

# Sustainability Benchmarking for Utilities 2015 Mid-Year Summary

## Introduction

Companies across many industries are increasingly working to understand how their sustainability performance compares to peers. There are a growing number of third-party reporting “standards” that companies can follow and many private consultants offering benchmarking services. Benchmarking activities generally rely on specific metrics that are used to compare to peer organizations. Benchmarking also helps companies communicate with stakeholders by providing information to inform company narratives about various aspects of sustainability. It is important that any benchmarking effort use metrics that properly compare information that was collected using similar boundaries.

Late last year, EPRI collaborated with TVA to assume management of the Utility Environmental Benchmarking Forum, which had been launched by TVA in 2010. The effort evolved into the Sustainability Benchmarking for Utilities project under EPRI management. The effort allows funders to provide guidance on developing the new EPRI benchmarking database platform; collect and submit data using the benchmarking database and run customized reports; and attend a Benchmarking Forum. This document details the activities of the Sustainability Benchmarking for Utilities project from January 1–June 30, 2015, including membership status, database development, webcasts, and the Benchmarking Forum scheduled for October 19–20, 2015.

## Membership

Membership in the Sustainability Benchmarking project comprises 34 members as of June 30, 2015, as shown in Figure 1. The project also has a Steering Committee to provide guidance on the project, with representatives from American Electric Power (AEP), Duke Energy, Entergy, Exelon, and Tennessee Valley Authority (TVA).



Figure 1.  
Sustainability  
Benchmarking for  
Utilities Member  
Organizations as of  
June 30, 2015

## Project Schedule

The graphic in Figure 2 shows the key milestones and activities in 2015.

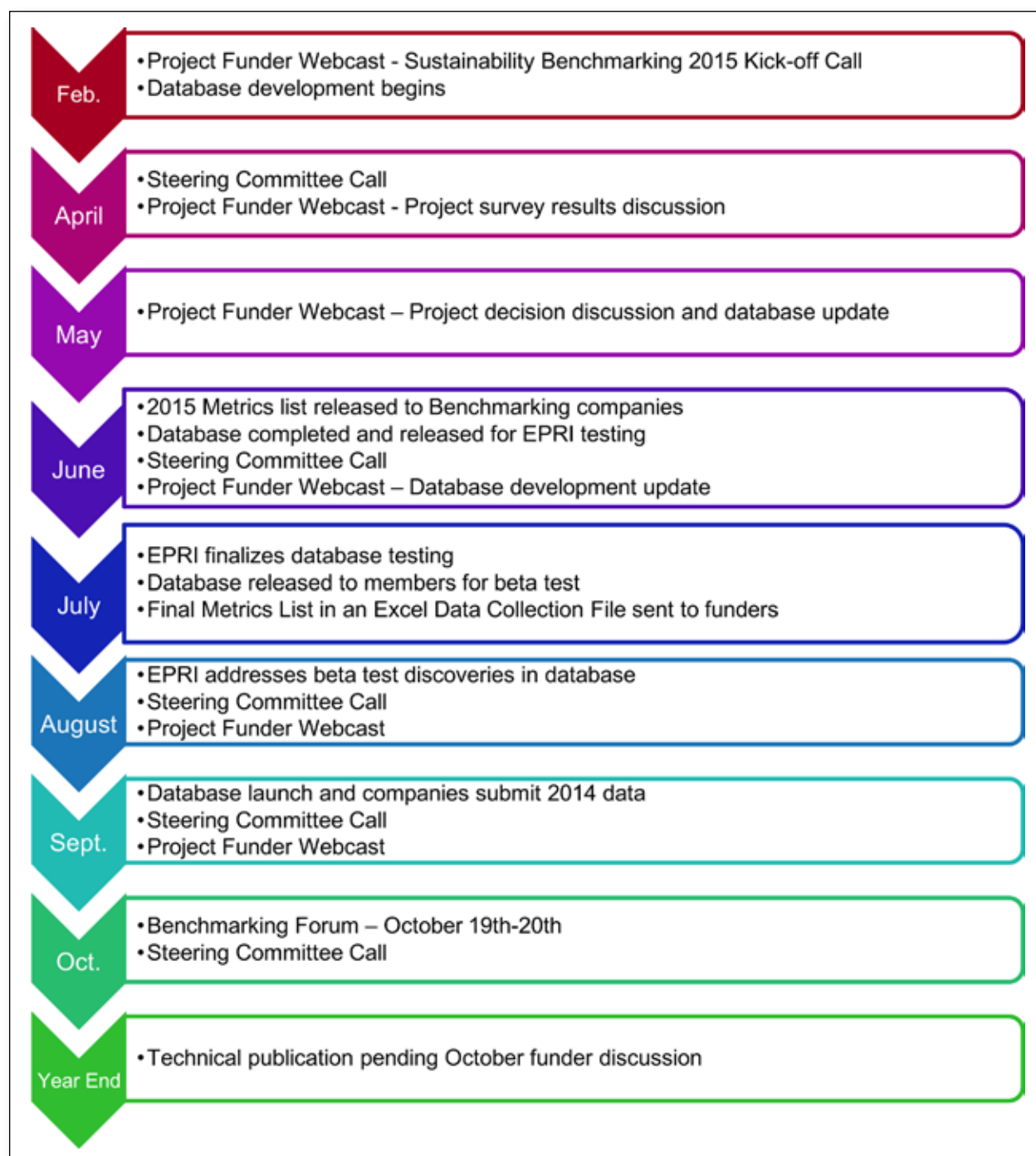


Figure 2. Key Milestones and Activities

## Issues to Address in 2015

In 2014, EPRI and TVA co-hosted the Environmental Benchmarking Forum and facilitated discussions about the value and possible improvements to the effort. The 2014 meeting attendees discussed the need to validate results, compare “apples to apples,” work with metrics already being used as much as possible, and to rely on quantitative data whenever possible, but not forget to use qualitative information to “tell the story.” Objectives for 2015 benchmarking include consideration for the appropriate transparency of results, being able to analyze trends and customize reports, and capturing both goals and performance by using leading and lagging metrics.

Figure 3 is a graphic captured at the 2014 meeting regarding the future of benchmarking:

## 2015 Activities

### Metrics Development

The process to identify metrics for benchmarking takes place through the Energy Sustainability Interest Group. In 2013, EPRI identified 15 material sustainability issues most relevant to the electric power industry [1]. In an effort to further

understand the “right” metrics for the industry across the full range of sustainability issues, in 2014 EPRI compiled a Sustainability Metrics Database [2] and accompanying report [3] containing nearly 450 metrics currently in use. These metrics were captured through interviews and third-party sources that track and report on sustainability performance, including the Dow Jones Sustainability Index (DJSI), The Climate Registry, the Global Reporting Initiative (GRI), Carbon Disclosure Project Climate Change and Carbon Disclosure Water, among others.

In 2015, over 40 companies in EPRI’s Energy Sustainability Interest Group worked to narrow the list of metrics to the ones most useful for sustainability benchmarking across social, economic, and environmental areas. A total of 78 metrics were identified for 11 of the 15 material issues that will be used for the 2015 benchmarking. Additional work is ongoing to provide metrics for the four remaining material issues, as well as additional emerging metrics for those issues already completed. Table 1 shows the number of original metrics identified and the number of metrics being used for 2015 benchmarking, broken down by material issue and sustainability pillar.

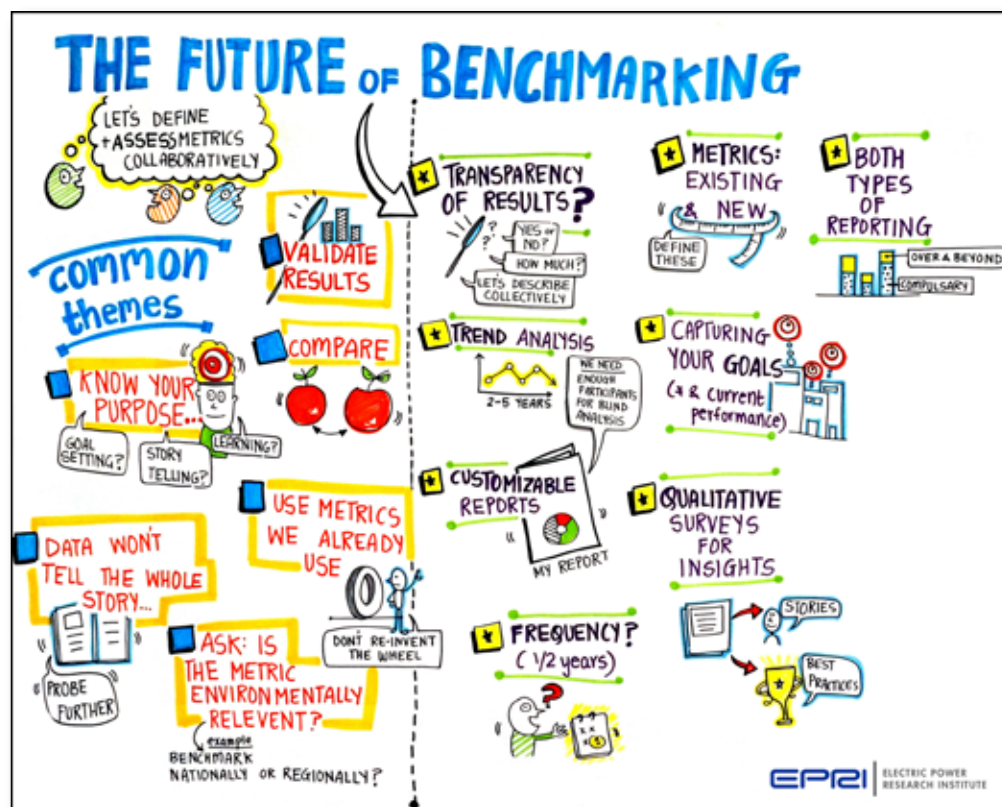


Figure 3. Graphic Illustration from 2014 Environmental Benchmarking Forum

Table 1. 2015 Benchmarking Metrics

Sustainability Pillar	Material Issue	Original Metrics Identified	2015 Metrics for Benchmarking
<b>Environment</b>	Greenhouse gas emissions	78	12
	Reductions of other air emissions	35	16
	Water quality	24	2
	Water availability	64	2
	Habitat protection and biodiversity	17	2
	Waste management	31	7
<b>Social</b>	Employee safety and health	20	7
	Public safety and health	24	4
	Job satisfaction	12	
	Community support and economic development	20	6
	Engagement and collaboration	10	
<b>Economic</b>	Energy reliability	71	4
	Energy affordability	2	
	Skilled workforce availability	8	14
	Economic viability of electric utilities	32	
<b>Additional Metrics</b>	Reportable Environmental Events*	N/A	2
<b>TOTAL</b>		448	78

\*Reportable Environmental Events was not identified as a material issue and was therefore not evaluated in 2014 metrics research. However, during the metrics refinement effort, the need for a rolled up metric for all environmental violations and associated fines was identified and metrics created to meet that need.

## Database Development

EPRI worked to develop a secure online database to provide project funders with the opportunity to benchmark their data against the metrics discussed above. The platform is a customization of EPRI's RadBench, an online database for nuclear data benchmarking, and is being built to the same high security standards. The database will be available 24/7 to funders.

The benchmarking database allows users to securely input their sustainability performance information and to run customized reports based on four filters: business structure, company category, revenues, and generation capacity. Example screen shots from the database are shown in Figures 4 and 5.

The database launched for beta testing between July 13 and July 24. During beta testing, EPRI received 60 comments from 13 companies. In August, EPRI will address issues uncovered during the beta testing and will release the database in September for data input. The benchmarking results will be made available in early October for companies to run customized reports. Results will be reviewed and discussed at the Benchmarking Forum, which is discussed below.

Welcome Andrew Han
EPRI.com | Logout

ELECTRIC POWER  
RESEARCH INSTITUTE

# Utility Sustainability Benchmarking Web Application

Home
Input Data
Graphs
Reports
Settings
Admin
About

Company:

EPRI

Company Details:

Property	Value
Business Structure	Other
Category	Other
Area	Urban
Revenue (\$M)	385
Customer Size	0
Employees	998
Gen. Capacity (MW)	0

Year:

Add Year

2014

Generation:

Edit

Generation	MWh
Coal	100
Natural Gas	200
Oil	300
Fossil Fuel	600
Nuclear	500
Hydro	600
Wind	700
Solar	800
Biomass	900
Other	55
Net Generation (All units)	2500
Energy Delivered	1500

Data Entry Status

Environmental: Data entry started, but not yet submitted.

Social: Data entry started, but not yet submitted.

Economic: Data entry started, but not yet submitted.

EPRI | 2014

Environmental
Social
Economic

☐ Data Entry Complete for Environmental Data
Last Updated: 6/30/2015 10:28:47 AM by Andrew Han
Record Saved

Greenhouse Gas Emissions

#	Field Name	Value	Units
1	Total CO <sub>2</sub> emissions for coal generation	1231333	metric tonnes
2	Total CO <sub>2</sub> emissions rate for coal generation	12313.33	metric tonnes/MWh
3	Total CO <sub>2</sub> emissions for natural gas generation	3434555	metric tonnes
4	Total CO <sub>2</sub> emissions rate for natural gas generation	17172.78	metric tonnes/MWh
5	Total CO <sub>2</sub> emissions for oil generation	1234	metric tonnes
6	Total CO <sub>2</sub> emissions rate for oil generation	4.11	metric tonnes/MWh
7	Total CO <sub>2</sub> emissions for fossil fuel generation		metric tonnes
8	Total CO <sub>2</sub> emissions rate for fossil fuel generation		metric tonnes/MWh
9	Total CO <sub>2</sub> emissions rate for TOTAL generation		metric tonnes/MWh
10	Total CO <sub>2</sub> emissions for power purchased		metric tonnes
11	Total CO <sub>2</sub> emissions rate for power deliveries		metric tonnes/MWh
12	Total Scope 1 emissions - CO <sub>2</sub>	99	metric tonnes
13	Total Scope 1 emissions - CH <sub>4</sub>	88	metric tonnes
14	Total Scope 1 emissions - N <sub>2</sub> O	77	metric tonnes
15	Total Scope 1 emissions - HFC	1	metric tonnes
16	Total Scope 1 emissions - PFC	2	metric tonnes
17	Total Scope 1 emissions - SF <sub>6</sub>	1	metric tonnes
18	Total Scope 1 CO <sub>2</sub> e emissions	64255	metric tonnes

Figure 4. Sample Screenshot from EPRI Benchmarking Database



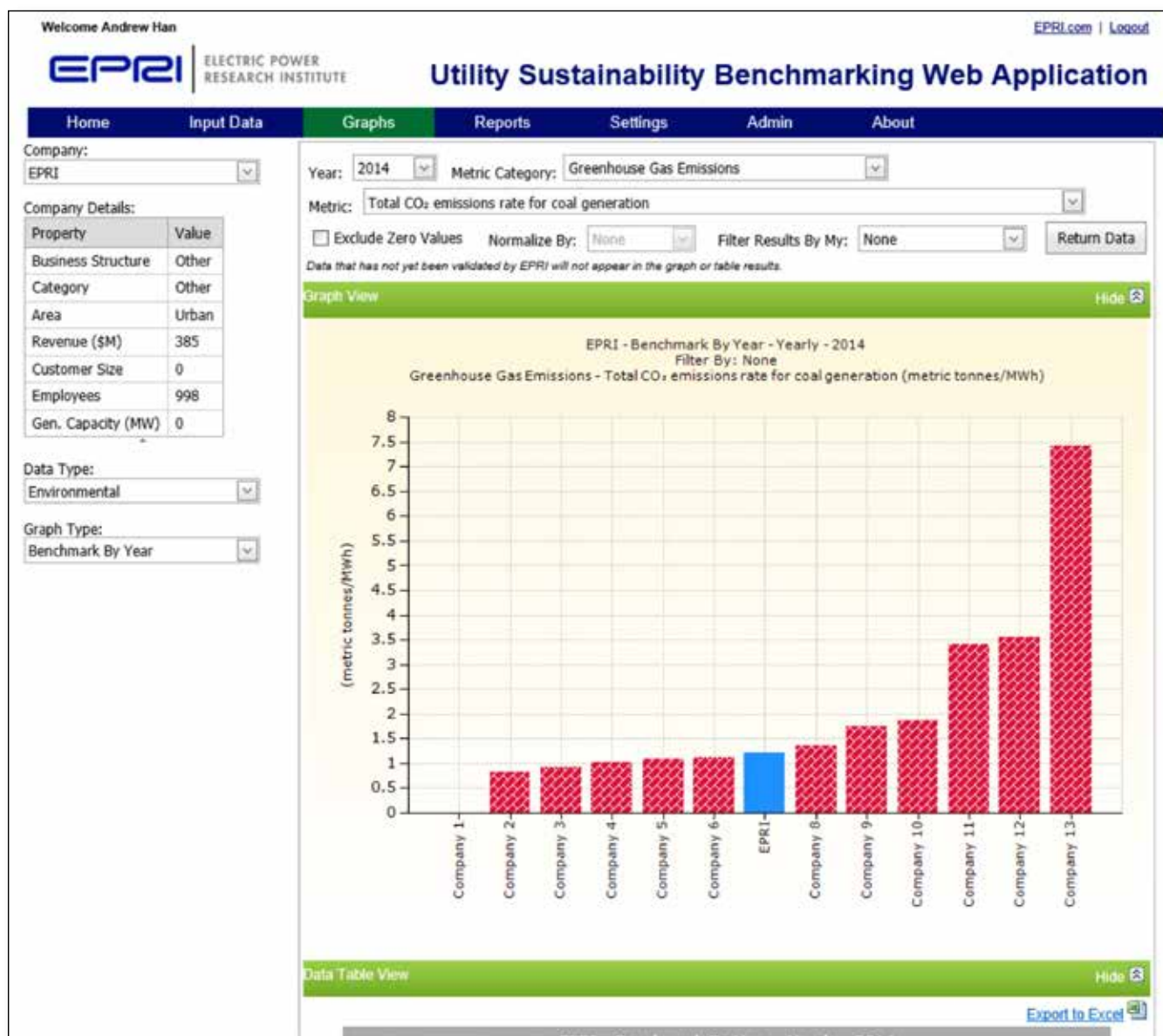


Figure 5. Benchmarking BETA Database Screenshot. Data listed is for example purposes only

## Webcasts and Steering Committee Calls

A series of webcasts were scheduled to provide project updates to funders, answer questions, and collect feedback. Four webcasts have been held thus far in 2015, as shown in Table 2. Three additional webcasts are scheduled for the remainder of 2015.

In addition to the full group webcasts, EPRI held two calls with the Forum Steering Committee to advise on key project decisions. Participants included:

- Jessica Fox, EPRI
- Morgan Scott, EPRI
- Sandy Nessing, AEP
- Michelle Abbott, Duke Energy
- Rick Johnson, Entergy
- Al Picardi, Exelon
- Lee Matthews, TVA

## Benchmarking Forum

The EPRI 2015 Sustainability Benchmarking Forum will be held October 19-20 in Los Angeles, California. The conference is co-located with the Energy Sustainability Interest Group Fall workshop and hosted by Los Angeles Department of Water and Power and Southern California Gas Company. The Forum will provide opportunities for project funders to reflect on the benchmarking results, share best practices, and identify opportunities for database and metric enhancement for 2016 benchmarking.

## Key Decisions

Many of the issues discussed under “The Future of Benchmarking” discussion at the 2014 EPRI-TVA Benchmarking Forum have been addressed through database design and metrics development, as follows:

- **Transparency:** While some companies have requested the option to assign their company name to their dataset, it has been determined that 2015 benchmarking results will be blinded in accordance with EPRI-member contracts. Blinded results in year one will allow users to gain experience with the database to better understand how data will be shown. To ensure results are not easily attributed to a particular company, metric graphs will only be generated if there are eight or more data points available for the metric. Due to funder request, EPRI will facilitate a discussion on data transparency options for future years at the October Benchmarking Forum.
- **Meaningful Participation:** As the number of data points available for benchmarking increases, the value of the lessons learned and overall benchmarking benefits also increase. However, it is understandable that every company will not be able to provide data for every metric. EPRI will work to define “meaningful participation”, which will be validated after data submission in September.
- **Filters:** The database graphs have filtering capability to allow for benchmarking against companies’ closest peers. Only one filter can be applied at a time (i.e., no filter stacking) and there must be at least eight data points in the filtered category for a graph to be produced. In 2015, there will be four filters:
  - Business Structure: Refers to company’s ownership as either investor-owned or other. “Other” structures include, but are not limited to, cooperatives and municipal utilities.
  - Company Category: Refers to company’s operational structure as either vertically integrated or other. “Other” categories include, but are not limited to, independent power producers and transmission and distribution companies.

Table 2. Webcast Summaries: January 1 – June 30, 2015

Webcast #	Date	Subject	Presenter(s)	Description
1	2/20/15	Sustainability Benchmarking 2015 Kick-off Call	Jessica Fox, Morgan Scott	Outlined project scope and schedule.
2	4/6/15	Survey Results	Morgan Scott	Discussed decisions made regarding project development and reviewed results of member survey related to transparency and report publication.
3	5/4/15	Database Check-in	Jessica Fox, Morgan Scott	Reviewed decisions and provide an update on metrics and database development.
4	6/25/15	Project Update	Jessica Fox, Morgan Scott	Updated on database development and provided insight into beta test process and expectations.

- Revenues: Refers to revenues for all company operations for the previous calendar year. Boundaries are <\$3 billion, \$3-12 billion, and >\$12 billion.
- Generation Capacity: Refers to the nameplate, equity-owned capacity at the close of the previous calendar year. Boundaries are <5,000 MW, 5-11,000 MW, and >11,000 MW.
- **Learning Opportunities:** Companies will be able to apply a filter that does not apply to that company (e.g., an IOU can filter out and see the “others”). Additionally, companies who have met the requirements of meaningful participation will be able to view all metrics, even if they have not reported them.

The request for EPRI to release blinded 2015 results via an EPRI report or public webcast, as well as non-blinded results in a future year, will be discussed with the funders at the October Benchmarking Forum.

## Project Developers

- Jessica Fox, Technical Executive
- Morgan Scott, Technical Lead
- Andrew Han, Senior Software Designer

## References

1. *Material Sustainability Issues for the North American Electric Power Industry*. EPRI, Palo Alto, CA: 2013. 3002000920.
2. *Sustainability Metrics Database v2014*. EPRI, Palo Alto, CA: 2014. 3002004336.
3. *Sustainability Metric Compilation for the Electric Power Industry*. EPRI, Palo Alto, CA: 2014. 3002004255.

**The Electric Power Research Institute, Inc. (EPRI, [www.epri.com](http://www.epri.com))** conducts research and development relating to the generation, delivery and use of electricity for the benefit of the public. An independent, nonprofit organization, EPRI brings together its scientists and engineers as well as experts from academia and industry to help address challenges in electricity, including reliability, efficiency, affordability, health, safety and the environment. EPRI also provides technology, policy and economic analyses to drive long-range research and development planning, and supports research in emerging technologies. EPRI’s members represent approximately 90 percent of the electricity generated and delivered in the United States, and international participation extends to more than 30 countries. EPRI’s principal offices and laboratories are located in Palo Alto, Calif.; Charlotte, N.C.; Knoxville, Tenn.; and Lenox, Mass.

Together...Shaping the Future of Electricity

---

### Electric Power Research Institute

3420 Hillview Avenue, Palo Alto, California 94304-1338 • PO Box 10412, Palo Alto, California 94303-0813 USA  
800.313.3774 • 650.855.2121 • [askepri@epri.com](mailto:askepri@epri.com) • [www.epri.com](http://www.epri.com)