

Feedback on STARS 0.5

Introduction

STARS 0.5 was made available for public comment from April 10 to May 30, 2008.

Feedback is presented as it was submitted, with minor formatting changes and clarifying edits. In addition, some identifying information has been removed to protect the anonymity of reviewers.

Participants in the Review Process

AASHE received feedback on STARS from the following individuals.

Strategic Advisory Committee Members

1. **Sarah Banas**, Program Associate, American Association for the Advancement of Science
2. **Mary Jensen**, Coordinator of Campus Sustainability and Recycling Programs, Keene State College
3. **Jeanne Steffes**, PhD., Associate Vice President for Students Affairs, Syracuse University

Technical Advisory Committee Members

1. **Peter Ashbrook**, Director, Environmental Health and Safety, University of Missouri
2. **Thomas Balf**, Director, Campus Consortium for Environmental Excellence (C2E2)
3. **Ed Becker**, Executive Director, Environmental Health & Safety, University of Southern California
4. **Matthew Biette**, Director, Dining Services, Middlebury College
5. **Almut Beringer**, Environmental Sciences/UNESCO Chair 'Higher Education for Sustainable Development', University of Luenenburg, Germany
6. **Edith Callaghan**, Director, Arthur Irving Academy for the Environment, Acadia University
7. **John Cusack**, Executive Director, New Jersey Higher Education Partnership for Sustainability
8. **Deborah Freed**, Alternative Transportation Manager, Virginia Polytechnic Institute and State University
9. **Jennifer Hayward**, Sustainability Coordinator, Lane Community College
10. **Jeremy Friedman**, Project Administrator, New York University Sustainability Task Force
11. **Melissa Gallagher Rogers**, Manager, Government and Higher Education Sectors United States Green Building Council
12. **Michael Glaros**, AIA, LEED AP, Senior Associate, Ayers Saint Gross
13. **Phillip J.A. Ling**, P.Eng., LEED AP, Powersmiths International Corp.
14. **Terry Link**, Director, Office of Campus Sustainability, Michigan State University
15. **Larry Litten**, Retired; previously Director of Research at the Consortium on Financing Higher Education (COFHE) and Director of Institutional Research at Carleton and Dartmouth Colleges
16. **John Mlade**, National Market Sector Research Manager, Perkins + Will
17. **Jane Nichols**, Professor, Art and Interior Design, Western Carolina University
18. **Kevin Nelson**, AICP, U.S. EPA, Office of Policy, Economics and Innovation
19. **Christopher Payne**, Associate Vice Chancellor for Student Affairs, University of North Carolina
20. **Jonathan Rausseo**, Sustainability Development Coordinator, University of Ottawa
21. **Lee Richardson**, Professor of Marketing, University of Baltimore

22. **Debra Rowe, President**, U.S. Partnership for Education for Sustainable Development, and Professor, Sustainable Energies and Behavioral Sciences, Oakland Community College
23. **Morgan Simon**, Executive Director, Responsible Endowments Coalition
24. **Walter Simpson**, Energy Officer, University at Buffalo
25. **Tuesday Strong**, Director of Facilities Services, Facilities Operations, Rose-Hulman Institute of Technology
26. **Michael Youdelman**, Manager, Department of Recycling/Resource Management, Stony Brook University

Reviewers

1. **Peggy Barlett**, Goodrich C. White Professor of Anthropology, Emory University
2. **Ryan Burg**, Board President, The Responsible Endowments Coalition
3. **Peter Crownfield**, Internship Coordinator Alliance for Sustainable Communities
4. **Michael Foster**, Biodiversity Specialist, American Museum of Natural History
5. **Tom Green**, PhD Student, University of British Columbia
6. **Kevin Greene**, Illinois EPA, Office of Pollution Prevention
7. **David Henry**, Co-Chair, GREENRichland, Richland College of the Dallas County Community College District
8. **Sam Hummel**, IT Manager, AASHE
9. **Sura Hussain**, Santa Barbara City College
10. **Stephanie Kaza**, Professor, Environmental Studies, University of Vermont
11. **Corinna Kester**, former Sustainability Coordinator, University of Texas at Austin
12. **Dhara L. Kothavala**, MBA, Sustainability Researcher & Projects Manager
13. **Mary Ellen Mallia**, Director of Environmental Sustainability, University at Albany
14. **Chelsea McMellen**, Sustainability Coordinator, University of Texas at Austin
15. **Montgomery Norton**, Graduate Representative, UC Sustainability Steering Committee, University of California, Irvine
16. **Rochelle Owen**, Director of Sustainability, Dalhousie University
17. **Carrie Packwood Freeman**, PhD candidate, University of Oregon, School of Journalism and Communication
18. **Aditi Pain**, Manager, Office of Recycling and Sustainability, University of Massachusetts Boston
19. **Alex Paulson**, Business Development Manager, LeanPath, Inc.
20. **Cindy Pollock Shea**, Director, Sustainability Office, University of North Carolina at Chapel Hill
21. **Rachel Rannow**, Research Assistant, Sustainability Office, University of Colorado at Colorado Springs
22. **Nina Rizzo**, California Freedom from Oil Campus Organizer, Global Exchange
23. **Dean Rodeheaver**, Senior Campus Planner, Performa Higher Education
24. **Suzanne Savanick Hansen**, Sustainability Manager, Macalester College
25. **Michelle S. Schroeder-Moreno**, Assistant Professor, Agroecology Program Coordinator, Crop Science Department, North Carolina State University
26. **Leith Sharp**, Director, Green Campus Initiative, Harvard University
27. **Raymond C. Shea**, Special Assistant to the President, Monroe Community College
28. **Sherief Sheta**, Department of Technology Systems, East Carolina University
29. **Joseph Stagner**, Executive Director, Sustainability and Energy Management, Stanford University
30. **Elizabeth Swiman**, Student Program Assistant, Center for Leadership and Civic Education, Florida State University

31. **Donna Wysokenski**, Student, Clark University

Overall Comments

Reviewer 1

I put considerable effort into reviewing STARS 0.4 and submitted extensive comments. That took a lot out of me since it is difficult for me to justify taking time away from work to spend on this project. I had high hopes for STARS, but was frankly disappointed in the product sent out for review and though I tried to make constructive comments, I was concerned that the project was fatally flawed. I was so discouraged it took me several months to even force myself to look at STARS 0.5. When I finally did look at STARS 0.5, I was pleased to see that there were many, many significant improvements in the tool and it now has the potential for some value. I commend the AASHE staff for listening to reviewers comments and thoughtfully making so many changes.

Now, my concern is that the effort that an institution must put into STARS to collect data seems overwhelming to me. I think STARS 0.5 provides a lot of excellent guidance in a lot of areas to help institutions with specific areas of sustainability interest. However, I am not sure what the end result means if an institution follows through with the entire assessment. I have been active in a benchmarking project in CSHEMA. Our data collection efforts are substantial, but pale in comparison with what is required for STARS 0.5. I wish there were a “STARS Lite” program that would require much less in terms of data collection.

Reviewer 2

[*My institution*] is pleased to participate in the STARS pilot program because we recognize the need for and value of a comprehensive sustainability assessment system for universities. We recently implemented our own internal environmental assessment process [...] and the STARS pilot is providing us with a unique opportunity to gauge our own rubrics against those of another organization.

We admire that STARS is comprehensive and broad in focus. It is commendable because it is customized for universities and developed through a transparent peer review process. Similarly, the focus on rating instead of ranking supports the collaborative approach that will best advance campus sustainability. We recognize that creating STARS has been an ambitious undertaking—and we are grateful for your hard work. We hope that the following constructive criticisms will be helpful in developing the next version of STARS.

Reviewer 3

[*My organization*] would like to commend the Association for the Advancement of Sustainability in Higher Education (AASHE) for developing the STARS rating tool. STARS is a comprehensive rating system that has great potential to influence the sustainability of colleges and universities across the country. [*My organization*] would like to provide the following comments and suggestions, both general and specific, to help shape the continued development of the STARS rating tool.

Sustainability is a tool to help higher education institutions achieve their missions. While the STARS introduction adequately defines the concept of sustainability, it could make a better case for why colleges and universities should attempt to achieve sustainability in their institutional activities. The STARS introduction should articulate that colleges and universities should focus on campus sustainability not only because of moral or societal obligations but also because doing so will allow them to more effectively accomplish their missions. Colleges and universities that implement sustainability practices and smart growth techniques will more effectively recruit and retain the best students, faculty, and staff; will have a more positive impact on the surrounding communities; and will achieve better educational, fiscal, and environmental outcomes.

[*My organization*] focuses on shaping land development patterns that will result in positive economic, social, and environmental outcomes. Land use patterns play a key role in sustainability efforts and should, therefore, be considered in many of the STARS credits. The specific comments provided below attempt to provide concrete suggestions for how the STARS rating tool might emphasize that land use development patterns on and around campuses are an important facet of sustainability in higher education.

Reviewer 4

Overall I think it is very good and you are moving in a great direction.

Reviewer 5

Overall, this version of STARS is great. I think that credits are exactly right for the most part. Good work!!

Reviewer 6

In general for the section introductions, I appreciate how you weave in social justice components to the issues at hand instead of solely considering the narrow environmental impacts.

Reviewer 7

First of all I wanted to say how incredibly impressed I am with this compilation of detail and discussion. The document has come a long, long way. I want to compliment you on how the discussion points and new ideas were added to the preparation of this draft. I am going to take that as a nugget for one of my next major projects that will require revisions by others- nice job.

[...] I also want to comment/commend the criteria/documentation/guidance framework; this type of infrastructure demystifies and clarifies what is needed to be eligible for the credits. [...]

Thank you again for the opportunity to be a part of this.

Reviewer 8

Please pass on my highest compliments to the leadership team on this revision. It just keeps

getting better. I really appreciate the “Discussion” section since I didn’t make all the conference calls. My comments follow for what they are worth.

Reviewer 9

Education and research credits are part of curricula and are paid for and graded for credits. Scoring should be done separately from operations because it is such a different outcome and requires different kinds of administration and finance as well.

Scoring support operations and administration and finance together is needed. These two involve the current operations as well as the ability to support them and improve future operations

Balance is important. A high overall institutional rating could be given for curriculum and administration and finance combined while the institution is actually accomplishing little operational sustainability. That should not be allowed to happen

Definitions are critical in sustainability. One university is claiming its grand centerpiece of the near future in the form of a New Law School building without yet defining any of the sustainability features. A huge sum could be claimed as sustainability investment with only mediocre sustainability features

Reviewer 10

First off GREAT JOB!!! What you all have done here is fabulous, it will really help universities to start (continue) making some good decisions. Second, although I was not able to participate as much during the review between 4.0 and 5.0 as I would have liked, I did do a full review of 4.0 and can attest to the fact that this document has improved by leaps and bounds since then -- your strive for stakeholder input and active involvement (that I am sure was not easy to manage), and your overall good thinking has truly paid off!

Reviewer 11

Let me begin with a general round of appreciation for the huge effort that has gone into creating these various draft iterations of the STARS tool. I am hopeful that it will be used by academic institutions of all sizes to review their environmental performance and consider ways to improve it.

Reviewer 12

The format is great. It is easy to follow and direct. It has a LEED certification feel which is great and familiar.

Without getting into any specific credits, I would like to see some form of detailed resource person. I love the guidance that is provided but it would be nice to have some form of person identified as a potential resource to speak with (ex. grounds keeping manager for green space related issues). I have noticed that many institutions don’t know the entire compliment of

people even in their organization.

For documentation it would be nice to have to include the names of the people that provided the information. Not just for accountability but also to ensure that the numbers are being double checked.

I am concerned that the process might be too long. Completing this rating system looks like to would require a massive amount of resources and time. Is there an idea of who would be tasked with completing this at an institution? Is there any concern that if it were done by students (which will likely be the case) that this might not be the right type of person to be dealing with the volume and complexity of the information?

Reviewer 13

You have achieved heroic steps forward with this version of STARS. I am awestruck by how responsive you were to the previous round of criticism and how effectively creative you have been in moving the protocol forward. I especially like how you have handled the difficulties of trend analysis and the need to recognize existing levels of high achievement. Congratulations and applause.

Furthermore, it is an exceptionally thorough and clear document, with a beautiful format. IR could learn (and I hope will) a great deal from you.

Reviewer 14

I was pleased to see that AASHE is developing a sustainability guide for institutions of higher education. This guide and rating system will be a great asset to help integrate sustainable practices throughout universities and colleges across the country.

[...] Thank you for the opportunity to comment on STARS. We plan to recommend that Illinois institutions of higher learning take advantage of this system for gauging their progress towards sustainability.

Reviewer 15

Besides its invaluable contribution to campus sustainability, this document titled STARS 0.5 can be a very effective educational tool, allowing for as much information on sustainability as possible. This may include, and is not limited to, using "Arial 10 and 9" fonts; adjusting the document paper margins to narrow" (0.5 inch, each side), providing an advice or recommendation for readers on printing on a recycled paper if printing, searching first for the "Print Friendly" option, using double-sided printing, and recycling the printout when it is no longer needed.

I noticed black table head in pages (12-18) that will consume considerable amount of ink on printing out the document. This could be changed to light color background.

[...] The bottom line: The latest STARS Version is a wonderful product, and it is quite pleasure to share.

Reviewer 16

Well done! You, your staff and all the volunteers have really done a fine job of continuing to improve this document so that it has a reasonable chance of success and changing culture/behavior at colleges and universities. It is still going to be a bear to complete, but no one can accuse you of being superficial or unfair.

Not sure I buy [*the distinction between STARS being a rating system versus a ranking*] – why, then, do you promote the aspiration that prospective students will use to choose a college or university?

Reviewer 17

WOW - this is really coming together. I am proud to a part of this very progressive group and the development of this leading standard. It is also rewarding to see the institutions step up to participate. (Glad to see it is so much more than about buildings....)

Reviewer 18

UGSBC would like to offer assistance to AASHE to create a reference guide to accompany the STARS rating system. We can provide technical assistance for users on both the LEED rating system and the green building educational workshops and training offered by USGBC.

Reviewer 19

I want to congratulate you on such a comprehensive and high quality document. I've reviewed the draft and have the following questions and/or comments. I hope you will find them useful. Don't hesitate to contact me for any further information.

Reviewer 20

Compliments to you and your committees. I think this is a great tool for colleges and universities and those of us who work with them on their planning efforts.

Comments on version 0.5 based on my experience as a campus sustainability coordinator and consultant.

I now work with small private campuses on master plans, so I'm very interested in seeing the final product since it will be a useful tool in several ways.

Reviewer 21

Sharing Results

It might be interesting to periodically showcase best emerging practices, by campus sphere of involvement, along with illustrations of these at leading campuses. This could be an AASHE DVD, provided at the conference, using video & working guides from leading campuses & consultants nationwide.

Advisory body

I'd recommend Rick Bunch as an advisor... He led (pre-) WRI's efforts to recognize, connect & cultivate capacity for early green business programs in the US & what became Green Pinstripes.
<http://www.aspenbe.org/about/staff/rick.html>

Also, the Global Reporting Initiative (GRI) may have relevant 'lessons learned':

<http://www.globalreporting.org/Home>.

Reporting Standards

Using measurements related to existing reporting standards - GRI, carbon registries, LEED, etc.

Video - seriously, encourage illustrative video to showcase campus 'wins'. Emphasize sharing qualitative and quantitative gains and how they contributed toward students, faculty, university & sustainability goals.

Reporting Software -- Consider providing automated software to leverage staff/student time for ease of reporting - should a school need to hire someone to conduct AASHE reporting? If well designed, the software could also save AASHE time in evaluation and sharing.

Reviewer 22

I cannot tell you how impressed I am with version 0.5. You have done an amazing job to take into consideration what I'm sure were countless diverging opinions and use them to really strengthen the document.

Reviewer 23

I think the current version of the STARS is looking pretty complete. Every time I had a question about a certain section, it was definitely answered a few paragraphs away, only leaving me with two thoughts/questions.

Thank you for the opportunity to review the document. I look forward to reading the next version.

Comments on STARS 0.5 Front Matter

Reviewer 10

It is noted that the Stars program has marketing benefits, and that prospective students can use the rating system in their decision making about which schools to attend. This is an important incentive and merits elaboration. How will results be distributed? Can the best performers be promoted in the media and to prospective students?

Reviewer 24

It's too bad that the social responsibility piece was subsumed under Administration and Finance. You've done a good job of capturing it, but it is again buried under a category that is not obvious. It is the most neglected of the three legs of the stool but will continue to rise in importance as the poor and disadvantaged impacted by resource scarcity and climate disruption. There are recent efforts to "use" the poor as a reason NOT to pursue sustainability because they will be the first to suffer. By not having the words Social Responsibility out in front with environment and economics, we may be missing an opportunity.

Reviewer 25

We commend your efforts in establishing a comprehensive sustainability assessment system.

We understand and appreciate the interrelationship between environmental and social sustainability, however we feel that including both in this system dilutes focus on each fairly distinct issue. We recommend restricting issues of social equity and sustainability to those that directly relate to environmental sustainability issues. For example, assessing the social equity and economic impacts of past and proposed actions affecting the environment would be appropriate to include as part of an environmental sustainability program, while the general issue of fair labor standards, health care and other such social sustainability issues, while important, do not directly relate to environmental sustainability and we therefore recommend they be included in other separate assessment tools for university performance by AASHE.

Given [*this*], if AASHE keeps other non-environmental sustainability issues in the STARS rating system we recommend that universities be given the option of participating in only the environmental sustainability categories and receive a rating only on environmental sustainability.

Reviewer 7

I like that you have equalized the rating system between the three topic areas and not so heavy on environment and operations

Reviewer 26

I would like to strongly oppose letting schools only get a rating in one category but not the others UNLESS a category is almost entirely not applicable to them (though, I can't think of many instances where that would be the case - even a "virtual" school like the University of

Phoenix has facilities they have to operate). If there is a class(es) of schools for which large numbers of credits are not applicable, I would advocate for trying to define that class of schools (let's say "community colleges") in some way and rolling out a STARS variation for that class of schools that still covers all three areas. That is the LEED approach (and I think the correct approach because it is holistic). Allowing STARS schools to only do one of the three areas and get a rating in it would be similar to the USGBC allowing a building to only get a LEED-Energy rating. I think they haven't gone that route for a good reason - sustainability should be holistic.

Reviewer 2

Even with Ecological Footprint Analysis, there is no way to compare "un-alike" credits in social, economic, and environmental areas – they require grounding in different sets of values. One can't readily value an "ecological" good using the same measurement system as a social good.

The Sustainability Office [*at my institution*] is specifically charged with improving [*my institution's*] environmental performance, and we have adopted a definition of sustainability focused primarily on environmental performance and public engagement – substantially different than the much broader agenda advanced in STARS.

There is no objective rubric against which to judge the potential impact of the actions recognized by the "Community Relations and Partnerships", "Diversity, Access, and Affordability", and "Human Relations" Sections. These are, of course, essential areas for evaluation/assessment, just as important as environmental performance, and areas in which it is critically important for universities to lead by example. But they are not comparable on a level playing field – they're apples and oranges. Who can say using objective analysis whether AF Credit 25 "Support Programs for Underrepresented PhD Candidates" should be weighed more heavily than OP Credit 19 "ENERGY STAR Purchasing"?

One way to fix this structural problem would be to implement a parallel scoring/rating system for the social /economic credits, and one for the environmental credits, where AASHE makes clear that a point in one cannot be cross-referenced or treated as equivalent to a point in the other. Institutions could then opt to complete the assessments that are most meaningful or feasible for their institution type and structure.

At this time, we at [*institution*] do not recommend the system as framed, with regard to the means of approaching economic and social issues. There is no acknowledgement of a consensus definition of sustainability by AASHE that will explicitly include and frame issues like endowment transparency, worker conditions, or financial aid, and this would be a helpful step at legitimizing the inclusion of these issues. Even then, however, they can't be fairly compared or scored or benchmarked against "ecological" issues and their solutions.

Reviewer 27

A second, and much less important observation that I offer with regards to the current draft, is that because the STARS approach is grounded in the "three-legged stool" or "three overlapping

circles” paradigm of sustainability, it fails to emphasize the fact that the economy is a subsystem of the biosphere and hence the two systems are not on equal footing (Dawe and Ryan 2003).

The biosphere would continue to exist and evolve without the economy, but if the biosphere is not maintained within the fairly narrow band of conditions that are necessary to human survival, little or no future economic activity will be possible. The three-legged stool model suggests equivalent trade-offs between the environment, the economy and society, a perspective that is inadequate to the growing sustainability gap between where we are and where we need to be (Fischer, Manning et al. 2007).

Human knowledge about what sustainability requires has evolved since the Brundtland Commission issued its report, while ecological conditions have continued to deteriorate, to the detriment of a growing number of people worldwide (Homer-Dixon 2001; Robinson 2004; Sneddon, Howarth et al. 2006; Howarth 2007). My own preference would be for STARS to rely upon, or at least acknowledge, a model where the economy is a subsystem of the environment (see for instance Daly and Farley 2004). Such a perspective is still compatible with ensuring that attention is paid to environmental, social and economic aspects of sustainability. However, it reduces the likelihood of accepting short-sighted trade-offs driven by economic imperatives that reduce prospects for sustainability. For example, where policies designed to maintain environmental quality are deemed to deliver insufficient levels of economic activity, the “balancing the stool” metaphor can result in pressure to further relax environmental constraints that are essential to longer term sustainability (e.g., government failing to reduce fishing quotas for the Northern Cod shortly before the collapse of fish stocks because local communities desperately needed jobs – with an end result that over a decade later, fish stocks show no signs of recovery).

The nested systems perspective does not imply that the economic and social dimensions of sustainability are unimportant, but rather merely puts them in a more realistic relationship with the natural environment.

Comments on STARS Ratings, Logistics, and Participation Guidelines

STARS Overview

Reviewer 28

Mission of higher education: research, education, service -- this should be reflected in STARS -- where is 'service' -- e.g. community relations?

Acknowledge that STARS can be used for ranking...

CSAF for Canadian universities and colleges [*is a standard, comprehensive way to compare the sustainability performance of higher education institutions and to benchmark a single institution's*

performance over time]. CSAF is also holistic [*in that it includes credits related to an institution's social, economic, and environmental performance*].

[*Suggested listing which campus sustainability assessments were reviewed in developing credits in an appendix*]

No Canadian professional institutions represented [*on the Strategic Advisory Council*] -- please correct this, as STARS is supposed to apply to Canadian institutions as well.

STARS Credits

Reviewer 29

There is something awkward about tier two credits. How much are they worth? It says less than 1 pt. Are they are weighted equally? I would suggest they are all the same value. Perhaps 1/2 point.

Reviewer 4

The points in general sometimes seem arbitrary in the amounts. Did someone do a footprint analysis (even a rough one) to calculate the relative damage to the environment for those related credits and then gave credits accordingly or, even better, I guess you could give credits by looking at how modeling this for the country could potentially reduce the U.S. footprint as the country followed the higher ed model? I know this may be beyond the scope and staff capacity of AASHE but it is an interesting approach/issue. This way the incentive system would really get at reducing the footprint.

Reviewer 16

Can you get these partial credits [*Tier Two*] regardless of how you have answered the [*Tier One credits*]?

Reviewer 2

According to the STARS guidelines, "Tier I credits are based on measurable outcomes and Tier II credits are based on institutional strategies to achieve those outcomes and/or indicators of institutional commitment and sustainability performance." Currently, credit assignments to one of the other of these categories seem somewhat arbitrary. Additionally, Tier I and Tier II credits do not fall cleanly into the two categories as described.

Certain Tier II credits appear to have the potential to improve an institution's sustainability performance much more than some Tier I credits, though, as AASHE notes in the introduction to STARS .5, Tier I credits are assigned more weight because they are intended to be more meaningful tools for evaluating outcomes. A small "outcome" of limited importance should not be weighted more heavily than a large-scale, reliable and effective "strategy."

Ecological footprint analysis is one way to compare different credits using a relatively objective “common denominator,” and EFA could potentially help to address this problem by placing credits in Tiers more consistently. That there is currently no ecological footprint analysis or other rubric against which practices can be measured to determine their real environmental performance effectiveness makes both Tier and Point assignment problematic.

At the very least, a more consistent mental approach or a rationale should be included explaining why so many apparent “strategies” find their way to Tier I, and so many “outcomes” to Tier II.

Point Allocation Problems occur in credits that are not weighted appropriately against other credits (either too much or too little), in terms of the points awarded for an action or the points possible, according to a more objective understanding of meaningful sustainability performance.

We recognize that we were encouraged to avoid focusing our review on point allocation at this phase in the project, but we believe that this is a deep issue which needs to be addressed early. It isn't that the system simply requires fine-tuning, but that the underlying premise about how to assign points should be re-examined, with a more objective approach used in its place. Once again, ecological footprint analysis is instructive here, as is carbon accounting. In the absence of these, every single point assignment for each credit should be extensively and transparently justified against all the others.

To emphasize this: the current allocations of credit points are based on no rigorous or rational system at all; they are almost completely arbitrary in their allocations. We would suggest eliminating points entirely for the time being, developing a strong “indicator set” of credits, getting the pilot results, and then based on those results, and additional academic research or methods like EFA, allocating points using a strict and internally-consistent award method.

Reviewer 30

How is the number of points per category determined? Can you work out the potential gigajoule of energy that could potentially be saved per credit area in a particular category based on a case study. From there you could build the points level accordingly.

Reviewer 31

As an institution there are sections where we have many of the credits however we don't have one of the prerequisites, we believe we should still receive credit for the efforts we have made to truly assess our sustainability.

Reviewer 11

Could you please identify the three main sectors/organization groups for higher education?

[...] The credits need to be compared to each other and worked out for weight and scale. Some points require tremendous time and financial investment, others much less. Hopefully the pilot testing will sort some of this out. I've made a number of suggestions for changing the points scales for various credits. Also, it might be good to run this by NACUBO to get their feedback. The rating system needs to be "doable" by higher ed staff and have some motivation behind it. If it is too hard to document all these points, the system won't take off.

Reviewer 5

1. Please eliminate Tier Two Credits for the following reasons:

a. Schools will have the most success with STARS and be the most likely to be able to have continued participation if we keep the document as simple as possible. Please keep points to those really critical to measuring an institution's sustainability.

b. For the most part, each tier two credit is an action that will contribute to a result that is already measured in the Tier One credits.

c. The tier two credits are just lists of random things that schools can do to improve sustainability. For each single tier two credit that you have, there could be 50 more things that are tier two credits. The current tier two credits will unfairly give points to schools who have participated in the initial rounds of reviews by giving more points to schools who happen to be doing those things and commented that they should be included. Schools who happen to be doing other things will not get additional points. If you expanded the list of possible tier two credits to include all of the sustainability things that each school was doing it would be so burdensomely long that it would be a deterrent to participation and only those schools who had a lot of administrative overhead to pay people to spend a lot of time on STARS would rank high.

d. One way to eliminate Tier Two credits, but to still give schools who are really going the extra mile and doing a lot of additional things would be to have the possibility of an innovation credit in each category. For each section of STARS, allow one additional point for innovation in that area. List things which a school might do to earn this innovation credit and include on the list the things that are currently considered tier two credits. Have the schools submit a list of things that they are doing in this area and a brief narrative describing why it is worthy of an innovation credit.

Reviewer 32

Introductory Sections: p.8 - It's great that innovation credits will remain part of the STARS process. STARS should encourage new and innovative approaches as opposed to adherence to existing technology, practices and processes.

Reviewer 28

Again two types of credits: Tier 1 and Tier 2 -- this is confusing with two types of credits above -
-performance and strategy

[Question whether outcomes are the same as performance]

Eligibility

Reviewer 31

It seems as though the requirements assume that every university makes a large income, however city colleges are funded for by the state so to hold them to the same standards as private and public universities is an unfair assessment.

Reviewer 11

Explain non-compliance, do you mean with the EPA? or other regulatory bodies? Might be useful just to spell these out.

Reviewer 16

Note about how [*compliance with regulations that pertain to sustainability*] is to be judged. [*Add*] such as criminal behavior, repeat violations or environmental damage [*to the end of the sentence*].

[...]On the compliance side, I am comfortable with removing compliance from the prerequisite category as well as giving AASHE or the STARS governing body with the discretionary authority to remove an institution from the rating program if it is found to be in significant violation of federal or state regulations. That said, the strength of an institutional “compliance program” -- which is a fundamental underpinning of any strong environmental sustainability program – should be included. I would suggest, for now, a second tier credit, but I wasn’t really sure where to put it. It’s not really a subcategory of any of the Operations or the Administration and Finance sections. That said, here are some possible Tier II credit options:

- Conducted a campus multi-media audit during the last three years and developed a plan for correction of any deficiencies observed
- Participation in EPA Performance Track, Self-Audit Initiative, or similar agency or third party program during the last three years

Verification and Certification

Reviewer 16

I would consider asking for “any exceptions” as part of the documentation requests. There are a number of questions in Operations, in particular, where there are likely to be some exceptions to policy or practices and I think that asking for any notable exceptions supports transparency and may support credibility for scores provided.

Reviewer 24

pg. 8 last line is missing something

Reviewer 18

The Verification and Certification section of STARS (page 8) states that there may be need for

third-party verification of project documentation. USGBC would like to offer our assistance and expertise in this process; we encourage AASHE to establish third-party certification by laying out the value in having verification and the synergies that come from working with the credit system as a whole, rather than in sections. The same is true not only for the STARS rating system but also for the buildings and operations section of the STARS rating system. When credits are broken out instead of considered in the context of the whole building package, synergies between credits are lost.

We offer the following idea as a potential solution to the perceived high cost of LEED Certification: USGBC will help AASHE form a user's group that can share ideas and information, and can help to lower the cost of certification for those using both LEED and STARS. Other solutions may present themselves in the future. This is important, because many of the costs associated with LEED certification are due to third-party consulting expenses. An information exchange network could help to alleviate the need to retain consulting services to handle LEED paperwork and reporting.

Applicability and Ratings

Reviewer 28

[Questioned why STARS would potentially set different standards for different types of institutions]

Reviewer 29

On p 9, thresholds should be the same for each institution as represented as a % of applicable points.

Reviewer 16

Can you "fudge" the system? Say something doesn't apply when it should?

Reviewer 23

Different rating levels vs. celebrating positive achievement--there are definitely pros and cons to either approach. What is a truly, fully sustainable campus? Is there a model campus? and since each campus is different, would it be comparing apples to oranges. I believe we are still in the research, experiment, process, learning phases of figuring out what campus sustainability means and we should all continuously strive to improve our operations, research, and education of students, faculty, and staff. As with other national college surveys, winning more stars or a higher rating leads to not-so-complete answers of questions.

On the other hand, the LEED system of rating seems to be working well (enough). A similar approach with the chance to move-up as your campus builds greener infrastructure would be nice with a CONSIDERABLE emphasis on individual (campus) innovation and creativity in problem solving in light of particular campus-related issues (budget cuts, liberal arts vs. research schools).

Reviewer 11

How many points total earn your campus what kind of rating? I see that is not yet determined; this is crucial because it is the motivator for going through all the tedious paperwork to “prove” your points. Have you tried a boiler plate set of numbers and then run it by some coordinators to see if it’s in the ballpark? I’d be curious to see what a draft scale might look like.

Reviewer 21

If you choose to do Ranking: Opt In or Third Party Selection

I believe it's important that a ranking organization ultimately determine inclusion & ranking, whether or not the campus has provided (self-nominated opt in) detailed rating info in a given year. This may more accurately reflect overall efforts & results on campuses over time (vs. efforts involved to complete a complex rating form) in a way that 'rings true' for leaders in the AASHE community [though it would tend to conservatively reinforce bias toward best-known, past leaders]. In the academic field of sustainability in business, it happened that after a few years, several leading schools didn't have/take time to do their reporting & as a result, schools that gave more attention to reporting came to the fore, though their efforts may not have measured up to those of leading schools. Also, I believe it's important that ranking & judging be done by those familiar with campus greening efforts (as compared to, say, business or municipal approaches) to retain the rankings' credibility among administrators, faculty & students.

Timeframe for Ratings

Reviewer 12

I like that the time frame will be over 3 years.

Participation Fee

Reviewer 33

During our conversation it was mentioned that there had been a discounted price for [AASHE membership for] MSIs [*minority serving institutions*] but that was going to be phased out because it was not being used. I would suggest that the program not be phased out yet. Because you have not had an organized outreach program to MSIs it is more likely that the discounts underuse is a matter that most MSIs are unaware of the discount. Rather as you develop an outreach program where the discount is part of the marketing effort if you continue to find it underutilized then it would make sense to shelf it.

Reviewer 11

Participation Fee – consider a sliding scale? Not sure on what basis – size of endowment?

STARS Reporting Guidelines

Letter from Leadership

There were no comments on this section.

Institutional Boundaries

Reviewer 3

-This section should require each institution to consider the broader context upon which their campus exerts influence. For example, an institution should not only consider the activities within its boundaries, but should also consider the surrounding area from which faculty, staff, and students commute. Consider adding a sentence or two to this section:

“Each institution should also consider where their faculty, staff, and students live, whether on or off campus. Analysis of the institution’s sustainability should consider commuting distances.”

How STARS Calculates ‘Per Capita’

Reviewer 24

Using Per capita as a baseline is great, but it will be messy for many schools. Just a heads up (should you need it) that this can be a complicated area to understand and accurately account for on a campus.

Reviewer 12

I think that you are going to eventually have some difficulty having everyone agree on the ‘per capita’ concept, especially as it relates to how each institution likes to measure their own numbers.

Reviewer 1

On page 10 of the April 2008 document, there is a formula for calculating per capita: It was not clear to me whether on campus (student) residents would be counted twice in this formula. (They could be counted as both on campus residents and full (or part) time students). A comment would be helpful to clarify this issue.

How STARS Calculates Trends

There were no comments on this section.

Timeframe for Reporting

Reviewer 34

Avoid confusion, I suggest that the reporting period be clearly labeled, using the academic year convention (e.g. '2007-2008'), not the accounting/fiscal year convention (which labels a fiscal year according to the year in which it ends). [...]

1) Every institution I know uses the academic year as their fiscal year (although some data may be tracked on a calendar-year basis).

2) I suspect that allowing different time periods will lead to confusion and error. I recommend requiring all submissions to use the academic year (= fiscal year at most institutions). At worst, this might require some institutions to make a one-time change in how certain data are tracked.

Introductory Institutional Information

Basic Information

Reviewer 28

Carnegie Classification for Canadian Institutions=Maclean's Category

Reviewer 11

Consider including a table with info on Basic Geography/Ecology for the school – i.e. weather, climate, soils, bioregion, local environmental impacts (and perhaps responsibilities). This would encourage consideration of these factors in self-assessment.

Reviewer 13

I recently realized that in my haste in sending comments about STARS 0.5 in order to meet the deadline, I overlooked something that still concerns me—the absence of any of the traditional indicators of short-term institutional sustainability, which is necessary (while certainly not sufficient) for long-term sustainability. These are the kinds of things that go into the admittedly myopic bond ratings, but again, unless an institution is financially sound, it simply can't be sustainable (or contribute to the educational goals of sustainability). I'm thinking about things like demand (applications) relative to capacity, income relative to expenses, debt levels relative to income. As I said earlier, I believe inclusion of these measures not only provides a general perspective on sustainability, but will be important to having credibility with, and encouraging the engagement of, the financial officers and many trustees. These could be in the institutional information section.

Reviewer 7

You asked for suggestions on how to classify/signify different divisions of record in the system. A few thoughts:

Carnegie Classification (more recent classification is a little daunting and somewhat confusing) - older version might be easier

NCAA divisions ratings- easy to remember but I think it could be seen as a little elitist and off-putting by some (Division 1, 11, and 111 also the sports thing might not work well for our needs here. (Okay through writing this out this is one that I might not recommend)

Common Timeframes for Reported Data

There were no comments on this section.

Population Information

There were no comments on this section.

Facilities Infrastructure

Reviewer 35

Facilities Infrastructure: There is a big difference between private and public colleges and universities when it comes to buildings and upkeep – especially when they might be dependent on state funds for new construction, or deal with “deferred maintenance” issues, leading to many a struggle for keeping regular campus operations running, let alone new or expensive trial projects.

Recommendation # 1: Designation should include a category that says: State-owned or private buildings.

Reviewer 34

What is the significance (with respect to sustainability) of the 'percentage of buildings that have received historical designation'? How do you define historical designation? Age of buildings - The area could be as important as the number of buildings.

Reviewer 16

I wonder whether total number of buildings (or percentage of space) is as important as the current indicator [*percentage of buildings*]. Can you ask for number and percentage?

Reviewer 1

On page 13, I could see some institutions having difficulty counting buildings. I know this may sound crazy, but I cannot tell you how many buildings our campus has. I suggest that you include a minimize building size for inclusion to avoid getting concerned with small structures. I would recommend that the minimum building size be somewhere between 5,000 and 30,000 gross square feet.

Campus Space

Reviewer 3

This section should include an item that measures the density of new development on the campus. Such an item might be measured by the ratio of area (in square feet) of building space that was developed on campus during a particular period of time divided by the area (in square feet) of impervious surface that was added to the campus during that same time period. In this case, the higher the ratio, the denser the campus' built environment. Density through infill and brownfield development can reduce the campus' environmental footprint and increase its sustainability.

Reviewer 35

Campus Space: Proximity to waterfront is a factor, especially in a harsh, marine environment like UMass Boston – these types of buildings face higher risks of wear and tear due to their proximity to salty, windy environments. In recognition of impending sea level rise, this would also be an important consideration for such campuses.

Recommendation# 1: Inclusion Category: Proximity to marine/aquatic environment. (in meters).

Reviewer 34

Area of campus lawns, outdoor athletic fields, and gardens - Does this include farms? Would it make sense to separate lawns & athletic fields from gardens and farms? What is the purpose of separating Medical/Clinical space?

Financial Information

Reviewer 34

Why are we interested in student fees allocated to sustainability officer/office/committee?

Education and Research Credits

Reviewer 22

I am extremely happy to see the education section in tip-top shape, and given the weight that I think it deserves. The comments below are minimal and mainly cosmetic, as I think that you have all of the major issues taken care of.

Reviewer 28

Operations and sustainability on campus are very significant aspects of informal sustainability education and learning.

Reviewer 16

[Regarding the comments suggesting the Education and Research category should be worth as many points as other categories] I disagree, for now. I think this will prioritize or place more emphasis on reframing and redefining education/research which may or may not really result in meaningful change. I tend to prefer / feel more comfortable with credits for actual, documentable improvements to physical impacts (e.g., footprint) and social equity measures.

I think the pilot will be telling. If credits appear to be more easily received/achieved in this section, then I think AASHE should take a step back and rethink.

Reviewer 34

With all these points related to sustainability in courses, departments, and programs, the definition of sustainability becomes critical. Basing so many points on these indicators may tend to cause courses to be labeled as sustainability-related or -focused even when the connection is minimal.

At the same time, many people who are tuned to environmental sustainability, have little understanding of the implications of the social and economic components.

Reviewer 21

I. Measures of leadership and incentives for interdisciplinary scholars:

- is the President or Chancellor committing to a carbon reduction plan?
- Are School/Dept Chairs encouraged & rewarded for bringing sustainability into their departments' efforts (or penalized for not doing so)?
- Are scholars encouraged/allowed to establish a credible publishing record toward tenure in (emerging) interdisciplinary journals? (STARS 0.5 mentions this as research, but it's a leadership & staff development issue in this context).
- are graduate students given opportunities / encouragement / requirement (beyond elective courses) to develop depth in multiple fields or cross-disciplinary/bridging mastery?
- does the school offer opportunities for students to major in sustainability sciences at the BA/MS/PhD levels?
- Are skills courses (interdisciplinary glossary, interdisciplinary teams issues, interdisciplinary

problem solving facilitation) offered for students, faculty and administrators?

- are students, faculty, staff & administrators given credit for their achievements and time commitments to pioneer a campus toward sustainability (rewarding talent and avoiding burnout)?

- international visibility & leadership

II. Integrating sustainability across schools & campus efforts

- to what extent have efforts 'bridged' across multiple schools or areas of campus, e.g. ASU multi-school sustainability majors, UMI School of Natural Resources w/ School of Business, UCSB Bren School of Environment & Management w/ Engineering Entrepreneurship, Middlebury students' campus greening efforts w/ coursework, Cornell students' campus climate efforts w/ coursework, Oberlin green building w/ coursework, et c.

- hosting sustainability conferences on energy, environment, wildlife, building, education, media, law, design or other sustainability related topics.

III. Intensity of involvement

- actual number and/or percentage of people & hours routinely involved/employed in sustainability on campus. Such a measure, if well crafted, could shine light on schools, small & large, with the highest proportion of campus engagement.

Reviewer 36

In general the STARS framework misses a few key aspects that would drive continuous improvement and collaboration – which I think should be included. For example credits could be added for campuses that have put ongoing staff training programs in place to support continuous learning and transformation of operational practices. That is to say that STARS would ideally recognize proactive efforts to institutionalize continuous improvement and collaboration. This certainly needs much more thought as to how you might include these facets that I have done here.

Campus culture should also be included. Credits should be awarded to campuses that are effectively engaging large numbers of people across the campus to change their behaviors and practices. The presence of occupant engagement programs in arenas like residential dorms, laboratories and administrative populations should be recognized, rewarded and encouraged. Again – needs more thought as to how you would structure this –but it should be done. This might go under administration and finance of education and research

Reviewer 37

Fostering community, creativity, interdisciplinary dialogue among faculty: I feel like this is our first and most important task to build momentum for sustainability, and I don't see how that is captured by the kinds of course-based items you have in the pilot STARS version.

Reviewer 38

My major suggestion is for an initial focus on something much more fundamental than

coursework. It is not even co-curricular, by the current category definitions. It is pre-curricular. If it were to be included, I believe some later credit categories could be simplified or eliminated.

I. Sustainability on Campus: Pre-Curricular Issues

As we consider the need for courses in sustainability, there are prerequisites that should be in place before the work of active teaching begins.

What does this mean?

I recommend that before the advent of courses on sustainability, every university should publish and promote guidelines for sustainable behavior on the part of its students, faculty, and staff. These guidelines ideally would be part of the honor code of the university. It would be a commitment to be signed by every entering student, and a prominent part of freshman orientation. This means it is beyond voluntary: it is a moral commitment (as I believe it should be), like any academic code of conduct.

The guidelines are rules for behavior, a code of conduct. The “prerequisites” follow, in spirit, the LEED certification prerequisites.

The basics: (1) recycling. Every student will commit to recycling. This means attention to waste of every type, from paper to old computers, and a knowledge of where this is collected. (2) ETS control. Students will not smoke in indoor public places OR in shared dorm rooms. If necessary, there will be venues for campus smoking that are environmentally isolated. (3) where the flow of resources is controllable, students will make every effort to reduce usage. They will turn off lights. They will use less water. They will unplug appliances not in use. (4) purchasing. Where possible, students will purchase appliances that have earned the ENERGY STAR. They will try to buy products, like paper products, with recycled content. They will try to buy local food without a lot of excess packaging, and fair trade coffee.

Staff and faculty should sign this code of sustainable conduct, too.

I would propose awarding big points – 10 – to any institution which promulgates a code-of-sustainable-conduct applying to all their members.

In the presence of a pre-curricular, mandated code-of-sustainable conduct, I would strike ER Credit 10, “Sustainability Graduation Requirement,” entirely. I would also strike the ER Credit 16, “Sustainability Literacy Assessment” since this literacy is assumed if you adopt a code-of-sustainable conduct.

Reviewer 4

I have a leftover comment that applies to the academic area. Somewhere, perhaps in Tier 2 should be credit for sustainability oriented learning communities. Also, if the First Year

Experience (FYE) is sustainability focused this can have a dramatic positive impact on student learning, especially when this is for the whole student body and not a subset of FYE choices and should be recognized. Last, if there is a requirement for the General Education Core Requirements for all degrees that include sustainability, this should be recognized, although you may have already included that and my memory is missing it since I am onto the latter part of the document.

Co-Curricular Education

Reviewer 28

The informal, hidden curriculum, e.g. via the campus culture and infrastructure, is an important aspect of sustainability education which needs to be recognized in some way in this section.

[Informal Education and Co-Curricular Education] are two different and separate things

Reviewer 35

Missing a very important and large organizational segment, should include Student Affairs or Student Center division that guides all the various student groups and activities on campus. While peer to peer is fine, there should be far higher emphasis on organizational divisions like the Student Affairs division that may usually have professional staff helping with student activities, counseling and more. Additionally, many sustainability programs, including ours offer paid or for credit internships in collaboration with the academic adviser and this type of real-world exposure helps many students really get involved and interested in campus sustainability in a productive and collaborative manner.

Recommendation# 1: Include category called: Student Affairs involvement in Sustainability across student-related activities, clubs and offerings. Points allocation: 2.

Recommendation# 2: Include category called: Availability of co-curricular campus sustainability internships. Points allocation: 1.

Reviewer 4

Under co-curricular education, it is important to add a credit for Students have the opportunity to work on solutions to real world sustainability problems. You should also give credit for "Students engage in a campaign to make (the campus, the community or a company) more sustainable in its policies and practices." You should also give more credit if students start a campaign or project that they then spread to other higher education institutions or spin off to communities. In other words, they should be given a lot more credit for being systems thinkers and creating system shifting projects.

Reviewer 29

A campus farmers market should be a tier two credit, perhaps in the co-curricular education section

ER Credit 1: Student Sustainability Outreach Program

Reviewer 32

As written, credit is given to institutions that encourage peer-to-peer outreach... However, the documentation required appears to have a particular program in mind. It should probably

read: The form requests or equivalent / similar documentation that represents your institutions efforts in this area.....

Reviewer 39

It would be helpful if it was clear what is meant by “the institution must be contributing formally to the program”. Does this mean by financial support or by staff support? I suggest it be either. I also suggest that this program not be required to have a website to earn the credit, but rather it be encouraged.

Reviewer 10

I like this credit a lot, but it is only oriented to peer-to-peer education. Would it be possible to expand it a bit to create a category that would be for sustainability related leadership around a non-curriculum based initiative? This last year one student (primarily) developed and managed a month long Eco-Olympics among our resident halls. There was no training manual or formal outreach; it was just fun, movies, eco-games, and an online set of sustainability modules. This student was involved in what I would categorize as a leadership initiative, more so than an education initiative (although they do overlap).

Reviewer 40

Does a campus receive credits for events put on for students by student organizations? If so, perhaps consider another rating category could be offered for courses actually taught by undergraduates.

ER Credit 2: Sustainability-Related Competition

Reviewer 28

Delete credit: it's just ONE way to motivate for sustainability, and should therefore not be worth credits when other programs do not receive credits -- One can also oppose this credit on philosophical grounds: why foster competition vs collaboration?! Who says competition is better re: sustainability than collaboration? why not recognize collaborative sust’y programs?

Reviewer 32

A dorm style competition should probably be a Tier II credit. This is a great technique that involves students in the greater effort.

Reviewer 4

For ER Credit 2 on Sustainability-Related Competition, you might want to make it Contest instead since a cooperative approach might be to see the total change toward sustainability without pitting one group against each other. The value of collaboration and creating a win-win is more aligned with sustainability.

Reviewer 2

This credit seems like a 'strategy' like several of the Tier II credits, not an 'outcome' as in Tier I. The way the credit is written does not guarantee that the competition have a meaningful impact on energy, water, waste reduction, etc.

Reviewer 39

Does the competition need to be strictly a campus program, or can it also work if your campus participates in a national competition such as RecycleMania?

Reviewer 8

I find the activity too prescriptive. There are numerous approaches to waste and energy reduction for example, To highlight one for special credit seems unwise. I also wonder about nurturing the “competitive” spirit vs. the cooperative spirit. Could we devise a credit that showers those who exhibit cooperation?

Reviewer 34

Why give credit for Sustainability-Related Competition? There are many ways to reach students, and giving credit for one, but not to others, doesn't make sense. Competitions may engage a lot of students, but if the goal is competitive, the real lessons are often overlooked. I can't imagine that this is a better indicator than having student groups dedicated to sustainability.

ER Credit 3: Sustainability in New Student Orientation

Reviewer 32

Great as written. Getting students involved as soon as possible will help them make significant contributions during their 4 years in school.

Reviewer 39

What is meant by “prominently”? I think that some of the struggles we face in the pilot program are in trying to determine if we meet the criteria—how much is enough for the credit. This is a challenge, because we like to earn some credit for the work that is done here, but we don't want to imply that we have done all that we can—that there is no room for improvement. It might be helpful to have this as a two tiered credit, or to outline some possible examples of what a school could do to earn this credit.

Reviewer 4

I agree that sustainability in orientation should be a Tier 1 credit.

Co-Curricular Education: Tier Two Credits

Reviewer 32

Item #1 - I think of "Leave no Trace Principles" in outdoor recreation, but not in the operation of an urban campus – Maybe that could read "Campus orientation / education includes the preservation of green and shared outdoor areas".

Item #4 – Urban campuses or those in desert communities, where land and water is an issue, may find it difficult to operate significant campus organic gardens. It will be good to have other activities on the menu that make sense on those campuses.

Item #7 – Why do the sustainable cafés have to be student run?

Item #9 – Our campus papers run numerous sustainability related articles (including special editions dedicated to the subject) but we don't have a space dedicated to sustainability. The credit should be worded to reflect that sustainable coverage is encouraged as opposed to ensuring that space is allocated away from potentially newsworthy stories of the day.

Item #2 and #10 – Are especially useful in this section.

Reviewer 29

- Student garden on campus should be moved to tier one from a tier two credit. This is one of the most important aspects of sustainability and needs to be highly visible. This is how life styles will change.

- Production garden for dining services can be considered for a tier two spot.

Reviewer 8

Item #10 add "speaker series" to events list.

Reviewer 28

1. Minimum impact/leave no trace
2. Should be Tier 1 credit -- it's an important means for student engagement and visibility of student activity
3. Tier 1 credit: part of informal sustainability learning and thus Tier 1
5. See point 3
6. Tier 1 credit: visualization and communication of sustainability is as important as action/activities
7. How often? Need to include this.

Reviewer 7

Excellent to add Co-Curricular, it is clearly the industry standard now for learning outside the classroom [...]

4) Addition to Co-Curricular Education: Tier Two Credits

a) First year book (the entire class reads one book and it serves as a launching pad for MANY campus events- educational and cultural) with a sustainability theme that is co- and curricularly maximized during the school year.

b) student activities focus on sustainability and sustainable programming (millions of dollars spent every year by colleges bringing speakers and activities to campus (social justice, women's, men's, GLBTQ, POC) diverse and multicultural programs- might be a way to include this as a way to recognize their efforts. (in an addendum, lists of programs-tool kit ideas, some of the things that have been suggested by ACPA taskforce.)

I like the emerging student focus and developmental processes that include them, they must be tapped for this larger process to work.

Reviewer 34

Tier two includes 'Institution has an outdoor program that follows Leave No Trace principles.' What about a campus-wide program based on the same principles? The presence of sustainability-themed housing may be a good transitional indicator, but it implies that the rest of the housing is not oriented towards sustainability! (And why do they need a model dorm room -- is that because the others are not sustainable?)

Suppose they have an on-campus organic garden where students raise food for the poor? It is good for an institution to have a student-run café that serves environmentally or socially preferable foods, but no substitute for serving such food campus-wide.

Reviewer 2

1 -- Does this apply for an urban embedded university?

3 -- This Tier II credit seems potentially as much or more meaningful than ER2-'Sustainability-related Competition'. I would be interested in AASHE's reasons for making the competition a Tier I credit while this is Tier II. My instinct would be to reverse the two.

6 -- At [*institution*], we've deliberately kept most materials digital to avoid paper and space waste - are we effectively penalized here for environmentally responsible behavior?

7 -- What makes it better that the café be student-run? What if it's not a café, but a different establishment serving food/beverages? This should be reframed.

8 -- This constitutes a major student sustainability commitment-denotes student participation and involvement; could be considered an "outcome".

9 -- This is a bit nebulous - for instance, at [*institution*] our newspaper sustainability coverage has increased by 800% since the launch of our sustainability initiative - there's no official

"space," but they are habitually reaching out and contacting us for articles now. So do we get a point here or not? What about a trend showing an increase in coverage, or a threshold for minimum coverage of environmental and sustainability issues?

10 -- Conferences and symposia are major university functions--denotes major university commitment to sustainability. This would be a very strong Tier I credit for institutions that regularly host symposia and conferences.

Reviewer 41

I would suggest not to include "Institution has a student-run café that serves environmentally or socially preferable foods" as I don't see why having a student-run cafe is useful for sustainability and should be something that universities aspire to; my feeling is that if the food served on campus is sustainable, that should be enough; there is no relevant need for one of these cafes to be student-run. This seems more appropriate for an innovation credit.

Reviewer 40

#7 – "Institution has a student-run café that serves environmentally or socially preferable foods." Just as a point of personal clarification, it would be helpful to understand the importance of having a student-run operation as compared to another that provides full-time employment opportunities.

Perhaps consider a credit for: Sustainability-related events, i.e. Campus Sustainability Day, Earth Day, speakers, films, fairs, site visits, etc.

Curriculum

Reviewer 42

In the Education and Research credits section in the Curriculum section, the focus is just on the number of sustainability related courses or the university recognition of these courses separately. My comment is that what defines a sustainability related course is left up to the definition of the university or specific person filling this information out...I think you would be better to clearly define what that means. Also there should be a higher number of points for sustainability related or more importantly "focused" curriculum programs- minors, concentrations, majors than just courses. Sustainability programs are a growing trend at many universities and this requires a much higher institutional commitment than just a few courses that may hit on a few themes of sustainability.

Reviewer 4

I think there should be separate credits given for academic credit given for assignments that work on real world sustainability problems. This would have a transformative effect on the skills of graduates, the content of higher education, and the solutions created for our real world sustainability problems.

Reviewer 4

Regarding the % of courses that should include sustainability, if a course has not been reviewed to see if it comes from the updated worldview of sustainability, then the course may very well be coming from an outdated and inaccurate worldview of endless resources and the earth can absorb all the toxins. Therefore, true excellence in undergraduate education would be when at least all of the undergraduate disciplines have looked at whether their courses are being taught with assumptions of the older inaccurate worldview. In addition, at least the intro courses in each discipline should mention the discipline's possible and existing contributions to a more sustainable future. You might give some points for a program or major, but the most points should come when all undergraduates become literate about our sustainability challenges and engaged in the solutions.

[...] Notice how the percentages on local food purchase are so high and the percentages on courses that relate to sustainability are so low. I'd hate to see an institution score high that still had a high percentage of courses coming from the outdated non sustainability oriented world paradigm.

Reviewer 33

Note: In recognition that many MSI help build new generations of college graduates through TRIO programs that begin with High School students (TRIO programs last through graduate school). You might consider an ER Credit for Sustainability in TRIO Programs.

Reviewer 39

A University Definition of sustainability was omitted from this draft. I agree that that should not be a prerequisite, but I would like to see it as a Tier Two credit.

Reviewer 27

My first involvement with education for sustainability was in 1989 when I organized a program that eventually involved 16,000 Canadian high school students working in networks of school to respond to the Brundtland Commission's report *Our Common Future* (The first report came out in 1990: *Public Focus*, 1990. *Visions 2020 - Ontario's youth, Ontario's future: Ontario students set out their vision for Ontario in the year 2020*. Toronto, 133 p). I have a Masters degree in Ecological Economics. Much of my work has been concerned with the implications of sustainability to the forestry and mining sectors with particular attention to the implications of natural resource development to indigenous people. I recently returned to academia where I am working on an interdisciplinary PhD that combines sustainability, economics and higher education. My research project involves examining how the introductory economics curriculum prevalent in North American universities affects student knowledge, values and attitudes related to sustainability.

Comments on STARS curriculum criteria

I agree with the observation on page 19 of the draft document that "educating students and conducting research are the primary functions of higher education and that schools can make the largest contributions to sustainability through these activities." Furthermore, there is nothing that I would change in the following from page 23: "A primary function of colleges and universities is to educate students. By training and educating future leaders, scholars, workers, and professionals, higher education institutions are positioned uniquely to prepare students to understand and address sustainability challenges. Institutions that hold courses relevant to sustainability issues help equip their students to lead society to a sustainable future." A corollary to these findings is that if society has created conditions that are now so far from sustainability, it is likely that part of the explanation comes from the fact that historically, universities must have been teaching their students content that impedes sustainability. This can be seen across academia, from Civil Engineering courses that taught students how to design highways that increased sprawl, resource depletion, land degradation and GHG emissions, to marketing classes that taught students how to sell products that, from a sustainability perspective, probably should never have been produced, let alone sold.

STARS is an important part of encouraging a realignment towards sustainability. However, given the urgency of our current predicament, it is important to ask whether the criteria can be designed so as to accelerate the required realignment. In particular, could an institution get high marks on STARS 0.5 all the while continuing to graduate a significant number of students whose knowledge base and values are shaped by their courses in such a way as to induce them, without ill intent, to undermine sustainability in their future endeavors following graduation? Stated in another way, could the addition of one or two more criteria provide the encouragement to institutions of higher learning to ensure this is not the case?

My comments are therefore directed at how STARS address curriculum. In particular, drawing on my current research interest, I focus on the introductory economics curriculum. There are

three reasons for this focus:

- About 40% of undergraduate students at North American universities take at least one course in introductory economics, while less than 2% major in economics. Therefore, the introductory economics curriculum represents an important opportunity for integration of sustainability.

- Human economic activity involves extracting resources and discharging wastes at rates that are well beyond what can be sustained over time. To achieve sustainability, it is commonly agreed that economic incentives and economic policies will have to be changed, that investments will have to be redirected and that growing inequities will have to be addressed. Improving student knowledge of ecosystem-economy linkages and potential economic instruments and policies to support sustainability is therefore a critical step in enhancing society's capacity to address sustainability.

- There are indications that the current introductory economics curriculum teaches content that misinforms students with respect to sustainability and undermines support for changes required to achieve sustainability (Goodwin 2001; Nelson and Goodwin 2005; Reardon 2007; Green 2008).

The issue I seek to address is that while universities should seek to ensure they have courses that address sustainability, they should also be encouraged to examine their existing curriculum to see if they have courses with content that undermines or provides flawed advice that would misdirect societal efforts towards achieving sustainability.

My contention, which I recognize is controversial in some circles, is that many introductory economics courses at North American Colleges and Universities will be having this effect. I therefore explain my reasoning and provide an overview of some supporting evidence.

If further degradation of the biosphere and erosion of human prospects is to be avoided, goods will have to be produced in an environmentally benign manner, consumption levels in rich countries will have to be reduced and inequity in the global distribution of income will have to be lessened (Homer-Dixon 2001; Daly 2002; Rees 2002; United Nations Environment Program 2005; Stern 2006). While economic theory and analysis can aid in the identification of efficient mechanisms to implement such responses, many policies usually favoured by mainstream economists, as well as many values implicit in conventional economic theory and analysis, appear to be in potential conflict with values and policies that are likely to be required to achieve sustainability. For instance, despite the need to reduce humanity's ecological footprint, standard economics presumes the desirability of maximizing production and consumption (Daly 1992 [1977]; Rees 2002; Brown 2007; Daly 2007).

Much mainstream economic theory models humans as atomistic, rational, self-interested actors. Prominent economists, including Nobel laureates Akerlof, Sen, Kahneman and Stiglitz, have criticized the standard corpus of economic theory typically presented in undergraduate

introductory economics courses (hereafter ‘Econ101’)(Sen 1987; Stiglitz 2001; Kahneman 2003; Stiglitz 2006; Akerlof 2007). Evidence suggests that the study of economics – likely in part because of reliance of a selfish “model of man”, emphasis on rational decision-making and a presumption that human desires are unbounded – promotes values and behaviours that are more selfish, less cooperative and more corrupt (Frank, Gilovich et al. 1993; Kirchgassner 2005) and may even result in lowered support for measures to protect the environment (Ewert and Baker 2001). Particularly troubling from a sustainability perspective, is evidence suggesting that although economic theory is based on an inadequate model of human behaviour, by informing the development of policies and institutions, it favours and encourages self-centered, consumption-focused behaviour posited by the model (Ferraro, Pfeffer et al. 2005).

It is not necessary to agree with the details of the above argument to accept the need to consider the overarching issue that I am raising. Universities and Colleges are moving from a context where sustainability was not a consideration to one where it is of critical importance. It is likely then that within the body of curriculum taught at a given institution of higher learning, there is content that predates knowledge of and concern for sustainability. Some of that curriculum is likely to have a pernicious effect on society’s knowledge base, analytical tools and values that are relevant to achieving sustainability. In one sense, this seems to be a situation of a rather large “unnamed elephant in the room” – universities and colleges are in the midst of a societal and intellectual paradigm shift. It is not enough to add curriculum that addresses sustainability, or to integrate sustainability into some portions of existing curriculum, if these useful steps are undermined elsewhere on campus by curriculum that in effect is anti-sustainability. Therefore, given the slow rate at which curriculum typically evolves, it is likely that at most institutions a fairly significant body of curriculum requires some alteration to address our new knowledge about the effects of human activity on the planet and the university’s commitment to take action. Curriculum, especially curriculum that makes up the core content within various disciplines that are directly relevant to sustainability, should be assessed from a sustainability perspective and in most instances where problematic content is identified, updated or modified (Of course, I am not implying that there is one correct perspective on sustainability, nor am I advocating censorship. Part of providing students with critical thinking skills involves having them assess competing claims and differing perspectives. What I am trying to get at is the type of situation where, for instance, students learn a model of the economy where no resources are consumed, no wastes are generated, no energy is required and growth can go on and indeed should go on indefinitely. Such a model is like teaching pre-Newtonian physics. As new knowledge is accumulated, curriculum that predates such knowledge can become out of date; retaining curriculum unchanged misleads students and ultimately society).

Below I have reproduced from STARS 0.5 the credits and the overall criteria for each credit that might be seen to relevant to the issues raised above.

Credit number and title	Criteria
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ER 5: Sustainability-Focused Academic Courses	Institution conducts a specified percentage of sustainability-focused academic courses, as measured by courses held during the past academic year.
ER 6: Sustainability-Related Academic Courses	Institution conducts a specified percentage of sustainability-related academic courses, as measured by courses held during the previous academic year.
ER 7: Sustainability Courses by Academic Department	A specified percentage of the academic departments or programs that offer courses within an institution offer at least one course related to or focused on sustainability.
ER 8: Academic Sustainability Courses by Student Credit Hours	A specified percentage of student credit hours is earned through sustainability-related or focused courses.
ER 9: Sustainability-Focused Undergraduate Academic Program	Institution offers a sustainability-focused undergraduate academic program.
ER Credit 10: Sustainability Graduation Requirement	A specified percentage of the institution's departments require undergraduate students to take a sustainability-focused or sustainability-related course as a graduation prerequisite.
ER 11: Sustainability-Focused Graduate Academic Program	Institution offers a sustainability-focused academic program for graduate students.
ER 16: Sustainability Literacy Assessment	Institution conducts an assessment of its students' sustainability literacy.

From the above curriculum-related credit breakdown, as far as I can tell there are no points awarded for scanning all curriculum to ensure that courses are not working at cross purposes to the University's commitment to and society's desire for sustainability (e.g., providing out of date content or incubating values and attitudes that are problematic from a sustainability perspective). The only way that this would be captured in the above scheme, albeit indirectly and with a considerable time lag, is if ER16, Sustainability Literacy Assessment, captures inadequate progress in or even a decline in student sustainability literacy.

I therefore recommend the following addition to the criteria (I have not addressed scoring, but suggest that the weighting should be fairly high).

ER ??: Sustainability Assessment of Core	Institution conducts an assessment of existing curriculum, focused on the core curriculum for major fields of study, to determine whether there is content that requires updating to reflect both new
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Curriculum	knowledge with respect to sustainability and the university's commitment to sustainability.
ER ??: Core Curriculum Updated to Reflect Sustainability Knowledge and Commitments	Institution updates core curriculum to reflect new knowledge with respect to sustainability and the university's commitment to sustainability.

ER Credit 4: Sustainability Course Identification

Reviewer 43

Identifying inventory is a potent first step in knowing where the institution stands, in order to chart a course. Critical component.

Reviewer 5

Like the credit the way it is currently worded. Please don't change it.

Reviewer 32

The changes work well as discussed.

Reviewer 2

This seems more in line with Tier II "strategies."

Reviewer 4

I think having a designation in the schedule or catalog is worth much more than just a list coming from the sustainability director.

Reviewer 11

Need some specific measures for determining if a course qualifies, such as % of course focus, types of assignments and readings, does it meet an ecoliteracy requirement? Also, there is an issue in how to count course offerings because some schools are on quarters, others on semesters. Perhaps the measure should be credit hours or number of students enrolled? Counting courses would be more manageable every two years, especially for bigger institutions.

Reviewer 37

I don't know how we would go about "tagging" courses. For example, part of the social side of sustainability is building respect for other cultures and supporting cultural diversity. Does that mean every cultural anthro course could count? One of the things I like about our approach at

[*institution*] is that we don't have a "greener than thou" litmus test of what's "supposed to happen" in a class. A small addition of eco-criticism into a poetry course may do as much good to awaken the awareness of an English student as offering a whole course on Climate Change that that student doesn't take. I'm sorry I don't have a good suggestion for an alternative approach.

These same issues of definition apply to research.

Reviewer 29

Indicate the % of course material that must be sustainability related to be included - focused vs. related. 20% 50% 70% 90%?

Service learning projects around sustainability should be included. Does course work improve community? Activities in which students are applying sustainability skills in the campus and surrounding communities should be rewarded.

ER Credit 5: Sustainability-Focused Academic Courses

Reviewer 34

Why does this top out at 4%?! Since sustainability used as a 'lens' counts for this, I think it could be much higher. Sustainability-related courses - Even with a cap at 25%, this is too low.

Reviewer 28

All, 100% [*of courses should be sustainability-focused*] – since sustainability touches on ALL aspects of life and thus, education/curriculum -- a 'truly sustainable' university would recognize this

4% is far too low for full/highest points, full points should be 80% minimum

Reviewer 43

My preference would be the % rather than a trend. This also gives an institution something concrete to target and strive for.

Reviewer 2

AASHE needs to clarify what counts as sustainability focused courses. Schools have very different definitions of sustainability--some schools could accrue more points for a more inclusive definition. Also, clarity between "sustainability" and "environmental" would be extremely helpful here - are all courses accepted within an Environmental Studies Major "sustainability" courses? At [*institution*], we have grad. prgms. in Environmental Education, Urban Planning, Biology, Environmental Medicine, Environmental Law - all of these contain courses that could fairly be regarded as "sustainability" courses.

Reviewer 5

Like the credit the way it is currently worded. Please don't change it.

Reviewer 32

ER Credits 5 & 6: My guess is that some Administrators will question why 4% of coursework focusing on sustainability is the perfect amount to dedicate to this topic area (or 25% of course components). At first glance these percentages appear arbitrary... maybe even difficult to accurately measure. Note: Some may question whether an institution with 25% sustainability related education may be overemphasizing the subject at the expense of art, music, medicine, engineering, math, etc.

Reviewer 22

At the 2 pt scale, for consistency, I'd NOT spell out "one"

Reviewer 38

The point rewards should be justly greater. The criteria and documentation language seems fine.

ER Credit 6: Sustainability-Related Academic Courses**Reviewer 28**

The %s are too low

Reviewer 43

Our institution commonly offers courses every other year. Therefore, it makes sense to me to record a course that is offered at least once every 2 years.

Reviewer 4

I am very pleased to see the addition of ER 6

Reviewer 8

This is tough one. There would need to be more specific guidelines for what constitutes a credit worthy course in my opinion. If sustainability is about wholes, how does this course relate the subject matter back to the whole. What percentage of the time is the "whole" featured? Is there a threshold – 20%, 30%??? It feels like a slippery slope to me. This of course also waters down the value in ER Credit 8 for the same reasons.

Reviewer 2

Similarly, AASHE needs to clarify what counts as sustainability-related courses. The difference between the two is almost impossible to pin down, and we'd recommend scrapping the distinction altogether. Either a course should be considered, or not - "focused" and "related" are just too nebulous, and subject to opinion and the whims of proposers or reviewers.

Reviewer 39

This credit poses some potential problems. We offer thousands of courses each semester. They

are posted online and there is a search function, but often times that will only capture courses that are sustainability-focused not sustainability-related. We don't have a mechanism in place to go through every class and see if they do a module or component on sustainability. It would require getting a syllabus for every class in the institution to see if they teach a sustainability issue at some point in the semester, and I just don't think that is possible in an institution with 50,000 students. In addition, a course could change based on the professor who is teaching. If just one module is required in a course for this credit then that could easily be implemented by one professor one year who frames the session in the context of sustainability and not by another professor another year who frames the material in different context. I think this is noted most often in the business school, where business concepts can be taught in the context of sustainable business practices or not. This poses a problem because once course could count one year and not another. But more importantly it would be nearly impossible to track. As we cannot track independent study and internship programs that are on sustainability.

ER Credit 7: Sustainability Courses by Academic Department

Reviewer 43

I am still struggling with points for "related" versus "focused" sustainability content. I like giving credits for both, but believe it should be tiered, such as fewer points for related and greater points for focused.

Reviewer 32

This appears to be the most useful approach. Ensuring that individual colleges take the time to measure sustainability related offerings will help them arrive at the optimal number of course offerings.

Reviewer 2

This is probably a good credit because it measures how well sustainability is integrated across the curriculum. However, this credit and the previous two put too many points in an area that isn't specific or particularly meaningful because "sustainability courses" isn't meaningfully defined

Reviewer 34

This is a good way to see whether sustainability is confined to one or two departments, but I think you need to allow higher brackets. As you say in your guidance, most or all departments have a critical role to play -- but your credit indicates that you don't think it will actually come anywhere near that.

ER Credit 8: Academic Sustainability Courses by Student Credit Hours

Reviewer 32

Same thoughts as 5 and 6. Note: Some campuses are decentralized/with many silos and methods for setting curriculum. It may be a significant enough challenge to gather this information, that the process should avoid appearing repetitive (e.g. with slight variations - % courses, % coursework, % credit hours, etc.)

Reviewer 34

Also, counting them all the same makes this credit somewhat meaningless -- an institution gets the less credit for 100 students in courses that focus directly on sustainability for 3 credit hours than it would for 200 students taking courses where sustainability is touched on only once. How will you handle schools that don't use the credit-hour system?

Reviewer 11

The per cents seem too low to me for earning these points. 5% is nowhere near a tipping point on a campus. Why not aim for something higher, at least 20-25% and then give the high points to those institutions that are really engaging the topic as a central theme in their curriculum?

Reviewer 38

This is intriguing because it is a measure of how well an institution is doing with its encouragement and promotion of sustainability courses. Tallying student credit hours should give an interesting snapshot of this.

Reviewer 39

This credit again has some problems for large schools. It would be impossible for us to figure out how many student credit hours were taken during a given semester or year (This credit does not specify if it is looking per semester or year, but those numbers will be different every semester.) With thousands of classes, each with varying amounts of credit hours, and 50,000 students to work with this would not be possible to calculate. We may be able to calculate how many students took the sustainability focused classes, but even that would be very difficult and time consuming as that is not publicly available online—we would need to contact each professor. We have the same problem here as with Credit 6 itself with sustainability related courses and this would make it even more difficult to gather information on students in these classes, and I would rather see that omitted. I'm not convinced that this credit is necessary with the existence of the others.

Reviewer 2

This credit is prescriptive in a way that STARS has been trying to avoid. Schools should get points for offering options and info, but not for student choices about sustainability. Perhaps student behavior and choices should be a different section.

Reviewer 41

I feel like ER Credit 8 excessively duplicates ER Credits 5 and 6.

ER Credit 9: Sustainability-Focused Undergraduate Academic Program

Reviewer 32

May add one or two lines to indicate whether coursework in environmental studies, geography, etc. fit the bill in this category.

Reviewer 34

In a school offering only 15 different majors, it will be much easier to get this credit than in a school with 30.

Reviewer 11

Same comment, set the bar higher.

Reviewer 2

This is a very important credit, but it doesn't make sense to measure how many students are involved, as universities aren't particularly responsible for that. Rather, funding or some other way of measuring support would be better. Student percentage participation is a false indicator for a successful program. Especially in a massive international research university like [institution], where Environmental Studies (while going from zero students to one of the 15 largest majors within 2 years!) is still a minute fraction of the entire 50,000-student body.

ER Credit 10: Sustainability Graduation Requirement**Reviewer 28**

%s are ok here

New credit, very important: institution requires its students to take at least one sustainability-focused course prior to graduation = graduation requirement

Reviewer 5

Like this credit. However, so that two-year schools may be included, please include AAOT and AAS or their equivalents in the wording.

Reviewer 4

It seems that the curricular credits have a lot of overlap and that you could be double counting credits. Is there a way to account for that? For ER 10 I think you should differentiate between a focused and a sustainability related course and give more credits if the requirement is for a focused course. I also think it is worth more points if there is a requirement for all students.

Reviewer 11

I'm not convinced that requiring a sustainability course for all students will accomplish cultural change on campus. What is the evidence? Because all students take PE or a foreign language or a science, does that change the way they view the world or act? Requirements have a way of becoming something to check off and then forget. They are also hard for faculty to sustain (as in diversity req'ts) unless there are many courses to choose from. I think we should allow for other models to evolve, peer education, green leadership certificates, Eco-reps classes, etc.

Reviewer 32

I would favor “available” and “encouraged” offerings over mandatory coursework. Sustainability should not appear to be mandated to students, or the entire process may lose some of its appeal.

Reviewer 8

Keep it. It’s the most powerful curriculum credit. Wish we had it!!!

Reviewer 34

Some schools have 1-credit courses that all students are required to take. Does such a course count the same as a full 3- or 4-credit course?

Reviewer 2

AASHE needs to clarify what counts as a sustainability course for this credit.

ER Credit 11: Sustainability-Focused Graduate Academic Program

Reviewer 32

It’s useful to distinguish between grad and undergrad as is suggested here. Reasoning behind the idea that the cut-off is schools with 25 degree offerings or more will have to be included in the supporting documentation.

Reviewer 20

It’s not clear to me why the applicability criterion is so strict. I was the sustainability coordinator at a small campus (5500 heads) with about 4 graduate programs, one of which was a great interdisciplinary program in environmental science and policy. The students in that program led campus sustainability efforts and, when I left the campus, were developing the strategy for measuring the institution’s carbon footprint (and for reducing it). Their impact on the institution was far greater than larger programs that are one of more than 25 masters programs; consequently, the students’ opportunity to engage in the institution and its relations with the community were also far greater.

Reviewer 4

I’d like to see credit also given if the graduate program (like the Swedish law) requires courses in sustainability instead of just whole degrees. All graduate students should be exposed to sustainability in multiple courses so diffusion throughout the curricula plus a graduation requirement should be worth a lot more credits for graduates (and undergraduates)

Reviewer 2

Could an environmental law program count? A environmental health med school program? Bioethics?

Reviewer 40

It would be helpful to understand if the number of degrees offered is a limiting factor for some institutions and furthermore, provide more context for why the number of degrees offered is a limiting criteria.

ER Credit 12: Sustainability Study Abroad Program

Reviewer 28

Delete this credit -- or include it ONLY if the study-abroad program is climate-neutral! it sends a mixed message, esp re: GHG emissions reductions credit

Reviewer 43

[Regarding ER Credits] 12-16: I support all of the co-curricular and outreach additions, terrific!

Reviewer 32

Instead of "abroad", you may consider "off-campus" to capture local actions that have international/global implications.

Reviewer 4

I assume ER 12 is one credit?

Reviewer 11

Suggest including this under #7 rather than as its own separate category. It doesn't seem to be on the same scale or importance as the other credits in my mind.

Reviewer 2

This would probably be a stronger Tier II credit unless AASHE can justify such programs' significant impact on furthering sustainability goals.

Reviewer 8

I would add additional point for FOCUSED course, or in keeping with the spirit of earlier comments, delete the RELATED courses for credit.

Reviewer 44

We feel that this credit should be worth more than one point. Particularly, the "mitigation of negative social and environmental impacts of the study abroad programs..." should be added as a separate point, not a minimum requirement to obtain the credit - we feel that this is a hard target to hit.

Also, we feel that there should be a separate credit for "Sustainability Off-Campus Courses/ Programs" - it would be nice to see domestic programs count for a credit, especially since students are getting off-campus exposure and learning experiences with minimized harm to the environment.

ER Credit 13: Non-Credit Sustainability Courses

Reviewer 28

%s are too low

Reviewer 32

ER Credits 13 & 14: It's useful to consider certificate offerings.... However, percentage based credits can be tricky. Non-credit and certificate courses are offered based on demand for the course. Percentage credits must consider the business models used in determining whether a course offering is economically feasible.

Reviewer 4

I want to differentiate again between focused and related. Those credits are fine for focused, but all courses should be sustainability related and the percentages for points should be much higher. This applies to the earlier credits as well.

Reviewer 13

I'd put ER 13 into Tier 2.

Reviewer 11

On our campus, enrolled students can get regular credit for continuing education courses, so this possibility needs to be included. I'm not sure why the credit/non-credit courses need to be separated in the checklist.

Reviewer 2

Again, institutions often have very small non-credit programs. Please justify why this is meaningful enough to be a Tier I credit or perhaps move to Tier II. Also, non-credit courses, by definition, undergo a different relationship with the academic sector - one less credible - and in many ways can ghettoize or weaken the influence of sustainability in the academy. We're not sold on this credit.

ER Credit 14: Sustainability-Focused, Non-Academic Certificate Program

Reviewer 28

% is too low

Reviewer 13

I'd suggest the following categories -- 1 - offer, 2 - 9 or less, 3 - 10 or more.

Reviewer 39

Does this include employee training or is this designed to cover continuing education credits. The language of this credit is a bit vague. This might be a good credit to list examples but not limit it to those examples.

Reviewer 2

Similar criticism as previous credit.

“Again, institutions often have very small non-credit programs. Please justify why this is meaningful enough to be a Tier I credit or perhaps move to Tier II. Also, non-credit courses, by definition, undergo a different relationship with the academic sector - one less credible - and in many ways can ghettoize or weaken the influence of sustainability in the academy. We're not sold on this credit.”

ER Credit 15: Curricular Engagement

Reviewer 28

Add Canadian equivalent

Reviewer 11

Important to show the relationship between service learning and sustainability rather than just assuming it is there. The two fields have different learning goals and methods; they can be complementary but not necessarily.

Reviewer 16

ER Credit 15 – Rename “Service Learning:

Reviewer 32

May appear to endorse a specific program yet to be fully established.

ER Credit 16: Sustainability Literacy Assessment

Reviewer 7

You asked for suggestions about how to operationalize assessing sustainability literacy. One way is to see if it can be incorporated into the current NSSE survey taken each year by students (Indiana University and George Kuh is the principal on that)

CIRP data might also be accessed as well as the Alexander Astin surveys out of CA each year. I am sure that they are on your radar but wanted to share them.

Reviewer 32

In my opinion this credit is very good – If at all possible, sample evaluation tools should be provided by AASHE....

ER Credit 16 B (Faculty and Staff Development: Great idea, should be its own credit.

Reviewer 4

Let's make this sustainability issue literacy and willingness to engage in solutions

Reviewer 40

May want to establish a percentage of students involved in the assessment or criteria related to a particular cohort of students.

Reviewer 2

Shouldn't points be allocated for the outcome of the survey, or an upward trend in sustainability literacy instead of having the survey? That would make this an "outcome" as opposed to "strategy" credit. Right now, it belongs in Tier II.

Reviewer 39

If you have a sustainability requirement for graduation, as in Credit 10, how you would not meet sustainability literacy criteria. I believe that would be the goal of the graduation requirement. I'm not sure how a standardized test/assessment would be conducted of everyone on campus without an expensive scientific survey. I'm not sure that this is necessary.

Reviewer 29

- Omit ER 16: Eco literacy assessment. If they have coursework on sustainability and students pass, assume literacy. Seems like this credit is redundant. Data collection can take place in sustainability courses.

Faculty and Staff Development and Training

Reviewer 35

Though peer to peer event as suggested is fine, it is more important to invest monies in continued professional and training of staff oriented especially in sustainability. This would be extremely useful, since what is needed is not the motivation but the skills to apply sustainability in one's own field- given the variety of responsibilities campus managers have. What is needed is an "across the board training" in sustainability, using funds that campuses usually do allocate for professional development of staff.

Recommendation# 1: Include category called: Incentives for continued professional development of staff in sustainability. Points allocation: 1.

Reviewer 34

This probably is still under-developed.

Reviewer 4

I like [*the faculty development*] section.

ER Credit 17: Incentives for Developing Sustainability Courses

Reviewer 43

I completely support any effort toward integrating sustainability in courses, even if it begins with just modules. We need to encourage small steps at the beginning. Most faculty are approaching it gingerly and don't have full confidence in either their own understanding of sustainability, in their ability to teach it, or in students openness and acceptance of sustainability issues. Incentives are important.

Reviewer 7

When dealing with Faculty incentives to create sustainability courses and that being recognized as a person who seeks out this as a specialty area is exciting. There has been a movement that this offers a great deal of promise.

Reviewer 32

This will be better received if it is worded to reflect that existing incentives are sustainability friendly. Not as a separate sustainability initiative. Sustainability related incentives need to be incorporated into existing systems to be widely accepted.

Reviewer 40

Perhaps consider a credit for:

- Incentives provided for developing service learning courses, especially with a sustainability theme.

- On and off-campus sustainability internships.

ER Credit 18: Sustainability in New Employee Orientation

Reviewer 28

[Language should be changed so it's clear the credit applies to both faculty and staff]

Reviewer 16

ER Credit 18 – I would like to see some guidance so that covering recycling and campus sustainability programs is NOT sufficient for a credit.

1) Definition of sustainability

2) Sustainability program at campus

3) Examples of desired behaviors / participation at multiple levels (e.g., green chemistry, PI/anti-idling grounds, community outreach) so that at orientation a connection is made with each individual, rather than someone else's program.

Reviewer 32

Great as written, and will pay dividends in improved operations.

ER Credit 19: Employee Peer-to-Peer Sustainability Outreach Program

Reviewer 7

In the ER 19 section (possibly in the peer to peer section) I am wondering in the guidance section about putting examples - Campus Commuter Challenge or a Bike challenge. This might be too specific and may have to be considered in a "Points of Practice" piece at some time in the future.

Reviewer 32

Not clear what would be acceptable here... Earth day programs?

Reviewer 8

How about expanding credit to include any "ongoing network" as opposed to single event or campaign?

Reviewer 39

This recognizes at least one event or campaign per semester for faculty/staff education. I suggest that this include a group that regularly meets to support ongoing efforts in this area. It may be that a one-time campaign is not as effective as a monthly meeting with presenters and one new tip a month about advancing sustainability in offices and classrooms. This type of regular peer-to-peer education is important too and should be included.

Reviewer 19

Our school has a community and public service program. They can apply to do this at a 2 or 3 credit workload for the sustainability office – would this be included in ER 19 or would it be in a different or a whole new category?

Reviewer 40

Perhaps further refine the scope of outreach programs. For example, do peer to peer outreach programs on Green Building, Recycling, Energy Efficiency, Green Purchasing, or Transportation Demand Management count? Or is the credit limited to programs covering the full three-pronged scope of Sustainability?

Research

Reviewer 34

The section on Research looks for incentives, consideration in promotion and tenure, and gives consideration for interdisciplinary efforts. Shouldn't these all apply to teaching as well?

I can't wait until we see DOD-sponsored research counted as sustainability research.

Reviewer 28

Similar definitions [*that were provided in the Curriculum section for sustainability-related and focused courses*] have to be developed for 'sustainability research'

Reviewer 43

Research areas are so very discipline specific. I couldn't comment on whether another discipline was achieving goals toward sustainability research, and don't believe others could assess mine fairly either. Perhaps we need to consider a review board that would evaluate the merit of research agendas toward sustainability goals. Members from various disciplines might review and comment on research programmatic progress, based on their unique disciplinary understanding of it. Perhaps a post-STARs committee/review board could remain in place to meet this need.

Reviewer 4

I think the percentages are way too low, given how so much research can be sustainability related and how important sustainability is right now for society. Overall I like the research credits.

ER Credit 20: Research Inventory

Reviewer 28

Should be a prerequisite -- not a credit

Reviewer 11

These inventories are hard to do and can take a lot of staff time at a big institution. Suggest 1, 2, 3 pts be given according to the size of the task or institution. Having some definitions would really be helpful. It would be easy to list anything "environmental" in the desire to have a long list of projects and grants.

Reviewer 40

These criteria may be too challenging at large institutions with more than 3,000 faculty.

Reviewer 32

Good as written – Provides institutions with the incentive for evaluating their own mix of research activities.

Reviewer 8

I believe there would need to be a suggested vocabulary that institutions use to identify related efforts. There should be minimum ingredients before something gets counted.

ER Credit 21: Research Incentives

Reviewer 32

Good

Reviewer 16

ER Credit 21 – I'm not sure where the line will be drawn concerning meaningful incentives and minimal or superficial incentives that simply garner a point.

ER Credit 22: Faculty Involved in Sustainability Research

Reviewer 28

Needs to be in % or ratio
sustainability research needs to be defined!
%s are much, much too low
3 points should be awarded to 80% and more

Reviewer 32

Not useful to consider percentages. It depends on the mix of research and work at the school.

Reviewer 8

Documentation needs to identify what positions are full-time research positions or perhaps FTE as the trend at many schools is to use part-time adjuncts, non-tenured, faculty who have no "research" time in their description.

Reviewer 2

This credit is similarly prescriptive.

Reviewer 11

Points seem too low. I would have thought it possible to achieve 10% at least of faculty involvement at the smaller institutions. "Total number of faculty members" is a problematic term – does it include part-time faculty? Lecturers? Non-tenure track people? Only tenure track faculty and research faculty are expected to do research and publish.

Reviewer 22

At the 3 pt scale, typo. s/b "More than 1 percent..."

ER Credit 23: Departments Involved in Sustainability Research

Reviewer 28

Higher %s , e.g.
1 point -- 0 - 19%
2 points -- 20-24%
3 points -- 25-49%
4 points -- 50-74%
5 points -- 75% and more

Reviewer 11

Suggest tighter scale here: 0-10% for one point, 11-25% for 2 pts, over 25% for 3 points.

Reviewer 32

Change this from a percentage of involvement to a more generic process. I would guess that everyone will get 5 pts. in this section. Some type of sustainability related research goes on in most departments.

Reviewer 22

Just be consistent whether using "Between" for 2-4 pt levels (used in 3 pts, not the other 2)

Reviewer 2

I'm not sure what to do with this credit. Too prescriptive and unrealistic.

ER Credit 24: Internal Funding for Research

Reviewer 28

%s are too low

Reviewer 32

ER Credits 24 and 25: Will be difficult to measure.

Reviewer 8

How about they get one point for each percent of research funds won are related? It also doesn't penalize schools based upon how big they are.

Reviewer 11

Not sure why this should be separated out. Explain rationale? Seems it would be enough to just have one measure for research funds in total.

Reviewer 22

Just be consistent whether using "Between" for 2- and 3-pt levels

Reviewer 39

These should be kept as percentages and it should not be required to list actual dollar amounts.

ER Credit 25: External Funds for Research

Reviewer 28

%s are too low

Reviewer 11

Again bar seems too low to me. Don't we want more than 1% of the research funds to go to sustainability-related concerns? Or at least don't we want to reward a bigger commitment?

Reviewer 39

These should be kept as percentages and it should not be required to list actual dollar amounts.

ER Credit 26: Interdisciplinary Research

Reviewer 28

Inter-, multi- and transdisciplinary research as well as community-engaged research and scholarship

Ditto; add 'community-engaged research and scholarship'

Reviewer 43

Just as interdisciplinary research should be commended in faculty promotion and tenure, interdisciplinary and collaborative teaching should also receive merit. In those cases, faculty, institutions, and students benefit. I don't know if this would be under curriculum, or perhaps collaboration (AF12)?

Reviewer 11

This credit is probably not documentable for most institutions, I'm sorry to say. Every dept handles these things differently, and every faculty standards committee likewise. It is highly variable and very difficult to track.

Reviewer 32

More explanation will be necessary to validate the claim that interdisciplinary research is more likely to be sustainability related.

Reviewer 2

This is problematic because interdisciplinary research may or may not be a good indicator of sustainability research. What exactly does interdisciplinary research have to do with sustainability and furthering sustainability goals? I can't really see a clear way to justify this credit against scrutiny. I think a pro- or anti-interdisciplinary bias simply doesn't belong here. Even if it does, it's certainly a Tier II "strategy," and not an end in itself.

Reviewer 22

I'm wondering if you want to say "treats interdisc research THE SAME". What is meant is that

interdisc research is not penalized, or interdisc research is equally valued. For really progressive universities (I understand that parts of ASU are this way), I'd imagine that interdisc research may be given PREFERENTIAL treatment. "Treated the same" just seems like a weak way to put this idea.

Operations Credits

Reviewer 43

All issues to buildings and operations are critical. A huge learning opportunity is being overlooked though. All of these actions must be imparted to the students. If students are not made aware of green purchasing, LEED buildings, fair-trade coffee, etc., the culture of sustainability is not trickling down to the future leaders of this planet. I have tried repeatedly to have our students tour the new LEED buildings coming out of the ground on our campus, but liability issues are obstacles, etc....Can't we develop a means and a credited category for utilizing the campus and its facilities and operations as a teaching tool and learning lab? This is so critical. Our students continuously complain about lack of campus parking, but when I explain that we are trying to promote walking, biking and our shuttle instead of driving, they have an understanding and appreciation. They don't just know things intuitively, we need to find venues for sharing and teaching, and not just through a website they may never visit or a committee or club they will never join. We need to find ways to teach beyond the choir. For institutions that will be slow to adopt sustainability criteria for graduation or in freshman orientation (both 2 good venues), there must be alternate means of getting all these messages out, even if no Sustainability Officer exists. And there needs to be STARS credits for finding and implementing those means!

Reviewer 16

While I recognize that the STARS document will also serve as an educational tool, I found the narrative in the opening paragraphs of many of the subsection of the Operations section to be troublesome. While I agree with it factually, I found it to be burdened with all the negatives (pollution caused by x, health problems caused by y, etc) whereas the other sections of STARS don't dwell on the negative so much as simply describe the positive attributes of the issue and provide some appropriate guidance. Perhaps I'm cranky this week, but I did not find the information or the tone to be instructive or helpful in completing STARS.

Reviewer 19

I may be too late to add this thought in but I've been working a lot on IT and sustainability and I don't know if it is addressed directly in the AASHE document. We at are exploring the issues of virtualization, cooling of data centers, and looking at building a LEED certified data center (that one I could use any info on other schools who may have done that) as well as traditional elements of duplex printing and powering down computers (which I believe are in the STARS). Moving towards establishing an infrastructure that allows for less server space will increasing output is definitely an endeavor schools should be given credit for as well as investing in better cooling options. Both of these come with an expense to the institution but reap great rewards in terms of energy use and productivity.

Reviewer 18

USGBC would appreciate AASHE's attention on a number of STARS credits, which reflect LEED. On this matter, USGBC suggests that AASHE indicate, within all relevant credits, where

there is overlap with LEED prerequisites and credits. As identified by USGBC, some relevant credits are: OP Credit 3, OP Credit 4, OP Credit 5, OP Credit 9, OP Credit 10, OP Credit 11, OP Credit 13, and OP Credit 16. We believe that it is extremely important for AASHE to ensure that campus decision makers understand that by achieving LEED certification on their campus, they can also achieve all of the aforementioned and other STARS operations credits. Please consider using a phrase such as, "Achieving LEED for Existing Buildings: O&M Certification will aid in your project's achievement towards this credit. Please download the LEED for Existing Buildings: O&M Rating System from www.usgbc.org."

OP Prerequisite 1: Recycling Program

Reviewer 28

Need to define/differentiate compost, paper, plastic, glass, styrofoam, etc. -- and assess compliance

Reviewer 4

It kind of bugs me that recycling is first in operations since so many schools do that and get stuck there and overlook the important energy management and other areas.

Reviewer 16

OP Prerequisite 1 – I don't really see why this must be a prerequisite. I would be fine if it was simply a credit.

[*Add*] quantifiable information about recycling rates [*to the documentation section*].

Reviewer 45

Part 2 of the modification based on suggestions... exterior collection is fine based on fire codes and structural footprint realities...however, there still needs to be bins INSIDE all bldgs for deskside and common areas.

Reviewer 32

The pre-credit appears flexible enough to consider the nuances of recycling programs. This should remain the case.

Recycling may occur at the source or in at a remote facility. Some campuses focus on "waste diversion" and may approach 100% diversion through the use of sorting facilities...

The use of sorting facilities carries a stigma of being inefficient, but the survey will need to acknowledge that campuses are paying a premium to ensure that the vast majority of the waste is diverted from landfills (Including construction waste).

Note: recycling bins are good because they provide a visible commitment to sustainability. However, some programs with fewer bins on campus may actually be diverting far more waste from landfills.

Documentation may also include program commitment to reducing and reusing prior to recycling.

Reviewer 10

Recycling program compliance could be considered: Allow extra credit for high compliance. Verification could be provided by a statement from Waste Management/ Physical services department. An assessment could be based on a percentage e.g. average % of compliance in diverting waste in faculty offices, in public areas etc.

Offer credit for compost program and compliance?

Reviewer 39

This says bottles, cans, paper and cardboard. Originally we took bottles to mean plastic as they are much more commonly used and a pose a serious long-term threat to the environment over glass. I was told that this actually means both plastic and glass.

We have a limited glass recycling program for windshields of university cars and trucks as well as high quality glass, such as bullet proof glass, from the police station and security stations.

We have attempted to conduct a glass recycling program but found the following barriers: (1) glass recycling poses a safety risk to the students and staff who collect these materials because often times glass gets broken, (2) glass is cost prohibitive to recycle—we tried to arrange a contract with the city, but it would cost the university \$77.43 per ton and in addition to that we would be required to hire an outside company to do a test on the glass each time it is delivered to the city to ensure there are not chemicals on the glass (this is due to a concern the city has because we have a lot of labs on campus and they are concerned about lab glass contamination), and (3) if the city were to take our glass it is not actually recycled—it is crushed and stored because there is not a viable option for recycling in our region. Therefore we have determined that we are unable to do campus wide collection of glass at this time.

Most of our vendors sell items in plastic instead of glass since it is not recyclable, and our student environmental group has a program to encourage people to reuse their glass jars as beverage containers since there have been problems with chemicals in certain reusable plastic bottles. This program helps to reduce our glass waste. We continue to keep this as a discussion with our Director of Facilities Services, and we are actively looking for other alternatives so that we can actually recycle our glass. Given these efforts, I think that it would be extremely unfortunate to exclude us, or any other institution who faces these same problems, from a third of the STARS program because we only recycle windshields and high quality glass as that is the only market that we have found where the glass could actually get recycled. We hope to still participate in STARS despite our problem with glass recycling.

Reviewer 34

You should look for the percentage of recyclable materials that are actually recycled.

When recycling receptacles are provided for groups or clusters of buildings and not at multiple locations in each building, recycling percentages are generally much lower and contamination is higher.

Also, in jurisdictions that require other items to be recycled, or recycled separately, an institution that is not even complying with the local law might receive this credit.

Reviewer 41

Given my experience with recycling in [*location*], I wouldn't include recycling bottles, cans, paper, and cardboard as a prerequisite, as it is a significant effort for some schools and may be unnecessarily exclusionary. Just because recycling is generally one of the first campus sustainability programs for most doesn't mean it is the case for all of them. For example, my school does not have full aluminum and plastic recycling but does have a sustainability effort and a sustainability officer. I guess I generally question the need for prerequisites.

Reviewer 29

- Change OP PR 1: Recycling to read "glass and plastic" rather than "bottles." I would suggest expanding it to meet the LEED prerequisite's scope.

Buildings

Reviewer 9

LEED building credits or points should give higher recognition to gold or platinum. Alternatively, "basic" LEED arguably is not worth any points as standards for sustainability if the higher LEED standards get 2,3,4 points

Reviewer 16

Is there a way to give credit to someone who is not constructing or adding square footage?

Reviewer 34

New Construction, Renovations, and Commercial Interiors? What do commercial interiors have to do with this??? Requiring LEED certification is a bad idea. In some cases, institutions make silly building decisions just to get another LEED point or two or to qualify under the new buildings standards instead of LEED-EB. This pays too much attention to LEED certification and too little to sustainability. (You can get LEED certification for an outrageously oversized building, while a smaller building or a renovation that didn't quite make the LEED criteria would actually be more sustainable.) Finally, there are other sets of standards besides LEED; requiring certification for the higher awards doesn't really make sense -- wouldn't it make sense to do work to even higher standards instead of putting the money into certification??

Reviewer 17

Indoor Environmental Quality: I suggest looking at the Indoor Environmental Quality sections in LEED for Schools and CHPS 2006 (Collaborative for High Performance Schools). I suggest referencing one/both/ or a variant of them.

Reviewer 8

Buildings – Indoor quality could be credited by annual testing of indoor quality. If they do the tests they get the credit. If they don't they won't.

Reviewer 36

In building operations I propose the idea of starting with 1 credit for a campus-wide building re-commissioning effort. This is cost effective and would be the ideal starting point for a campus to launch a building operations effort from. It would lay the groundwork for the next step into LEED EB while jump starting a significant performance improvement. LEED EB would then start at 2 credits.

Reviewer 18

We recommend that the STARS point system be restructured to reward those projects that take the extra step of adopting LEED. USGBC encourages AASHE to recognize those campuses that make the commitment to run a truly sustainable campus, by weighting credits that demonstrate a larger commitment to sustainability. USGBC's Portfolio Program, currently in pilot phase, can aid all campuses in their environmental goals. This program will offer LEED volume certification and will be available to the public January 2009! This is a great opportunity for AASHE to partner with USGBC in promoting campus wide environmental consciousness.

We would like to remind AASHE that with the first reference of LEED in STARS, there should be a registered trademark symbol; USGBC now refrains from using the rating system acronyms (e.g. LEED-EB vs. LEED for Existing Buildings: O&M)

We fully support all of AASHE's current efforts to incorporate LEED fully and accurately. We welcome open dialogue on the comments addressed above. In the end, we hope that AASHE will allocate higher weightings to LEED in the STARS operations section; projects will achieve their sustainability goals on campus and will be more inclined to make the LEED/STARS shift. In summation, USGBC encourages AASHE to embrace LEED as the way for a campus to green its operations.

OP Credit 1: New Construction, Renovations, and Commercial Interiors

Reviewer 1

On page 45, under OP Credit 1, I would make the same comment as the previous. It would help if a minimum building size be indicated.

Reviewer 3

This credit should award more points for new construction that considers the location of the building (i.e. on an infill site on campus near other services rather than developing on the outskirts or in a greenfield) in addition to rewarding green building techniques. A green building that is located in a place that requires additional vehicle travel is not as sustainable as one that is built in a location that does not require extra driving.

Reviewer 30

Are there other building rating systems that are similar to LEED that could also be included?

Reviewer 4

I have a problem with LEED since I think as a society we need to move to net zero buildings but I am probably out in front on this in higher education.

Reviewer 11

How about getting a credit for having a green building policy? These points seem too hard compared to the ones under Education. They are certainly much more expensive! I would have thought the total number of bldgs with any LEED rating would be more important than the number of bldgs with each type of rating.

Reviewer 40

Consider clarifying if this also includes construction related to infrastructure facilities, i.e., steam and chilled water plants.

Perhaps it would be more realistic to specify a percentage of buildings that must meet these requirements, especially for large, rapidly growing campuses.

[Changing this credit so that new construction projects are addressed separately from major renovations and commercial interior spaces] appears to be appropriate and a good idea.

Reviewer 29

Define "new" square footage. Less than 3 years old?

- Certification is a MUST!! If they don't think they need certification for buildings, why are they participating in STARS? Can't they just implement sustainability on campus without trying to get points?

Third party certification is extremely important and students know it!

Reviewer 5

In the 3rd bullet under "Documentation," please insert the word, "major," before the word "renovation." Otherwise, please keep the credit as is.

Reviewer 32

OP Credits 1 and 2: The wording here should provide participants a way of demonstrating commitment to green building without using the LEED scorecard. Labs 21 criteria may be more useful for labs, Green building standards in Europe may / may not be better for campuses abroad, etc.

How about: LEED Scorecards for certified projects or a documented action plan defining the scope and nature of the project's adherence to green building principles.

Reviewer 8

I think LEED shouldn't be the only scorecard. We need to include other Green Building schemes including the State of Minnesota, NYC, etc.

Reviewer 15

LEED is the most rigorous plan to help with sustainable building practices. LEED programs are under ongoing improvement, and STARS should announce to track and apply changes and updates as they bound to arise.

Credits could be given to institutions raising awareness on LEED principles, and/or offering related training or educational programs.

Community engagement of each campus should be monitored and accredited. Campuses can develop training programs for a considerable number of architects, engineers, and reviewers that would positively enforce and emphasize the entire sustainably effort.

Scientific-based strategies for “sustainability on campus” can be encouraged by accrediting on campus sustainable evaluation tools such as life-cycle assessment (LCA) and life-cycle cost analysis (LCCA). This would help a great deal address front end cost burdens of sustainable practices and technology, and allow room in budget to support their inclusion.

Reviewer 24

If you haven't built a building you can't get credits here. Shouldn't you get EXTRA credits for not building any buildings? No new buildings means no new emissions.

[...] Under discussion – check out the CHEMS program (as an example) that reduces amounts of chemicals on any campus and tracks them better. <http://cems.keene.edu/CEMS/Info>

Reviewer 17

I support the point made in the discussion that renovations should be addressed separately.

Reviewer 18

The Guidance section of OP Credit 1 cites “Innovation and Design”, this should be corrected to “Innovation in Operations”.

Although we offer the utmost in support, we also would like to express concern about the requirements in OP Credits 1 and 2. These credits require LEED Certification or “...documentation demonstrating the achievement of LEED-EB criteria...” USGBC maintains that our contracted documentation reviewers and in-house quality control systems are the only bodies approved to review and approve LEED submittal documentation. With that said, USGBC's system of third-party certification, if required by STARS, will aid in the validity of OP Credits 1 and 2.

OP Credit 2: Building Operations and Maintenance

Reviewer 5

Under "Guidance," second paragraph, last sentence, delete the word "new."

Reviewer 17

The criteria section has the same generic wording with respect to using CaGBC in Canada. There is no LEED-EB in Canada – so the LEED-EB per USGBC should be referenced.

Reviewer 18

The Guidance section of OP Credit 2 cites “Innovation and Design”, this should be corrected to “Innovation in Operations” (LEED for Existing Buildings credit category).

Reviewer 20

Was the intention of some of these points to parallel OP Credit 1? Why does actual LEED EB certification need to occur while LEED NC does not to get 1 point?

Reviewer 30

LEED® Canada for Existing Buildings is not launched yet. It is anticipated to be launch in 2009.

Reviewer 16

[*The thresholds*] seem high to me, but others know better.

Reviewer 11

Likewise, I would suggest giving more points for LEED-EB bldgs, since these pts are so hard to accomplish and represent so much institutional investment.

Reviewer 40

The points jump from any portion of the institution's buildings (1 pt) to at least 10% (2 pts). It seems like there should be a different threshold for large campuses.

OP Credit 3: Potable Non-Irrigation Water Consumption Reduction

Reviewer 28

%s here ok. Extra credit for separate potable water/greywater system into buildings

Reviewer 5

Under "Documentation," also need to collect the total floor area in gross square feet in the previous year. In addition, what about including in this credit recognition for schools who are reusing rainwater on site or treating water on site for non-irrigation water uses? The credit could be changed to say, "Institution achieves a specified reduction in non-irrigation water PURCHASED per gross square footage of building space." That way, if a school purchased 1,000,000 gallons of water from their utility in AY 01, then only purchased 750,000 gal of water in AY 07, but also used 100,000 gal of water collected and reused on site, the college would still get 2 points. This credit might be a little sticky to interpret for any school that uses, say, well water instead of municipal water, but do any schools even do that??? If yes, those schools would probably have a meter on their wells and the amount from the wells could be substituted as the amount "purchased."

Reviewer 11

Credits seem too hard compared to other scales. Suggest 1pt= 10%, 2pts = 20%, 3pts = 30%.

Reviewer 16

Only concern – should be an entire program and not dependent on new green building(s) or significant increase in square footage.

Reviewer 4

I have concerns about how the baseline year of 2000-1 still penalizes institutions that have been at this for a long time. Perhaps an alternative accounting for those institutions that should trends from their baseline?

Reviewer 32

Building space varies (housing uses far more water than administration). I would favor point values that reflect commitment to water reduction (Documented plans, tracking reports, water reduction task forces, etc.)....

Reviewer 29

- OP3 is currently measured against 2000-1. I would suggest it be 2000-1 or most current year with available data. It may be difficult to track 2000 data down.

Reviewer 8

From my experience there could be data problems generated with accurate data on irrigation versus non-irrigation.

Reviewer 34

Potable Non-Irrigation Water - Reduction is good, but an institution that wastes a lot of water can earn this credit much more easily than one that is already doing a good job; this also applies to institutions that build more space than they need. It would make more sense to measure the amount of water used per student and per resident.

Why isn't pervious pavement covered here? How about reducing the area that is paved?

Reviewer 17

Contrary to the comment that the credit now reflects an absolute reduction – this is simply not true. It is a reduction in per square foot use, as noted elsewhere “to avoid penalizing institutions for physical growth”. This is a big problem for me as it masks the reality of increasing water use as measured in absolute gallons – this is a global problem that should not be masked. A reduction in per unit water use looks good, but if more water is being used there is no denying that the is increased pressure on the local aquifer. We cannot reward growth of absolute campus water use just because they are doing better on a per unit basis.

OP Credit 4: Green Cleaning Service

Reviewer 32

Instead of meeting the certification criteria of “Green Seal”, participants should be given an option to document their own innovative program.

Reviewer 30

I would add in Green Seal or Eco-Logo certified or meets the certification for Green Seal or/and Eco-Logo. Eco-Logo is the premier green certification group in Canada.

Reviewer 16

Wondering whether this needs to be less black and white. I suspect that some (many) campuses are not 100% compliant so may need to give 1 if 25-50% of cleaning products are GS certified and 2 if 75%.

Reviewer 1

On page 49, under OP Credit 3, the URL for the Green Seal spec has a slight error. The URL shows a hyphen before the 42, but it should be an underline character.

Buildings: Tier Two Credits

Reviewer 32

It will be difficult to include an exhaustive checklist of all acceptable building practices. I would leave it to the institution to present such credits. One such credit could revolve around having a committee that meets regularly to consider campus specific opportunities...

Reviewer 28

A certain % of lecture halls/classrooms have natural light and opening windows
Natural light and natural ventilation credits missing -- please add

Reviewer 16

I'm not comfortable giving points for any of these except #2 if it is broadly applied. "Uses" makes it too easy to get credit. Number 1 is embedded in LEED.

Reviewer 34

Tier two - I think these belong in Tier Two, but only if water is really being conserved. The result is more important than the method.

Reviewer 4

I think the list of Building: Tier 2 credits are weak. There could be a lot more there, especially in terms of process like preventative maintenance, control strategies, energy management program that optimizes a number of things. This is worth a fuller discussion

Reviewer 17

The problem with rewarding strategies is that they may not have the expected result. What matters is that the desired result was achieved – if lower water use is the goal of using waterless urinals – the only measure that matters is did it reduce water usage.

The reason I comment on this is an effect known as the "Efficiency Paradox", where higher efficiency results in higher use not lower use. For example, data shows that using a car with higher gas mileage has resulted in a change of driving habits where more driving has resulted – the mentality that I can go farther for the same dollar.

Care should be taken since this is true with behavior of people in our buildings with respect to resource use.

Reviewer 19

Under Building, Tier 2 credits – be clearer about the water conservation methods, do these

methods have to be employed in all buildings? Our school is moving towards hands free but can only afford to do some buildings at a time. Would that receive credit or does a certain percentage have to comply?

Reviewer 40

"Institution uses vegetated/green and/or reflective/high albedo roofs."

Perhaps more clearly state what percentage of buildings or roof areas.

"Institution uses front-loading washing machines."

Perhaps more clearly state a percentage of machines that have a front-load feature.

Perhaps consider additional credits for:

- Complying with NPDES Phase 2 standards for storm water management.
- Double plumbing buildings to use nonpotable water, and establishing a percentage of buildings or square footage.
- Using nonpotable water i.e. greywater, rainwater, foundation drain water and/or reclaimed water for cooling towers, including corresponding percentage thresholds.

Dining Services

Reviewer 28

Include GE-free products

Reviewer 46

One thing missing is the retail component of college and university dining. Many of us have that as part of our business, some may contract it out. If contracted, the contract should be specifying these purchase principals. If it is self operated, then the rating should be able to garner the same points. Within the retail component, should there be some points given for having the choice to purchase fair trade or organic? A situation with our bean provider and the source of the beans comes to mind – some farmers are too poor to buy chemicals for their trees, or only have a tree in their back yard that are picked up by the local coffee guy – not plantation coffee – perhaps that is something to consider.

With respect to overall dollar expenditure, we need to keep some sustainability of budget when looking at these questions. It is important to offer foods with principal but, in our area, chicken farms, beef farms and the like would put us out of business or we would put them out of business – if we purchase all of a farms livestock, they can't supply others. If we spend our resources ONLY on local, then we would have less money to buy other goods – it is a catch 22.

Reviewer 37

I also would raise some concerns about the weighting of points. One point for coffee, one for trays and one for a huge effort in local purchasing—these seem not commensurate to me, either in terms of institutional effort, record-keeping, or cost. One credit for “green cleaning products” —a relatively easy substitution—is not really comparable to finding new dairies or new vegetable suppliers.

And what about having an institutional commitment to sustainable food? A committee? An adopted policy with specific goals? These things matter a lot, I think, and if done well embody huge institutional education. This kind of measure, that gives credit to intentions and policies echoes the “continuous improvement” of the Food Alliance. You might want to consider giving support to progress in the right direction, even when the obstacles are huge.

Reviewer 16

[Delete introductory sentence about ecological problems associated with food production].

Reviewer 8

While I'm in favor of the credits for local food in principle, larger operations are penalized as they can't get the quantities necessary on a daily basis in the same way smaller operations can. We need to try to ameliorate this disadvantage in scoring. Also different regions would have different advantages due to local agricultural conditions.

Reviewer 34

What is a 'residential dining hall'?

Why is there no credit for eliminating single-use serve-ware?

Offering vegan and vegetarian meals should be Tier One. The production of factory-farm meat causes more GHG than transportation! This needs to be recognized, not buried.

Reviewer 10

Account for efforts to minimize food waste. For example, encourage working with nutrition experts to manage serving sizes, or removal of trays from dining halls.

Reviewer 40

By limiting recognition to local, Food Alliance-certified, organic and Fair Trade-certified products the document does not recognize many other initiatives that institutions can do to support building a sustainable food system.

It might be helpful to more clearly define residential dining operations and the role of retail operations. For example, residential dining operations are sometimes referred to as all you can eat operations and disregard retail or a la carte operations. In many cases retail operations are an excellent way to test the consumer needs for a satisfactory price/quality relationship and offer an institution a creative way to offer sustainable food.

There are many other categories that institutions can focus that help build sustainable food systems. Examples include grass-fed, natural, free range, Fair Trade Certified, farmed fish – (omnivorous species), pasture or pasture-raised, Protected Harvest certified, no antibiotic administered, and no hormones administered.

Reviewer 9

The dining credit and evaluation is very weak. It does not recognize the value getting high quality foods year around and spending more on transportation to do so. Growing bananas in greenhouses in cold climates may result if this section is not clearer. Likewise. Serving undesirable foods grown locally (high fat, etc.) should not be encouraged by nonspecific language that creates such a loophole. You cannot achieve 50% local in harsh cold climates without absurd dietary consequences.

Reviewer 13

In the basic data section, can you change the percentage breakdown of building ages from building counts into percentages of square footage in the several categories (or specify the latter as preferable, while allowing the former)?

Reviewer 35

Category 2: Operations (OP) Dining Services: Missing a big important contributor to green dining, perception change and reduction in solid waste – Using compostable or reuseable dinnerware. Many campuses see savings, increase in recycling and reduction in footprint by

using renewable materials such as paper dinnerware and biodegradable bags or non-disposable utensils and dinnerware. For campuses that use contract vendors, local food criteria may not be a large part of their operations and this might need some development. You may also ask for large vendors to subcontract with companies that use free-range, or non-factory farmed meat options rather than go with sub-vendors that show no initiatives in humane methods of farming animals. Also, many campus dining services work with local food banks and this should be recognized.

Recommendation# 1: Include category called: Zero-waste dining initiatives. Sub-categories should include – Using recyclable dinnerware vs non-recyclable, capturing pre- and post consumer food waste, composting volumes, innovative programs such as using corn-starch utensils, biodegradable bags etc. Donating surplus food and working with local food banks to alleviate hunger. Point allocation: 2

Recommendation # 2: Include in the “Food Alliance and Organic Certified Food” category – the preference to consider contracting with companies that offer humane methods for animal farming/processing. For fish, please also include species that have had mercury-contamination warnings or not to use species that on the brink of collapse on their menus, as is commonly available on many State Public Health warnings and also practiced by many chefs and food businesses.

Reviewer 41

In dining, I would add, "sustainability criteria are included in awarding food concessions." (If this is intended to be included in OP 24, it may be useful to state that).

Reviewer 19

Dining services: I would like to see recognition of dining halls who purchase grass fed beef and other animals that are not coming from CAFO's

Also, I think there needs to be more consideration for alternative food purchases besides just organic. For example, antibiotic free meat or cage free chickens. I am leery of an organic emphasis given the emergence of “big organic” or people purchasing organic certified products that have travelled all the way across the country, often at the expense of local farmers who may not have the time, money or resources to become organic but practice native, sustainable and healthy farming.

Reviewer 30

I like that the document uses Food Alliance, fair trade and organic certification. I don't believe that the Food Alliance has expanded into Canada. The closest organization we have to this is Local Food Plus, located in Ontario. (They have not yet expanded into Atlantic Canada.)

I see what the STARS system is trying to capture by specifying Food Alliance certification, but in the absence of this certification system in Nova Scotia, it will be trickier to capture these desirable characteristics. The difference between industrial farms and local, organic farms isn't

black and white – there’s a continuum. The question is: how can we create demand for the desirable farming practices in an effort to move people along that continuum? For example, can you specify a certain percentage of items like free range chicken and eggs or grass-fed beef? Maybe there would be a way in the future to identify farmers who have Environmental Farm Plans and make it a priority to purchase their products? I think it’s important to leave room for these criteria.

In terms of the certification for seafood products, I noticed that there is no current standard, but that the STARS system is considering using Marine Stewardship Council (MSC) certification. The MSC system is a useful tool for assessing seafood sustainability. I would also encourage STARS to consider the “Common Vision for Environmentally Sustainable Seafood” that was developed by 14 prominent conservation groups from across Canada and the United States (including the Ecology Action Centre and the other groups involved in the Canadian SeaChoice program). These 14 groups, known collectively as the Conservation Alliance for Sustainable Seafood, work collaboratively with each other, as well as with businesses that buy and sell seafood. The groups use the latest scientific research to help companies develop solutions for sustainable seafood procurement. More information on the Conservation Alliance groups or the Common Vision initiative, please visit www.solutionsforseafood.org

In Canada, SeaChoice program also has a Canada’s *Business Guide to Sustainable Seafood*, a useful resource for retailers and foodservice providers, such as those at Canadian universities. I encourage Canadian universities to use the SeaChoice program as a tool in making sustainable seafood purchasing decisions. For more information on the SeaChoice program, to search for sustainable seafood information, or to download a copy of the *Business Guide*, visit www.seachoice.org.

I didn’t see any reference to bottled water, but I feel it would be an easy policy to specify jugs of water, instead of bottled water, in university catering. Tap water is cheaper, avoids the issue of privatization of water, eliminates unnecessary plastics, etc.

Finally, it would be interesting to develop a policy to reinvest the costs savings from certain environmental improvements into other, more costly, environmental initiatives. For example, money will be saved by reducing water and energy usage and this money could then be used to help fund other more costly initiatives, like purchasing local, organic food.

Reviewer 5

These credits should also apply to schools who do not have institution-affiliated food service. Every institution has a choice as to whether they want to operate foodservices in-house or to contract them out. If a school chooses to contract out foodservices, they should be held to the same standards as every other school. Contracts can require use of local, organic, and free-trade just as easily as in-house services can make those choices. The only schools to which these credits should not apply are schools that offer no food sales on site. At this point, it might be unduly burdensome to track sales at convenience stores, vending machines, and concessions,

but on-site franchises should be included.

Reviewer 47

I wanted to say that I think it is imperative that the food/dining of the AASHE sustainability criteria include a plant-based food credit. The fewer animal products used (maybe as a percentage of all food) the higher points they should earn. It isn't just local and organic that is important to sustainability. It is plant-based too. Excluding an emphasis on plant-based foods is a MAJOR oversight. The planet and the animals cannot afford for us to keep ignoring this massive problem.

Editors at the World Watch Institute's magazine (July/Aug. 2004) concluded "the human appetite for animal flesh is a driving force behind virtually every major category of environmental damage now threatening the human future - deforestation, erosion, fresh water scarcity, air and water pollution, climate change, biodiversity loss, social injustice, the destabilization of communities and the spread of disease" (p. 12).

Similarly damning, a 2006 report by the United Nations (<http://www.fao.org/newsroom/en/news/2006/1000448/index.html>) described animal agriculture as "one of the most significant contributors to today's most serious environmental problems." The report concluded that a meat-based diet is a major culprit in contributing to Global Warming because raising livestock generates 18 percent of the world's greenhouse gas emissions, proving even more damaging than transportation.

There must be a way to quantify the amount of veg-friendly food. Personally, I think it should be based on how many animal products are served rather than quantifying the plant food. We could say that X percent or less animal products is sustainable. That way the focus is on the detrimental animal products and using less of them, not just offering more spaghetti or more tofu. We want to encourage them to replace dairy with soy or rice milk and use less eggs, etc.

Here are some organizations that might be able to supply standards.

Farmusa.org

Vrg.org

OP Credit 5: Local Food

Reviewer 5

Please keep STARS as simple and easy as possible by not asking participants to submit information that is not required to obtain the credit. Don't require submission of "Total expenditures on local food that is also certified organic" and "Total expenditures on local food that is also Food Alliance certified"

Reviewer 30

In Nova Scotian context, 150 miles is too rigid and that food from the Maritimes could be considered local. We are not in a major agricultural area.

Reviewer 11

Achieving these points depends so much on local infrastructure and food availability. I'd suggest 1pt = 5%, 2pts = 15%, 3pts = 25%.

Reviewer 32

I don't know if 50% of all food is available to every campus within 150 miles. But, at first glance this seems difficult to calculate (e.g. desert communities aren't good for growing coffee, bananas, etc.)... I would think that even if a campus in Arizona or New Mexico took steps to purchase food from neighboring states instead of overseas, this would be of great benefit. The credit should be more flexible to consider such differences.

Note: Is there a direct correlation between USDA Plant Hardiness Zones and the availability of locally grown food?

Reviewer 10

Maybe a credit could be created for those institutions that actively work with the local Farmer's Market. This is not a perfect metric, but might help get us closer to supporting the smaller family farm.

Reviewer 2

Issues of land use are not taken into account. Perhaps AASHE should stipulate this for schools in certain regions with arable land. This is not really appropriate for every climate.

Reviewer 37

1) Local Food: For the state of Georgia, the primary growing areas lie on either side of the 150 mile zone. Since we are the largest state east of the Mississippi River, it is not feasible to ask distributors to label food as coming from north, central, and southern Georgia. Also, this criterion disadvantages schools located in large metro areas, as opposed to rural areas. When smaller schools are able to deal with small growers and have personal relationships with all farm suppliers, such labeling is easier than for larger food services, that offer tens of thousands of meals a day. The labeling we ask for must be feasible for such distributors as FreshPoint and Sysco. [*Institution's*] designation of "local" is broken into two priorities: state of Georgia and regional (8 Southeastern states). We have shifted an important sector of purchases from California and Mexico to our SE region—and we should be able to get credit for that.

Also, I'm not clear why the increments are 5—20—50%? That seems to be standard in the document, but 10—25—50 would be as logical.

Reviewer 13

OP 5 and 6: Make the categories exclusive -- 5% or less, 6-19, 20 or more (do the same with OP 15, but with different cuts)

Reviewer 34

Local Food - 150 miles might make sense for some areas, but in others, like the Lehigh Valley, that is too far to be meaningful.

Reviewer 42

I think the definition of "local foods" at 150 mile radius is flawed. This not only makes it very difficult to gather or know this information but it potential skews some institutions just by location and distance to farm. A far better definition and that is easier to for people to wrap their heads around is local by state.

Reviewer 40

Consider changing the points per percentage. For example, there are likely few institutions with over 2,000 students enrolled that are purchasing as much as fifty percent of food expenditures toward local food unless they are considering food purchases from a prime vendor as local as opposed to where the food originated.

The problem with benchmarking 150 miles may be that the institution disregards the fact that if they purchase something that is 200 miles from the institution as opposed to 1,000 miles from the institution they are still helping the environment.

There are a number of factors to consider. For example, if an institution is in an affluent community and they decided to purchase from a farmer outside the 150 mile radius but in a less affluent community, this approach may help improve the economies of a less affluent community.

OP Credit 6: Food Alliance and Organic Certified Food

Reviewer 28

GE-free

Reviewer 5

Please keep STARS as simple and easy as possible by not asking participants to submit information that is not required to obtain the credit. Don't require submission of "Total expenditures on certified organic food that is also Fair Trade Certified" and "Total expenditures on certified organic food that meets another (not including Fair Trade Certified or local) criteria that makes it preferable, and please specify which criteria" and "Total expenditures on Food Alliance certified food that meets another (not including Fair Trade Certified or local) criteria that makes it preferable, and please specify which criteria."

Reviewer 32

Seems to be worded in a manner that allows for flexibility in the certification methods used.

Reviewer 37

Organic and Food Alliance: I have some concerns about combining these 2 aspects. Since Food Alliance certification is not available in most of the country, it might push long-distance organic purchases, with harm to local purchases. For fruits and vegetables, we have prioritized "local."

Reviewer 2

How were these numbers determined?

Reviewer 34

Food Alliance - In some respects, this is a better certification than organic, but it only prohibits certain named 'highly toxic' pesticides. Sustainability requires eliminating fertilizers and pesticides that are based on fossil fuels and those that have not been proven to have no harmful health or environmental effects.

OP Credit 7: Fair Trade Certified Coffee

Reviewer 28

And other fair trade products, such as bananas

Criteria for fair trade coffee purchases too high – should only be 80% of purchases

Reviewer 5

This credit should require coffee to be Fair Trade Certified AND ORGANIC. It is very easy these days to purchase organic free trade coffee and including this extra requirement in STARS is not overly burdensome and contributes to the environmental and human health impact of the credit.

Under Documentation, please delete the 2nd, 3rd, and 4th bullet. Keep STARS simple and don't require submission of information that is not required for the credit.

Reviewer 11

Seems like too much focus on a single product. What about fair trade tea, bananas, cotton, etc? And what about the high carbon footprint of coffee as a luxury item? Could this be combined with #6?

Reviewer 32

A fair trade policy / process should be Tier I ... A single product (e.g. coffee should be a Tier II credit)

Reviewer 16

Is there a way to generalize this category so that you might be able to add products in the future. In other words, fair trade coffee is the only option now but next year another specified product might be included.

Reviewer 37

Fair Trade: why is coffee only an issue? For schools that buy sugar, chocolate, or tea, it makes no sense to deny this progress as part of the rating.

Reviewer 48

Purchasing fair trade coffee is 'worth' the same amount of points as mandating all campus buildings achieve a LEED Basic Certification. This appears to be very out of line with the reality of the impact of choosing one of these courses of action.

Reviewer 34

Why is this limited to coffee?

Reviewer 40

Perhaps consider including a separate credit for small, locally owned coffee shops that are hosted on university campuses.

The Criteria specifies that All of the institutions coffee purchases are Fair Trade Certified. This does not give any credit to those institutions that are purchasing some Fair Trade Coffee. Fair Trade does not use any quality criteria to determine certification. Additionally, small farmers in developing nations have to pay to get certified when sometimes they can sell their coffee at a higher price without the certification. If there is a moratorium on issuing new certifications, there may not be enough certified fair trade coffee to meet all of the demand.

Dining Services: Tier Two Credits

Reviewer 28

Add:

4. Institution has set up direct linkd to a local food provider, e.g is a member in a local CSA.
5. Institution has its own organic farm or community garden.

Credits re: recyclable/compostable dishes and cutlery URGENTLY needed
NO food services should receive ANY 'sustainability' credit' as long as they use throw-away dishes and cutlery -- washable dishes should be a prerequisite credit

Reviewer 8

Tier Two – not sure why the credit for non trays. I hear that is a mixed bag of results.

Reviewer 40

"Institution has vegan and vegetarian dining options available for every meal."

May need to further define what is considered a dining option. For example, is a salad bar with Tofu available at every meal considered a dining option?

Additional credits considered for:

- o Institutions for composting their food waste or donating leftovers to local shelters, churches or food banks.

- Institutions that offer sustainable packaging.
- Institutions that offer strong marketing programs that support sustainability.
- Institutions that coordinate special events and promote sustainable dining.

Energy and Climate

Reviewer 1

I recommend that credits be given for universities that have a combined heat and power system.

I would suggest that the credits be as follows:

- a. 1 credit for a system that is capable of supplying up to 35% of the campus' temperature control and power needs.
- b. 2 credits for a system capable of supplying up to 70%
- c. 3 credits for a system capable of supplying up to 100%

Rationale: combine heat and power systems are twice as efficient as conventional power plants.

Reviewer 9

The best reductions in energy intensity come from more efficient equipment and significant improvements in insulation. You may want to measure thermostat setting adjustments as a separate matter because they do not require new equipment and insulation materials possibly from other continents. Institutions would have to keep records

You mention only electricity in some energy standards. Oil, wood and natural gas are popular alternatives for heating that must be considered. Wood is controversial depending on the kind used and whether it is obtained in a renewable area of production

Coal and nuclear, both used to generate electricity, need to be mentioned and a determination made whether these primary sources matter in scoring electricity

OP Credit 8: Reduction in Energy Intensity

Reviewer 28

%s are too low

Reviewer 2

In the final draft, we hope that AASHE applies some kind of ecological footprint analysis to the impacts associated with these credits to properly determine their weight against other credits.

Reviewer 4

The percentages for OP credit 8 are too small. I can walk into most buildings and point out a 10% savings using low cost and no cost ideas and 20% using very high ROI low hanging fruit ideas. Also this penalizes schools that have been doing this for a long time. You could do a comparison using the Portfolio Manager that compares the building to other similar buildings and see whether it is in the top 10 percent etc. You could help develop the ranges for the campus buildings via participation in STARS pilots. The danger with portfolio manager is complacent people will say, "Oh, I am in the 50th percentile so I am fine" instead of shooting for the 90th percentile and raising the bar as they should. Also you could use an Energy Utilization Index which is Btu (electricity can be converted to Btu too) per square foot per degree day.

Finally, this would probably be more helpful if you had a list of energy efficiency and management improvements and institutions could check off what they have done. You could also link to these lists as helpful tools. I have a checklist from coop extension that is very good and DOE has them too.

Reviewer 11

Points seem too low, especially compared to pts in earlier credits. Why not 3pts = 10 or 20% reduction? Don't we need to be aiming for these higher cuts?

Reviewer 38

A performance-based measure of energy use needs to replace the trends-based approach, and secondly, that the possible points awarded under this credit category should be much higher -- at least doubled, to 6.

Why?

After recycling, purchasing, and investment practices, there is nothing so easily under the control of an institution than its energy and water use, and nothing with as immediate, significant, and continuing an environmental impact. And the fact is that rigorous measurement of energy and water use is relatively easy. Energy benchmarking is useful knowledge to campus energy managers. The specificity allows them to target weak links or inefficient areas. The trend-based approach cannot do this, and thus cannot lead to energy-conserving action in the short term, let alone to a plan for the future.

AASHE should look again, and seriously, at recommending the use of the EPA ENERGY STAR benchmarking tool, Portfolio Manager.

Why Portfolio Manager rather than some other program? Three overarching reasons:

(1) We at this environmental consultancy made the choice some time ago to involve ourselves in the refining and promotion of PM as a weapon against energy waste. It's a sharp weapon. Most of my colleagues are engineers here and they are constantly testing PM and other programs, looking at metrics, metrics, metrics. Portfolio Manager is the best of the lot, in our opinion. Its reporting system fits into any other tool or format, whether LEED reporting or, in this case, STARS reporting.

(2) Portfolio Manager is an egalitarian program because not only PM itself but also the training on the use of PM is free-of-charge. This means that rich schools and poor schools have equal access to it. This is one of the more glorious ways in which our tax dollars are at work for the common good.

(3) Portfolio Manager, and this is a personal prediction, will be the standard benchmarking tool of the future, the most widely used. It is the platform in Ohio and California (indeed,

California, with all its relative wealth, chose it.) Its database for energy performance comparisons is extensive and becoming greater. It is also increasingly linked to LEED certification in all kinds of ways. The USGBC just passed a resolution that all certified new construction (NC) buildings must provide actual performance data for energy use. LEED Online, for example, has a mechanism to enter this information and link to Energy Star.

The big issue for AASHE has been that many campus building types, like laboratories and athletic centers, are not able to achieve an energy “rating” (1 – 100) under the Portfolio Manager rubric. But in the short term I propose you change your membership’s thinking about this. The goal should be benchmarking first, rating later. There are as you know some campus building types that can be rated, and those include dormitories, offices, retail, and hospitals. The list will grow, and this is another personal prediction, to include many, many more types within the next few years – even those energy-consuming beasts, the laboratories. Within the next few days ENERGY STAR and affiliate program Labs21 will announce a new initiative to encourage greater energy benchmarking of laboratories, refine the current Labs21 benchmarking tool and eventually develop an ENERGY STAR rating for labs. So there’s some progress here.

Reviewer 5

Comment 1: How will this credit normalize data for heating and cooling degree days? Do you need to ask institutions to submit the HDD and CDDs for their area? It may not be necessary to normalize for HDD and CDDs since you are looking at three year trends. However, if you do keep this clause in the credit, please explain how that will be calculated or how the HDDs and CDDs will be determined if they are not submitted by the institution.

Comment 2: Please use MMBTU/ft² as the unit for the number calculated for this credit (including the electricity plus the natural gas [or whatever]/ft²). It will make it easier for schools to compare and learn from each other using this standardized unit.

Comment 3: Keep the trend for this credit. Institutions should be rewarded for continual energy improvement. Once Energy Star's Portfolio Manager includes all applicable building types it might be good to add an additional credit to STARS for a campuses overall Portfolio Manager rating, but don't then take out the trend credit.

Reviewer 32

Good

Reviewer 8

Since we have co-generated power plant – the “total BTU used for temperature” may be a tricky calculation

Reviewer 34

Reduction in Energy Intensity - These credits penalize schools that are already using low per-capita energy, and rewards schools that are currently wasting huge amounts of energy and/or having more conditioned space per-capita.

Reviewer 49

1.) This only rewards a downward trend in recent years but does not reward efficiency in absolute terms – so a campus could score well on this credit while still being much less efficient than another campus that scores poorly.

2.) Focusing in on just the last three years disadvantages campuses which have a long history of energy conservation and may have made substantial reductions in the past and deserve more credit for maintaining existing levels of efficiency than do other campuses which are new to the energy conservation business and because they haven't done much are easily able to make annual reductions.

3. Normalizing by heating and cooling degree days sounds good but anyone who has played with the numbers knows that there are problems with this kind of analysis. The base load (which is unaffected by outside temperatures) skews the analysis.

Say the base load is 10,000 units of annual energy consumption and the portion of the load affected by outside temperatures also averages 10,000 units. Let's take two winters, a cold one with 6,000 HDD when 12,000 units of energy was needed for temperature control and a warm one with 4,000 HDD when 8,000 units were needed. Note that the heating efficiency is the same for both years, 2.0 units of energy for every heating degree day.

However, look what happens when we do the calculation with total annual energy being the numerator:

Cold winter year

Total energy of 22,000 / 6,000 HDD = 3.7

Warm winter year

18,000 / 4,000 = 4.5

Even though the efficiency is the same, the calculation makes it appear as though there is much greater efficiency during the cold winter year. This problem could be fixed with a more sophisticated calculation technique which removes the base load when analyzing heating or cooling efficiency. Then improvements in base load efficiency could be calculated separately. We might not want to get this complicated but I just wanted to point this problem out.

Suggesting an improved method gets complicated.

I raised this issue with [*an individual*] (who I have a long working relationship with) and rather than translate his response, I will provide an excerpt:

It may be hard to make a blanket recommendation that is applicable to all situations. The high level concept is to make the HDD (or CDD) adjustment to only that portion of the energy use impacted by weather (i.e. not the base load).

For most facilities - which tend to use fossil fuels for heating & electricity for cooling - this base load can be reasonably approximated by taking the lowest monthly energy use "out of season". Deduct (that x 12) from the annual total and then divide by degree days. For electricity in a site that uses it for cooling, it is normally safe to use either the lowest month, or a very low cooling month (such as April or October in a northern climate). Note that many facilities have some electric heating loads that wouldn't be adjusted properly with this technique. This wouldn't be material for most sites.

Fossil based heating follows the same concept - use a low month (when a central plant is actually operating) to determine base load.

The above simple approach loses its accuracy dramatically when cooling is provided by fossil fuels (absorption chillers, steam turbines) even if from waste heat such as cogen. A similar problem arises in an all electric facility (electric heating & cooling). I assume (but don't know) that you can take all the energy use "above the base load" and divide by the sum of HDD + CDD. It is probably reasonably accurate.

When I had to know we had a good correlation in the past, I would do regressions models of each energy source vs some combination of HDD, CDD and avg temp. Multiple runs after extracting various amounts as "base load" would normally give a good fit. This is somewhat manual I know but for M & V in a performance contract, we took the time to do this.

TIPS - using more than 12 months will increase accuracy. Using "units/square foot" will also improve accuracy and allow for some adjustment for changes in size - important to match changes during the Base Period. Future adjustment to SF may or may not be appropriate depending on what you are trying to have the results show. I have heard discussions about using some combination of SF, or # students, or per \$ of research \$ to improve comparison accuracy.

For units, I'd stick with kWh for electricity in part because all the emissions data is presented that way. Use MMBtu for fossil.

I agree with everything [*the individual*] has said but am not sure how you can use this information to modify STARS appropriately. Maybe – since STARS' energy performance component is not designed to compare one campus to another but rather just measure progress at one campus – why not give the campus some latitude in how they show and analyze their energy use. And perhaps specify that in addition to showing annual total energy in MMBTUs, they should show annual totals for electricity, natural gas, oil and coal and they should break

this down by campus square footage (maybe specify either GSP or NSF) and by HDDs and CDDs – noting that a HDD or CDD adjustment should only be made to that portion of the load which is impacted by weather. I realize that this is not very elegant but I hope it is helpful.

Reviewer 17

A lower trend in usage is good but is still only a first step, and needs to be identified as such. We need to stop using the excuse “to avoid penalizing institutions for physical growth”. The result of a good trend is a feeling that we are making progress, when in fact if the absolute number isn’t lower, the reality is that the campus is causing more pollution, environmental degradation etc due to the real use of more resources.

The trend point needs to be supplemented by an accompanying absolute point where the veil is lifted and real usage is compared. Higher education institutions will only meet their President’s climate change commitments by making real reductions, not by continuing to increase total use but at a slower pace.

EPA’s portfolio manager is a good tool to highlight peer performance. A simple reporting of actual total usage is all that is needed.

Reviewer 25

It is not clear how this would be calculated given the information requested. What is base year if a 3-year trend is desired? Are the points awarded for annual average percent improvement or from base to end of year 3? An example calculation would be helpful.

How are both heating degree days and cooling degree days allocated against a single energy use value?

If not all space is conditioned (particularly cooling), using conditioned gross square feet (GSF) will actually penalize those locations that are not air conditioning all of their buildings by including their electrical use without the GSF.

OP Credit 9: Renewable Electricity

Reviewer 10

Offer more points for achieving 100% of electricity consumed from institution catalyzed renewable energy sources to reward institutions addressing this significant sustainability issue. Also offer more points for “Institution derives 100 percent or more of its on-site combustion for heating and cooling from renewable sources.”

Reviewer 5

When your local utility's regular electricity portfolio includes a certain percentage of renewably generated electricity, how does this count?

Reviewer 32

Good - Note: Some institutions are locked into long term energy contracts mandated by law... But the credit will be helpful in encouraging institutions to influence new arrangements in the future.

Reviewer 16

I forgot – did you define renewable? Example – is hydro covered? I believe in some states (CT) co-gen can qualify for some renewable credits.

[About allowing RECs to count for up to two of five points] reasonable compromise.

Reviewer 34

Renewable Energy - Why should a school that goes from 0 to 5% get one point when a school that goes from 15-34 (almost 4 times the improvement) gets no increase in credit???? In general, point scales should be linear, otherwise continuing improvement becomes a lower priority.

Reviewer 40

Somehow unique geographic influences and regulatory restrictions should be taken into consideration. The southeast is inherently penalized because of our coal dependence, regulated electricity markets, interconnection requirements that forbid large scale, third party generators, etc. The institution may experience further limitations if use [of] state funds is not permitted to buy renewable energy credits or carbon offsets because of the voluntary nature of these markets.

Reviewer 4

100% renewables deserves more points - I think 8! I would like to see credit to institutions that engaged in policy changes so that renewables were more available in their state, and they would deserve credit, even if they didn't get the RECs. They could document the letters and the calls and the testimony they provided for policy change. This is extremely important to encourage. Otherwise you are encouraging more niche and less systemic solutions.

Reviewer 49

1. I see the point of disproportionately rewarding campus-catalyzed renewables vs. REC purchases, but I wonder if the percentages of each chosen for various points is right. Seems rather arbitrary.
2. The first and second point for this credit does not give proportionate credit to campuses doing both, e.g. having some on-site PV and buying some RECs. Maybe the level of either alone would be insufficient to qualify for the point but taken together they should be enough.
3. Clean or sustainable biomass needs a defensible definition.
4. Let's not take the position of grossly devaluing or discounting RECs. We need to be encouraging campuses to buy them.

Reviewer 20

The requirement that 15% or more electricity come from renewable sources seems to be more strict than the EPA Green Power Partnership in most cases. Campuses, like my old one, that participate in that program would have to up the ante and are given no recognition for leading the way in purchasing green power

Reviewer 17

I am on the side of the discussion that makes RECs much less desirable than on-site or institution-owned generation. Otherwise the message is that we can buy our way out instead of taking ownership that we have to make changes on campus. The compromise established in the revised credit, while better than before, is still muddy by combining institution-catalyzed production with RECs. I would prefer the transparency associated with assigning separate credits.

OP Credit 10: On-Site Combustion with Renewable Fuel

Reviewer 5

What about RECs purchase from natural gas suppliers? Could you expand credit 10 to include those? Maybe in a similar way as they are included in Credit 9? NW Natural sells RECs that fund generation of combustion fuel from cow waste.

Reviewer 34

Suppose they don't use on-site combustion for heating and cooling? This credit should only apply to those schools that use on-site combustion. And if they have on-site combustion, why is there no credit for co-generation or tri-generation?? There should also be a credit for eliminating on-site combustion, either by switching to ground-source heat pumps or off-site consumption that uses renewable fuel. (Using community-based tri-gen for heating & cooling, for example.)

Reviewer 4

For renewables combustion, I disagree that "it would be difficult to accurately measure the impact of certain techniques and technologies (such as passive solar design, geothermal, and solar thermal) on heating and cooling." I do that in my courses regularly. You could have a chart showing typical output in btu per square foot for solar collectors and south facing glass if you didn't want them to have to do calculations.

Reviewer 49

I am confused about how the credits allow for and reward cogeneration with renewables since this credit would give no points for electrical generation and credit 9 gives no credit for heat produced. So it seems that if cogen were applied to either OP Credit 9 or 10, it would only get credit for half of the useful energy it produces.

OP Credit 11: Greenhouse Gas Emissions Reduction

Reviewer 5

Leave credit the way it is.

Reviewer 32

In early versions of STARS, campuses should be encouraged to set emissions baselines... This credit should be process driven instead of encouraging the purchase of carbon offsets, etc.

Reviewer 34

GHG Reduction - This should be linear, to encourage rapid and continuing movement.

Reviewer 30

The baseline for water is 2001 and the baseline for this is 2005-2006. For easier reporting it would be nice to have the baseline year for all credits the same.

Reviewer 16

I support [*adding a point or credit for conducting a greenhouse gas emissions inventory*]

Reviewer 4

OP credit 11 does a double counting with the energy conservation and renewables credits. Of course, some of the academic credits were also double counted.

Reviewer 49

1. If a baseline of AY 2005-2006 is used, then campuses which have been doing serious energy conservation and renewable energy development for many years will be disadvantaged compared to campuses which started recently and may have accomplished a lot less.
2. What about Scope 3 emissions and their reduction? Harder to measure but very important, e.g. commuting.
3. While we don't want campuses to buy their way out, carbon offsets should be considered legitimate – though they will be to be in accord with an appropriate protocol, e.g. the one now being developed for the ACUPCC.

Reviewer 6

I hold grave reservations about the inclusion of carbon offsets.

Not only is carbon trading and carbon offsetting irresponsible and unjust in principle, but even the three third party certifiers mentioned are questionable. A quick Google search (not the best research, admittedly) gave me this:

<http://climateprogress.org/2007/11/20/the-so-so-voluntary-carbon-standard-for-offsets/>
<http://www.sciencedaily.com/releases/2007/11/071126143333.htm>

My suggestion to accommodate this criticism: take out the sentence “For this credit, purchasing carbon offsets that have been verified by a third party may count towards a portion of the reduction” and instead note that carbon offsets and trading do no count.

In my opinion, any pushback to this indicates an unwillingness to acknowledge that projects stemming from carbon offset projects and carbon trading hurt poor, Third World communities of color first and most. It's our myriad of privileges, green consumerist desire for cheaper, easy band-aids, the dirty energy industries and profiteers that don't want to see systemic change that created these new profitable markets and drives us to use them. But they're not solving the climate justice problem: rather they're exacerbating it and creating even more environmental injustice in the process.

I anticipate that AASHE will not adopt this suggestion due to pressure from others to keep it, so please at least keep in mind that another issue that will arise is that wealthier schools could pay their way to more credits and thus a higher sustainability score.

I agree that campuses should get a point for conducting a greenhouse gas emissions inventory. I think it's a way for progress to be awarded and it's an intense process that should get recognition.

Reviewer 17

I am on the side of the discussion that makes Carbon Offsets much less desirable than actual reductions by the institution. Otherwise the message is that we can buy our way out instead of taking ownership that we have to make changes on campus. The compromise established in the revised credit, while better than before, is still muddy by combining actual reduction with offsets. I would prefer the transparency associated with assigning separate credits.

Reviewer 40

Ratings tend to penalize rapidly growing campuses if the emissions are not normalized for square footage or per capita. Perhaps there could be credits for both absolute and normalized reductions.

Energy and Climate: Tier Two Credits

Reviewer 8

Tier Two, #4 – Uses Energy Star vending machines; #5 credit also for internal “energy related performance contracting”

Reviewer 19

Under Energy, Tier two credits: I think geothermal is a huge undertaking and should be elevated to tier one.

Reviewer 34

Tier Two - Why should geothermal energy be rewarded more than other renewable energy sources? (If you are referring to use of ground-source heat pumps, that should not be termed geothermal -- and it will show up in reduced energy intensity and lower GHG.)

Reviewer 29

Energy and Climate tier two credit # 6 should be changed. More efficient fume hoods are not always the best solution, as in the case when there are very few of them. They serve as the general exhaust of the lab and do not penalize energy use. More appropriate would be to develop policy around minimum Air Changes Per hour that are the lowest appropriate levels possible. Night time set backs can also get a tier two point designation.

Reviewer 16

Once again, I don't feel comfortable with "has" and "uses."

I think that the quantity of points involved in this section (~15 pts.) precludes any need to recognize/reward selected "tactics" for achieving meaningful conservation, renewable, or GHG goals.

Add credit: Institution has implemented measures to minimize energy usage associated with computer usage, including ENERGY STAR devices, load sharing, or sleep modes.

Reviewer 4

The energy and climate tier two credits are too limited. There is much more to be added, along the idea of the checklist I mentioned above and some are inaccurate. You don't want timers for occupancy. You want an energy management system that adjusts for power outages and other item and can be centrally and even remotely controlled because in the real world, the timers get off and then cause problems. This is an absurd list as it stands. Perhaps I don't understand the Tier 2 credits enough, but this looks like a red flag to me.

Reviewer 40

Suggest credits for:

- Real time energy monitoring and feedback systems.
- Phase outs of T-12 and incandescent lighting.

Grounds

Reviewer 28

Add OP credit: native planting

Add OP credit: lawn mowing with fossil fuels reduction

Reviewer 4

For grounds, I'd like to see a mention or reduced need for mowing. I'd also like to see a mention of permaculture and native landscaping. I'd also like to see, as is mentioned, credit for reducing the need for irrigation.

Reviewer 50

I think it would be good to have school report their acres of impervious surface (and the percentage). They would have a credit for a storm water management plan. They would have the highest credit for a plan to become "storm water neutral", i.e. all rainwater is kept on site.

Reviewer 40

Suggest credits for:

- Tree protection policies and programs, i.e. inch for inch replacement policies/funds and use of logging mats during construction.
- Features to capture, infiltrate and/or reuse rainwater.
- GIS mapping of storm water infrastructure.
- Comprehensive storm water management plans and staffing and/or funds to implement.

OP Credit 12: Organic Campus

Reviewer 28

Farms should be included

Reviewer 32

Good

Reviewer 34

Organic campus - I'm glad to see this one!

But if they have a farm, they should get even more credit for that being organic!

Reviewer 16

Add "Records of any exceptions to the policy" to the documentation section.

Reviewer 30

There is only reference to US federal policy.

Reviewer 11

I don't like the title; there are better ways to describe an ecologically sound landscaping policy. Some things that could be given points here are:

- (a) having a pesticide policy
- (b) per cent of grounds managed without pesticides
- (c) Arboretum status for campus
- (d) curatorial records system for plantings

Reviewer 49

While I don't favor watering down this credit by accepting an IPM program instead of truly organic standards, it might be desirable to break the credit into two points. One point for largely being organic (definition to be determined) and a second point for being completely organic. For example, at [institution] we have been fighting for years to keep 95+% of our lawns pesticide free – the only exception being the athletic fields and the use of Round-up along curb and fence lines. That's been a tough fight and probably deserves a point.

OP Credit 13: Non-potable Water Usage for Irrigation

Reviewer 28

Should this be water *reduction* instead of consumption?

Reviewer 34

Non-Potable Water Usage for Irrigation - This is also a good one, but here I think the points are too low and should start at a lower level of usage.

Reviewer 29

100% non potable water for irrigation is not enough. It should also be reduced by 50% over baseline (as LEED requires).

Reviewer 16

Why not expand to uses other than irrigation such as toilet flushing or cooling waters?

Reviewer 32

Credit should account for systems that reduce water consumption regardless of water quality. (Electronic sensors used in irrigation controls, water friendly landscaping practices, etc.)

Reviewer 49

If this is the only credit for potable water saving, then there should be another one for water saving generally – otherwise water use efficiency by other means is not recognized or rewarded by STARS.

On our campus, very little water is used for irrigation. Much more for toilets, etc. Also, when we tried to do an audit of water use a number of years ago, we could not figure out where all the water was going. It appeared that as much as 40 -50% was the result of leaks in our chilled water system – long since corrected. I mention this only to suggest that the water credit or credits be carefully thought through by campus people who have really tackled the water issue and really know the causes of water waste and opportunities for saving.

Reviewer 51

I've been thinking about STARS OP Credit 13, specifically as to why we wouldn't choose to measure irrigation water trends, just like we do with potable, non-irrigation water. As I recall, your response was that you guys had wanted to do this but weren't happy with the options at hand. Is this still so? If I'm not being too dense, why? It seems to me that institutions that can't soon begin using non-potable water for irrigation can find ways of reducing the volume of irrigation water used.

I suggest using trend data to:

- * Measure irrigation water trends, so institutions can be rewarded for reductions in its use just as they will be for non-irrigation water use, OR
- * Measure total water use, as using less water overall is a key goal

What am I missing here in thinking this is a simple question?

Grounds Tier Two Credits

Reviewer 28

2. and 3. should be a tier-one credit, and should document trends; i.e. improvements toward native planting and creating habitat

Tier one credit: points for %s of pervious paving of total paved area

Tier-one credit: institution reduces fossil-fuel-based lawn-mowing; points for %s of lawn that are being converted to native wildflower meadows

Reviewer 8

Tier Two, #2 – Native plants are good, but our institutions are also arboretums and gardens used to teach about different biomes, etc. so exclusively using native plants reduces some of that benefit of having specimens and mini-ecosystems that can teach.

Reviewer 32

Grounds tier Two Credits: These credits are good (Integrated Pest Management is useful in agricultural campuses, is there a link to a reference indicating their applicability to urban campuses?)

Reviewer 11

Tier two credits are all good, maybe the way to earn pts is by the total # of these actions that have been instituted.

Reviewer 20

Native landscaping can still require watering, fertilizers, and pesticides. While natives are generally preferable, isn't the intent to use any plants that are non-invasive and reduce need for fertilizer, pesticides, and water? Native landscaping is one solution but not always the best. For example, there are perfectly acceptable prairie/woodland plants for Wisconsin that actually

come from the Appalachian mountains. One of our nurseries in the state developed a no-mow grass that is not native but is a great addition to the landscape.

Reviewer 34

Some of the Tier Two credits should probably be developed into Tier One credits.

Reviewer 40

“Institution landscapes with native plant species.”

Perhaps identify a percentage of landscape with native species.

Reviewer 16

1. Change “uses” to “has implemented a campus-wide” program
2. Change “landscapes” to “prioritizes”
3. Change to say “Institution has developed and implemented a biodiversity plan on campus.”
5. Change to say “Institution has developed an implemented a stormwater management plan that describes policies, procedures and practices to minimize stormwater runoff.”
7. Delete

Materials, Recycling, and Waste Minimization

Reviewer 19

I don't see a category that would give credit for schools that either: a. produce their own biofuel for use in vehicles (maybe it is in OP credit 10) or b. for schools that contribute their waste oil for the production of biofuel (meaning that the school may not have the production facility but they provide the raw material for its production)

Reviewer 28

Tier-one credit: coffee cups are largest % of waste by volume

CRITICAL tier-one credit: institution requires double-sided printing, and all printers in computer labs are set to double-sided printing by default (paper use is good indicator re: resource use/waste on any campus)

Reviewer 45

I would also suggest that for advanced recycling efforts, there is built in accountability for custodial services of recycling inside (or equivalent) in their job descriptions. We ourselves are just starting on this component and over time this will help mitigate the challenges of custodians "commingling" recyclables with the trash in one bag syndrome. Such a component helps to reflect an institutions greater commitment to gaining greater efficiencies of recycling diversion, and working towards zero waste.

You also have listed weight shall be provided in pounds. This should be in "tonnage." As this is really the standard by which we provide our reporting....i.e. state reporting, recyclemania reporting, etc.

OP Credit 14: Waste Minimization

Reviewer 32

OP Credit 14 - 17: Good – These are easy to understand and to calculate.

Waste minimization credits should focus on the application of site specific pollution prevention plans, waste minimization plans, or environmental management systems (EMS's) focusing on activities such as:

1. Complete elimination of, or substitution for hazardous materials, wherever possible;
2. Minimizing the amount chemicals used whenever elimination or substitution is not possible;
3. Maximizing recycling whenever elimination, substitution, or minimization is not possible, creating closed loop materials management systems that eliminate or constrict release pathways; and
4. Promoting cradle-to-cradle waste management instead of cradle-to-grave waste management.

While not the only process available, the EMS scorecard outlined by the [Campus Consortium for Environmental Excellence](http://www.c2e2.org/ems_assessment/questionnaire/cover.htm) (C2E2) provides generally accepted management principles in that area. (http://www.c2e2.org/ems_assessment/questionnaire/cover.htm)

Reviewer 8

How about using the ratio of recovered vs. land filled waste. The combination of the two should ideally show decline, otherwise we're not reducing consumption just the landfilling of it after its use....

Reviewer 2

It would make sense to have percentages included in this credit and offer more points for more percent reduced weight.

Reviewer 16

For this next question, what do you want to do with "fly ash" from power plants / central heating that may be recycled by sending to an asphalt batching plant? Check with CURC.

Reviewer 34

Waste minimization - Trend has the same problems here as in the categories where you eliminated trends.

Reviewer 59

Recommended Change

OP Credit 14 provides credit for total waste reduction on a per capita basis.

LeanPath recommends that there be an opportunity for Dining Services Waste to be reported in addition to the total aggregate waste figure.

Credit should be available for decreases in Dining Services pre-consumer and post-consumer waste (measured in pounds)

This waste minimization "sub-metering" approach could be extended to other elements of the solid waste stream. For this reason, we recommend this change in OP Credit 14 rather than under Dining Services credits.

Rationale for Change

Sub-metering is a proven best-practice for increasing awareness and reducing consumption. Aggregate metrics are much less effective at making the case on a local, departmental, or site-specific basis.

Sub-metering offers an educational opportunity for students, faculty and Dining Services staff to develop heightened awareness about food waste.

OP Credit 15: Waste Diversion

Reviewer 28

Where is the recycling part in the credits?

Reviewer 5

Add another point or two so that colleges who are already above 50% diversion rate have something to work towards. Suggest 4 pts for 75% and 5 pts for 90% or keeping with your 15% spreads it could be 4 pts for 65% and 5 pts for 80%.

Reviewer 34

I think 15% is too low to reward -- but an institution that does a really good job of waste minimization might not be able to get this credit.

OP Credit 16: Construction and Demolition Waste Diversion

Reviewer 3

This credit should award more points for the reuse and renovation of existing buildings when retrofits are possible, rather than demolishing usable buildings and constructing new ones.

Reviewer 5

I don't think it is necessary or informative to separate C&D waste out as a separate credit, but I'm not a strong proponent to eliminate Credit 16, so either way. If you couldn't add anymore overall points to the OP section, it would be much better to include more points into Credit 15 (as recommended above), fold C&D waste into the total diversion rate, and eliminate Credit 16.

Reviewer 34

Construction & Demolition Waste - This is normally accounted for under Buildings, which is appropriate because it is not an ongoing process.

Reviewer 18

OP Credit 16 misrepresents the LEED Materials & Resources section by citing Materials & Recycling;

Reviewer 40

75% may be too high a threshold; recommend 50% one point; 75% two points, just as in LEED.

Reviewer 45

C&D recycling is a tricky thing on campuses.... glad you took away the "trend" scenario for measuring results/success. With C&D are you including asphalt, brick, and concrete? This is part of the C&D mixture... This past year we recycled and will reuse the "stone pak" back on our campus...over 60,000 tons! We did 35,000tons the year before. Saves a tremendous amount of money and resources. This recycling effort is not something that is long term obviously... institutions that are older and in need of refurbishing their bldgs and roadway infrastructure will elect to invest in renewing the infrastructure on an as needed basis.

When measuring for C&D recycling in new or used bldgs... is it ok to take to an approved C&D recycling facility? LEED has a strange requirement right now where one has to have a bunch of separate roll-offs for various components to be recycled/diverted away from the waste stream. Honestly, this is silly. If the local environmental protection agency has approved of various facilities to divert and recycle the components...then this should be more than sufficient. In

reality, the LEED scenario his highly impractical for areas where there are limited footprint space. So... for measurement purposes... one would simply need to get a report generated by the participating C&D recycling facility in tonnages and provide the % of recycling diverted from their facility.

In the case of asphalt, brick, and concrete... typically, the institution may bring in a contractor that will grind up the A,B,C material and stockpile the "products". We ask the company to provide us with a reasonable estimate of the tonnage. It's not practical to get weights from our University truck scale on a "real time" basis etc because this material will sit for a long period of time... what can happen is a representative load gets weighed for a particular sized truck w/ cubic yard capacity...then a count can be maintained for the number of loads of new product utilized on the campus etc.

Not sure you can use this scenario but it is a way to gain a measurement that is reasonable.

OP Credit 17: Electronic Waste Recycling Program

Reviewer 5

Commuter schools that don't have residence halls shouldn't have to collect electronic materials from students.

Reviewer 34

good

Reviewer 11

This is really challenging, not sure it's possible for most campuses. We need federal and state programs to coordinate acceptable recycling practices. I would agree with separating institutionally-generated e-waste from student e-waste (since that is likely to be disposed of in their home town).

Reviewer 16

This is easy, I think. All colleges/universities would meet this criteria. I would prefer to add language that the institution also has policies or relationships with vendors to take back selected e-wastes.

Reviewer 40

May consider the feasibility of confirming and/or controlling that the waste is recycled domestically? Brokers sell to brokers who sell to brokers.

[Separating institution-generated electronics from student-generated electronics] appears to be appropriate and a good idea.

Perhaps consider credits for:

- Recycling batteries.

- Reducing the use of and phasing out mercury.

OP Credit 18: Hazardous Waste Minimization

Reviewer 1

On page 67, for OP Credit 18, I have a few comments:

- a. The credit is labeled “Hazardous Waste Minimization”; however, a more appropriate label would be “Hazardous Waste Management” based on the information requested.
- b. Most people like me think that hazardous wastes refer only to chemical wastes because of RCRA. I suspect STARS intends to have “hazardous wastes” refer to biological, chemical and radioactive wastes. The document should clearly specify what is meant.
- c. I don’t find that the number of regulatory visits or fines are a good indicator of an institution’s efforts in hazardous waste minimization. I suggest that these information requirements be deleted.

Reviewer 32

I think the item that CSHEMA members would be most interested in is OP Credit 18.

Some of the documentation for this credit has little to do with hazardous waste minimization. Cost of violations, number of regulatory inspections, total weight of waste (not-normalized to activity), etc. are not useful for assessing waste minimization programs.

Another concern, is that regulatory activity varies greatly depending on the type of institution and geographic location. Fines and similar measures are not useful for grading institutions (not uniformly applied).

1. Complete elimination of, or substitution for, priority chemicals, wherever possible;
2. Minimizing the amount of priority chemicals used whenever elimination or substitution is not possible;
3. Maximizing recycling whenever elimination, substitution, or minimization is not possible, creating closed loop materials management systems that eliminate or constrict release pathways; and
4. Promoting cradle-to-cradle waste management instead of cradle-to-grave waste management.

While not the only process available, the EMS scorecard outlined by the [Campus Consortium for Environmental Excellence](http://www.c2e2.org/ems_assessment/questionnaire/cover.htm) C2E2 provides generally accepted management principles. http://www.c2e2.org/ems_assessment/questionnaire/cover.htm

Reviewer 8

How about including credit for either mini-scaling programs or other Green Chemistry programs?

Reviewer 11

Only gives credit for tracking and disposing of the waste, not reducing the amount of waste.

Reviewer 13

Dartmouth has lead a regional effort on hazardous waste management with, I believe, federal funding.

Reviewer 34

Hazardous Waste - Recycling of fluorescent tubes, CFLs, and all batteries should either be covered under this or a separate credit, since those are significant sources of mercury but most people don't think of them as hazardous waste.

Reviewer 16

Add "most recent biennial report, if applicable" to the documentation section. [*don't ask for things that aren't relevant to criteria*]

Materials, Recycling, and Waste Minimization: Tier Two Credits

Reviewer 24

#2 needs the word program added at the end.

Reviewer 11

I'd expect more on printing standards and opportunities.

Reviewer 14

I recommend you add the following to the Tier Two Credits:

-- Institution has a program to inventory the use of mercury-containing items (e.g. equipment, devices and supplies) and replace with mercury-free or low mercury alternatives.

As you may know, a number of states are working to encourage facilities to phase out the use of mercury-containing items and ensure that such items are managed safely at the end of their useful life. These programs are designed to reduce mercury releases to the air and water. Many states have fish consumption advisories for mercury, recommending that certain populations limit their intake of fish. There are a number of places where mercury equipment and supplies may be used in higher education institutions (see attached presentation). These items can pose a risk to the environmental and public health, and their use should be eliminated or reduced, wherever possible.

Alex Paulson, Business Development Manager, LeanPath, Inc.

Institutions should be able to earn a Tier Two credit for implementing a continuous food waste tracking program for pre-consumer food waste, post-consumer waste, or both.

Rationale for Change

Current Tier Two credits that relate to dining waste focus on composting and operating

supplies.

Food waste minimization should be the highest priority in this area (above composting) and specific tactics associated with food waste reduction should be present on the Tier 2 credit list and currently are not.

Continuous tracking of waste is a waste minimization tool and is essential to ongoing performance improvement, exception monitoring and student/staff engagement. Several colleges are currently tracking food in this way.

Reviewer 20

Materials, Recycling, etc. Tier two Credits: Does composting yard waste include leaving grass clippings on the lawn?

Reviewer 19

Materials, Recycling and Waste Minimization: Tier 2: I would add credit for schools that use 100% recycled paper for copying, schools that print material on 100% recycled paper and schools that have policies on double sided printing and copying.

Reviewer 2

We recently did a characterization study indicating that 80% of our current waste stream is compostable. Given that extraordinary amount, shouldn't composting be more significant, and/or Tier I?

Reviewer 16

Delete 5, 6, and 9.

Add Institution has implemented a chemical inventory system – this is meaningful.

Purchasing

Reviewer 34

Selling 'sweat-free' & Fair Trade products needs to be covered, whether sold by the institution or 3rd-party providers -- not just food

Reviewer 17

Packaging

Look at including as a Tier 2 credit

Credit for program that explicitly requires packaging to be minimized, recycled within the institution's program, or taken back by the vendor at vendor's expense

Manufacturing

Look at including as a Tier 2 credit

None of the points meaningfully address the need to green the manufacturing process. For example Energy Star is about resource use during operation (ie. Energy, water use...), but completely ignores how the product was made and how it will be disposed of.

As global industrial production of the goods used or consumed is responsible for a large part of energy/water/resource use and environmental, health & social justice issues, higher education institutions have a natural role to play as they are educating the next generation of global business people.

For example, a solar panel is seen as a purely positive contribution to sustainability, when in fact its manufacture may have caused significant environmental pollution and health hazards where it was made that more than offset the energy benefit during operation. These "side effects" are not currently considered anywhere within STARS.

Cases similar to this abound and STARS is the ideal way to put this on the table as per the "Understanding Sustainability" section.

Points should be allocated to reward the use of products that were created with more than operating impact in mind - reaching backwards and forwards in its lifecycle addressing to the cradle to cradle implications as for which Bill McDonough has so eloquently made the case. Lesser points could be allocated to a reduced cradle to grave impact.

A similar approach could be taken to rewarding sustainable food sourcing described in the "dining" section (OP credits 5, 6 & 7)

Reviewer 16

I support this applicability threshold. You manage what you measure. Have it apply to everyone – must have a mechanism for tracking at least 75% of total purchases.

Reviewer 8

Perhaps one needs to report the % of materials purchased through central purchasing by dollar amount to balance the difference in those institutions that have radically different central purchasing operations. This might also be done around a couple of ubiquitous items for campus, e.g. computers, copy paper where you could get total dollars vs. total tracked

OP Credit 19: ENERGY STAR Purchasing

Reviewer 28

How often? Specified in policy?

Reviewer 32

Good. Allows institutions to meet or exceed energy star.

Reviewer 2

Isn't this the very picture of a strategy? How to justify making this a Tier I credit and not the composting?

Reviewer 30

Please reference the Canadian Energy Star program administered by Natural Resources Canada - <http://www.oee.nrcan.gc.ca/energystar/english/consumers/index.cfm>

Reviewer 34

Energy Star - good

OP Credit 20: EPEAT Purchasing

Reviewer 28

Include Canadian equivalent to EPEAT

Reviewer 30

How is EPEAT different than Energy Star. EPEAT maybe doesn't have the same relevance in Canada?

Reviewer 32

Good.

Reviewer 2

Why two credits about energy appliance standards?

Reviewer 34

EPEAT - good

OP Credit 21: Purchasing Green Cleaning Products

Reviewer 28

Already addressed in earlier credit: there seems to be a too high an emphasis on green cleaning products compared to other credits

Reviewer 34

Green cleaning products - why is this considered separately from OP4, Green Cleaning Service??

Reviewer 6

I don't know enough about products to make specific comment, but especially since it relates to the health and well-being of campus workers, I am very pleased to see this. Thank you!

Reviewer 16

I think threshold criteria should apply OR require that it applies to facilities and custodial services.

The documentation section should ask for any exceptions.

Reviewer 18

OP Credit 21 cites LEED for Existing Buildings EQc3 – this needs to cite LEED for Existing Buildings: O&M EQc3 (same for OP Credit 23 citation).

Reviewer 40

Perhaps expecting 100% of products to be certified at the outset is unrealistic; suggest 1 point for purchasing 50% green products, 2 points for purchasing 100%.

OP Credit 22: Environmentally Preferable Paper Purchasing

Reviewer 5

Leave credit the way it is.

Reviewer 8

I'd add a criterion for regionally produced paper. It's heavy and thus shipping has its costs, not to mention you might be enhancing your local economy...

I concur with the sentiment to separate paper types.

Reviewer 34

Environmentally-Preferable Paper - PCW paper is preferable to FSC-Certified.

Reviewer 30

A lot of furniture in our markets are not marked with these percentages or may not be available readily. Are there programs or ideas to help us identify these?

Reviewer 2

It depends on how much of the waste stream is paper.

Reviewer 40

Don't let the perfect be the enemy of the good. This is often a question of market availability and cost, and should perhaps consider credits for varying levels less than 100%.

Consider the impact for printing projects outside the traditional purchasing channels (i.e., reports, magazines, newsletters, cards, brochures, etc.)

OP Credit 23: Environmentally Preferable Furniture Purchasing

Reviewer 32

This will be hard to track at a large institution. Credit should be given for the effort put into educating staff to evaluate furniture purchases.

Reviewer 8

Additional criteria for consideration – recyclable/repairable.

Reviewer 11

Should this include carpets and flooring, often purchased along with new furniture?

Reviewer 34

Furniture - Meeting more criteria should earn more points

Reviewer 2

Why is paper all or nothing and furniture is incremental?

Reviewer 40

Criteria sound unrealistically cumbersome, especially on large and rapidly-growing campuses.

OP Credit 24: Vendor Code of Conduct

Reviewer 32

Good

Reviewer 34

This says nothing about what standards have to be met. A policy that requires only minimum statutory standards would get the same credit as one that sets high environmental and labor standards.

Reviewer 4

I think the vendor code of conduct is very important and should have a potential for a lot of points. Perhaps you could give credits for it based on its applicability throughout the college (e.g. just the bookstore - I saw that in AF 33, just centralized purchasing, for all purchases.)

Reviewer 2

This is definitely a "strategy" credit. Why Tier I?

Reviewer 6

Thank you for including this section and bumping it up to Tier One! It's essential that our institutions' values of social and environmental justice are upheld throughout.

I have a suggestion to make it even stronger. In the discussion section it's noted that 'on campus' workers be paid a living wage. This is terrific, and I want to push for off campus workers to also be included because university purchasing and contracting decisions have impacts off campus too. Maybe this can be delineated with another separate point.

Transportation

Reviewer 28

Credit: percentage of campus grounds under impermeable surfaces (e.g. parking)

Reviewer 9

Transportation programs that encourage students to drive four wheel vehicles less should be scored. Some transit companies have such programs. Walking and bicycles should be encourage by walkways and bicycle paths that were made safe and practical

Reviewer 24

On credits page 16 under transportation. Most of the credits pages are good clues to what you'll find in the details page. Here it isn't for the: Fleet greenhouse gas emissions (reductions perhaps) and Air Travel (reduction perhaps)

Reviewer 20

OP Credits 25-27: Can credits be earned for the percentage of commuters using electric, hybrid, or biodiesel fueled vehicles?

Reviewer 52

My area is transportation, so I don't feel qualified to comment on the other areas. Transportation looks fine to me.

Reviewer 53

This feedback may not entirely be in the format you'd like but I had a thought about the Transportation section credits. The protocol looks at air travel and says that there are not really any good alternatives. I often wonder about how colleges and universities create a culture that expects air travel as a way faculty get recognized for tenure. That is, faculty are often encouraged to attend conferences etc.

What if credits were given to universities that:

- put a limit on conferences by faculty (very divisive policy possibly)
- encourage faculty to use phone conferences, etc
- award faculty who make conscious efforts to reduce their travel footprint
- encourage rail, bus and other forms of transportation
- intentionally set up meetings with faculty to talk about how job expectations impact their ability to live sustainably. Maybe work to create a new way of looking at a faculty job in an oil scarce world.

OP Credit 25: Fleet Greenhouse Gas Emissions

Reviewer 34

Fleet GHG - using CO₂/passenger-mile is probably the best way to go on this, although it still might reward sprawling campuses over compact ones.

Reviewer 40

Rating criteria sounds quite complex. How about a credit for petroleum reduction over time?

[*Separating campus fleet into transit vehicles and single-passenger vehicles*] sounds like an appropriate and good idea.

Reviewer 16

How would any college with a facilities department get two points?

Reviewer 6

For this credit, the institution's motorized fleet includes all institution-owned and operated vehicles. I think RENTED vehicles should also be included, if it already isn't under operated. And thank you for not allowing carbon credits to be counted for this section.

Is it possible to reward campuses that re-use their own waste vegetable oil to fuel their fleet? This is more sustainable than purchasing biofuels that have potentially been causing social and ecological disruptions elsewhere.

OP Credit 26: Commute Modal Split

Reviewer 28

Too high -- probably unachievable
?? better: other-than-SOV modes of transportation

Reviewer 16

I think no more than 2 pts should be given for this credit since an urban campus has such a distinct advantage.

Reviewer 3

The documentation section for this credit should include the number of parking permits issued to faculty, staff, and students per semester (or per year) AND the number of mass transit passes (subsidized or unsubsidized) provided to faculty, staff, and students per semester (or per year). A greater number of mass transit passes means that faculty, staff, and students are driving less and thus would increase the institution's overall sustainability.

Reviewer 5

Under Documentation, second bullet, "The percentage of institution's population riding campus shuttle OR OTHER FORMS OF PUBLIC TRANSPORTATION as their primary method of transportation."

Reviewer 11

Seem too high; I'd suggest 1pt = 20%, 2pts = 40%, 3 pts = 60%.

Reviewer 2

Should give different credits for students, faculty, and staff because they're different areas for

improvement. At [*institution*], less than 5% of students commute using cars, while perhaps 30% of faculty do, and likely a majority of staff car-commute. Strategies to change these habits would be different for each campus group, so they should really be scored separately.

Reviewer 32

There may be some local variations to commuting patterns not accounted for in the credits.

Reviewer 8

Some communities have great mass transit system, others rather non-existent. Do you get any credits when you have a higher percentage of your students residing on campus (thus no transit?)

Reviewer 30

How do you accurately determine travel patterns for the full campus population? Do you have to do a statistically significant survey every year?

Reviewer 34

Point scale probably should be linear.

OP Credit 27: Commuter Options

Reviewer 28

Include Canadian equivalent of the Best Workplaces commuter program

Reviewer 32

Good

Reviewer 34

Good

Reviewer 11

Could this be combined with #26?

Reviewer 30

Best Workplaces for Commuters program is US based program. What would be the similar program in Canada?

Reviewer 6

How many points does this earn?

OP Credit 28: Air Travel

Reviewer 34

Air Travel - calculating emissions from air travel is good, but not worthy of points -- only reducing or offsetting the GHG is of any value towards sustainability

Reviewer 2

Only to inventory GHG emissions? Why not reductions or offsets for travel emissions? We're working on a program to encourage traveling faculty/staff to switch to trains when they need to get somewhere.

Reviewer 40

This data is very difficult to obtain for the relatively small amount of greenhouse gas emissions produced.

Administration and Finance Credits

Reviewer 54

Perhaps I'm overlooking it but I wanted to ask about "dedicated funding". This is one challenge we have encountered here at [institution]. We do not have a sustainability budget as of yet. Our administration continues to support various sustainability related initiatives with a large portion of the funding coming from the Facilities' budget. I wondered about "Dedicated Funding" as a potential credit. One other area that we are working on is providing an "Intro to Sustainability" or a program for existing community members, students, faculty, and staff, that focuses on what it means to be a member of a sustainable [institution] community. I noticed in ER Credit 19 we somewhat address this but I wanted to suggest possibly specifically adding verbiage acknowledging the provision of an introduction or baseline workshop or training event for community members. I appreciate the opportunity to provide input – this is such an important project.

Reviewer 36

Under admin and finance I think it would be very wise to include a requirement around the adoption of life cycle costing in financial decision making for construction and renovations and also for general procurement practices for anything that has an operating cost associated with it. My rationale for proposing this is that the accounting disconnect that often exists between capital and operating budgets is a profound institutional barrier to high performance building design and operations

Reviewer 10

I must have missed it, but, I did not see anything there about a policy for receiving donations. Or, is this what you were talking about in the initial Discussion Section regarding "sustainable funding." If that is the case, then I understand the discussion that outcomes is what we are looking for, and indeed funding is what allows us to engage in activities. BUT, who we take money from does also have influence (if not outcome effect). If a university puts up solar panels with money they received from Exxon Mobil, and another university does not put up solar panel because they could not take money from Exxon Mobil then how do we judge which one is on the higher ground? Or even which one had a greater positive or negative impact? By taking money from an organization that has actively worked to squash the debate around climate change, an institution would be legitimizing the activities of that organization. I firmly believe that a credit could and should be created around this. The credits could be very similar to those for investments: committee, transparency, and filter/screen. I do not understand why any institution would oppose this set of credits, unless they were concerned that they would not be able to gain points here...but that's not really what this is about anyway, is it? This (in my mind) should be more about raising awareness of issues, and this is a big issue for us to tackle.

Reviewer 40

Suggest credits for:

- o Career services focus on sustainability.

- Sustainability offered in Human Resources training and development programs

AF Prerequisite 1: Sustainability Committee

Reviewer 28

Or "Environment" committee

Reviewer 5

Make it a point rather than a prerequisite.

Reviewer 8

I concur that it is a statement, even if the group is not functional. What I would require is that the mission of the committee specifically addresses the social component as well as the environmental and economic.

Reviewer 9

The campus sustainability committee representatives should be elected by student, faculty, and staff governance organizations or be committees of a campus wide organization that already has these constituents. The campus President should also be able to choose a small minority of membership, but will already have the expertise in her/his staff conducting much of the implementation of policies.

Principles of accountability and transparency should apply in the policymaking, implementation and operations of sustainability programs

Reviewer 34

ok

Reviewer 36

The Sustainability Committee requirement under Administration and Finance should not be so prescriptive and instead should be Sustainability Governance. While many campuses will use the campus-wide committee model – often this is not actually an adequate model for effective governance of campus sustainability. As programs evolve you end up having to create a wide range of committees and smaller working groups and as this happens the role of the campus-wide committee can become much less important.

With this in mind this section should be redefined as Sustainability Governance and should be framed to require an effective governance structure that meets at least three criteria: 1. a high level reporting connection, 2. that involved professional sustainability staff, 3. that allows for the voices of students, faculty and staff to be effectively integrated – and leave it at that. If this is resolved by having one campus-wide committee then that is fine, but if it is resolved by have numerous groups then that should be allowed as well.

It should also be noted that such committees rarely achieve the work of getting new policies implemented and in fact this is usually the result of the efforts of professional staff working the inside sometimes despite the committee's dithering. Also the role of the committee/s should not be defined as an implementation role but rather as an oversight, advisory and support role - which is much more realistic for such committees to play. The implementation role needs to be a professional role that is recognized as such – it is a huge mistake to misrepresent the role of a campus committee and to pin false hopes on its real function while subsequently undermining the professional role that is actually needed for implementation to succeed.

Reviewer 43

I agree that the Sustainability Committee must be flexible, and informal is certainly viable. Our Faculty Learning Community on SHE (8 people) accomplished great things in a year, and it would have never been created by the institution; it grew from the special interests of just a few. We need to promote the Power of One, or a few, as often and as loudly as possible. Most of the gains in this movement have been grass-roots, and we need to honor that.

Investment

Reviewer 55

In my area of sustainability investment expertise, I do have a problem with some individual credits and how they inter-relate in the present draft.

For example, giving credit for Negative Screening of Investments (AF3) may preclude Engagement (AF5), since the institution may not be able to engage firms in which it has no ownership role. Running away from the problem does not solve it, and sometimes only owning a stock is the only way to encourage the management to change.

An institution using negative screening could still engage firms through environmentally-preferred purchasing policies, so therefore I am puzzled that having an environmentally-preferred purchasing policy was removed from OP 19-22, since having such a policy sets requirements for purchasing for people within institutions who may not know what is environmentally-preferred and what is not. Leaving purchasers to act without policies requiring them to act is probably not really sustainable in practice!

Also in the investment area, if STARS will give credit for specific sustainable investment approaches such as negative (AF3) and positive screening (AF4), STARS should also give a credit for "best-in-class" sustainable investment policies, where institutions have the best opportunity to favor sustainable companies while still holding a diversified portfolio across the entire economy.

For example, the California State Teachers Retirement System (CalSTRS) has a \$50m sustainable investment mandate with a sustainable investment strategy of picking the 80 most sustainable companies (basically the best 2 in each of 40 industries) in the S&P 500. Last year this strategy has appreciated 3.28% while the S&P 500 benchmark has declined 2.48%. This out-performance of 5.76% shows that strategies such as "best-in-class" sustainability strategies can deliver value in today's turbulent equity market and also favor companies with good sustainability performance by buying their stock (Negative screen SRI strategies such as KLD/Domini underperformed the S&P 500 last year). I know this since CalSTRS' money manager for this mandate happens to be a client of mine, but many other institutional investors are using this sustainable investing strategy, especially in Europe, so why not universities struggling to be sustainable AND produce higher endowment returns?

[...]

Finally, I would comment that Investment in Sustainable Infrastructure is a form of investment that might deserve a separate AF credit, such as LA Community College District's massive investment in renewable energy so that they will be a "net clean energy generator" by 2012, selling clean energy back to the grid in excess of their needs. That is something they should get credit for as being "good sustainable investors", not just for good operating practices (as

evidenced & rewarded in STARS credits OP9-11).

Reviewer 4

I think the investment credits are wonderful!!!

Reviewer 9

Both new investment and that for upgrading or reconditioning older facilities should be scored at the time and amount they are spent and not when they were put into a pool, many of which do not spend their capital, only their earnings. Negative investments problems are reduced by not counting the pool, but only the spending. Investments that are harmful to sustainability will be difficult to measure, but not as difficult as those rated a socially irresponsible in general

Reviewer 34

Investment - all look good

Reviewer 56

The section on responsible investment has a number of helpful and appropriate provisions. I do have one or two suggestions, but generally I think the system will be extremely useful

Perhaps the most conspicuous oversight in this document is any reference to community investment. Some schools are increasingly involved in community investment activity regionally. These efforts should be acknowledged here since they provide a substantially responsible revenue source.

The inclusion of community investment is complicated by the fact that some schools are doing this work with operating accounts, which would not fall under the purview of the NACUBO definition.

[Regarding whether the credits should be restricted to unencumbered funds] The meaning or intention of the "unencumbered fund" exclusion is not clear to me. Obviously, schools might mean funds for which the interest revenue or principal is already accounted-for, and which they are contractually bound to invest in a certain way or to maintain as cash, for instance. A loan might stipulate a certain modicum of liquidity on the school's part, and this may be described as "encumbered" because the cash cannot be invested in all possible instruments.

My take, for what it is worth, is that schools should report on all invested funds, irrespective of their "encumberances." There are alternative investments available in almost every investment instrument, including community development financial institutions, where you can essentially store cash. Specifying a loophole seems to open the way for partial compliance which should simply be footnoted in the information the schools share.

[...] UNPRI: Also, you might include a reference to the UNPRI, which the University of Dayton signed and may be signed by others.

AF Credit 1: Investment Transparency

Reviewer 57

Transparency credit looks great; I would add that minutes of meetings of the committee on investor responsibility should be posted.

Reviewer 56

I presume that the NACUBO definition of an investment pool includes schools invested in the common fund. However, it may be helpful to spell this out.

Reviewer 2

This remains a big problem. First of all, investment transparency is a Tier II - it does not, in and of itself, help sustainability or reduce adverse environmental impacts in any way. Its viability even as a Tier II is somewhat arguable - bottom line is, this is a great example of how a scoring system struggles when it attempts to compare unlike social, economic and environmental credits.

AF Credit 2: Committee on Investor Responsibility

Reviewer 56

There is huge variation in the extent to which a given committee (AF credit 2) is empowered to do the job it has been assigned. Some committees are permitted to write letters to companies, vote proxy resolutions and recommend that certain assets be excluded from portfolios. Others struggle to get a few resolutions filed each year. Most schools have standing committees, but some are only issue-responsive, that is, students have to bring a complaint in order for the committee to take action, even around proxy resolutions.

[...] As for specific proxies for committee performance, I think that you've hit on a few: meeting frequency, transparency, accountability. You might also include the fact that some committees have access to campus investment information that students cannot see.

Web-based list of all school investments, updated dynamically

Web-based list of all school investments, updated periodically

Paper list of school investments available at library, updated periodically

Web-based list of public securities (excludes private investments)

Paper list public securities available at library

Disclosure of all school investments to campus representative committee

Disclosure of public securities to campus representative committee

Disclosure of public securities where social issues proxies have been filed to representative committee

Responsive disclosure (students can ask whether the school owns a company, go fish style)

Other features of a well-functioning committee include:

Committee meets more than 3 times per year
Committee has disclosed its voting guidelines to the campus community
Committee has direct control over proxy resolutions
Committee has direct access to trustees for other issues that arise
Committee reviews entire endowment, not just proxy resolutions

Reviewer 2

This is a better investment credit

Reviewer 57

Note that the credit says that committees should make recommendations on all asset classes. right now none of them do that...I would say "have the AUTHORITY to make recommendations on all asset classes" so that it's not like you have to always being making recommendations on every asset class to get the credit. this is really nitpicky, I know...

AF Credit 3: Screening for Negative Investments

Reviewer 57

I would say "conducted or maintained" since some schools have been screening tobacco since the 70's...or do you mean the screen must be updated at least every 3 yrs? I'd also like it to be required that such info has been made public; add to the criteria either proof on a website or press release that this decision is known. And yes, revision to write letter to managers is very important.

Reviewer 2

AASHE should give more guidance about what is or isn't a negative investment

AF Credit 4: Positive Sustainability Investments

Reviewer 13

For 3 points, I'd recommend 16-30% (for category exclusivity).

Reviewer 57

Fine

Reviewer 16

Do you need to provide guidance on what qualifies for an SRI fund or company?

AF Credit 5: Shareholder Engagement

Reviewer 57

Can we ask for the letter to be made public either to the school community or community at large?

Reviewer 11

Seems unlikely, much more possible to actually vote your proxies, i.e. climate proxies, etc. This takes passing a policy and holding staff to it.

Investment: Tier Two Credits

Planning

Reviewer 39

Credit 6 and 7: Our institution only has a Master Plan, not a Strategic Plan. Is it possible to have Credits 6 and 7 applicable only for institutions who have such a plan, as many have one or the other? I understand that this would not work for Credit 8 as the goal is to get the university to commit to a Sustainability Plan/Policy.

AF Credit 6: Strategic Plan

Reviewer 28

Required for all academic institutions, so should not earn a credit

Reviewer 34

Strategic Plan / Master Plan - these terms need to be defined, because not everyone uses the same terminology; they should probably be combined into a single credit

AF Credit 7: Master Plan

Reviewer 28

Master Plan including sustainability! -- a Master Plan can be all about growth ie against sustainability and therefore should not earn credit per se

Reviewer 3

-This credit should award more points for institutions whose master plans were developed in conjunction with the county or local municipality's comprehensive plan, so that there is coordination between campus and city planning.

-This credit should also give more points for institutions whose master plans espouse smart growth principles (see: http://www.epa.gov/smartgrowth/about_sg.htm#principles).

Reviewer 36

Many universities don't have one master plan for the entire campus and instead have master plans only for areas under active development. This should be recognized in the way the master planning section is defined.

Reviewer 20

My only other request would be to make the master plan credit potentially worth more points! When my firm does master planning, we look at a broad range of functional and programmatic issues, not just buildings and sites. So I'm really interested in seeing how campuses can integrate sustainability campus-wide. So there's a difference between a campus that builds its master plan around a sustainability plan and those that include in their master plan such issues as LEED Silver or equivalent construction or xeriscaping. That's a tricky issue but I'd be willing to discuss it further.

AF Credit 8: Sustainability Plan

Reviewer 43

A Sustainability Plan is so essential; it needs to be Tier 1 and every tier thereafter.

Reviewer 8

Should there be some minimum number of categories or indicators addressed in this plan?

Reviewer 2

What if our vision of sustainability is different than AASHE's? For example, if we don't think that budget disclosure is part of sustainability, would our plan count?

Reviewer 16

I disagree [*that the plan doesn't have to be formally adopted*]. Informal plans are often ineffective. Or 1 credit for not formally adopted; 2 credits for formally adopted.

Reviewer 14

I recommend you add the following to the documentation section for the section on sustainability planning.

- A brief description of the methods used to solicit input on the plan.
- A brief description of how progress towards meeting the objectives will be tracked and reported.

I believe it is important for institutions to provide meaningful opportunities for staff, faculty and students (surrounding community????) to participate in the sustainability planning process. This could include campus forums, surveys, listening/brainstorming sessions and other tools. The public outreach methods should be documented to ensure institutions are inclusive and pro-active in seeking input.

In addition to objectives and performance measures, there is another important element in the sustainability planning process – ensuring you have a system in place to track and report performance. This allows an institution to identify opportunities for improvement and keep the campus community informed. Documentation for tracking and reporting could include: having the sustainability committee meet periodically, evaluating performance data on a quarterly basis, reviewing progress reports on key projects, updating the plan every two years, keeping a sustainability scorecard and/or publishing an annual report.

I have one final comment for the sustainability planning section. I assume AASHE would like to see the sustainability plan cover operations, education, research and perhaps other areas like public service and student life. In the guidance section, I would recommend you clarify that the sustainability plan covers operations, education and research to ensure that institutions just don't focus on operations.

AF Credit 9: Climate Plan

Reviewer 34

I think it's OK to give equal recognition to plans other than the ACUPCC, but only if they are comparable -- a plan to mitigate climate emissions is not the same as a plan to eliminate climate emissions!

Reviewer 16

Criteria to include "or a documented environmental aspects/impacts analysis from an environmental management system.

Reviewer 49

1. A point should be given for doing a GHG inventory.
2. A point should be given for signing the ACUPCC. (The reviewer comment that this would be a conflict because AASHE is a sponsor of the ACUPCC is silly.)
3. This credit should recognize that not all climate action plans are equal in rigor or goals – so, if it is possible, a higher score should be available for plans which show more rigor and would take a campus closer to climate neutrality.
4. Maybe additional credit should be given to campuses which are helping their wider community to achieve greenhouse gas reductions

Sustainability Infrastructure

Reviewer 34

Sustainability Infrastructure - all good, although I think incentives (beyond awards) should be covered here

Reviewer 10

Some institutions have more financial resources to fund sustainability initiatives, achieve certifications etc. Can credit be incorporated for investments in performance and strategy that is proportional to financial resources of the institution?

Reviewer 19

I feel credit should be added for schools that offer internships through the office of sustainability

Reviewer 4

This may show up later on but I don't want to forget it. Credit should be given for including sustainability in the job descriptions and in the annual reviews across all areas of the institution. Credit should also be given for counting engagement in real world problem solving for sustainability in tenure and promotion decisions for faculty and staff.

Reviewer 16

On the management side, I was struck by the credit for "Planning" in the A & F section but no other elements of a management system – Plan, Do, Check, Act. C2E2 surveys of the maturity and rigor of Environmental Management Systems (EMS) on college campuses have consistently demonstrated that colleges and universities are really good at planning and setting aspirational goals within those plans, but – and especially compared to corporations – really not so great at follow-through and accountability. While you can make the argument that much of the STARS program is about program performance, I think there is still an opportunity -- really a need -- to encourage and give credit to those institutions that use comprehensive and integrated systems to achieve their performance goals rather than relying on myriad independent programs haphazardly chugging along. Experiences at institutions around the country have repeatedly demonstrated that the second approach is not sustainable in times of financial stress or as priorities change.

So, what to do? I think that a Tier I credit could be defined in A & F that gives credit for the use of management systems in the design and implementation of sustainability programs. I would probably include it under "Sustainability Infrastructure" as AF Credit 13: Management Criteria: Sustainability plans, policies and programs are designed and administered in a manner consistent with management programs (e.g., EMS, Balanced Scorecard) advocated or supported by the institution.

Documentation:

- Sustainability Office goals and objectives

- Identification of management system elements or approach utilized by the Sustainability Department or Office
- Brief summary of sustainability office achievements

If you agree with this approach, I would be happy to work with you to polish it up.

Reviewer 14

I recommend you add the following to the Tier Two Credits:

- Institution has a network of sustainability contacts or advocates in the academic, operations and student areas.

Once the sustainability plan has been developed, I believe it will be important to cultivate a network of sustainability contacts or advocates throughout the institution. These contacts can act as liaisons to the sustainability committee and/or coordinator to help carry out the plan, monitor performance, troubleshoot and provide feedback. They can also serve as role models and mentors, which will be especially important since the plan will most likely contain provisions promoting changes in personal behavior and lifestyles.

Reviewer 42

Also in the previous section, I do not see points for university appointed sustainability/local foods focused staff positions to assist with purchasing local foods in the dining hall. Many progressive universities are starting to hire local foods specific staff in the dining hall to organize these purchases. This is a significant institutional commitment and should be recognized. I hope my own institution can get to this point some day.

Reviewer 36

Sustainability Infrastructure as a title is confusing and perhaps should be Sustainability Staffing and Capacity. This section would also ideally include credits for governance structures that have the sustainability professional reporting at the highest possible levels within the university. Universities that employ sustainability staff and then place them under facilities or environmental health and safety are greatly reducing the effectiveness of this staffing effort. Universities that have recognized the importance of having a high level sustainability professional leader should be acknowledged and encouraged – maximum points for a direct Presidential connection of some sort.

This section should also have credits for staff within the campus that are attending sustainability training events/courses etc, acknowledging the importance of having staff from all over the campus engaging in professional development for sustainability.

AF Credit 10: Sustainability Officer

Reviewer 43

When considering a “Sustainability Officer”, I prefer to see this as loosely defined as possible. Few individuals will be able to address facilities, operations, admin/finance and curriculum. More than likely, this will be a team of sorts. Our institution is investigating both an SO that is housed in facilities management, and also 1-year term “fellowships” for a curriculum advisor on SHE. The first is full-time salaried and the second is a faculty with course release time. Let’s be flexible with titles, roles, responsibilities, and designations, and let’s give credits based on how the institution perceives its commitment through these person’s goals/objectives. This may be in terms of work time, or other means.

Reviewer 8

Staff levels would be hard to measure depending upon the organizational structure and what is included in the reporting structure here as opposed to elsewhere in the institution. One might try to describe certain functions/positions regardless of where they are housed in the institution, e.g. energy manager, environmental health and safety.

Reviewer 11

I’d say 1pt for at least 50% of staff person’s time devoted to coordinating sustainability efforts.

Reviewer 9

Sustainability officer should be chosen and given security to hold the position rather than being intimidated and easily removed by the President. The ombudsman model should be followed

Reviewer 49

For one point, maybe the % should be 50% of a paid staff members time. Have that as a minimum. Otherwise it could be 1% or 10% which is pretty darn close to nothing!

AF Credit 11: Sustainability Recognition Program

Reviewer 28

What is this?

Just one aspect of a campus sust program, and often not represented -- should not be a credit

Reviewer 43

Yes to all and any AWARDS. Incentives of many forms are valid and valuable; particularly in affecting culture change institutionally-wide.

Reviewer 2

Curious about why this is a Tier I as opposed to Tier II credit

AF Credit 12: Inter-Campus Collaboration on Sustainability

Reviewer 28

Why?

Better: alliances with off-campus community partners on sustainability

Should be on and off campus relations

Reviewer 43

I fully support crediting collaboration in all its forms. It's critical to holistic, systems-thinking.

Reviewer 2

There's just no way to really measure this--to what extent it's happening and/or how it's affecting the university community. While this is definitely important, there has to be some better way to write this credit. Is this effectively Co-Curricular Education? At the very least - it's a strategy, not an outcome!!!

Reviewer 39

I think this credit is important to the growth and development of sustainability professionals. It is very hard to track—we have many working relationships with other sustainability practitioners in our state especially, but there is not a lot of documentation that comes from that—it is more community building and sharing of resources, which is still very important. I think the one way to track this would be to track conference presentation and attendance by a number of individuals, and by professional memberships. I realize that this credit is not very rigorous, but I think that it is beneficial to recognize the multiple forms that the collaboration occurs, and that they are all important.

Reviewer 3

This credit should emphasize the importance of geographically-based collaborations between higher education institutions. For example, a city that is home to multiple colleges and universities would benefit from a collaboration between all the higher education institutions in the area who can share best practices, exchange lessons learned, and can cooperate in land use planning and sustainability efforts that extend beyond their individual boundaries.

Sustainability Infrastructure: Tier Two Credits

Reviewer 28

Re: 1-6: small institutions can not afford to have all these different positions, and the Sust Coord is the one to address these areas-- ie should be an applicable credit only
12 should be tier one credit
Tier-two credit: signatory to the Univ & coll Pres' Climate Commitment

Reviewer 40

Suggest credits for: Campus Sustainability Reports, Signage, Tours, GIS maps of sustainability features, Newsletter

Reviewer 34

Tier Two - These are all good, but #12 should be raised to Tier One or even prerequisite. In many cases, it's only when an institution starts to make this part of their public image that it really starts to move.

Reviewer 2

1 -- Sustainability staff are, without a doubt, the single most important way for a university to move in the right direction. Pouring funding and money into programs instead of people gets schools NOWHERE. This weighting/points does not reflect the cascading and diverse benefits to hiring FTE sustainability professionals for these positions - when community service infrastructure gets more points below!

Reviewer 39

Communication, education and outreach are very important to advancing the sustainability mission for the university. I know that there are tier two credits for a website and such, but I think that some sort of sustainability report, newsletter, website, or other educational, outreach program for all faculty, staff and students is important to include in Tier one credits. We need to educate people on what our campus is doing not just on what sustainability is in general.

Community Relations and Partnerships

Reviewer 10

Provide credit for community partnerships and support of local initiatives e.g. through sponsoring sustainability oriented events, providing meeting space for non-profit groups etc.

Reviewer 9

Community relations should be measured by significant achievement. Having boards of prominent citizens alone cannot be a measure of success, but the work of that group can be measured. Partnerships are potentially successful, but achievements should be measured and an appropriate share allocated

Reviewer 34

I do not think this should be under Admin & Finance -- It's often connected with service learning or coordinated by the same person

Reviewer 40

Suggest credit for public service focus on sustainability.

AF Credit 13: Community Service Infrastructure

Reviewer 28

What is this?

Reviewer 2

This gets a whole credit and other job positions don't?

AF Credit 14: Student Participation in Community Service

Reviewer 40

Appears to be very high thresholds.

Consider undergraduate and graduate students separately in different credits.

Reviewer 2

Social/Econ. Realm makes weak connections back to sustainability core, can't be evaluated using same criteria

Reviewer 11

Again, need to show "why" service learning is connected to sustainability. Percents seem too high; suggest 1pt = 0-25%, 2pts = 25-50%, 3pts = 50-100%

AF Credit 15: Student Hours Contributed in Community Service

Reviewer 8

Our Service Learning Center calculated our hours as 360,000 recently, but that's only for those

students directed to SLC through their instructors. Some instructors don't use SLC in setting up community projects.

Reviewer 2

Social/Econ. Realm makes weak connections back to sustainability core, can't be evaluated using same criteria

Reviewer 34

Student hours - These levels are extremely low! Many students do 2+ hours per week.

Reviewer 23

After reading the criteria for this credit, I am confused on what it is asking for. What is "institution-organized" community service? Is it mandated community service as a graduation requirement? Or is the question referring to course-based service learning?

The guidance section explains that the credit "recognizes institutions whose students devote a significant amount of time to community service..." but 10 hours of service a year is not as significant for students who do 10 hours a week, every week, every semester.

We have students who do the bare minimum (about 10 hours) for the whole semester and on the flip side we have students who go above and beyond (100+ hours) spending weekends and school breaks doing service.

[*Institution*] used to have a 20-hour minimum if the service was to be recorded on the student's official transcripts. We have done away with that in hopes that our students are getting out and doing without a specific number hovering over them.

When working with faculty to develop service learning (experiential learning) opportunities for their students, we try to find a good number that balances community agency needs and training and students' schedules and commitment levels. I would say our more "robust" service learning courses commit to 30 hours of service per semester; about 3 hours per week, 10 weeks, and leaving time at the beginning and end of each semester to get things started and wrap-up.

I would suggest the point system reflect a higher range of service hours; for example:
1 pt—percentage of students engage in 20 or less community service hours per year
2 pts—percentage of students engage in 21-40 community service hours per year
3 pts—percentage of students engage in 41 or more community service hours per year

...or something to that effect.

My other concern with how the question is worded is "institution engages in..." It could be interpreted as a university-mandated service requirement, and although only a small number of schools have that, it's not the best road to go down. Required or forced service does not produce the same civically engaged results as optional service opportunities.

AF Credit 16: Financial Incentives for Public Service Careers

Reviewer 28

This is unwarranted bias against pro-sustainability private enterprise! e.g. for-profit sustainability consulting, which invests 10% of its profits in 'good causes'

Reviewer 8

I've never heard of such programs. Someone needs to share this with me

Reviewer 2

Why isn't MD included in this?

Reviewer 34

Financial Incentives for JD/MBA grads? Why is this under admin & finance? What about incentives for undergraduate students who enter public service careers, especially those with lower earning power than MBA & law? What about students who spend a year or two working with Americorps or the Peace Corps? What about those who go to work for non-profits or NGOs?

Reviewer 33

Many MSI [minority serving institutions] often started out as teaching or agricultural training institutes. There is a serious qualified teaching shortfall in the country. In addition most teachers leave the field before 3 years. Think it would be appropriate to include financial incentives programs for graduates of MS and/or MA Teaching programs in AF Credit 16.

AF Credit 17: Outreach & Partnerships Carnegie Designation

Reviewer 34

It appears that institutions can earn this credit if they meet the Carnegie criteria, whether or not they actually apply for this classification with Carnegie. Is this correct?

Reviewer 28

Add Canadian equivalent to Carnegie

AF Credit 18: Public Policy Engagement

Reviewer 8

While we have done some of this with HESA, I wonder if some institutions are specifically prohibited. Also would there be a specific stance one would have to take? I'm curious as when NRDC and Greenpeace or Sierra Club are at odds, which position gets credit??

Reviewer 39

I think that adding this was important.

Reviewer 3

This credit should more strongly emphasize the importance of a higher education institution's engagement in local policy decisions. Colleges and universities should partner with their local planning department to shape development policies that promote sustainability both on and off campus.

Reviewer 2

This credit is written in a way that is not meaningful. Does one act of "policy engagement" get you this credit? How do you ensure that this credit is meaningful?

Reviewer 35

For many state colleges and universities, (AASHE has a vast majority of these types of institutions), their states offices offer a wealth of guidelines, grants and agency-specific criteria on sustainability i.e California CHPS, Massachusetts LEED Plus standards and more. Perhaps part of the public policy engagement or in its own category, campuses should be asked if they are aware of their state's green criteria or sustainability programs. This could be a Yes or No answer. Also, working with schools and the K-12 community, that many campuses do

Recommendation #1: Include a Yes/No category to the question: Does your state have sustainability or compliance guidelines or grants that your campus complies with or has applied for.

Recommendation# 2: Engage the K-12 community. Yes or no type question as part of this criterion. Does your campus have programs that engage the k-12 community in sustainability?

Reviewer 34

Good

Reviewer 40

Lobbying may be more challenging for publicly-funded institutions.

Diversity, Access, and Affordability

Reviewer 8

This section is by and large good. I wonder about specifically recruitment and retention of faculty from underrepresented groups. This is very important to have role models for the students we are recruiting and to strengthen the overall diversity of the institution. One could also make the case for similar recruitment efforts for other positions, but teaching is a higher profile effort at universities so perhaps merits special attention

Reviewer 4

Once again, I find many of the Tier Two credit lists incomplete and question the credits given. I would like to see the front edge of diversity be about "Diversity for what purpose? To understand our interconnectedness and our commonalities in the interest of creating a more sustainable future for all." and not just diversity for diversity's sake.

Reviewer 58

I wanted to thank you for extending the deadline and take the opportunity to provide feedback on STARS 0.5. I spent significant time reviewing the new version as well as reading commentary by reviewers of version 0.4 on the website. The point that I want to make is in regards to the Diversity, Access, and Affordability section. Many of the comments by reviewers seemed to suggest that this section was inappropriate for STARS and wrought with unnecessary requirements not reflecting environmental sustainability. The comment that I want to make is a reaffirmation of the general notion of sustainability. I thought that each of the credits available in this section was well written, timely, and extremely relevant to the social aspects of sustainability. Going back to the introductory STARS Overview there is a beautifully written section on Understanding Sustainability which clearly states the triadic reciprocity of ecology, economy, and equity. It seemed to me that many of the reviewers either didn't read this section or fell victim to the same trap that is determining both corporate and institutional sustainability. So, far our society has begun the process of addressing environmental issues and their economic consequences. We have yet to achieve the integration of social factors into the equation and balance the "three-legged" stool.

Please, do not succumb to the institutional inertia and resistance to achieving holistic sustainability by green washing our efforts to strive for a balance between social, environmental, and economic concerns. For far too long we have continued to externalize the costs of our impact on this planet's cultures, societies, and communities, as well as ecosystems. It's time that our institutions of higher education continue to forge leadership with regards to our social values of equality, access, inclusion, and justice and set a precedent for the sustainability of our society as we face the growing crises of social and environmental collapse.

Thank You.

Reviewer 34

Most of these are infrastructure credits, with little in the way of credits for actual diversity or making sure that diversity is respected throughout the institution, not just in Admissions

Reviewer 6

Thank you for including this whole section.

I agree that depending on context, diversity in certain categories may be more relevant than others. However, we live in the United States, a country with a history of racism that still exists and we cannot ignore it. If the school is mostly white then this fact should be acknowledged along with the weaknesses associated with it. White people alone cannot truly solve environmental problems.

AF Credit 19: Diversity Committee

Reviewer 28

Diversity, Equity and Accessibility Committee

AF Credit 20: Diversity Officer

Reviewer 28

Diversity and Equity Office

AF Credit 21: Non-Discrimination Policy

Reviewer 11

Agree that having such a policy should be a prerequisite (as basic compliance with federal guidelines), not something you get a point for.

AF Credit 22: Diversity Plan

Reviewer 2

"Areas of the institution"? This is not meaningful without more specific criteria.

AF Credit 23: Recruiting for Student Diversity

Reviewer 28

Student, faculty and staff/administration diversity

Reviewer 15

A possible collaboration between the diversity officer (AF Credit 20) and university's students union can be accredited or encouraged. Many of this possible collaboration effort should be tracked and accredited in terms of a "general strategic planning for campus sustainability." In my work for sustainable campus project at [*institution*], a lot of effort has been done individually, that needed to be aligned and interlinked.

AF Credit 24: Support Programs for Under-represented Groups

Reviewer 33

Only listing mentoring and counseling leave this credit to read that support programs should be psychological in nature rather than holistic and psycho-social. I am thinking about affinity groups like, LGBT Groups or an Asian-American Student Association, which are student initiated usually, but often supported through the diversity affairs office. I am too thinking about academic support programs that specifically create learning communities for historically underrepresented groups i.e. MANNRS (Minorities in Agriculture, Natural Resources and Related Sciences).

AF Credit 25: Support Programs for Under-represented Ph.D. Candidates

Reviewer 33

This is a great credit however, I am concerned that there are programs of study whose terminal degrees are not doctorates yet these programs also suffer low matriculation by historically underrepresented groups i.e. architecture or journalism. I think this credit should remain but perhaps there is a Tier 2 credit opportunity by including support programs for non-doctoral terminal degrees programs.

Reviewer 2

This is so specific and "strategic" that it must be a Tier II credit.

AF Credit 26: Affordability and Access Programs

Diversity, Access, and Affordability: Tier Two Credits

Reviewer 35

Include international students as a category.

Reviewer 28

Credit for accessible residences/housing and campus
Credit for child-minding service/s

Reviewer 11

How about availability of gender neutral restrooms? Also somewhere availability of nursing rooms for faculty and staff mothers? And what about child care availability?

Human Resources

Reviewer 34

I think you need to define sustainable compensation and/or basic needs.

Reviewer 2

How has it been decided what's important and what's not in the human resources section? It seems like there's very little legitimacy in terms of credit criteria

Reviewer 11

I wonder about including points for (a) a clear drug and alcohol policy (i.e. to promote the "sustainable human") and (b) for having a faculty or staff union (i.e. to protect the quality of life for campus workers)

Reviewer 40

Suggest offering credits for:

Ombuds to address employee issues and concerns.

Wellness policy and programs for faculty and staff.

AF Credit 27: Sustainable Compensation

Reviewer 28

What is this?

Reviewer 4

I would also include a specific description of credits for paying their own employees a living wage and humane working conditions. I saw AF Credit 27 which addresses this somewhat after writing this.

Reviewer 8

I would still argue for the living wage as a minimum. It is definable based upon the US Poverty level. Obviously it's tougher to live in LA or NYC on that wage than Dubque or Spokane, but it should be a minimum. Another possibility would be to peg the gap between either the highest paid and lowest paid or the lowest and the medium and give points to those institutions that at least freeze the gap if not reduce it. But then I'm a looney on this one. I think every organization should have a Ben and Jerry's type rule: that the ratio between the highest paid and lowest paid never exceeds some multiplier, say 10 to 1 or 20 to 1. That probably makes me a communist. So be it.

AF Credit 28: Faculty and Staff Benefits

Reviewer 8

Does this distinguish between institutions where they pay most or all of it vs. those where the employee pays the lion's share?

Reviewer 24

Can this get reworded to account for the fact that full health benefits are offered even if they aren't taken advantage of. For example, your partner has a better health plan and you opt out, or you choose not to be enrolled at all.

Reviewer 39

I think it is important to recognize a difference here in offering health coverage and paying for health coverage. Here is an example: All full time employees are eligible for health care coverage that is paid for by the university. All half time employees are eligible for health care coverage but the employee must pay half of the premium each month which amounts to about \$150. It is unclear as the credit is written now if the institution gets 1 point or 3. It might be good to add more points to this to allow institutions who offer health care to all employees at 50% or higher FTE points for offering it even if there is some payment required for part time employees for their benefits. It is important that they are offered the benefits, and at a much lower cost than they would otherwise have had to pay on their own.

AF Credit 29: Graduate Student Employee Benefits

Reviewer 34

What is 'full health care coverage'?

How about grad student pay?

AF Credit 30: Parental Leave

Reviewer 11

I'd suggest reframing this to be more inclusive and calling it "Family leave." Some people could really use this option to care for elders. It is pretty child-centric as "parental leave."

AF Credit 31: Domestic Partner Benefits

AF Credit 32: Employee Satisfaction Survey

Reviewer 28

Add Credit: Employee Assistance Program

Reviewer 4

For AF32, you might want evidence that the survey is utilized for future planning.

Reviewer 15

Employee Satisfaction Survey; a more comprehensive survey on sustainability should be made by each institution on a regular basis. Institution willing to implement self evaluation on sustainability should be accredited by STARS. This survey form can be organized and offered online by STARS after being widely discussed by experts. I recommend that it may tackle five

stakeholders' categories with five classifications of Qs: Students; Alumni; Administrators; Faculty; and Staff. This may help:

1. identify current standpoint of sustainability at each institution;
2. initiate continuous year-to-year assessment of the institutional progress toward sustainability;
3. appraise data and input to be published through an interactive website for sustainability to be initiated; and
4. recognize campus stakeholders (students, alumni, faculty, staff, and administrators) with an interest in participating in drawing the future of sustainable ECU; searching for the advocates who can defend the concept and pursue the initiative within a flexible framework.

Human Resources: Tier Two Credits

Reviewer 28

Fair Treatment Policy

Reviewer 40

Consider establishing a percentage for what percentage of child care needs are met

Reviewer 11

Tier Two ideas, p106 – Delete #3 as this supports part-time outsourcing and low pay usually. Suggest adding a credit for having an ombudsperson to hear and mediate complaints, and another credit for having clear grievance procedures.

Trademark Licensing

Reviewer 34

A&F seems to be an odd place to put this.

This implies that it's OK to sell sweatshop apparel as long as it doesn't have the school's logo on it.

Reviewer 34

Selling 'sweat-free' & Fair Trade products needs to be covered, whether sold by the institution or 3rd-party providers -- not just food

AF Credit 33: Independent Monitoring of Logo Apparel

Reviewer 43

Apparel. Let's move beyond Fair Labor Association to the more globally recognized Fair Trade certification. Let's face it; most of this apparel is coming from China, Bangladesh, Honduras.... Fair Trade labels (with explanation of benefits) warrant and usually convince consumers to pay slightly more when they know that they haven't exploited other people.

Reviewer 11

Should include athletic corporate sponsorships.

Reviewer 6

I strongly object to the inclusion of the Fair Labor Association, which has a history of not holding its member apparel businesses accountable. I support only the Workers Rights Consortium.

AF Credit 34: Designated Suppliers Program

Reviewer 6

Thank you so much for including this!

Any school that claims not to buy from sweatshops should adopt the DSP, or else their intention and policy lack implementation teeth. It's the difference between paying lip-service to workers rights and actually rewarding good factories with orders.

Reviewer 11

Seems like this could be combined with credit 33.

Appendix A: Monroe Community College's Proposed Framework for a Green IT Campus

MCC's proposed Green IT Campus model is organized into four categories: Power Consumption, Recycling, Transportation and Fuel Conservation, and Other Campus IT Sustainability Items. Examples of potential campus initiatives within each category are provided and reviewers are invited to comment and contribute to the model. It is recommended that survey questions related to these IT categories be formulated for possible inclusion in future AASHE and other sustainability-related consortia's survey instruments.

Power Consumption

- Purchase PCs, printers and other peripherals (for offices, computer labs, classrooms, libraries) that are compliant with the EPA Energy Star program
- Address server virtualization and data center power usage and related HVAC issues
- Place auto-controls on data projectors and bulbs in smart classrooms and campus meeting and conference rooms

Implement a recycling program for:

- PCs, monitors and peripherals (partner with vendors, as needed)
- Mobile devices
- Batteries
- Toner
- Outdated software CDs
- Shredded and baled paper
- Packaging that the technology/equipment is delivered in, e.g., Styrofoam, plastic, cartons, etc. that may be re-purposed for lab experiments if green issues are designed into the curriculum

- Utilize recycled paper for copying and printing
- Address strategies for a reduction in paper usage throughout the institution —better education for end users on how to print one page only from web sites, emails, etc.
- Implement an imaging system that reduces the amount of files that need to be retained in hard copy
- Seek advice from campus records and retention experts to determine measures that may reduce the amount of college-related hard copy archives and the space needed to retain these files
- Implement a process for weeded library journals to be made available to other libraries to help fill gaps in collections.
- Re-use manila envelopes, jiffy bags and fabric shipping bags for Interlibrary Loan

Transportation and Fuel Conservation

- Online courses (asynchronous and blended) reduce students' need to regularly drive to on-campus sites for classes
- Use of videoconferencing between campus sites can reduce travel and save time for faculty, staff and administrators

- Use of webinars, webcasts and audiocasts for professional development can reduce travel—and travel costs—and save time for faculty, staff and administrators
- Use of enterprise-wide online informational and transactional applications (i.e., Banner) allows for:
 - online access to student services and records; reduces the need for additional student travel to campus to request a transcript, to register for a course, to complete a Housing application, to view their schedules and grades, etc.
 - online access to campus records reduces faculty, staff and administrator travel to campus sites on evenings and weekends
- Use of a VPN (Virtual Private network) allows faculty, staff and administrators to securely access their electronic files without traveling to campus on nights and weekends

Other Campus IT Sustainability Items

- Use of an integrated email delivered pay stub reduces paper and postage costs
- Use of integrated reporting applications (i.e., Web Focus and e~print) saves paper and provides time savings when looking for records online
- Use of online timesheets reduces paper usage, provides 24/7 access to input and approval of time sheets and reduces the need for travel to a campus-based site to sign hard copies of timesheets
- Use of a pay-for-print system may reduce unnecessary or “frivolous” printing—people requesting printed pages that they never collect, erroneously submitting one print job multiple times, or printing several pages instead of the one page that is wanted
- Create department-specific records retention schedules so that only necessary records are retained
- Use of microfiched records that the institution is legally compelled to retain permanently reduces needed storage space and preserves records for future retrieval
- Replace alkaline battery flashlights with rechargeable emergency flashlights
- Minimize press runs of hard copy campus publications, consistent with actual need