ETCC QUARTERLY MEETING

Crunching Numbers, Shrinking Megawatts: Making Data Centers More Energy Efficient

Wednesday, December 7th | 9:00 AM – 3:30 PM
Webinar runs from 10:00 AM – 3:30 PM

LOCATION: UC Davis, Activities and Recreation Center, 232 One Shields Avenue, Davis, CA 95616, and via Webinar.

Data center design and operation is all about capacity, security and scalability. But energy efficiency is also essential because data centers are responsible for a full 2% of energy consumption in California -- and that amount continues to grow. December's ETCC meeting will take a deeper dive into this area that so far has only seen limited results from energy efficiency efforts.

Panelists will address data center energy consumption trends and opportunities. Discussion will also cover how innovative design, enhanced operating practices and application of emerging technologies can drive down energy use and peak demand in enterprise data centers and smaller server rooms and closets. Utility representatives and vendors will share examples of current projects and case studies, and the conversation will wrap up with a look at the future of data centers and what other developments can reduce energy consumption without sacrificing performance.

AGENDA

9:00 AM	**BREAKFAST AND NETWORKING**	
10:00 AM	**Introduction, Safety and ETCC Updates**	**Jim Parks,** Program Manager, Sacramento Municipal Utility District
10:15 AM	**Welcome**	**Ben Finkelor,** Executive Director, UC Davis Energy Efficiency Center
10:20 AM	**The Big Picture Behind Crunching Big Data** *Data centers offer big energy saving potential, but little of these savings have been realized so far. Panelists kick off the day's conversation with an overview of data center energy consumption and by sharing some high-efficiency design concepts. This session will also include engagement examples and success stories from projects that have transformed energy usage patterns in data centers and server rooms. (70 minutes)*	**Moderator: Ryan Hammond,** Senior Energy Advisor, Commercial Services, Sacramento Municipal Utility District **Pierre Delforge,** Director of High Tech Sector Energy Efficiency, Energy & Transportation Program, Natural Resources Defense Council **Arman Shehabi,** Research Scientist, Energy Technologies Area, Lawrence Berkeley National Laboratory

11:30 AM	**NETWORKING LUNCH** (provided)	
12:35 PM	**Concurrent Session: Enterprise Data Center Solutions** *Some of the largest data centers offer massive opportunities in energy savings. One site can provide savings hundreds of times larger than a small business efficiency project when operated and managed effectively. Join this breakout session for insights into the enormous potential and specific opportunities in this sector. Get a feel for what technologies are making a major splash and which ones are coming down the pike. (80 minutes)*	**Moderator: Mary Medeiros McEnroe,** Public Benefit Program Manager, Silicon Valley Power **Nissim Hamu,** Design Manager, Intel Corporation **Fred Rebarber,** Manager, Technical Relations, North America, Vertiv
12:35 PM	**Concurrent Session: Server Closet and Server Room Solutions** *Many businesses have server closets or server rooms on-site. However, these represent an energy savings conundrum because most IT support staff have little knowledge of energy issues or proper management, and no incentive to strive for energy efficiency. In aggregate, small server enclosures could waste more energy than large data centers, yet efficiency programs have only scratched the surface of potential energy savings. Join this breakout session for insights into how enhanced efficiency in server closets and server rooms can make a big impact. Check out the technology showcase and see what new opportunities are available for typical commercial buildings. (80 minutes)*	**Moderator: Priscilla Johnson,** Evaluation Measurement & Verification, Pacific Gas & Electric **Magnus Herrlin,** Program Manager, High-Tech Group, Lawrence Berkeley National Laboratory **Bob Huang,** Senior Associate, Cadmus
1:55 PM	**BREAK**	
2:15 PM	**What's Next? The Future of Data Centers** *Demand for computing power and cloud storage are forecasted to rise for years to come. Because data center operators pay a large part of their operating budgets for electricity, they have a good understanding of energy impacts and a strong financial motivation to implement efficiency measures. So what does the future of data centers look like, and how can energy use be tamed given the continued growth of this sector? Panelists will talk about current and future energy efficiency policies and legislation, offer suggestions and predictions on the technology front and engage the audience in discussion of more efficient options. (70 minutes)*	**Moderator: Mark Modera,** Director, Western Cooling Efficiency Center, UC Davis **Mukesh Khattar,** Technical Executive, Data Centers, EPRI **Jeff Stein,** Principal, Taylor Engineering **Jim Hanna,** Director, Datacenter Sustainability, Microsoft

3:25 PM	**Wrap-Up**	**Jim Parks,** Program Manager, Sacramento Municipal Utility District
3:30 PM	**CONTINUED NETWORKING**	

ABOUT THE ETCC

The ETCC supports the advancement of energy efficiency and demand response initiatives through its leadership, impact and influence in the emerging technology domain. It pursues this objective through strategic stakeholder engagement and effective and efficient coordination among ETCC members.

CONTACT US

We appreciate your feedback. If you have questions, suggestions, partnership ideas or project leads, please contact us at contact@etcc-ca.com