

April 27 & April 30, 2010 Metrics and Benefits Reporting Webinars

Questions and Answers

1. **Question:** How will metrics reporting differ if Recipients are demonstrating technology performance rather than an actual system demonstration on the grid?

Answer: The Data Analysis Team will meet with each Recipient to discuss *relevant* Build and Impact Metrics (associated with the technology's performance rather than the integrated suite of Smart Grid technologies), Smart Grid functionality, benefits, energy storage applications, and technology performance and/or project objectives. As listed in the sub-area 2.5 Demonstration of Promising Technologies for energy storage in the original Funding Opportunity Announcement DE-FOA-0000036, Recipients should address the following at a minimum:

- Deliver a prototype system that can be grid connected and electrically charged and discharged with a plan for scaling the system to utility power levels
- Identify and describe elements of electric storage systems that the project will significantly improve (i.e. cost, storage capacity or density, lifetime, environmental impact, safety, etc.) through the demonstration
- Describe targeted market applications for the proposed new energy storage solution and provide an analysis of the value proposition for various stakeholders
- Describe anticipated performance and installed cost targets over time
- Address potential environmental impacts of the proposed system
- Contain a demonstration plan with multiple milestones, at appropriate points, in the development cycle
- Propose a project capable of being ready for operation within 4 years of project award

2. **Question:** Will there be a make-up webinar if people were unable to attend the first one?

Answer: No make-up webinars will be held, but a pdf version of the webinar presentation (and this FAQ) will be available online at <http://www.smartgrid.gov/teams>.

3. **Question:** Define "System" and provide examples.

Answer: "Project" level data pertains to the specific scope of the project funded by ARRA and Recipient cost share. "System" level data pertains to all the utility's assets within its service territory for transmission, distribution, AMI, Distributed Energy Resources, etc. For the Build Metrics, "System" data is intended to include any non-SGDP funded (neither ARRA nor Recipient cost share) equipment or systems (IT, communication, etc.) installed by Recipients which may facilitate the functionality of Smart Grid assets under the SGDP project. For example:

- A Recipient installs automated feeder switches on feeders in addition to those that are part of the SGDP project. The Recipient should capture the automated feeder switches installed by the

SGDP under the Build Metric “Project” level and all other automated feeder switches installed in the distribution system under the Build Metric “System” level.

- A Recipient demonstrates voltage optimization by installing automated capacitor banks funded by the SGDP and using automated regulators that either already exist or are being installed in a non-SGDP funded project. The Recipient should capture automated capacitors under the Build Metric “Project” level and automated regulators under the Build Metric “System” level.
- A Recipient installs smart meters in an unrelated project. AMI may not affect the functionality of the SGDP-funded project but it may affect reliability or customer electricity use optimization. Since DOE does not want to overstate the impact of SGDP-related assets, it is important to identify system assets that will affect Impact Metrics measured at the system level. To the extent possible, DOE would like to capture all the material Smart Grid activities within the system even if they are not funded by SGDP.

For the Impact Metrics, the “System” impact is not limited to the impact resulting from the project, but rather the system impact resulting from all smart grid investments even if not funded by SGDP.

4. **Question:** If Recipients determine that a data point is applicable to the project, does it automatically become applicable to the system?

Answer: No. Data points will become applicable to the system if they are applicable to the larger environment (service territory) with which the project interacts, captured by the utility for the system, and/or are critical to the project but not funded directly by ARRA or Recipient cost share.

5. **Question:** Where will Recipients need to estimate baseline data, and are ranges acceptable?

Answer: A baseline estimate will be required for each Build and Impact Metric that is relevant to the project. Ranges should be discussed with and approved by the Data Analysis Team.

6. **Question:** On the April 27th webinar, Joe Paladino referenced an existing cost-benefit analysis process/methodology document. Where is this document located?

Answer: Joe Paladino either referred to the December 7, 2009 Smart Grid Investment Grant (SGIG) Guidebook or the *Methodological Approach for Estimating the Benefits and Costs of Smart Grid Demonstration Projects*. The Data Analysis Team has prepared an SGDP/RDSI Guidebook that will be emailed to Recipients and posted with the two reports above at <http://www.smartgrid.gov/teams>.

7. **Question:** Regarding protection of data and proprietary information, will Recipients need to classify how they want the data handled? Will the DOE consider protection of their data and classify it as they request?

Answer: The Data Analysis Team (i.e., NETL federal staff and its support contractors, who have signed the necessary conflict of interest/non-disclosure agreements) will not disclose Recipients' data without permission.

8. **Question:** Clarify the Impact Metric of "Hourly Customer Electricity Usage."

Answer: The project should develop a composite of customer hourly data (8760 hours) by major customer categories (e.g., residential, commercial, industrial) relative to the baseline rather than give complete hourly data on individual customers.

9. **Question:** Clarify the Impact Metric of "Monthly Customer Electricity Usage."

Answer: Monthly reporting is needed since data from non-testing months can be used to recalibrate the baseline. Once the equipment is installed and operating, monthly reporting will allow the Data Analysis Team to measure the impact.

10. **Question:** Clarify the Impact Metric of "Equipment Failure Incidents."

Answer: The focus is on critical equipment such as switches and transformers, but other equipment that may see a change in failure rates due to Smart Grid deployment may also be included.

11. **Question:** For the Build Metrics of "AMI and Customer Systems Assets," if a Recipient is using AMI data from the utility, should they put the "Yes" on the "System" level?

Answer: Yes, since the data is captured by the utility for the system. It would also be "Yes" for the project if the same data is available for just the customers affected by the project.

12. **Question:** For those fields which Recipients answer "Yes", should they have to provide or deposit the data sets to any SGDP centralized database?

Answer: Report all applicable data to TPOs in the course of normal project reporting, and a select subset will be further analyzed and consolidated with data from other SGDP and RDSI projects through Smartgrid.gov and other channels.

13. **Question:** For the Build Metrics of "AMI and Customer Systems Assets," should a Recipient answer "Yes" at "Project" level if they installed meters at residences and "Yes" at the "System" level if they use the data sets generated by the utility?

Answer: If a Recipient is installing meters in their project, the Recipient should report the number of meters installed under the "Project" End-Points (meters) Build Metric. All other AMI end-points that the Recipient already has or is installing with other unrelated projects should be reported in the "System" level. If a Recipient plans to use data that is being processed by a Meter Data Management

System or a Meter Data Analysis System that is not being installed by their SGDP project, the Recipient should provide a description of the MDMS or MDAS under the Build Metric "System" level.

14. **Question:** For the Build Metric of "Pricing Programs: Retail Rate Design and Rate Level," it will be defined by the utility and stream to the utility's intelligent server for dispatching to the end-users. However, the actual incentive for promoting the DR peak reduction is still under discussion. Therefore, should Recipients answer "No" at the "Project" level and "Maybe" at the "System" level?

Answer: If the pricing programs are available to utility customers, they should be applicable to the project as well. Thus, the "Maybe" positions would also be applicable at the project level. The Data Analysis Team anticipated that it may be more common for the project to model the effects of pricing programs without actual utility programs being formally in place for customers. Thus, the project may have a "Yes" while the system has a "Maybe" or "No". If the pricing program is implemented at a later time, these metrics should be adjusted and reported at that time. For purposes of this table, it should be listed as "Maybe" and remarks should include the detail that actual incentive pricing program structures have not been agreed to or finalized.

15. **Question:** For the Impact Metrics of "AMI and Customer Systems," intelligent server operation can reduce the Impact Metric of "Peak Load" or optimized grid management from assorted distributed assets can reduce the Impact Metric of "Annual Generation Cost." Should Recipients answer "Yes" at "Project" and "System" level if there are impacts?

Answer: "Yes" to project-level applicability if information at the project level is made available through direct data capture or through modeling.

16. **Question:** Is "equipment" the contractually defined equipment (i.e., >\$5,000) or is there another definition?

Answer: Yes, "equipment" is the contractually defined, which is funded directly by ARRA or Recipient cost share.

17. **Question:** How does the "Virginia Tech" Smart Grid Information Clearinghouse (SGIC) relate to this data effort?

Answer: The SGIC is an industry-led website designed to serve as a repository for public smart grid information and to direct its users to other pertinent sources for additional information. It will facilitate direct sharing and dissemination of smart grid information among various stakeholders on knowledge gained, lessons learned, and best practices. The SGIC website will likely include summary information on SGDP, and direct users to Smartgrid.gov for additional information.