



# UNIVERSITY OF HAWAI'I SYSTEM

## TESTIMONY

SCR 173: Requesting the Center for Smart Building and Community Design  
Develop Energy Efficient Design Standards for New and Retrofitted Buildings  
Throughout the University of Hawai'i System

Testimony Presented Before the  
Senate Committee on Higher Education and  
Senate Committee on Energy, Environment & International Affairs

April 5, 2005

By

Stephen Meder  
Director, Center for Smart Building and Community Design  
University of Hawai'i

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Chair Hee, Chair English, and Members of their Committees:

Aloha, my name is Stephen Meder. I have a joint appointment at the University of Hawaii. I serve as the Director of the Center for Smart Building and Community Design and I am also an Associate Professor performing research and teaching at the School of Architecture. With me today is Dr. Gordon Grau, Director of the University of Hawaii Sea Grant College Program. We are here to testify in favor of the adoption of SCR 173.

This year, the University of Hawaii will spend over \$20 million on electricity. During the 2003-2004 budget cycle, oil costs averaged \$37 a barrel. As we speak, oil costs are \$53 per barrel and climbing. That change represents a 70% increase in fuel costs and no authority on the topic expects to see those prices decrease in the future. Establishing standards for energy efficient building design can reduce the University's overall energy consumption by 20-50% and reduce our energy costs by millions of dollars annually at current costs.

The University, through the Center for Smart Building and Community Design, can realize these savings and demonstrate leadership to the larger community by creating design standards that consider energy conserving, healthful design strategies and life cycle costs for efficient building operations. Building orientation, passive design techniques, thermal mitigation, appropriate material choices, daylighting, energy efficient lighting and air conditioning design, water conserving strategies and viable renewable energy applications can substantially reduce the energy demand and improve the quality of life within and around our buildings.

By generating these standards the University of Hawaii demonstrates the value of responsible planning and building design to its students and increases their professional capacity through related curricula. Energy efficient design standards motivate the design professions to increase their design capacity to meet the new standards. We have supported outreach design workshops with our partners at HECO, DBEDT, and the US Department of Energy that provide

valuable information to our design community. Such outreach supplies them with the design and analysis tools to develop energy conserving buildings and keep more money in the state economy.

The University of Hawaii and the State of Hawaii have a special responsibility to taxpayers to use resources in a manner that is as productive and efficient as possible today and for future generations. The University of Hawaii is the perfect starting point from which to generate energy conserving design principles. UH is the largest user of electricity on Oahu after the US military. The Center is prepared to develop design standards for energy efficiency for new and retrofitted buildings. We are in the process identifying engineers and architects to develop the standards and we anticipate a Fall completion date. We have found the University Administration to be very supportive in this endeavor. The Administration stands to benefit economically from the information contained in the new design standards. In addition, the utility of the design standards will not be limited to the edge of Manoa or Hilo or Windward and Leeward Community Colleges; they will be applicable to other buildings in the state and could serve to bolster the greater economy of the state while doing the right thing for our environment and our people. The Center for Smart Building and Community Design is committed to improving the interaction among the built, natural and human environments by focusing resources and expertise to solve issues facing the university and Hawaii's larger community.

Dr. Grau and I strongly urge you to adopt SCR173. We thank you for your time this afternoon and the opportunity to testify on this resolution.