

Sustainability Tracking, Assessment & Rating System – Energy and Climate Call Notes

March 4, 2008

The call began with introductions. We then went through each credit individually. For each credit, people asked questions and provided feedback.

OP Credit 8: Reduction in Energy Intensity

The credit is based on a downward trend in energy intensity. There are shortcomings to using trends, including penalizing schools that have already done a lot to improve the efficiency of their buildings. In light of these shortcomings, AASHE is very interested in suggestions on how to improve this credit.

A caller asked if this credit could be divided according to building classification. When writing the credits, AASHE was initially interested in using the ENERGY STAR portfolio manager program, which sets an efficiency threshold for different types of buildings, but the program didn't cover many types of buildings found on campuses (only office buildings and dormitories were available). Someone noted that changes in standards may pose a challenge as the project moves forward. If anyone has information about building efficiency standards they would like to share, please send it to stars@ashe.org.

Someone asked if energy consumption should include things like transportation fuels and natural gas used to conduct experiments in science laboratories. The credit attempts to measure the energy efficiency of buildings, so transportation fuels should not be included. Since it would be difficult to separate natural gas used for experiments from gas used to operate the building, all natural gas consumed should be included.

Several callers said that the source of electricity should matter, and not just the efficiency of buildings. While electricity from renewable sources is covered in OP Credit 9 and on-site generation from renewable fuels is covered in OP Credit 10, there aren't any credits that specifically recognize the efficiencies and benefits from co-generation facilities. Efficiencies from co-gen facilities would be captured in OP Credit 11: Greenhouse Gas Emissions, but the benefits could get lost in the noise of the credit.

Someone asked if plug load is captured elsewhere in STARS. In addition to this credit, it would be captured with greenhouse gas emissions. There are also credits in the purchasing section that recognize ENERGY STAR and EPEAT purchases.

Some callers suggested that building efficiency should be worth more points since it has such a large environmental impact. Someone suggested using ecological foot-printing to help determine how to allocate points. AASHE is focused on developing strong and meaningful credits now. Once the credits take shape, AASHE and reviewers will turn their focus to how to allocate points to those credits. Ecological foot-print analysis may provide a basis for allocating points. AASHE welcomes feedback on point allocation, both now and as the project progresses.

OP Credit 9: Renewable Electricity

The credit currently allows Renewable Energy Credits (RECs) to count for part of the amount of energy generated. This was a response to feedback suggesting that RECs are generally of less value than on-site or institution-catalyzed renewable energy sources. AASHE is open to suggestions for how to compare on-site renewable sources to RECs.

A participant asked if the thresholds could be adjusted to account for institution size or type. For example, a small, rural campus will have more options for on-site renewable sources than a large, dense, urban campus. AASHE will consider using different thresholds for different institution types based on the results from the pilot.

There was discussion about whether or not renewable sources in the institution's utility's power mix should be incorporated. The credit is intended to recognize schools that are spurring the transition to renewable electricity sources. Schools shouldn't be able to take credit for the power source of their utilities (the utility's fuel mix is captured in greenhouse gas emissions, however). In states with de-regulated energy markets where a customer can choose its provider, a large institutional purchaser can help shift markets by purchasing from a utility with a cleaner fuel mix. A caller suggested that the credit shouldn't apply to schools served by zero-emissions utilities, since developing on-site renewable electricity doesn't reduce the school's greenhouse gas emissions.

A caller suggested adding a more detailed definition of "renewable sources", particularly low-impact hydropower and sustainably produced biofuels. AASHE welcomes suggestions on how to define these renewable energy sources or links to other organizations that have already defined them.

Solar water heaters are not included in this credit since they aren't used to generate electricity. The benefits of solar water heaters would be captured in the energy intensity and greenhouse gas emissions credits. It's difficult to measure the benefits of thermal technologies, including passive solar design, so there aren't separate credits for these strategies.

Institution-catalyzed renewable energy sources that are funded by people purchasing offsets can be included in this credit. The CO₂ reductions should not be counted in the greenhouse gas emissions credit since the institution has sold the carbon reduction.

Institutions will be able to earn credits for conducting research on renewable energy technologies. These credits will be covered in phase two in the Education and Research section.

OP Credit 10: On-Site Combustion with Renewable Fuel

AASHE wanted to base this credit on the percentage of heating and cooling load met with renewable sources so that it would capture the benefits of solar thermal and geothermal technologies. However, since it can be difficult to accurately measure the percentage of heating and cooling load that is met with renewable energy technologies, this credit focuses on using renewable fuel sources for on-site combustion.

A caller asked how energy from an on-site co-generation facility that is powered with renewable sources is measured in STARS. Any electricity or heat generated with renewable sources should be captured in credits 9 and 10 respectively. If a certain percentage of the input in the co-gen facility is from renewable sources, that percentage of heat and electricity generated should be counted, depending on the input's energy content.

There was a good discussion about the number of points and associated thresholds necessary to earn those points for this credit. Several callers suggested adding more gradation to this and other credits in order to recognize improvements. For large schools particularly, the investments and technologies necessary to go from earning two points to three points is very large (50% to 100%). Likewise, it will be challenging for large schools to achieve even the first point, which requires that 15% of on-site combustion come from renewable fuels; the first point should be easier to achieve. A caller suggested having different thresholds for small and large schools. Trying to find a middle ground that works for both types of schools may end up penalizing everyone. Results from the pilot project will inform this discussion. The highest level of points should be rewarded when an institution achieves, or comes very close to achieving, sustainability. While a system with fewer points will be simpler, adding points will enable the system to capture differences, progress, and gradual changes more accurately.

This credit is based on renewable fuel, which may not be the most sustainable way to meet heating and cooling demands, especially for urban campuses. A caller suggested having institutions prove that they are deriving a certain percentage of heating and cooling load from renewable sources, which would allow them to include geothermal and solar thermal. AASHE can't change the credit at this point, but definitely wants to hear about potential improvements – feel free to send suggestions to stars@ashe.org and/or include it in the feedback section when you complete the documentation for the credit.

OP Credit 11: Greenhouse Gas Emissions Reduction

Callers made the following suggestions to change or supplement this credit:

- Add a separate credit for conducting an emissions inventory. It's a significant undertaking for schools and provides an important foundation for making reductions. The credit could include multiple points to recognize schools that include scope two and three emissions in their inventories.
- Consider normalizing per square feet to avoid penalizing growing campuses.
- Have two separate credits: one that includes offsets and one that looks at direct emissions profile without offsets.
- Add additional points to allow for more gradation and recognize schools that are making small changes (it's unrealistic to expect large changes in a short time period).