



CRS

center for
resource
solutions

February 7, 2019

Kristi Wamstad
Director, Technical Development
LEED for Cities and Communities
US Green Building Council (USGBC)

RE: Comments of Center for Resource Solutions (CRS) on the LEED for Cities and Communities: Existing (Beta), dated December 12, 2018, and the LEED for Cities & Communities: Energy & GHG Emissions Working Session on January 23, 2019

Dear Ms. Wamstad,

CRS appreciates this opportunity to submit comments on the December 12, 2018 LEED for Cities and Communities: Existing (Beta) rating system and the Energy & GHG Emissions Working Session held on January 23, 2019. Our comments are limited to the “EN Credit: Clean and Green Power” and the “EN Prerequisite: Energy Performance.” Please feel free to reach out to me at any time with questions about the below comments. CRS would be happy to work with you further.

Background on CRS and Green-e®

CRS is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy. CRS has broad expertise in renewable energy (RE) program design and implementation, and provides technical guidance to policymakers and regulators at different levels on matters related to policy design, renewable energy accounting, tracking and verification, market interactions, and disclosures and consumer protection. CRS also administers the Green-e programs. Green-e is the leading independent certification for voluntary renewable electricity products in North America. For over 20 years, Green-e’s verification procedures have ensured that voluntary purchasers of renewable electricity products receive clear and accurate information from their providers and the full environmental benefits and sole ownership of each megawatt-hour (MWh) purchased. CRS, with oversight by the independent Green-e Governance Board, maintains a stakeholder-driven standard development process. In 2017, Green-e certified retail sales of over 60 million MWh, serving over 1.1 million retail purchasers of Green-e certified renewable energy, including 63,400 businesses.¹

EN Credit: Clean and Green Power

In general, we recommend that this credit be consistent with other LEED green power points, with differences largely limited to the ways in which procurement and accounting for RE might be different for a city/community versus a building, for example. This will make LEED’s approaches to green power more defensible, consistent and impactful.

¹ See the 2017 Green-e Verification Report here for more information: <https://resource-solutions.org/g2017/>.

In addition, we recommend more specific and consistent requirements. As written, the different options may allow for two cities or communities to claim use of the same RE resource. At a minimum, all options should require exclusive ownership and retirement of renewable energy certificates (RECs) to prevent double counting.² All options should meet the criteria in RE100's *Making Credible Renewable Electricity Usage Claims*³ paper and be generally consistent with the GHG Protocol's *Scope 2 Guidance*⁴.

Option 1. Clean Power [1 point]

Cities and communities require more specific requirements than “obtain clean power mix”—how, what, from where, for how long, etc. This option awards 1 point for an EE index score of 50 or higher according to the PEER rating system's “EE Prerequisite: Environmental Performance Disclosure.” While the PEER rating system is outside the scope of this comment period, this option should include additional requirements where they are missing or unclear in the referenced PEER rating system. For example, one of six equally weighted determinants of the EE index score is Source Energy Intensity (SEI), which equals non-renewable energy consumed minus recovered thermal energy (both in MMBtu) over consumption (MWh). It does not specify:

- how to calculate non-renewable energy consumed;
- how to substantiate it (e.g. whether REC retirement is required for renewable electricity consumption claims);
- what data sources are used/acceptable (e.g. utility power source disclosures, public regional grid mixes, product disclosure, etc.);
- what the timeframe is for the mix of delivery;
- other requirements for RE consumption/delivery (e.g. Green-e certification, resource eligibility, facility qualifications); or
- the MWh to MMBtu conversion factor(s) that can/should be used.

Another of the six determinants is CO₂ intensity, which is CO₂e emissions (lbs) times a methane leakage multiplier over consumption in MWh. The PEER rating system does not specify how to calculate CO₂e emissions for electricity consumption under this prerequisite. These are presumably scope 2 emissions, but there are several approaches to calculating scope 2 emissions (location-based vs. market-based), particularly for cities and communities (e.g. aggregate of individual scope 2 emissions of consumers in the city/community vs. an independent calculation of scope 2 emissions based on totals and averages for the city vs. calculation only for city/community operations).⁵ It also does not specify the data sources that can be used (e.g. state power source disclosures, utility-specific emissions factors (e.g. using The Climate Registry's Electric Sector Protocol, the U.S. EPA's eGRID database).

We recommend that detailed requirements/guidance along these lines be provided, or that alternative standards be referenced that include such detailed requirements.

² Internationally often referred to as Energy Attribute Certificates (EACs). Where EACs/RECs are not formally issued and transacted, exclusive and legally enforceable ownership of market-specific renewable generation attributes should be required.

³ See <http://media.virbcdn.com/files/62/53dc80177b9cc962-RE100CREDIBLECLAIMS.pdf>

⁴ See https://ghgprotocol.org/scope_2_guidance. Though this is intended to be applied to corporate GHG accounting and reporting. The high-level accounting methods and principles are broadly applicable to institutional RE procurement and reporting, and reporting for aggregated entities.

⁵ See related comments below on the “EN Prerequisite: Energy Performance” for more information.

Presumably, this is the option that a city would use where it buys green power from a utility. We request clarification as to whether RE procurement through a community choice aggregation (CCA) program and other suppliers that are not traditional electric utilities would also fall under this option. We recommend that additional qualifications be added to this option (e.g. Green-e certification, length of purchasing term, etc.) to match the other options. We recommend that Green-e certification be required for the same reasons as it is included in Option 3. We also request an explanation for why this option can only earn one point, fewer than the other options. Depending on the way the utility program is structured, RE procurement through such a program may be as or perhaps even more impactful to RE development and GHG emissions than the other options.

Lastly on this option, we support the requirement that if the utility sells the RECs, the electricity is considered null, but the option only specifies that it must be discounted from the calculation for CO₂ emissions. It should also be discounted from the SEI calculations.

Option 2. Renewable Energy Procurement [3 points]

Similarly to Option 1, cities and communities require more specific requirements than “incorporate large-scale RE plant.” It appears that this option awards up to 3 points for either:

1. owning or leasing a RE facility (within or outside the city) that is used to serve the city for a period of 15 years; or
2. Power purchase agreements (PPAs) and virtual PPAs (VPPAs) for 15 years with a post-2005 facility where “environmental benefits” (RECs presumably) are retained by the city.

This could be made clearer. But in this case, there do not appear to be any resource or facility qualifications or constraints. Could it be any existing facility? Could it be a large hydropower facility? We recommend that some such qualifications be included to ensure that demand for RE from LEED buildings is making a difference. We also recommend that associated RECs be retained by a city agency or within the city boundaries.⁶ For PPAs and VPPAs, we request clarification whether these can be agreements with the city itself, entities within the city, or either.

We also request clarification as to whether and how this option may be used by cities and communities whose total consumption is small enough that it can be met with a facility smaller than 1 MW. If, for example, a community installs a new facility that is less than 1 MW to meet 100% of its consumption, would it not qualify for this option and the full 3 points available?

We generally support the online date and minimum purchasing terms. We recommend that Green-e certification be included under this option as well for additional consumer protections.

Option 3. Renewable Energy Certificates and Carbon Offsets [2 points]

For this option, we generally support the following (which are consistent with LEED v4 rating systems):

- Up to 2 points for purchasing RECs or offsets from resources that came online since 2005 for at least 10 years, delivered annually;
- RECs must be Green-e Energy certified or equivalent;
- Offsets must be Green-e Climate certified or equivalent; and
- Offsets must be from projects located in the same country.

⁶ Since the “EN Credit: Distributed Energy Resources” credit is being used to calculate a portion of demand met by local renewables under this option (avoiding the need for procurement under this option to cover that demand), then the RECs associated with that DER should be retained as well.

Regarding the equations provided, we have the following comments.

- Based on the calculations and definitions provided, it appears that the “percent of energy addressed” is a percent of nonrenewable consumption—that is, RECs and offsets can only be paired with non-renewables. Please confirm this.
- We recommend that additional information be provided for “equivalent energy purchased through offsets.” Is this the amount of energy whose emissions have been offset? Please clarify how this calculation should be done.
- The denominator in the “%Energy Addressed” equation is unclear or possibly incorrect.
 - If it is intended simply to exclude RE consumed from on-site RE (as in Option 2), we recommend that the language be revised to: “Total energy consumption, MWh - demand met by local renewables in *EN Credit: Distributed Energy Resources*, MWh.” Again, in this case, the RECs associated with those local renewables should be retained.
 - As written, however, it says all purchased RE should be subtracted from the denominator—e.g. when 100% RE is purchased, the denominator is zero. Division by zero is undefined. In this case, we believe the correct equation is rather:

$$\%Energy\ Addressed = 100 \times \frac{(Electricity\ purchased\ through\ RECs,\ MWh + Equivalent\ energy\ purchased\ through\ carbon\ offsets,\ MWh)}{Total\ energy\ consumption,\ MWh}$$

EN Prerequisite: Energy Performance

Accounting for scope 1 and 2 GHG emissions under this prerequisite should generally follow the GHG Protocol Guidance. Since this prerequisite relies on Arc, we recommend that Arc incorporate the GHG Protocol best practices if it does not already. For example, consistent with the GHG Protocol’s Scope 2 Guidance, emissions rates for non-renewable electricity should be “residual mix” data, where available.

To the extent that “EPA regional grid mix coefficients” (we assume this refers to eGRID emissions factors) and hourly emissions profiles from EPA’s Avoided Emissions and Generation Tool (AVERT) are both allowed as data sources, they are not equivalent alternatives. In particular, AVERT, which yields avoided grid emissions estimations, should not be used for scope 2 accounting. Scope 2 accounting should be “attributional” accounting for the direct emissions associated with purchased generation (market-based) and generation located in the region of consumption (location-based).

We recommend that additional information and requirements be provided to cities and communities for this prerequisite, principally concerning the different approaches to scope 2 accounting by cities. First, there is an important distinction between market-based and location-based accounting. Market-based accounting would allow the use of utility-specific emissions factors, CCAs, and city/individual procurement of RE, and it would include the use of residual mix emissions factors which take into account the specific purchasing of others in a grid region. If you allow cities to choose either the market-based or location-based approach, there will be double counting between those using different approaches and they will not be comparable. RECs should be required to use a market-based emissions factor that reflects use of RE.

Second, within the market-based method for scope 2 accounting, this prerequisite should provide guidance on whether cities should attempt to aggregate all voluntary activity/purchasing decisions and

scope 2 emissions in the city, or calculate a city-wide average scope 2 figure. If the latter, the prerequisite should be clear that this does not reflect individual purchasing decisions by city residents and businesses.

We would be happy to discuss these comments in greater detail and provide additional support for the LEED for Cities and Communities rating system.

Sincerely,

A handwritten signature in black ink, appearing to read 'Todd Jones', with a stylized flourish at the end.

Todd Jones
Director, Policy and Climate Change Programs