

# DOE Data Center Energy Efficiency Initiative

## Meeting Notes

**Meeting Date:** February 10, 2008      **Time:** 1:00 p.m. – 2:00 p.m.  
**Facilitator:** Will Lintner      **Recorders:** Allison Young  
**Location:** DOE Data Center Energy Efficiency Initiative      **Number of Pages:** 3

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### Distribution and Attendees: (☑ indicates that the person is present)

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|----------------------------------|------------------------------|
| ☑ Will Lintner (DOE, EERE, FEMP) | ☑ Bill Tschudi (LBNL)        |
| ☑ Paul Matthew (LBNL)            | ☑ Ronke Luke (EM)            |
| ☑ Caryle Miller (Science)        | ☑ Otto VanGeet (NREL)        |
| ☑ Ken Washburn (OCIO)            | ☑ Jeff Eagan (HSS)           |
| ☑ Tom Robinson (NNSA)            | ☑ Carter Ward (NNSA)         |
| ☑ Jake Wooley (OCIO)             | ☑ Paul Scheihing (ITP)       |
| ☑ Mike McDonald (ORNL)           | ☑ Allison Young (Energetics) |

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### Agenda

Num.	Topic	Person (s) Responsible/Briefing
1.	Opening Remarks	Will Lintner
2.	Draft Charter	Will Lintner
3.	DOE Site Assessments (Germantown and Forrestal)	Jake Wooley
4.	PSO and Field Updates	All
5.	Electronic Stewardship	Jeff Eagan
6.	Metrics	All
7.	Events	Will Lintner

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## Minutes

<b>1.</b>	<b>Opening Remarks</b>
	<ul style="list-style-type: none"><li>• Discussion of the economic recovery package.</li><li>• Social Security Administration may have \$ for a new data center.</li><li>• There may be some data center work outlined in the DOE executable plans.</li></ul>
<b>2.</b>	<b>Draft Charter Comments</b>
	<ul style="list-style-type: none"><li>• The charter should include long term goals. Proposed long term goal: DCIE of .75 or .85 by 2015. May want to break it up into incremental goals (i.e. 0.03 improvement per year, or 0.63 by 2011, 0.70 by 2013)</li><li>• Would it be possible to collect data annually?<ul style="list-style-type: none"><li>- Caryle: Possible because sites do plan on updating executable plans, but we need to give them clear instructions significantly ahead of time.</li><li>- We need to put together guidance on how this should be done – Order says only that Agency Senior Official can issue guidance on such matters.</li></ul></li><li>• Ten percent goal: the ten percent goal is additional reduction over the effort that industry already has in motion.</li><li>• “Benchmarking” goal is vague. Does it mean baseline or benchmark? Is it for individual data centers or all of DOE.</li></ul>
<b>3.</b>	<b>DOE Site Assessments</b>
	<ul style="list-style-type: none"><li>• Will begin Thursday and Friday this week with a walkthrough and stakeholder meetings at Germantown and Forestall.</li></ul>

<b>4.</b>	<b>PSO and Field Updates</b>
	<ul style="list-style-type: none"><li>• Office of Science<ul style="list-style-type: none"><li>- Oak Ridge is doing extended measurement of their super computer, with intent to come up with as many benchmarks as they can to try to improve future data centers.</li><li>- Will asked if it would be possible to measure Oak Ridge computer center using CADE. This would put theory into practice.</li></ul></li><li>• Office of Environmental Management – still waiting for decision on what site should be involved.</li><li>• National Nuclear Security Administration<ul style="list-style-type: none"><li>- No luck yet but are speaking with Karen King, who is writing a couple of success articles.</li><li>- Future IBM project at LLNL, biggest super computer in the complex, already has discussions about how to make it more energy efficient. We should try to get involved now while it's early, and see if they want to be involved in Super Computing Sub-Group. The computer is going into an existing facility.</li></ul></li><li>• DOE Office of the CIO – stakeholder and walkthrough meeting with Germantown and Forestall later this week.</li></ul>

<b>5.</b>	<b>Electronic Stewardship</b>
	<ul style="list-style-type: none"><li>• Stanford has put off movements on changing its data center</li><li>• Trying to move forward with coordination for New Orleans, needs to speak with Will about follow-up, etc.</li></ul>

<b>6.</b>	<b>Metrics Discussion</b>
<ul style="list-style-type: none"> <li>• Metrics – Mike MacDonald: A metric such as computations per watt would be more apt.</li> <li>• How confident are we in our baseline? Overall confident, perhaps not for each individual (especially outliers). But our estimates were on par with industry averages.</li> <li>• Paul S: Could we adopt a “work productivity metric”? So you get credit for doing more work for the amount of energy you use. Green Grid is working on it, but you can only compare a data center against itself.</li> <li>• McKinsey metric – Corporate Average Data center Efficiency (CADE) metric. Takes into account capacity, DCIE, etc.</li> <li>• GreenGrid is working on DCEP – which includes IT productivity, they’ve come up with about eight possible models and are working it down to one.</li> <li>• Bill: We should work on a consensus among national labs. Maybe something the Scientific Computing Group should work on.</li> <li>• GreenGrid and ASHRAE are putting together a metering book, and some companies are offering soft wear and systems to collect data from different monitoring programs. We should ask this group for a copy of drafts.</li> </ul>	

<b>7.</b>	<b>Upcoming Events</b>
<ul style="list-style-type: none"> <li>• 2009 Save Energy Now in Data Center Courses – talking with ASHRAE about a joint training curriculum.</li> <li>• Course at GovEnergy – in August, may be using new materials.</li> <li>• CIO Conference in March – more IT from different sites will be there. There will be thin client computing demonstrations (for desktop computing).</li> </ul>	

<b>Action Items</b>	<b>Person Responsible</b>	<b>Due Date</b>
Revise Charter	Will/Energetics	Next meeting
Next meeting	Will Lintner	February 24, 2009 1:00 PM EST
Ask ASHRAE for draft of metering book	Bill Tschudi	Feb 24, 2009
Send CADE Paper to Group	Energetics	Feb 15, 2009