AUDIT AND ADVISORY SERVICES

Sustainability Reporting
Audit
Project No. 15-661

July 22, 2015

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UNIVERSITY OF CALIFORNIA, BERKELEY

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July 22, 2015

Robert Lalanne
Vice Chancellor
Real Estate

Vice Chancellor Lalanne:

We have completed our audit of campus sustainability reporting practices as per our annual service plan in accordance with the Institute of Internal Auditors' *Standards for the Professional Practice of Internal Auditing* and the University of California Internal Audit Charter.

Our observations with management action plans are expounded upon in the accompanying report. Please destroy all copies of draft reports and related documents. Thank you to the staff of the Office of Sustainability and Energy for their cooperative efforts throughout the audit process. Please do not hesitate to call on Audit and Advisory Services if we can be of further assistance in this or other matters.

Respectfully reported,

Wanda Lynn Riley
Chief Audit Executive

cc: Vice Chancellor John Wilton
Vice Provost Andrew Szeri
Chief Operating Officer Grace Crvarich
Director Lisa McNeilly
Senior Vice President and Chief Compliance and Audit Officer Sheryl Vacca
Associate Chancellor Nils Gilman
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University of California, Berkeley
Audit and Advisory Services
Sustainability Reporting

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OVERVIEW

Executive Summary

The University's *Sustainable Practices* policy establishes systemwide goals in nine areas of sustainable practices: green building, clean energy, transportation, climate protection, sustainable operations, waste reduction and recycling, environmentally preferable purchasing, sustainable foodservice and sustainable water systems.

Our audit scope focused on the current process of collecting and validating key performance indicators (KPIs) employed by the campus to measure sustainability efforts. The campus reports certain KPIs that fall under the scope 1, scope 2 and scope 3 definitions for global greenhouse gas (GHG) emissions established in the World Resource Institute/World Business Council for Sustainable Development's *GHG Protocol Corporate Accounting and Reporting Standard.* Scope 1 emissions are all direct emissions resulting from the impact of human beings on nature. These generally result from the use of fossil fuels or other man-made chemicals. Scope 2 emissions are defined as indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling. Scope 3 emissions are other indirect GHG emissions that occur in the value chain. Examples of scope 3 emissions include emissions resulting from the extraction and production of purchased materials and fuels, employee commuting and business travel, use of sold products and services, and waste disposal.

Given our focus on data collection and reporting processes, we did not test nor do we express an opinion as to the campus' overall compliance with the systemwide *Sustainable Practices* policy or compliance with any individual area of the policy.

We utilized the six "Principles for Defining Report Quality" established by the Global Reporting Initiative's *G4 Sustainability Reporting Guidelines*: balance, comparability, accuracy, timeliness, clarity and reliability. We observe that the campus generally meets these principles for the 2014 *Campus Sustainability Report* in terms of the narrative sections of the report.

With respect to KPIs reported in the report, we did not focus on scope 1 and scope 2 metrics because the campus obtains external verification consistent with the requirements of our membership in The Climate Registry. We acknowledge that the availability and timeliness of certain categories of scope 3 data, which the campus voluntarily reports, varies from year to year due to changes in business processes, calculation methodologies, or the level of cooperation of external parties. However, our overall conclusion is that the processes and controls related to collection, validation, presentation and reporting of scope 3 metrics appear reasonably designed and consistent with the six principles above as of the close of our fieldwork in May 2015.

Source and Purpose of the Audit

The University's *Sustainable Practices* policy establishes systemwide goals in nine areas of sustainable practices: green building, clean energy, transportation, climate protection, sustainable operations, waste reduction and recycling, environmentally preferable purchasing, sustainable foodservice and sustainable water systems. It further reiterates the University's commitment to "responsible stewardship of resources and to demonstrating leadership in sustainable business practices. The University's locations should be living laboratories for sustainability, contributing to the research and educational mission of the University, consistent with available funding and safe operational practices."

With respect to compliance responsibilities, the policy states that "Chancellors and the Lawrence Berkeley National Laboratory Director are responsible for implementation of the Policy in the context of individual building projects, facilities operations, etc. An assessment of location achievements with regard to the Policy is detailed in an annual report to the Regents. The internal audit department may conduct periodic audits to assess compliance with this policy."

Scope of the Audit

The *Sustainable Practices* policy establishes the sustainability reporting areas, policy on minimum compliance activities for campuses and an annual reporting requirement but does not detail specific reporting requirements or frameworks. We note that there is not yet consensus on sustainability reporting protocols either in the public or private sector, domestically or internationally.

Based upon conversation with the Office of Sustainability and Energy (OSE) and further understanding of their current responsibilities, our audit scope focused on their current process for collecting and validating key performance indicators (KPIs) employed by the campus to measure sustainability efforts. We also considered the reporting of these KPIs in the annual *Campus Sustainability Report* and the reporting of some of these KPIs to the Office of the President for inclusion in the systemwide *Annual Report on Sustainable Practices*. Given our focus on data collection and reporting processes, we did not test nor do we express an opinion as to the campus' overall compliance with the *Sustainable Practices* policy or compliance with any individual area of the policy.

The campus also includes updates in the annual *Campus Sustainability Report* on additional areas related to sustainability efforts that are not in the scope of the systemwide policy: land use, academics and learning by doing, economic sustainability, and social sustainability. We did not include data collection or reporting practices for these topics in our scope.

The campus has informally adopted some of the principles of the *G4 Sustainability Reporting Guidelines* created by the Global Reporting Initiative as a good practice. The G4 guidelines are among the more prominent and widely employed guidelines available. We utilized their six "Principles for Defining Report Quality" in the guidelines to evaluate the 2014 annual *Campus Sustainability Report*:

Principle	Description
Balance	The report should reflect positive and negative aspects of the organization's performance to enable a reasonable assessment of overall performance.
Comparability	The organization should select, compile and report information consistently. The reported information should be presented in a manner that enables stakeholders to analyze changes in the organization's performance over time, and that could support analysis relative to other organizations.
Accuracy	The reported information should be sufficiently accurate and detailed for stakeholders to assess the organization's performance.
Timeliness	The organization should report on a regular schedule so that information is available in time for stakeholders to make informed decisions.
Clarity	The organization should make information available in a manner that is understandable and accessible to stakeholders using the report.
Reliability	The organization should gather, record, compile, analyze and disclose information and processes used in the preparation of a report in a way that they can be subject to examination and that establishes the quality and materiality of the information.

The campus employs a dashboard of sustainability metrics as KPIs in the annual *Campus Sustainability Report* that is compiled by the OSE. The metrics are organized into several categories: energy and climate, water, built environment, waste, procurement, transportation, food, and other. The latest report available was the 2014 report which includes metrics reported for 2013 with 2012, 2011, 2000, 1995, and 1990 provided for reference. Our audit testing focused on the processes and controls related to the collection, validation, and reporting of metrics in the "Annual Sustainability Metrics: 1990-2013" table of the 2014 report.

Some of these metrics relate to annual GHG emissions that are also reported by the campus to The Climate Registry, an independent non-profit organization that designs and operates a voluntary GHG reporting program. All ten campuses and the Office of the President are members of The Climate Registry. Their *General Reporting Protocol* requires members to self-report scope 1 and scope 2 emissions.[1] Members must have their emissions data externally verified periodically.

[1] The Climate Registry's *General Reporting Protocol Version 2.0* states that they follow the World Resource Institute/World Business Council for Sustainable Development's *GHG Protocol Corporate Accounting and Reporting Standard* which defines scope 1 emissions as direct GHG emissions. Scope 1 emissions are all direct emissions resulting from the impact of human beings on nature. These generally result from the use of fossil fuels or other man-made chemicals. The Climate Registry requires reporting of scope 1 emissions in four categories: stationary combustion, mobile combustion, physical and chemical processes other than fuel combustion, and fugitive sources. Scope 2 emissions are defined as indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling. Scope 3 emissions are other indirect GHG emissions that occur in the value chain. Examples of scope 3 emissions include emissions resulting from the extraction and production of purchased materials and fuels, employee commuting and business travel, use of sold products and

After obtaining an understanding of The Climate Registry's verification requirements, we obtained and inspected the campus' external verification report for 2011 and 2012 scope 1 and scope 2 data reported to The Climate Registry. Upon inspecting the report, we note that the procedures performed by the external verifier appear consistent with The Climate Registry's requirements. This verification was conducted in 2014 and the campus next expects to seek external verification in 2016 for 2013 and 2014 data reported.

Given that the campus will obtain in the future external verification for 2013 and 2014 scope 1 and scope 2 reporting, we instead focused on those campus reported items falling under scope 3 in the 2014 campus report[2]:

- GHG scope 3 (metric tons CO_2 equivalent)
- Total energy (G joules)
- Renewable energy
- Renewable energy certificates (metric tons CO_2)
- Water (millions of gallons)
- Wastewater (millions of gallons)
- LEED buildings (number and total square footage)
- Solid waste (short tons)
- Diverted waste (short tons) – including recycled waste, construction waste, reusables, composting
- Diversion rate (percentage)
- Hazardous waste (tons)
- Total green purchasing (dollar amount)
- Recycled paper purchases (percentage of total)
- Fuel usage – commute (gallons)
- Green fleet (percentage)
- Air travel (miles)
- Total sustainable purchases (percentage)

We interviewed OSE management on their processes and controls for collecting, evaluating, validating and reporting scope 3 metrics and examined the documentation they received from campus units. We also selectively corroborated our understanding of processes and controls with interviews with units providing information to the OSE. We did not independently verify scope 3 metrics for 2013 by re-performing data collection and tabulation performed by individual units but we did evaluate the processes and controls relative to the "Principles for Defining Report Quality" defined above.

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services, and waste disposal. The Climate Registry does not require the reporting of scope 3 emissions but the campus collects and reports certain scope 3 metrics in its *Campus Sustainability Report*.

[2] We excluded items in the "Other" category of the *Campus Sustainability Report* (population, gross square footage, and research dollar expenditures) as they are provided primarily for reference purposes and are principally compiled for purposes other than annual sustainability reporting.

Background Information

The OSE was formed in January 2008, nearly five years after the first systemwide sustainability policy was created and the Chancellor's Advisory Committee on Sustainability was formed. The vision of the campus, according to then Chancellor Robert Birgeneau, was to "work toward becoming a more sustainable campus and institutionalize campus sustainability" by focusing on and reducing the negative impact of campus activity on the environment, while increasing any societal and economic benefit. The OSE provides leadership to campus to carry out that charge by setting sustainability goals and strategies. They strive to achieve the sustainability goals of the campus and the system by project implementation, planning, partnerships, and community engagement. Part of this commitment includes transparent reporting.

Sustainability goals for the campus are driven, in part, by standards set by the Office of the President. The campus has taken the initiative to exceed those targets in some cases and to add additional local sustainability target areas to the portfolio. The following are subject areas and goals that align with the system and that were included in the risk assessment and scoping process for this audit:

Subject	Goal	Status (as reported in 2014 campus report)
Energy	1) By 2014, reduce greenhouse gas emissions to 1990 levels. 2) Achieve climate neutrality from building and fleet use by 2025.	1) Achieved 2) On Track
Climate	1) By 2014, reduce greenhouse gas emissions to 1990 levels. 2) Achieve climate neutrality from building and fleet use by 2025.	1) Achieved 2) On Track
Water	Reduce potable water use to 10% below 2008 levels by 2020.	On Track
Built Environment	Design future projects to minimize energy and water consumption and wastewater production; incorporate sustainable design principles into capital investment decisions; base capital investment decisions on life cycle cost, including the cost of known future expenditures.	On Track (continuous)
Waste	Achieve a 75% diversion rate by June 2012 and zero waste by 2020.	On Track
Procurement	Comply with the University of California environmentally-preferable purchasing policies and procedures.	On track (continuous)
Food	By 2020, increase sustainable food purchases by campus foodservice providers to at least 20%.	On track
Transportation	By 2014, reduce fuel use by commuters and campus fleet to 25% below 1990 levels.	Achieved

The OSE overseas and collaborates with campus Environment, Health and Safety and other central units to collect the data needed for the energy and climate sections. For remaining sustainability areas, OSE collaborates with responsible central units on campus who may also

rely on external third parties, such as vendors and utility companies to provide readings, bills and/or other reports of campus usage.

Summary Conclusion

We observe that the campus generally meets the six "Principles for Defining Report Quality" established by the Global Reporting Initiative's G4 Sustainability Reporting Guidelines (balance, comparability, accuracy, timeliness, clarity and reliability) for the 2014 *Campus Sustainability Report* in terms of the narrative sections of the report.

In addition, we conclude that the processes and controls related to collection, validation, presentation and reporting of scope 3 metrics appear reasonably designed and consistent with the six principles above as of the close of our fieldwork in May 2015.