UCTV 4669A-J. Santa Barbara Summit on Energy Efficiency.
May 12 & 13, 2010
Order Cat. No. 4669 A-J or each one separately: A,B,C,D,E,F,G,H,I,J

UCTV 4669-A. Opening Keynote.

Dan Reicher, Director of Climate Change and Energy Initiatives, Google.
*Realizing the Potential of Energy Efficiency: Technology, Policy and Finance*

To become sustainable in terms of energy we must understand how technology, policy and finance coexist, and we must strive for efficiency first. We should focus on the low-hanging fruits - insulation, water heating, lighting systems, fuel efficient vehicles - while we work on the bigger, more expensive things. We must also be able to measure energy use in order to improve it. Google has focused some of its resources on modernizing the smart grid, resulting in the deployment of the PowerMeter. The internet giant also sees real potential in Enhanced Geothermal Systems (EGS), and is actively researching plug-in vehicles. In order for progress to be made in these and other technologies, funding must be made reliable and policy must play a significant role.

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UCTV 4669-B. Implementing Solar Energy Options.

“Energy efficiency is a critical strategy in the quest for a sustainable energy future—but meaningful efficiencies can’t happen without collaboration between research, investment, and policy.” said John Bowers, Director of the Institute. The Summit agenda focused on the most promising energy efficiency technologies and their implementation, along with the role of government in fostering innovation and commercialization. Technology areas of focus included: energy production and storage, lighting, building systems, computing, and electronics.

Moderator: Gui Bazan, Production & Storage Solutions Group Head, Institute for Energy Efficiency.
Howard Wenger, President, Utility & Power Plants, SunPower Corp. *Utility Scale Solar Technology at a Distribution Level*
Dina Lozofsky, Vice President of Corporate Development, Solarmer. *Commercializing Polymer Solar Panels.*
Tim Keating, Vice President of Marketing, Skyline Solar. *Getting New PV Solar Power Technologies with a focus on the Skyline Solar High Gain Approach*
Implementing Energy Savings.

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Moderator: Jeffrey Henley, Global Advisory Board Chair, Institute for Energy Efficiency.
Joe Pettus, Senior Vice President of Fuel and Energy Operations, Safeway. Innovation for Energy Savings; William Sisson, Director of Sustainability, United Technologies Research Center. UTC’s Sustainability & Energy Demand Reduction in Targeted Facilities.

Energy Efficient Computing at a Large Scale.

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UCTV 4669-E. Energy Efficient Information Technology.

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Moderator: John Bowers, Director and Electronics & Photonics Solutions Group Head, Institute for Energy Efficiency.
Mario Paniccia, Director, Photonics Technology Lab, Intel. Energy Efficiency in the PC/Server Environment; Michael Lebby, President and CEO, Optoelectronics Industry Development Association. Green Photonics: How It Will Affect Our Lives Over the Next Decade; Mark Rodwell, Professor, Electrical and Computer Engineering, UC Santa Barbara. Low-voltage III/V Transistors for VLSI; Daniel Blumenthal, Professor, Electrical and Computer Engineering, UC Santa Barbara. Energy Efficient Photonics for Communications & Application to the Terabit Optical Ethernet Center at UCSB.

UCTV 4669-F. Keynote.


Global energy use is projected to grow 40% by 2030, with a similarly projected rise in greenhouse gas emissions. Increased energy use is driven by population growth in some regions and by worldwide economic activity while the growth in CO₂ emissions will largely come from increased electricity production and transportation fuel use. Efficiency will continue to increase as energy and CO₂ per dollar GDP declines due to shifts in building types and locations, vehicles types, mass transit, and less energy intensive industry. For example, vehicle fuel efficiency will continue to increase and hybrids are predicted to dominate light duty vehicle sales by 2035. Electricity use in buildings will decrease with structural changes in the economy, increased energy prices, the implementation of standards, and improved efficiency. Overall, EIA’s analysis illustrates various
energy paths depending on how energy markets, technologies, and policies unfold.

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Cary Vandenberg, CEO, Agilewaves, Inc.
Building Energy Efficiency: the Path to Optimization.
Takashi Hikihara, Professor of Electrical Engineering (Power Conversion & System Control Lab) Kyoto University.
Marti Ogram, Strategic Product Specialist, Emerging Technology Group, Cisco Systems, Inc.
Energy Efficiency Across the Enterprise: The Role of Information and Communications Technologies to Eliminate Hidden Energy Waste.
Panelists:
Alexis Ringwald, Co-Founder and Director of Business Development, Valence Energy
Walter Yuen, Professor, Mechanical Engineering, UC Santa Barbara.

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UCTV 4669-H. Moving Towards a Viable and Large Scale LED Market.

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energy production and storage, lighting, building systems, computing, and electronics.

Moderator: Steve DenBaars, Lighting Solutions Group Head, Institute for Energy Efficiency.
Robert Karlicek, Director, Smart Lighting Engineering Research Center, Rensselaer Polytechnic Institute.
*Novel Applications of LEDs for Energy Savings: A Systems Level View.* James Speck, Professor, Materials Science, UC Santa Barbara.
*The Second Cycle & Beyond: Worldwide LED Supply & Demand Analysis.*

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**UCTV 4669-I. Expert Picks: Near Term High-Growth Technologies.**

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Moderator: Jon Guice, Managing Director of Research, AltaTerra Research.
Gene Rodrigues, Director of Energy Efficiency, Southern California Edison.
*Policy & Technology: Fueling a Revolution in Demand-Side Management.*
Brent Dehlsen, Co-Founder and CEO, Ecomerit Technologies.
*Competitiveness of Wind & Marine Energy.*
TJ DiCaprio, Sr. Director, Environmental Sustainability Initiative, Microsoft U.S.A.
*Using Software Technology to Support Environmental Sustainability.*
Kelly Smith, Manager Sustainability Programs, Building Efficiency, Johnson Controls.
*Connecting the Dots: Integrating Components in a Building through Technology & Innovation.*

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**UCTV 4669-J. Closing Keynote.**
Michael Peevey, President, California Public Utilities Commission.

*Energy Efficiency.*

Michael R. Peevey was appointed President of the California Public Utilities Commission (CPUC) by Governor Gray Davis on December 31, 2002. In December 2008 Governor Arnold Schwarzenegger reappointed Mr. Peevey to the CPUC for another six-year term.

Mr. Peevey is committed to maximizing energy efficiency and demand response opportunities and ensuring that California's environment is protected. He is also a strong supporter of renewable energy and renewable procurement requirements for utilities, and is a leader in implementing California's Solar and Greenhouse Gas Initiatives. He also serves as Chairman of the California Emerging Technology Fund.

Peevey received the "Distinguished Citizen Award" from the Commonwealth Club of California for achievements in green and sustainable energy in 2007; he was named "Man of the Year" by the Power Association of Northern California; recognized with the Climate Action Champion Award by the California Climate Action Registry in 2004; and leadership recognition from American Council for Energy Efficiency (2005), the Utility Minority Access Program (2006), and the California Solar Energy Industries Association (2006).

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