Comments to the Senate Energy, Utilities and Communications Committee
Charlie Huizenga, Co-Founder and Chief Scientist, Adura Technologies
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My name is Charlie Huizenga. I am a co-founder of Adura Technologies, a cleantech startup that connects the smart grid to building automation systems. Adura's lighting control technology reduces commercial building lighting energy by over 50%.

I would like to share with you the story of Adura Technologies because it is an example of the kind of tangible benefit that comes from PIER research. In 2004, as an adjunct faculty and researcher at UC Berkeley, I received a $75,000 PIER grant to investigate the commercial potential of a concept that I had been exploring to integrate low-power , low-cost radio technology into commercial building lighting controls. Working with two graduate students at the UC Berkeley Haas School of Business, Zach Gentry and Josh Mooney, I used the PIER funding to develop prototypes and install the system in a campus office. The system we created reduced lighting energy use by over 65% and was embraced by the occupants because it gave them improved control over their lighting.

That PIER project has become a successful cleantech business. Adura Technologies, which started from a small PIER grant, now:

- Provides 35 green jobs, with plans for significant growth
- Has attracted $17 million in venture capital
- Has been recognized with several green technology awards
- Is a partner in the California Energy Technology Assistance Workforce Development Program, where we are working with California municipal governments to save energy in local government buildings and providing Green Jobs training

But the story of PIER's role in helping to create Adura Technologies goes further back than the grant I received for wireless lighting controls. PIER funding at UC Berkeley has fundamentally changed the research climate by bringing together researchers from different fields to work together on critical issues of energy demand and supply. The PIER Emerging Technology Demonstration Grant (ETDG) Program and PIER support for the UC Berkeley Center for the Built Environment has established relationships between my colleagues in Architecture and those in the College of Engineering that did not previously exist. This funding has helped create an ecosystem where new ideas, and new ways of applying existing technology, are taking shape every day. This research is unique in that it is much further upstream than that engaged in by the private sector, yet it is far closer to commercialization than most research at UCB.

The PIER Program is playing an important role in defining research problems and engaging the state's research community in new and effective ways. I urge you to continue the PIER program even while you carefully consider how you might refocus it to be as effective as possible. Thank you for your time and consideration.

Charlie Huizenga is a co-founder of Adura Technologies, a cleantech startup that connects the smart grid to building automation systems using low-power wireless mesh networking technology. Adura's lighting control technology reduces commercial building lighting energy by over 50% and enables significant demand response opportunities. Charlie is also a researcher and adjunct professor in the Department of Architecture at UC Berkeley focusing on energy-efficient buildings and indoor environmental quality and he is a co-founder of Agua Para La Vida (www.aplv.org), a non-profit organization dedicated to helping rural Nicaraguan communities develop safe drinking water systems, improve sanitation and conserve precious watersheds.