

EPA/ITI System Efficiency Webinar
September 30, 2014
High Level Notes

Webinar Goals:

- Discuss opportunity in Journal of Resources, Conservation, and Recycling
- Report on case studies/outreach effort
- Launch metric(s), technical approach work

Journal of Resources, Conservation, and Recycling:

- Eric Masanet of Northwestern University is organizing a special issue of this journal focused on government, industry, NGO, academic understanding of ICT enabled resource conservation. This issue is intended to serve as a stake in the ground and spur more research in this area.
- Eric will share the call for papers via events like the Green Grid Forum (took place the week of October 6) and is looking for other avenues for promoting the opportunity.
- Papers will be due in the spring of 2015 and the final journal will be published in the fall of 2015.
- You can find the call for papers here: <http://www.journals.elsevier.com/resources-conservation-and-recycling/call-for-papers/special-issue-the-role-of-information-and-communication/>

Highlights of Discussion

- Participants discussed that these case studies should be specific enough to satisfy the regulators associated with utilities and government. The group discussed possible templates/metrics that could ensure the right level of detail.
- ITI offered to look at the GeSI template, referenced [here](#).

Case Study Review:

EPA outlined the type of studies reviewed:

- IT/cloud migration
- Vehicle fleet management
- Commercial building retrofit, tenant dashboard/feedback systems
- Industrial automation and optimization
- Dynamic public transit pricing, toll system, rider information system
- Ultra high efficiency building, net positive energy

The Reported Results:

- Many case studies still in progress, benefits unclear
- Those with results often cite between 20 - 50% reduction of target metrics (energy, water, vehicle miles, manufacturing time), with some outliers having greater or lesser numbers
- Diverse examples means difficult to extract overarching, repeatable lessons

- Inconsistent information reported re: execution, benefits, costs
- Need a consistent framework, standard for reporting information re: such studies
- May be able to create suite of case study types

A question to ask ENERGY STAR National Building Competition winners specific to ICT enabled efficiency:

- *Did any of your efforts involve adding or upgrading intelligent building management systems such as sensors, real-time (energy/water) use monitoring and control, variable air volume vents, or other IT and "smart" adaptable technologies? If yes, please briefly describe these systems. (200 word maximum)*
- EPA is looking for ways to refine this question to ensure the collection of the most valuable data.

Highlights of Discussion

- Participants echoed the finding that the current crop of case studies, while illuminating, lack the consistency in reported results to make developing larger conclusions impossible.
- The group discussed the value of case studies as a trusted source when peer reviewed and inclusive of criteria critical to satisfying EM&V requirements of utilities and governments (e.g., for utility incentives or to satisfy 111(d)). The group also noted the value of case studies for promotion and communication of the benefits of ICT enabled energy efficiency.
- We did not identify specific actions with respect to further education, promotion or communications at this time, but agreed to launch a metrics effort, as summarized below, and to glean additional ICT enabled efficiency information from the Buildings Challenge (see draft survey question above)..
- ACEEE shared highlights of an effort with NEMA to characterize savings from motor driven systems. They noted that the effort is extremely data intensive.
- Another participant identified The Green Grid as an environment for peer reviewing case studies and metrics.
- Lastly, participants focused on a next step of talking with EM&V leads at utilities and government who can guide the group re critical factors that must be met to satisfy their programs. Participants flagged NEEP, NEEA, the technical reference manual work group in AK, and EPA as sources. EPA and ITI agreed to lead follow-up.

Metrics Launch:

- Participants needed, likely start regular meetings soon.
- December for first reviewable draft.
- Presented terms that came up for definition at the June workshop

Highlights of Discussion

- Small group development of straw man with larger group commenting – anticipated to be a more manageable process.

- Contact Rona or Abi if interested in participating (a couple people spoke up):
rona.newmark@emc.com, daken.abigail@epa.gov
- Should initial effort focus on defining terms? Or also consider consistent data elements for case study reviews, as was discussed earlier

To stay in touch with this effort to further ICT enabled efficiency, please visit our website at:
http://www.energystar.gov/index.cfm?c=prod_development.prod_development_epa_workshop