October 09-12, 2005	8th REHVA World Congress -- Clima 2005	To be held in Lausanne and Luzern, Switzerland • <a href="http://www.clima2005.ch/">http://www.clima2005.ch/</a>

### 2006

January 21-25, 2006	ASHRAE Winter Meeting	To be held in Chicago, IL • <a href="http://www.ashrae.org">www.ashrae.org</a>
June 24-28, 2006	ASHRAE Annual Meeting	To be held Quebec City, Canada • <a href="http://www.ashrae.org">www.ashrae.org</a>
July 09-12, 2006	SOLAR 2006	<a href="http://www.ases.org/">http://www.ases.org/</a>

## Directory of Software and Services for EnergyPlus

Program Name	Description	Cost
EnergyPlus 1.2	Downloadable from  <a href="http://www.energyplus.gov/">www.energyplus.gov/</a>	Free!
	Support mailto:EnergyPlus-Support@gard.com  Support Group <a href="http://groups.yahoo.com/group/EnergyPlus_Support">groups.yahoo.com/group/EnergyPlus_Support</a>	

## Users Tools for EnergyPlus

Vendor	Description
<b>Joe Huang and Associates</b> 31 Sarah Lane Moraga CA 94556-2563 Ph: (925) 247-9180	<b>DrawBDL</b> allows users to visually review the building geometry in both EnergyPlus and DOE-2 input files. DrawBDL can export the DOE-2 surface data in EnergyPlus IDF format; useful for those users who wish to convert their DOE-2 input files into EnergyPlus input files.
<b>Square One Research</b> Centre for Research in the Built Environment, Bute Building King Edward VII Avenue CARDIFF, CF10 3NB - Wales United Kingdom	<b>Ecotect</b> couples an intuitive 3-D design interface with a comprehensive set of performance analysis functions (visualization, solar and daylighting analysis, shadows and shading, lighting design, thermal performance, UK building regulations, ventilation, and acoustic analysis) with interactive information displays. It also can export an EnergyPlus IDF file. For more details, click here for an article from the Building Energy Simulation User News.
<b>Taylor Systems Engineering, Inc.</b> 9801 Fair Oaks Blvd., Suite 100 Fair Oaks, CA. 95628 Ph: (916) 961-3400 Fx: (916) 961-3410	<b>TSe+</b> is the first of a suite of tools to manage data for EnergyPlus. These (alpha) tools are available free of charge from Taylor Systems Engineering. <b>TSe+Mat</b> (materials library) is an interface to the materials datasets that come bundled with EnergyPlus and allows users to manage their frequently used material inputs for EnergyPlus data by manipulating new and existing material DataSets from EnergyPlus and exporting them in the required IDF format. <b>TSe+Gliz</b> (glazing library) is the second module of the TSe+ suite. It was an alpha release as of Sept 2003. TSe+Gliz allows the user to create, edit and manage window glazing, and gas, shade and blind materials and constructions.

## Users Tools for EnergyPlus (Continued)

**The Deringer Group, Inc.**  
1349 Addison Street  
Berkeley, CA 94702  
Ph: (510) 843-9000  
Fx: (510) 843-9005

**EnergyPlus Online Simulations** are online tools embedded in the Deringer Group's EcoAdvisor, a set of training modules on sustainable buildings. These tools can be used by anyone and require no special knowledge of EnergyPlus.

### **EnergyPlus Interface Support Tools**

This set of stand-alone Windows-based tools is intended to make the text-based use of EnergyPlus faster, easier, and more accurate. The tools assume that the user is somewhat familiar with typical text-based interfaces for energy simulations. So far there are two proof-of-concept tools.

#### **DrawEzPlus**

is a 3-D rendering tool that reads the geometry data in an EnergyPlus input file and uses a set of OpenGL commands to render the building objects. Two key steps are involved. First, the EnergyPlus input file is parsed and all vertices data is extracted into a temporary file, organized by type of building object. Second, the temporary file is processed by a set of OpenGL utilities that produces renderings of the 3-D data. The current version allows the user to: toggle between orthogonal (parallel lines do not converge) and perspective views, toggle between line and surface (fill) presentation modes, and select to draw any mix of key building objects (floor, walls, roof, windows, and attached and detached shading). DrawEzplus 1.1 will produce renderings in either orthogonal view simulations.

#### **EzPlus-Parm**

is a stand-alone Windows tool intended primarily for EnergyPlus parametric analysis. It was designed to simplify the running of multiple parametric EnergyPlus simulations and helps a user organize and edit files.

**GeoPraxis, Inc.**  
205 Keller Street, Suite 202  
Petaluma, California 94952  
Ph: (707) 766-7010 Voice  
Fx: (707) 766-7014 Fax

### **Green Building Studio**

is a web-based service provided by GeoPraxis, Inc. It gives 3-D CAD users quick, reliable, and free estimates of a building's energy costs during the early stages of conceptual design. Green Building Studio is powered by GeoPraxis' IDEA Server building energy simulation management software that incorporates EnergyPlus into this solution. Key to the integrated interoperability exhibited in GBS-compliant 3-D CAD applications is the Green Building XML schema (gbXML), an open XML schema of the International Alliance of Interoperability's aecXML Group. Green Building Studio creates an EnergyPlus IDF file.

## Interfaces for EnergyPlus

Vendor	Description	Cost
<b>DesignBuilder Software, Ltd.</b> Palace Chambers 41 London Road Stroud Gloucestershire, GL5 2AJ UK <a href="http://www.designbuilder.co.uk/">www.designbuilder.co.uk/</a>	<p><b>DesignBuilder</b> provides a range of environmental performance data such as: annual energy consumption, maximum summertime temperatures and detailed feedback on temperatures and heat flows in the building.</p> <p><b>DesignBuilder</b> provides an interface to the latest EnergyPlus version for envelope, solar, ventilation and daylighting capabilities as well as heating and cooling load modeling. The software comes with summer and winter design data for 1439 worldwide locations and has access to more than 500 hourly simulation weather files.</p>	See <i>website</i>
<b>EPlusInterface</b> <b>Contact Santosh Philip</b>	<p><b>EPlusInterface</b> is an open source initiative to develop a comprehensive interface for EnergyPlus. The code is <b>free</b> for anyone to use. The license is GPL. Modules currently under development are listed below; a few are ready to use. For latest downloads and status check the <b>website</b>.</p> <ul style="list-style-type: none"> <li>• EPlusTUI: Text based interface tui = text user interface</li> <li>• EPlusGUI: Graphical interface for Linux, Mac and Windows</li> <li>• API: A set of well documented API that can be used to develop specialized interfaces</li> <li>• CAD Interface: Protocol for building 3-D CAD models for EnergyPlus with conversion routines to generate EnergyPlus files</li> <li>• Material Library: Develop standard libraries for materials, construction, windows, systems, plants etc.</li> <li>• Import/Export: Protocol for transferring (import/export) elements between files.</li> </ul>	

## Support Tools for EnergyPlus (Continued)

### U. S. EnergyPlus CONSULTANTS

<b>California</b>				
<b>Steven Konopacki</b>	sjkonopacki@yahoo.com	2315 Ward Street	<b>Berkeley, CA 94705</b>	510) 207-9649
<b>Cliff Gustafson or Smita Gupta</b> cdg@tse-inc.net	Taylor Systems Engrg., Inc. www.tse-inc.net/tseplus/index.html	9801 Fair Oaks Boulevard, #100	<b>Fair Oaks, CA 95628</b>	(916) 961-3400 fax: 961-3410
<b>Tianzhen Hong, PhD, P.E.</b> thong@archenergy.com	Architectural Energy Corporation www.archenergy.com/	142 Minna Street	<b>San Francisco, CA 94105</b>	(415) 957-1977 fax: 957-1381
<b>Illinois</b>				
<b>Erik Olsen</b> eolsen@owpp.com	OWP/P Engineers www.owpp.com	111 West Washington St., #2100	<b>Chicago, IL 60602-2714</b>	(312) 960-8313 fax: 827-8313
<b>Jason Glazer</b> jglazer@gard.com	GARD Analytics www.gard.com	1028 Busse Highway	<b>Park Ridge, IL 60068</b>	(847) 698-5686
<b>Minnesota</b>				
<b>Tom McDougall</b> tgm@twgi.com	The Weidt Group www.twgi.com	5800 Baker Road	<b>Minnetonka, MN 55345</b>	(952) 938-1588 fax: 938-1480
<b>New York</b>				
<b>Chris Balbach</b> cab@thethomasgroup.com	Thomas Associates www.thethomasgroup.com/	215 The Commons	<b>Ithaca, NY 14850</b>	(607) 277-7100 fax: 277-1410
<b>Virginia</b>				
<b>John R. Ross III, P.E.</b> jross3@erols.com	Westwind Corporation	1609 Sereno Court	<b>Vienna, VA 22182-1958</b>	(703) 255-4712 fax: 255-4712

# Directory of Software and Services for DOE-2

## ESTSC Versions of DOE-2

Program Name and Vendor	Description	Cost
<b>DOE-2.1E (Ed Kidd, Kim Buckner)</b> estsc@adonis.osti.gov	Source code, executable code and complete current documentation for:	<b>Windows</b> U.S. Govt/Non-Profit/Educ \$ 300 U.S. Public, Mexico, Canada \$ 575 Japan \$1268 Other Foreign \$1075
<b>ESTSC</b> P.O. Box 1020 Oak Ridge, TN 37831-1020 Ph: 865-576-2606 / Fx: 576-2865 www.osti.gov/estsc	DOE-2. 1E/Version 121 (1000-zone version)  OS: Windows, SUN UNIX	<u>Support</u> Limited operational support (telephone assistance for installation, media or platform questions).

## Commercial Versions of DOE-2

Program Name and Vendor	Description	Cost
<b>ADM-DOE-2 (Richard Burkhardt)</b> ADM Associates 3239 Ramos Circle Sacramento, CA 95827-2501 Ph: 916-363-8383 / Fx: 363-1788 www.adm-energy.com/	Use on 386/486 PCs with a math co-processor and 4MB of RAM. The package contains everything needed to run the program: program files, utilities, sample input files, and weather files. More than 300 weather files available. OS: DOS, Windows 95	<u>Input</u> ----- <u>Output</u> ----- <u>Support</u> ----- \$395 + \$15/SH including one set weather data (your choice) and documentation
<b>Compare-IT (Matt Brost)</b> RLW Analytics, Inc. info@rlw.com 1055 Broadway, Suite G Sonoma, CA 95476 Ph: 707-939-8823 / Fx: 939-9218 www.rlw.com	Compare-IT allows DOE-2 professionals to add value to their projects by giving clients "what-if" scenarios using DOE-2. The interface is designed for novice energy analysts and the GUI can be customized for each client's particular interests. Based DOE-2.1E. OS: DOS, Windows (98, 95, NT)	<u>Input</u> : Customizable windows GUI dynamically built based on DOE-2 macros. ----- <u>Output</u> ----- <u>Support</u> ----- \$500 consultant \$2000 client  Documentation available
<b>DOE-Plus (Steve Byrne)</b> Item Systems info@item.com 8121 - 188 <sup>th</sup> St. SW. Edmonds, WA 98026 Ph: 425-640-3210 www.item.com/doeplus.htm	Complete support for all DOE-2 commands. Utility programs included: Prep, Demand Analyzer, weather processor. Over 500 worldwide weather files. Imports BDL files created with a text editor or other program. Based on DOE-2.1E. OS: DOS, Windows (3.1, 95, NT)	<u>Input</u> Interactive, graphical, fill-in-the-blanks ----- <u>Output</u> Customizable tables and graphics ----- \$895 with DOE-2 and doc \$495 without DOE-2 Source code not available.

Note: We list third-party DOE-2-related products and services for the convenience of program users, with the understanding that the Simulation Research Group does not have the resources to check the DOE-2 program adaptations and utilities for accuracy or reliability.

## Commercial Versions of DOE-2 (continued)

Program Name and Vendor	Description	Cost
<b>EnergyPro 3.0 (D. Vonderkullen)</b> EnergySoft LLC 1025-5 <sup>th</sup> Street, Suite A Novato, CA 94945 Ph: 415-897-6400 / Fx: 897-6422	Nonresidential load calculations for HVAC equipment sizing. Exports forms to AutoCad for inclusion on blueprints. On-line help. 344 weather files for the U.S. and Canada. OS: DOS, Windows (95, NT). <b>For California Users:</b> Performs Title 24 compliance calculations; state-certified HVAC and DHW Equipment directories, Title 24 lighting calculations. Based on DOE-2.1E	DOE-2 Module: Non-residential \$ 700 <sup>1,2</sup> Residential \$ 250 <sup>1,2</sup> Program Interface \$ 195 <sup>3</sup> <sup>1</sup> price reflects cash discount <sup>2</sup> includes documentation <sup>3</sup> required
<b>EZDOE (Bill Smith)</b> Elite Software P.O. Box 1194 Bryan, TX 77806 Ph: 409-846-2340 / Fx: 846-4367	Provides full screen, fill-in-the-blank data entry, dynamic error checking, context-sensitive help, mouse support, graphic reports, a 750-page user manual, and extensive weather data. Full implementation of DOE-2 on DOS-based 386 and higher computers. On-line help. Some weather files. Based on DOE-2.1E. DOS	\$1295 w/documentation Source code not available.
<b>FTI/DOE2 (Scott Henderson)</b> Finite Technologies Inc. 3763 Image Drive Anchorage, Alaska 99504 Ph: 907-333-8937 / Fx: 333-4482	Version 3.0 Release -- FTI/DOE is 100% compatible with LBNL version. Source code versions will compile with most F77-compliant compilers. On-line help: 344 weather files for the U.S. and Canada. Based on ESTSC DOE-2.1E. No demo, 30-day trial period OS: DOS, Windows (3.x, 95, NT) AIX, ULTRIX, VMS, Linux, NeXTStep.	\$ 995.99 US w/documentation \$1066 Int'l w/documentation \$4999.99 Source code
<b>PRC-DOE-2 (Paul Reeves)</b> Partnership for Resource Conservation 140 South 34 <sup>th</sup> Street Boulder, CO 80303 Ph: 303-499-8611 / Fx: 554-1370	Text-based version of DOE-2 includes documentation. Extensive information on new features, including information on new system types, new commands, new options, etc., added to later versions of 2.1E. OS: DOS, Windows (95, NT)	\$ 495 w/documentation Source code not available.
<b>VisualDOE 3.1 (Eric Kolderup)</b> Charles Eley Associates 142 Minna Street (2 <sup>nd</sup> floor) San Francisco, CA 94105 Ph: 415-957-1977 / Fax 1381	Fast construction of building geometry with pre-defined blocks and drawing interface. Import zone shapes from CADD file (dxf). Point+click to define zone properties and HVAC systems. Dynamic 3-D model views. Online help. LiveUpdate through internet. 400+ US, foreign weather files. OS: Windows 95/98/NT/ME/2000/XP	\$800 new commercial license \$400 commercial upgrade from version 2.6 60% discount for educational use \$3000 Site license (up to 8 registration keys) \$8000 corporate license (up to 15 registration keys) Support: 90 days free phone plus 1 year email support; thereafter \$300/year per licensed user

## Support Tools for DOE-2

Program Name and Vendor	Description	Cost
<b>DOE-2 Parametric Study Tool</b> <b>The Deringer Group, Inc.</b> 1349 Addison Street Berkeley, CA 94702 Ph: (510) 843-9000, Fx: 843-9005	DOE2PARM – is an MS Windows-based tool that permits you to run, edit and link all the related input and output files together in the same window.	<i>Free!</i>
<b>DoeRayMe</b> (Jason Glazer, P.E.) GARD Analytics 1028 Busse Highway Park Ridge, Illinois 60068-1802 Ph: 847-698-5690	DoeRayMe is a simple and flexible user interface for DOE-2 “screening tool” applications. DoeRayMe uses a specially developed DOE-2 input template to change the user interface. This allows new “screening tools” to be developed by anyone with DOE-2 knowledge.	
<b>DrawBDL</b> (Joe Huang) <b>Joe Huang &amp; Associates</b> 31 Sarah Lane Moraga CA 94556-2563 Ph: 925-247-9180	DrawBDL, Version 3.0, is a graphic debugging and drawing tool for DOE-2 building geometry. DrawBDL reads your BDL input and makes a rotate-able 3-D drawing of your building with walls, windows, and building shades shown in different colors for easy identification. OS: DOS, Windows (3.1, 95, 98, NT) [Works with 2.1E] email: tmchow@compuserve.com	\$125.00 plus shipping
<b>PRC-DOE-2</b> (Paul Reeves) <b>Partnership for Resource Conservation</b> 140 South 34 <sup>th</sup> Street Boulder, CO 80303 Ph: 303-499-8611, Fx: 554-1370	PRC-Tools aid in extracting, analyzing, and formatting DOE-2 output. PRC-Grab automates the process of extracting any number of answers from DOE-2 standard output files. PRC-Hour and PRC-Peak format the hourly output and create Peak-Day and Average-Day load shapes for any number of periods and for any combination of hourly values. OS: Windows (95, 98, NT) [Works with 2.1E]	\$99.00
<b>RIUSKA</b> (Tuomas Laine) <b>Olof Granlund Oy</b> P O Box 59 Helsinki, FIN-00701 Finland Ph: +358 (9) 351031 / Fx: 35103421	With RIUSKA user can add building envelope materials, internal loads and HVAC-system into the created 3D-model of the building and perform thermal calculations. RIUSKA can be used for space simulations to dimension cooling or heating equipments, or for energy calculations of the whole building. OS: Windows (95, 98, NT) [Works with 2.1E]	Contact Tuomas Laine for pricing.
<b>Visualize-IT</b> (Matt Brost) <b>RLW Analytics, Inc.</b> 1055 Broadway, Suite G Sonoma, CA 95476 Ph: 800-472-6716 Fx: 707-939-8823	Visualize-IT 2.0 is a Windows application designed to help you explore and summarize short-interval time series data, e.g., measurements taken once every 15 minutes over a period of weeks, months or years. Visualize-IT has been developed specifically for electric and gas load data measuring class profiles, market-segments, individual customer sites or specific end uses. Customized DOE2.1e hourly output importer. Visualize-IT is highly useful and informative for looking at DOE2 output and/or comparing to interval metered data. It is equally useful for other time series measurements such as weather, industrial process control, and water quality. OS: Windows 95, 98 and NT	\$500.00 per set Volume Discounts Available



## Special Versions of DOE-2

Program Name and Vendor	Description	Cost
<b>Building Energy Analyzer</b> InterEnergy Software 1700 South Mount Prospect Road Des Plaines, IL 60018 support@interenergysoftware.com www.interenergysoftware.com	InterEnergy Software, Inc. was established in 1998 by the Gas Research Institute and the Institute of Gas Technology to develop and market software for the energy industry. <u>Building Energy Analyzer</u> - Easy to use software provides quick economic analysis for commercial and industrial building; allows users to compare energy options and to estimate energy loads and costs. <u>BinMaker PRO</u> - Weather data for engineering. <u>DesiCalc</u> - Software for screening desiccant dehumidification/cooling applications; allows users to easily run hour-by-hour simulations to compare the energy needs and costs of using desiccant-based equipment with those of competing electric air-conditioning equipment.	see website for prices
<b>CBIP</b> cbip.nrcan.gc.ca/cbip.htm Office of Energy Efficiency Natural Resources Canada 580 Booth St., 18th Floor Ottawa ON K1A 0E4, CANADA	Natural Resources Canada's Commercial Building Incentive Program (CBIP) offers a financial incentive for the incorporation of energy efficiency features in new commercial and institutional building designs. The objective of this new incentive is to encourage energy-efficient design practices and to bring about lasting changes in the Canadian building design and construction industry. The program will be offered until March 31, 2004.	Web Based (free)
<b>Cool Tools</b> (Peter Turnbull) Pacific Gas & Electric Company pw11@pge.com www.hvacexchange.com/cooltools/	The CoolTools™ project objective is to develop, disseminate and promote an integrated set of tools for design and operation of chilled water plants. CoolTools products are Internet based, public domain resources available to building owners, design professionals, and operators involved in both new construction and retrofits.	Web Based (free)
<b>Energy Gauge USA</b> (Danny Parker) Florida Solar Energy Center 1679 Clearlake Road Cocoa, FL 32922	<u>Energy Gauge USA</u> allows the simple calculation and rating of residential building energy use in the US. The simulation calculates a six-zone model of the residence (conditioned zone, attic, crawlspace, basement, garage and sunspace) with the various buffered spaces linked to the interior as appropriate. TMY weather data for the program are available for 239 US locations.	Contact Danny Parker at FSEC for availability.
<b>Home Energy Saver</b> (Residential DOE-2) hes.lbl.gov	Calculation of residential energy consumption using DOE-2.1E. In 10-20 seconds, the program performs a full annual simulation for a typical weather year (involving 8760 hourly calculations) from 239 locations around the United States.	Web Based (free)
<b>PERFORM 2001</b> California Energy Commission 1516-9 <sup>th</sup> St., MS-13 Sacramento, CA 95814 Ph: 916-654-5385	Created for the State of California Energy Commission's, Title 24 energy code. Perform 2001 is an interface shell with DOE-2 as the engine. PERFORM 2001 calculates building energy consumption for space heating, space cooling and domestic hot water heating, and compares the energy consumption of the building design against the requirements of the standards. DOS input. Output is only California Title 24 compliant. [Based on DOE-2.1E] Technical support \$100/year from Gabel-Dodd Energy Soft LLC, Call 415-883-5900 for details.	\$250 including PERFORM 2001 program and manual on CD. (VISA/MC) Order #PS-400-04-017 www.energy.ca.gov/reports/reports_400.html
<b>RESFEN-3.1</b> Building Technologies, MS 90-3111 Lawrence Berkeley Laboratory Berkeley, CA 94720	RESFEN calculates the energy and cost implications of a building's windows and insulated walls. Also compares the relative energy and cost impacts of two different windows. RESFEN calculates the heating and cooling energy use and associated costs, also the peak heating and cooling demand for specific window products. [Based on DOE-2.1E] OS: Windows 95, 98, NT	Freel Download
<b>TEXAS EMISSIONS REDUCTION CALCULATOR</b> Texas A&M University	The Texas Emissions Reduction Calculator was created to provide Texans with an accurate, easy-to-use tool for calculating the emission reduction credits attributable to a single-family residence.	

## INTERNATIONAL DOE-2 RESOURCE CENTERS

*The people listed here have agreed to be primary contacts for DOE-2 program users in their respective countries. Each resource center has the latest program documentation, all back issues of the User News, and recent LBNL reports pertaining to DOE-2. Users may make arrangements to photocopy the new material for a nominal cost. We hope to establish centers in other countries; please contact us if you want to establish a center in your area.*

### Australia and Australasia

**P. C. Thomas, SOLARCH**, University of New South Wales, Sydney 2052, Australia  
Tel: +61 2 9385 6373 / Fax: +61 2 9385 6735, email [PC.Thomas@unsw.edu.au](mailto:PC.Thomas@unsw.edu.au) <http://www.fbe.unsw.edu.au/units/solarch>

**Murray Mason**, ACADS BSG, 18 High Street, Glen Iris, VIC. 3146, Australia / Tel: +61 39 885 6586 / Fax: +61 39 885 5974

### Brazil

**Prof. Roberto Lamberts**, Universidade Federal de Santa Catarina, Campus Universitario-Trindade, Cx. Postal 476, 88049-900 Florianopolis SC, BRASIL  
[lamberts@ecv.ufsc.br](mailto:lamberts@ecv.ufsc.br) / Tel: +55 48 331 9272/ Fax: +55 48 331 9770

### Czech Republic

Faculty of Civil Engineering, Dept. of Environmental and Building Services Engineering, Czech Technical University in Prague, Thakurova 7, 166 29 Praha 6, CZECH REPUBLIC <http://www.fsv.cvut.cz/lascii/index.htm> Tel: +42 2 2435 4327

### Egypt

**Dr. Ossama A. Abdou**, Center for Building Environmental Studies and Testing (C-Best), 15-El-Shibani Street, Almanza, Cairo, Egypt Tel: +20 2 391 1137 or +20 2 417 4583 / Fax: +20 2 519 4343 / [oabdou@hotmail.com](mailto:oabdou@hotmail.com)

### Germany

**B. Barath** or **G. Morgenstern**, Ingenieurbüro Barath & Wagner GmbH, Postfach 20 21 41, D-41552 Kaarst, Germany  
Tel: +49 2 131 7574 9012 G. Morgenstern / Fax: +49 2 131 7574 9029

### Hong Kong, China, Taiwan, Japan

**Dr. Sam C. M. Hui**, Mechanical Engineering Dept., University of Hong Kong, Pokfulam Road, Hong Kong (SAR), CHINA / [cmhui@hku.hk](mailto:cmhui@hku.hk), <http://web.hku.hk/~cmhui> Tel: +852 2859 2123 / Fax: +852 2858 5415

### India

**Jiten Prajapati** or **Anil K. Anand**, Energy Systems Engineering, IIT-Mumbai, Powai, Mumbai 400 076, INDIA  
Tel : +91 022 578 2545 x7378

### Italy

**Marco Rapella**, Managing Director Divisione Energie, Openplan SRL, c.so di Porta Nuova 13/15, 20121 Milano, Italy Tel: 39 02 626 94252, fax 36 02 2901 0531, [mailto:marco.rapella@openplan.it](mailto:mailto:marco.rapella@openplan.it), <http://www.openplan.it/>

### Korea (Chungnam)

**Dr. Jun Tae Kim**, Department of Architectural Engineering, Kongju National University, 182 Sinkwan-dong, Kongju, Chungnam 314-701, Republic of Korea / [jtkim@knu.kongju.ac.kr](mailto:jtkim@knu.kongju.ac.kr) / Tel: +82 416 850 8653 / Fax +82 416 856 9388

### Korea (Seoul)

**Dr. Jung-Ho Huh**, Ph.D., Assistant Professor, Dongdaemoon-Gu Jeonnon-Dong 90, Dept. of Architectural Engineering, The University of Seoul, Seoul 130-743, Korea. -- [huhj0715@uoscc.uos.ac.kr](mailto:huhj0715@uoscc.uos.ac.kr), Tel: +02-2210-2616 / Fax: +02-2248-0382

### Korea (Taejon)

**Dr. Euy-Joon Lee** and **Jong-Ho Yoon**, Passive Solar Research Team, Bldg 2, Room 202, Korea Institute of Energy Research, Daeduk Science Town, 71-2 Jang-Dong, Yusong-Gu, Taejon 305-343, Republic of Korea. -- Lee: [ejlee@kier.re.kr](mailto:ejlee@kier.re.kr), Yoon: [yesru@kier.re.kr](mailto:yesru@kier.re.kr)  
Tel: +82 42 860 3514 / Fax: +82 42 860 3132

## INTERNATIONAL DOE-2 RESOURCE CENTERS (continued)

### New Zealand

**Tan Yune**, Architecture Department, The University of Auckland, Private Bag 92019, Auckland, New Zealand    tanyune@ccu1.auckland.ac.nz / Tel: +64 9 373 7999 x5647 / Fax: +64 9 373 7410

### Portugal, Spain, Italy, and Greece

**Antonio Rego Teixeira**, INETI, Departamento de Energias Renováveis (DER), Estrada do Paco do Lumiar, 1649-038 Lisboa, Portugal  
rego.teixeira@mail.ineti.pt / Tel: +351 21 712 7237 / Fax: +351 21 712 7195

### Singapore, Malaysia, Indonesia, Thailand, and the Philippines

**WONG Yew Wah (Raymond)**, Nanyang Technological University, School of Mechanical and Production Engineering, Nanyang Avenue, Singapore 2263, Republic of Singapore, mywong@ntu.edu.sg / Tel: +65 790 5543 / Fax: +65 791 1859

### South Africa

**Prof. L. J. Grobler**, School of Mechanical and Materials Engineering, University of Potchefstroom, Private Bag X6001, Potchefstroom 2520, South Africa,  
mgiljg@puknet.puk.ac.za / Tel: +27 148 299 1328 / Fax: +27 148 299 1320

### Switzerland

**René Meldem**, BG ingenieurs Conseils SA, 61 Avenue de Cour, Caisse postale, CH-1000 Lausanne, Switzerland  
Tel: +41 21 618 1111, Fax: +41 21 618 1122,    rene.meldem@bg-21.com

Disclaimer: The Building Energy Simulation User News was prepared as an account of work sponsored by the United States Government (USG). While this document is believed to contain correct information, neither the USG nor any agency thereof, nor the Regents of the University of California (RUC), nor any of their employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process or service by its trade name, trademark, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the USG or any agency thereof, or the RUC. The views and opinions of authors expressed herein do not necessarily state or reflect those of the USG or any agency thereof or of the Regents of the University of California

## INTERNATIONAL DOE-2 ENERGY CONSULTANTS

### Australia

**P. C. Thomas**, Sustainable Building & Energy Consultants, 6/52 Houston Road, Kingsford NSW 2032, Australia.  
Tel/Fax: +61 2 9662 0205, Mobile +61 417 405 478, pc.thomas@iname.com

**Paul Bannister**, Energy Group, Ltd., Unit 9, 14 Lonsdale Street, P. O. Box 25, Braddon, ACT 2612, Australia, Tel: 61 2 6257 7066, Fax 61 2 6257 7063,  
mailto:paul@xgl.com.au, www.eglnet.com

### Belgium

**Andre Dewint**, S.A. Alpha Pl n.v., Avenue Franklin Roosevelt 74 bte 2, B-1000 Bruxelles, BELGIUM, Tel: +32 2 343 4251 / Fax: +32 2 343 0377, mailto:andewint@vub.ac.be

## INTERNATIONAL DOE-2 ENERGY CONSULTANTS (continued)

### Canada

**Curt Hepting**, P.Eng. EnerSys Analytics, 2989 Delahaye Drive, Coquitlam, B.C. V3B 6Y9 Canada mailto:chepting@enersys.ca, <http://www.enersys.bc.ca/homepage>  
Tel: (604) 552-0700 / Fax (604) 552-0713

**Dejan Radoicic**, D. W. Thomson Consultants, Ltd., 1985 West Broadway #200, Vancouver, BC V6J 4Y3, Canada Tel (604) 731-4921 / Fax (604) 738-4420,  
mailto:dwrtvan@dwtc.bc.ca, <http://www.dwtc.bc.ca/>

**Neil A. Caldwell**, PE, Ameresco Canada, Inc., 1060 - 401 West Georgia St., Vancouver, BC V6B 5A1 Canada, Tel (604) 684-4984 / Fax (604) 684-4985  
mailto:ncaldwell@ameresco.com

**Dr. Stephane Bilodeau**, PE, President, Groupe Enerstat, Inc., 125 Turgeon Street, Bromptonville (Quebec), J0B 1H0 CANADA. Tel (819) 846-1040 / fax (819) 846-4036.  
sbilodeau@groupeenerstat.com, [www.groupeenerstat.com/en/profil](http://www.groupeenerstat.com/en/profil)

**Gordon Shymko**, G.F. Shymko & Associates, Inc., 129 Evergreen Crescent S.W., Calgary, Alberta T2Y 3R2, Canada, mailto:gfsnymko@home.com, Tel: (403) 254-4776,  
Fax: (403) 254-4795

**Michael Wilson, P.Eng.** Enerficiency Consulting, 455 Elphinstone Ave., Gibsons, BC, Canada V0N 1V1 Canada,  
Tel: 604-886-9864 / Fax: 604-676-2604 fax, mwilson@enerficiency.ca / <http://www.enerficiency.com/>

### Germany

**Jens Grundt** and **Ludwig Michel**, GMW-Ingenieurbüro GmbH, Boulevard der EU 15, 30539 Hannover, Lower Saxony, Germany  
Tel: +49 0511 58 59 48 -11/Fax +49 0511 58 59 48 -48 [www.gmw-ingenieurbuero.de](http://www.gmw-ingenieurbuero.de) j.grundt@gmw-ingenieurbuero.de

### Ireland

**Paul Overy**, Overy + Associates, Mechanical and Electrical Consulting Engineers, Gurtnafluer Business Park, Clonmel, Co Tipperary, Ireland  
Tel: +353 (0)52-27667, Fax: +353 (0)52-29238 <http://www.overy-assoc.com/>

### Italy

**Marco Rapella**, Managing Director Divisione Energie, Openplan SRL, c.so di Porta Nuova 13/15, 20121 Milano, Italy Tel: 39 02 626 94252, fax 36 02 2901 0531,  
mailto:marco.rapella@openplan.it, <http://www.openplan.it/>

### Switzerland

**Markus Koschenz**, Building Equipment Section 175, EMPA, 129 Überlandstrasse, CH-8600 Dübendorf, Switzerland  
Markus.Koschenz@empa.ch, Tel: +41 1823 5511, Fax: 821-6244

**Philip Schlachter**, Institut für Bauphysik Klein, Urs Graf-Strasse 1, CH-4052 Basel, Switzerland

**Gerhard Zweifel**, Hochschule Technik + Architektur Luzern, Technikumstrasse 21 Abt. HLK, CH-6048 Horw, Switzerland gzwweif@ztl.ch  
Tel: +41 349 3349, Fax: 349 3960

### United Kingdom

**Dr. Peter Simmonds**, Ove Arup and Partners, Ltd., 13 Fitzroy Street, London W1P 6BQ, United Kingdom.  
Tel: +44 20-7465-3637 / Fax: 7465-3667, peter.simmonds@arup.com / <http://www.arup.com/>

## U. S. DOE-2 ENERGY CONSULTANTS

<b>Arizona</b>				
<b>Dale R. Broughton, P.E.</b> drb6@home.com	Quantum Computer Resources www.qcr-usa.com	20833 North 1 <sup>st</sup> Street	Phoenix, AZ 85027	(623) 780-3496 fax: 322-0049
<b>Henny van Lambalgen, P.E.</b> henny@questenergy.com	Quest Energy Group, LLC www.questenergy.com	4324 East Pearce Road	Phoenix, AZ 85044	(480) 753-5590 fax 753-1215
<b>Marlin S. Addison</b> marlin.addison@doe2.com	M. S. Addison & Associates	1215 West 12th Place	Tempe, AZ 85281	(480) 968-2040 fax: 968-2053
<b>California</b>				
<b>Joseph Deringer, Peter Zhang</b> jderinger@deringergroup.com	The Deringer Group, Inc. www.deringergroup.com	1349 Addison Street	Berkeley, CA 94703	(510) 843-9000 fax: 843-9005
<b>M. Gabel, R. Howley</b> office@gabelenergy.com	Gabel Associates, LLC www.gabelenergy.com	1818 Hamon Street	Berkeley, CA 94703	(510) 428-0803 fax: 428-0324
<b>Steve Konopacki</b>	sjkonopacki@yahoo.com	2315 Ward Street	Berkeley, CA 94705	(510) 207-9649
<b>George Marton</b>	1129 Keith Avenue		Berkeley, CA 94708	(510) 841-8083
<b>Leo Rainer</b> lirainer@davisenergy.com	Davis Energy Group, Inc. www.davisenergy.com	123 C Street	Davis, CA 95616	(916) 753-1100
<b>Lisa Heshong</b>	The Heshong Mahone Group www.h-m-g.com	11626 Fair Oaks Blvd., #302	Fair Oaks, CA 95628	(916) 962-7001
<b>Doug Mahone</b>				fax: 962-0101
<b>Cliff Gustafson,</b>	Taylor Systems Engineering, Inc. www.tse-inc.net	9801 Fair Oaks Blvd., #100	Fair Oaks, CA 95628	(916) 961-3400 fax: 961-3410
<b>Smita Gupta</b>				
<b>Tom Lunneberg, PE</b> tlunneberg@ctg-net.com	Constructive Tech. Group http://www.ctg-net.com/	16 Technology Dr., #109	Irvine, CA 92618	(949) 790-0010
<b>David J. Schwed</b> rma@as.net	Romero Management Associates http://www.as.net/~rma/	1805 West Avenue K	Lancaster, CA 93534	(805) 940-0540
<b>Martyn C. Dodd</b> support@energysoft.com	:EnergySoft, LLC www.energysoft.com	1025 5th Street, Suite A	Novato, CA 94945-2413	(415) 897-6400 fax: 897-6422
<b>Jim Kelsey PE, Kevin Warren</b> kelsey@kw-engineering.com	kW Engineering www.kw-engineering.com	360-17 <sup>th</sup> Street #100	Oakland, CA 94612	(510) 834-6420 fax: 834-6373
<b>Patrick Nkwocha, PE</b> UPat@worldnet.att.net	Global Tech Services	3360 Foothill Blvd., #108	Pasadena, CA 91107	(626) 583-8205 fax: 583-8206
<b>John F. Kennedy, PE</b> info@geopraxis.com	GeoPraxis, Inc. www.geopraxis.com	205 Keller Street	Petaluma, CA 94952-3874	(707) 766-7010 fax: 766-7014
<b>James Trowbridge, P.E.</b> jim@epmaker.com	Trowbridge Engineering	8240 Caribbean Way	Sacramento, CA 95826	(916) 803-5436
<b>Dr. Tianzeng Hong, Eric Kolderup</b> info@archenergy.com	Architectural Energy Corporation www.archenergy.com/	142 Minna Street	San Francisco, CA 94105	(415) 957-1977 fax: 957-1381
<b>Chandra Shinde, PE</b>	Envirodesign Group	19613 El Camino Esplanade	Walnut, CA 91789-2138	(909) 598-1980

## U. S. DOE-2 ENERGY CONSULTANTS (continued)

<b>Colorado</b>			
<b>Fred Porter</b>	Architectural Energy Corp	2540 Frontier Ave, #201	Boulder, CO 80301 (303) 444-4149 fax: 444-4304
<b>Susan Reilly</b> denver@enermodal.com	Enermodal Engineering	1554 Emerson Street	Denver, CO 80218 (303) 861-2070 fax: 830-2016
<b>Joel Neymark, PE</b> neymarki@qwest.net	J. Neymark & Associates	2140 Ellis Street	Golden, CO 80401 (303) 384-3672 fax: 384 9427
<b>Norm Weaver, PE</b> n_weaver@interwvr.com	Interweaver Consulting www.interwvr.com	P.O. Box 775444	Steamboat Springs, CO 80477 (970) 870-1710
<b>Adrian Tuluca</b> swa@swinter.com	Steven Winter Associates www.swinter.com	50 Washington Street	Norwalk, CT 06854 (203) 857-0200 fax: 852-0741
<b>Florida</b>			
<b>Philip Wemhoff</b> wemhoffp@buildingsleuth.com	9765 MacArthur Court North		Jacksonville, FL 32246 (904) 645-5342
<b>Dr. Paul Hutchins PE, CEM</b>	Reynolds Smith & Hills, Inc. www.rsandh.com	10748 Deerwood Park Blvd South	Jacksonville, FL 32256-0597 (904) 256-2500 fax: 256-2501
<b>Georgia</b>			
<b>Lung-Sing Wong, PE</b> lswong@bpe-inc.com	Building Performance Engineers www.bpe-inc.com	3060 Wanda Woods Drive	Atlanta, GA 30340 (770) 270-0100
<b>Illinois</b>			
<b>Gary H. Michaels, PE</b>	G.H. Michaels Associates	1512 Crain Street	Evanston, IL 60202 (847) 869-5859
<b>Prem N. Mehrotra</b>	General Energy Corp.	230 Madison Street	Oak Park, IL 60302 (708) 386-6000
<b>Robert Henninger, PE</b> rhenninger@gard.com	GARD Analytics, Inc. www.gard.com	1028 Busse Highway	Park Ridge, IL 60068-1802 (847) 698-5686
<b>Kansas</b>			
<b>Dr. Brian A. Rock, PE</b>	U. Kansas, A/E Dept, Marvin Hall	barock@ukans.edu	Lawrence, KS 66045-2222 (785) 864-3603
<b>Massachusetts</b>			
<b>C. Kalasinsky P.E.</b>	R.G. Vanderweil Engrs., Inc. www.vanderweil.com	274 Summer Street	Boston, MA 02458-1113 (617) 423-7423 fax: 423-7401
<b>Mark Mullins</b>	Select Energy Services www.selectenergysl.com/	24 Prime Parkway	Natick, MA 01760 (508) 653-0456 fax: 653-0266
<b>Michael Andelman, P.E.</b> mike@andelmanlelek.com	Andelman and Lelek Engineering, Inc. www.andelmanlelek.com	1410 Providence Highway	Norwood, MA 02062 (781) 769-8773 fax: ***_****

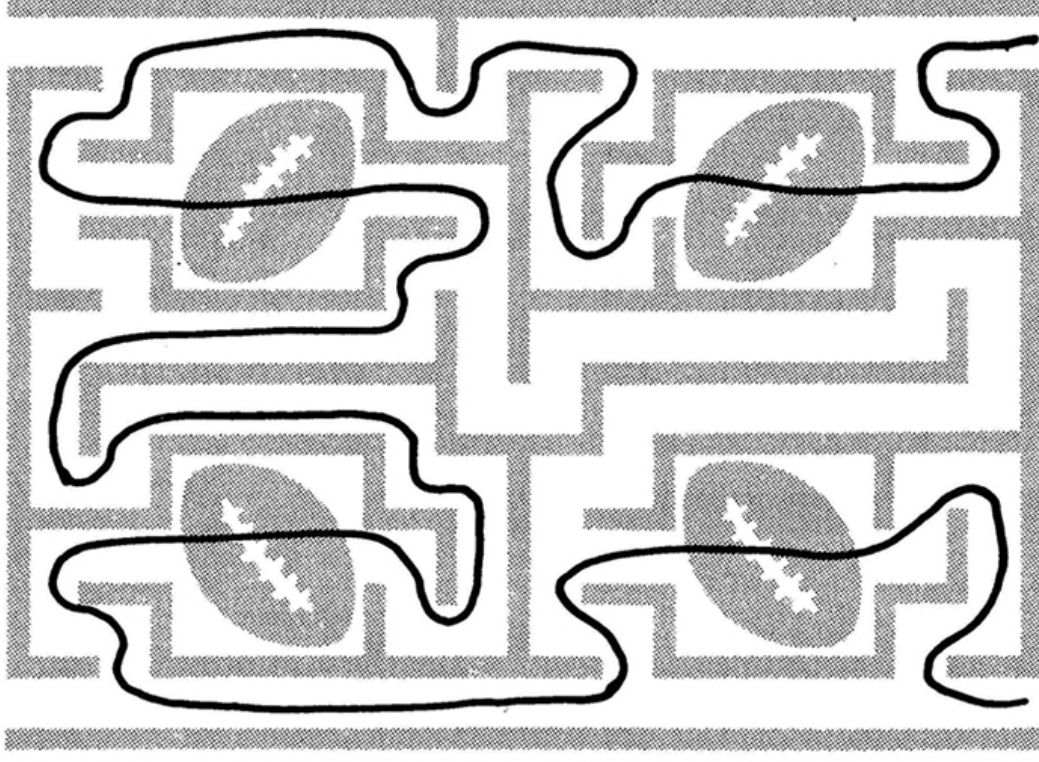
## U. S. DOE-2 ENERGY CONSULTANTS (continued)

<b>Minnesota</b>			
<b>Daniel A. Katzenberger, P.E.</b> dan@k-usa.com	Katzenberg USA Inc. www.k-usa.com/	7540 Edinborough Way, 1303 Edina, Minnesota, MN 55435	(952) 893-7379 fax 952-835-1442
<b>Missouri</b>			
<b>Mike Roberts</b>	Roberts Engineering Co.	11946 Pennsylvania Kansas City, MO 64145	(816) 942-8121
<b>Bruce A. Leavitt, PE</b>	Wm. Tao & Associates Inc.	2357-59 <sup>th</sup> Street St. Louis, MO 63110	(314) 644-1400
<b>Montana</b>			
<b>Michael W Harrison, PE</b>	Harrison Engineering	139 Bluebird Lane Whitehall, Montana 59759	(406) 287-5370
<b>Nebraska</b>			
<b>Philip M. Schreier, PE</b> FEI-OMA@worldnet.att.net	Farris Engineering www.farris-usa.com/	11239 Chicago Circle Omaha, NE 68154-2634	(402) 330-5900 fax: 330-5902
<b>New York</b>			
<b>Robert E. Gibeault</b> gibeault@pbworld.com	PB Power, Inc. www.pbworld.com	1873 Western Avenue #201 Albany, NY 12203	(518) 862-0012 fax: 862-1608
<b>J. Fireovid, P.E., K. Yousef, P.E.</b>	SAIC Energy Solutions Div. www.saic.com	421 New Karner Road Albany, NY 12205	(518) 452-8800 fax: 452-8111
<b>Scott Frank P.E., Konstantin Babets, and Chien Harriman</b>	Jaros, Baum & Bolles www.jbb.com	80 Pine Street New York, NY 10005	(212) 530-9300
<b>North Carolina</b>			
<b>Gopal Shiddapur, PE</b> gshidda@duke-energy.com	DukeSolutions (MC: ST05A) duke-energy.com	230 S. Tryon Street, # 400 Charlotte, NC 28202	(704) 373-4439 fax: 373-4872
<b>Oregon</b>			
<b>Mike Kaplan</b> mike@kaplanengineering.com	Kaplan Engineering	P. O. Box 811 Lake Oswego, OR 97034-0135	(503) 635-5154 fax: 635-5271
<b>Carol Gardner</b>	Gardner Energy Management Services	PO Box 12549 Portland, OR 97212-0549	(503) 223-4847 fax: 223-8486
<b>John P. Karasaki, P.E.</b> john_karasaki@pgn.com	Energy Services Group	16280 SW Upper Boones Ferry Road Portland, OR 97224	(503) 603-1629
<b>Pennsylvania</b>			
<b>Kimberly Byk, wba@utcorp.com</b>	Wood, Byk & Associates, Inc.	829 Meadowview Road Kennett Square, PA 19348	(610) 347-0710 fax: 347-0711
<b>Texas</b>			
<b>Jeff S. Haberl</b> jhhaberl@esi.tamu.edu	Energy Systems Laboratory esi.tamu.edu	Texas A&M University College Station., TX 77843-3123	(409) 845-6065
<b>Tarek Bou-Saada</b>	bousaada@flash.net	4410 Grand Cayman Drive Sugar Land, TX 77479	(281) 265-9139

## U. S. DOE-2 ENERGY CONSULTANTS (continued)

<b>Utah</b>				
<b>Curtis James Clark, P.E.</b>	Clarks Energy Services Corp.	4190 Highland Drive, #101	Salt Lake City, UT 84124	(801) 870-5037 fax (866) 507-7615
<b>Virginia</b>				
<b>Jay Hall</b> jayhall@icfconsulting.com	ICF Consulting	9300 Lee Highway	Fairfax, VA 22031	(410) 263-3162 fax (703) 934-3530
<b>Kurmit Rockwell, LEED AP, P.E., CEM</b> rockwellk@conedsolutions.com	ConEdison Solutions	4350 N. Fairfax Dr., Suite 820	Arlington, VA 22203	(703) 875-9458, ext 103, fax 875-8695
<b>Dave Walker</b> walkeng@swva.net	Walker Engineering www.swva.net/walkeng	P.O. Box 366, 4230 Pulaski Giles Turnpike	Staffordsville, VA 24167	(540) 921-4544 fax: 921-4548
<b>Dr. Hosan F. Abaza</b>	mailto:habaza@vt.edu	1405 Bayside Avenue #12	Woodbridge, VA 22191	(703) 498-3084 fax: 550-9755
<b>Washington</b>				
<b>Steve Byrne</b> byrne@item.com	ITEM Systems, www.item.com	8121 –188 <sup>th</sup> Street SW	Edmonds, WA 98026	(425) 640-3210
<b>Gregory J. Banken, PE</b> gbanken@qmetrics.com	Q-Metrics, Inc. www.qmetrics.com	P.O. Box 3016	Woodinville, WA 98072-3016	(425) 825-0200 fax: 825-0136
<b>Wisconsin</b>				
<b>Bill Talbert, M.E.</b> btalbert@aeieng.com	Affiliated Engineers Inc. USGBC LEED Accredited Professional	5802 Research Park Blvd.	Madison, WI. 53719	(608) 441-6677





Solution to the Big Fall Football Maze