

## Sundermeyer, Susan

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**From:** Dietrich, Natelle\*  
**Sent:** Wednesday, November 10, 2010 3:00 PM  
**To:** Sundermeyer, Susan  
**Subject:** FW: MoPSC DSM Potential Study

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**From:** Ken Schisler [mailto:kschisler@enernoc.com]  
**Sent:** Friday, October 01, 2010 9:49 AM  
**To:** Dietrich, Natelle\*; Rogers, John; 'Adam Bickford'; 'Ajay Arora'; 'Alden Hathaway'; 'Alex Pennock'; 'Allen Dennis'; 'Andrew Meyer'; 'Barry Dicker'; 'Barry Matchett'; 'Barry Warren'; Beck, Dan; 'Beth Burka'; 'Beth Soholt'; 'Bill Barbieri'; 'Bill Davis'; 'Bill Loesch'; 'Bill Roush'; 'Bill Roush'; 'Billie LaConte'; 'Billie Sue LaConte'; 'Blake Mertens'; 'Bob Gardner'; 'Bob Miller'; 'Brad Klein'; 'Brad Lutz'; 'Brent Ross'; 'Brent Stewart'; 'Brett McLean'; Brown, Doyle; 'Burton Crawford'; 'Cara Schaefer'; 'Carl Lumley'; Carlson, Bob; 'Carol Sivils'; 'Charles Peoples'; 'Chris Burnette'; 'D. J. Linton'; 'Dan Laurent'; 'Dane Glueck'; 'Dave Kreimer'; 'Dave Linton'; 'David Weisman'; 'David Overfelt'; 'David Woodsmall'; 'Dianna M. Vuylsteke'; 'Donald Johnstone'; 'Doug Healy'; 'Duane Highley'; 'Ed Downey'; Pappas, Charles; Parish, Dana; Voss, Cherlyn; Wilbers, Brenda; 'Ed Hedges'; 'Ed Matthews'; 'Eric Gunning'; 'Eric Swillinger'; 'Eric Thumma'; 'Erin Noble'; 'Ezra Hausman'; 'Frank Lewon'; 'Gaye Suggett'; Greg Geller; 'Greg Meyer'; 'Hank Stelzer'; 'Hans Detweiler'; 'Heather Starnes'; 'Henry Rentz'; 'Henry Robertson'; Hughes, Mark; 'Jay Hasheider'; 'Jayna Long'; 'Jeff Lewis'; 'Jeff Reinkemeyer'; Mendl, Jerry; 'Jesse Bermel'; 'Jim Fischer'; 'Jim Okenfuss'; 'John Coffman'; 'John Ervin'; 'John Grimwade'; 'Josh Harden'; 'Joyce Davidson'; 'Juan Gutierrez'; Judd Moritz; 'Kari Decker'; 'Karl Zobrist'; 'Kathleen Henry'; 'Kathleen Logan Smith'; 'Keith Beall'; 'Kelly Walters'; 'Kevin Bryant'; 'Khristine Heisinger'; 'Lars Kvale'; 'Lisa Langeneckert'; 'Lois Liechti'; 'LuAnn Madsen'; Mantle, Lena; 'Marc Lopata'; 'Mark Lawlor'; 'Marvin Rollison'; 'Matt Michels'; 'Matthew Brown'; 'Maurice Brubaker'; 'Michelle Harris'; Mills, Lewis; Noller, John; Oligschlaeger, Mark\*; VanEschen, John; Wheeler, Janet; 'Keith Beall'; Thompson, Kevin; 'Kim McCloud'; 'Margo McNeil'; 'Marsha Troy'; 'Mary Ann Young'; 'Michael McCabe'; 'Michelle McConnell'; 'Mike Bollenbach'; 'Mike Carella'; 'Mike Revak'; 'Mike Whitmore'; Couch, Myron; 'Nathan Jones'; Williams, Nathan; 'P. J. Wilson'; 'Patrick McNamara'; 'Paula Haskin'; 'Pete Curtice'; 'Phil Wright'; 'Puja Deverakonda'; 'Randy Hughes'; 'Rex Jenkins'; Moore, Richard; 'Richard Voytas'; 'Richard Wright'; 'Rob Freeman'; 'Rob Land'; 'Robert Willen'; 'Roger Clark'; 'Roger Steiner'; 'Ron McLinden'; 'Ron Stimmel'; 'Russ Mitten'; Trippensee, Russ; Kind, Ryan; 'Sandeep Menon'; 'Scott Miller'; Woods, Shelley; 'Sherry McCormack'; 'Sierra Club Missouri Chapter'; 'Stacey L Johnson'; 'Stephen Kidwell'; 'Steve Capanna'; Dottheim, Steve; 'Steve Gaw'; 'Stuart Conrad'; 'Susan Brown'; Sundermeyer, Susan; 'Terry Hilgedick'; 'Tim Michels'; 'Tim Rush'; 'Tim Wilson'; 'Todd Tarter'; 'Todd Wheeler'; 'Tom Rutigliano'; 'Tony Robyn'; 'Travis Creswell'; 'Troid Edwards'; 'Vaughn Prost'; 'Veronica Thomason'; 'Wade Miller'; 'Warren Wood'; 'Wenbin Li'; 'Wendy Tatro'; 'Wil Cooper'; 'Yuri Horwitz'; 'Zeina El-Azzi'; 'Zeke Fairbank'; Barnes, Matthew; Bender, Leon; Eaves, Dana; Gross, Randy; Kang, Hojong; Roos, David; Wankum, Martha; Adrian, Barb; 'Brad Lutz'; 'Cara Shaefer'; Eichelberger, Pam; Eiken, Shelley; Elliott, David; 'George McCollister'; Gregory, Sheryl; Harden, Joshua; Hernandez, Jennifer; Hughes, Mark; 'Jill Cornett'; 'Joseph O'Donnell'; Josh Harden (jktharden@gmail.com); 'Laura Becker'; Moore, Richard; Neuner, Joyce; Rick D. Chamberlain; 'Tim Rush'; Todd Tarter; Voss, Cherlyn; Wheeler, Janet; 'Angela Beehler'; 'B. Maire Pieniazek'; 'Bruce Campbell'; 'Damon E. Xenopoulos'; 'David Ellis'; 'John Orr'; 'Ken Baker'; Mckinnie, Adam; 'Paul Peterson'; 'Paul Tyno'; 'Rebecca Stanfield'; 'Tim Carter'; 'Tom Ruteigliano'; 'ewest@communityaction.org'; Imhoff, Tom; Cox, Kim; Stahlman, Michael; 'FGILZOW@MPUA.org'; Wilbers, Brenda  
**Subject:** RE: MoPSC DSM Potential Study

Natelle,

Thank you for giving us the opportunity to review the list of measures for the MO DSM potential study. We have gone over these materials and would like to offer a few comments.

The list appears to be a very good list of known and proven energy efficiency equipment replacement and retro-commissioning measures. That said, there are a few additional elements we suggest should be incorporated in the DSM potential study. This is certainly not a criticism of what has been developed so far, as it appears the memo was targeted only to equipment replacement/retro-commissioning measures.

Other areas where we believe there are tremendous opportunities for savings include: 1) demand response; and 2) monitoring-based commissioning (MBCx), a technology-enabled form of operational energy efficiency. We would request that these measures also be incorporated in a comprehensive MO DSM potential study.

**Demand response** – The materials from the KEMA Kickoff Meeting (at page 23) on your website indicated that KEMA would be looking at demand response measures and relying upon the FERC National Assessment of DR potential as a resource. Perhaps the memo that you circulated was intended to focus only on equipment replacement/retro-commissioning measures for energy efficiency only, which is why demand response measures are not included. Nevertheless, we thought we would bring this to your attention. At some point, it will be important to assess specific demand response measures as well as energy efficiency measures.

The KEMA presentation mentions that it will be focused on five (5) DR programs, the last being “Other DR Programs.” We have one suggestion: consider specifically reviewing demand response programs that utilize customer curtailment capabilities to provide operating reserves. As you know, operating reserves are quick response balancing services that match supply and demand in real-time with changing conditions. Since many generators have operating limitations that restrict the ability to ramp up or down, quick start operating reserves are needed to adjust for imbalances. In order to maintain sufficient operating reserves, the traditional method of balancing the grid is to reserve spare generating capacity on power plants that can ramp up quickly should the need arise. This is akin to having a taxi waiting outside your home running on idle, just in case you need it. Demand response that is capable of reducing load quickly can provide this same service cost-effectively to balance grid operations in real-time. Indeed, EnerNOC participates in demand-side reserves programs in several regions. As more intermittent renewable sources of generation come on line (e.g., solar and wind) in the Midwest, there will be an increased need on the grid for operating reserve capability. Accordingly, the potential for demand response to provide this service in Missouri should be explored in the potential study.

**Monitoring-based commissioning** – EnerNOC has provided information about MBCx in materials we have presented to the MOPSC, and would be happy to assist further in this regard. Monitoring-based commissioning (MBCx) is a form of operational energy efficiency; it’s an ongoing, whole-building approach that leverages technology to drive energy efficiency in existing commercial, institutional buildings and physical plants. Unmonitored buildings commonly drift away from optimal operations; MBCx ensures that building managers are alerted to issues as they arise so they can implement appropriate low-cost or no-cost energy efficiency measures. We believe that MBCx is a critical portion of a comprehensive energy efficiency portfolio in Missouri and a complement to traditional retrofit programs, as well as retro-commissioning programs.

It’s important to note the distinction between MBCx and retro-commissioning; both are valuable but they are different. Retro-commissioning is an activity that happens on a periodic basis (perhaps once every two to three years) where energy engineers use a “boots on the ground” approach to identifying opportunities for energy efficiency by recalibrating systems within a building. In contrast, MBCx uses technology to integrate data from building management systems and electric meters to *continuously* filter and analyze thousands of points throughout a facility and identify energy efficiency measures that can be implemented.

Many buildings often undergo a retro-commissioning, resulting in the setting of building controls to optimize efficient performance. But then afterwards, unfortunately, the typical situation is “set it and forget it.” Over time, as humans occupy the space and the building and its systems are operated normally, excursions from the optimal design efficiency emerge. MBCx is a supplement to traditional retro-commissioning that integrates the facility’s day-to-day management personnel with the commissioning engineers to control and optimize systems continuously so that energy savings are realized.

MBCx is an energy efficiency strategy that is particularly appropriate for large and complex buildings and campuses such as universities, hospitals, and office buildings with modern building management systems. The energy savings we see from MBCx is generally more than 10% over a base case.

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**EnerNOC - get more from energy**

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**Sent:** Tuesday, September 28, 2010 9:52 AM

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**Cc:** Dietrich, Natelle\*

**Subject:** MoPSC DSM Potential Study

**Importance:** High

The Missouri Public Service Commission retained the services of KEMA, Inc. to conduct a comprehensive and thorough statewide demand-side management market potential study. As part of that process, KEMA is gathering measure data, baseline data and other appropriate data to develop various inputs that are representative of Missouri. The Commissioners have asked that stakeholders provide input on various deliverables throughout the work plan. The work plan and other information related to the Study can be found on the Commission website at: <http://www.psc.mo.gov/electric/>.

Attached you will find the first deliverable – Measure Data Interim Memo. Your input in this process is valued. Please review the attached information and provide any comments or feedback to me. Staff will review the feedback and make recommendations to KEMA or the Commission based on that feedback. The contract with

KEMA anticipates a Study by the end of the year, so prompt review is requested. Comments to KEMA are due Monday, October 4, so your input is requested by Friday, October 1, at 3pm.

Thanks in advance for your assistance. Feel free to forward to others as necessary. Let me know if you have any questions.

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