



MEMORANDUM

REQUEST FOR ACTION

2101 L St NW
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www.usgbc.org

Circular Products Pilot Credit

Applicable Rating Systems & Versions

- BD+C v4, v4.1 -- YES
- ID+C v4, v4.1 -- YES
- O+M – V4 -- YES
- Residential v4, v4.1 – YES

1 Point

Intent

To reward project teams for selecting products that support the circular economy. To reward products that are manufactured with zero waste, designed to be cycled multiple times through repair or remanufacturing, and are recovered at the end of their useful life to be remade into new products. To not duplicate other attributes of product circularity that are captured in other credits in LEED, such as recycled content percentage, Extended Producer Responsibility programs, construction waste reduction, and building materials salvage/reuse.

Requirements

Use at least 5 permanently installed products from 3 manufacturers that demonstrate achievement of at least one of the circular product reports listed below. No more than four products can come from one category of criteria below. Products that satisfy more than one criterion cannot be double counted.

Supply Chain Circularity

- Recycled Content Disclosure: For products that include recycled content (pre- or post-consumer), the manufacturer has published additional details about the former source(s) of the recycled content:
 - Disclose the amount of recycled content, pre- and post-consumer. For the credit purposes, pre-consumer materials must originate from sources other than the final product manufacturer, such as materials traded between companies or industries.
 - Disclose what specific product the recycled material(s) were used in last. If they were sourced from more than one product, include percentages from each product type. Estimates, industry averages, or ranges are not acceptable.
 - Disclose the location (country, state or province) that the waste products were collected from.



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- Disclose the location of the facility (country, state or province) where waste was processed or converted into usable recyclable material or feedstock.
- Valuation: Products with less than 10% recycled content: value at ½ product
- Products with 10% or more recycled content: value at 1 product.
- Safe & Circular: Manufacturers of products that contain specific types of recycled content shall provide a lab analysis of the recycled content that tests for common contaminants. The specific types of recycled content materials are: glass cullet, wood fiber, plastics, polymers, asphalt, metals (aluminum, copper and steel) and ground rubber.
 - Disclosure: products with report that discloses the content levels of common contaminants, value at 1 product.
 - Optimization: products with a lab analysis of the recycled content that tests and shows acceptable levels of the common contaminants are present in the final product. Acceptable levels are below detectable levels or below the levels required for the same product made of virgin materials. Value at 1.5 product.

Zero Waste Manufacturing

- Select products manufactured in a facility that reduces waste throughout the manufacturing process and is third party verified to divert 90% or more of all waste from landfill and incineration. Value at 1 product. Acceptable certifications are:
 - GreenCircle Zero Waste to Landfill
 - NSF Landfill-Free verification
 - TRUE Zero Waste (any certification level)
 - UL 2799

Designed for Circularity

- Select products that have been designed for disassembly, repair, or reuse at the end of use and for which the manufacturer has provided detailed information on maintenance, reuse, disassembly and recovery options. Specifically, the product must be designed to be easy to separate, without destruction of components, and all necessary instructions for maintenance in-use and cycling at end of use are indicated or attached to the product or otherwise available to subsequent owners of the building. The following reports and certifications can be used to meet these requirements if they include all relevant information:
 - Valuation: Compliant reports are valued at 1 product.



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- Manufacturer has published a public type III EPD that includes an analysis of the lifecycle impacts from cradle to grave, including the recovery and disposal phases. The report must include LCA Stages for end of life modules and any relevant benefits or loads beyond the system boundaries. The product must also have publicly available instructions for how to take back, re-use, disassemble, or recover materials at end of use.
- The product has achieved Cradle to Cradle v3 Gold certification in the Materials Reutilization category and has published a nutrient management strategy that includes instructions for how to disassemble, reuse, or recover materials at end of use.

Closed Loop Products

- Verified closed loop product: Products have been third party verified for recovering and recycling materials at the end of useful life. The manufacturer has an established process and system to take back their products for reuse and recycling into the same or similar products within the manufacturing operation.
 - Certified [Closed Loop](#), GreenCircle, value at 1.5 product.
 - The product has achieved Cradle to Cradle v3 Platinum certification in the Materials Reutilization category and has published a nutrient management strategy that includes active nutrient cycling. Value at 1.5 product.
- Products-as-a-service: Select permanently installed products that are contracted through a products-as-a-service model and include take-back and cycling of the product at the end of use.
 - Value at 1 product for every service contracted as a product-as-a-service agreement with a manufacturer.
- Refurbished or remanufactured products: Select permanently installed products that are refurbished or remanufactured. Qualifying products must be purchased directly from a manufacturer or refurbisher. Value at 1 product.

Documentation:

Provide links or PDF copies of compliant reports. All reports must be valid at the time of product specification, purchase, or installation. See below for additional documentation guidance for each report type.

Supply Chain Circularity

- Recycled Content Disclosure: For a permanently installed building product, provide the recycled content type, percentage, recovered material category, place of recovery, and place of processing for all recycled content in the product. Documentation can be a



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certificate or letter from manufacturer that clearly states the individual product, its recycled content, and appropriate disclosures.

- Pre and post-consumer are both considered the same weighting for credit valuation purposes (pre-consumer is not considered ½ value of post-consumer).
- Percent recycled content is the mass of recycled content, pre- and post-consumer, found in the finished product.
- Pre-consumer must not originate from the same product manufacturer. Materials must originate from sources other than the final product manufacturer, such as materials traded between companies or industries.
- **Safe & Circular:** For products that contain the following recycled content, provide summary report derived from lab analysis of the recycled content that tests and shows levels of the following common contaminants:
 - Recycled glass cullet - Lead, mercury, cadmium, and hexavalent chromium.
 - Recycled wood fiber - formaldehyde, copper, hexavalent chromium, arsenic, creosote, methyl bromide, pentachlorophenol, and antimicrobials.
 - Recycled plastics & polymers – organotins; ortho-phthalates; mercury; lead; cadmium; flame retardants (antimony trioxide, TBPH, PentaBDE, and PCBs); nonylphenol. phosphite; per and poly fluorinated alkyl substances (PFAS); triclosan.
 - Reclaimed asphalt pavement and shingles - polycyclic aromatic hydrocarbons (PAHs), Lead, mercury, cadmium, asbestos.
 - Ground rubber - lead, PAHs, ortho-phthalates, volatile organic compounds (VOCs).
 - Metals - lead, mercury, cadmium, arsenic, and hexavalent chromium.
- For products that can prove their products have recycled content with acceptable levels of the common contaminants in the final product, provide a summary report derived from lab analysis showing:
 - Detectible levels (if present) of contaminants.
 - Results of undetectable contaminants.
 - Levels are below those required for the same product made of virgin materials. Manufacturer must provide a reference and/or link to relevant standards showing limits for contaminants in virgin materials.



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- Lab test results must be conducted in intervals that result in accurate measurements of contaminant levels likely to be found in the final end use product. Lab test reports and/or disclosure summaries must describe how the results from the analysis are accurate, especially when recycled content feedstocks come from different vendors, in different batches, or originate from a variety of recycled products/materials.
- Compliant product reports can take a form appropriate to the manufacturer so long as all the required information is provided. Reports could also be provided through an annotated HPD or other appropriate format.

Zero Waste Manufacturing

- Manufacturers are rewarded for minimizing the generation of waste during the manufacturing process of end use products. Strategies to minimize waste include: the redesigning of products so they generate inherently less waste during manufacturing; the reduction of waste at the source; working with suppliers to switch to reusable packaging and shipping containers; finding on-site ways to compost or divert waste to other uses with the manufacturing process; and working with external parties to find uses for waste products. Finally, the remaining waste is diverted from landfill or incineration through recycling, composting, or other offsite diversion strategies.
- Provide a product certificate indicating the product was manufactured in a facility that has been certified with more than 90% diversion of waste from landfills or incineration. Eligible certificates include third party verified labels from TRUE Zero Waste, UL 2799, GreenCircle Zero Waste to Landfill, or NSF Landfill-Free.
- Some certifications do not list the amount of waste diverted from the manufacturing facility, or they do not list the amount of waste that goes to incineration or landfill. Eligible products must provide this information, have it third party verified, and be publicly available.
- Certificates must be valid at the time the product was selected for use in the project.

Designed for Circularity

- Provide a compliant product report (EPD, Cradle to Cradle certificate, or other product certification) and an accompanying report or certificate that includes all the following elements:
 - Narrative or infographic describing how the product has been designed for circularity (disassembly, repair, or reuse). A circular designed product must include strategies that allow for greater ease in take-back, reuse, disassembly or repair at end of use.



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- Instructions for handling, disassembling, or returning the product to the manufacturer or a recycler at end of use. This information must be permanent, publicly available and/or somehow indicated on the product in a way that is transferrable from owner to owner. Examples include products with a website or phone number printed on the underside that instructs where to go for recovery options; have a QR code for finding information on circularity at end of use; RFID tags affixed to the product for traceability; digitization of product circularity information for use in BIM; and/or have labeling similar to the [How2Recycle](#) standardized labeling system.
- Products designed for circularity are those that are intended to be recovered and cycled in ways that maintain the highest value of the product and is not the same as a product recycling program or Extended Producer Responsibility program.
- Products designed for circularity must also include information about the product composition that may hinder cycling, such as harmful substances, health risks, etc.
- Products designed for circularity are intended to remain with the building and be a resource for material banking, such as through initiatives like the EU [Buildings As Materials Banks](#) program.
- Compliant Products:
 - EPD: Provide the product EPD report that includes all necessary impacts, including LCA stages for modules C1-C4 and D. All the stages must be included in the LCA analysis results per functional unit. Include a manufacturer provided public report that includes instructions for how to take back, re-use, disassemble, or recover materials at end of use. The instructions for recovery are likely not part of the EPD report and are a separate attachment.
 - Cradle to Cradle Certified Products: Provide link or PDF of the Cradle to Cradle certification that shows Gold level for the Materials Reutilization category.
 - Provide a link or PDF of the product nutrient management strategy. Manufacturers can provide a summary report rather than the full strategy and may withhold confidential business information in the published report.

Closed Loop Products

- Provide link or PDF of third party verified Closed Loop certification from Green Circle.
- Provide link or PDF of the Cradle to Cradle certification that shows Platinum level for the Materials Reutilization category.
 - Provide a link or PDF of the product nutrient management strategy that also includes a description of the product active cycling program. Manufacturers



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can provide a summary report rather than the full strategy and may withhold confidential business information in the published report.

- Provide proof of contractual service from a provider that leases products as a service. Include supporting documentation that includes how the manufacturer will take-back and cycle products at the end of the contract term.
 - Note: A service agreement will likely cover several individual components but will only be counted as one “product.” For example, if office lighting is contracted as a service, the whole contract will count as 1 product, even if that includes lamps, ballasts, housing, and fixtures.
- Provide proof of purchase of refurbished or remanufactured products. These must be purchased directly from a manufacturer or refurbisher, and cannot be donated/free, from a salvage organization, donation center, or re-seller (those strategies are captured under other LEED credits).

Pilot Credit Survey Questions:

- How many products did you have to purchase to meet the credit threshold? From how many companies?
- Which criterion were the most difficult to find compliant products?
- Why did you choose the products and circularity reports that you did?
- Did this PC provide opportunities to learn more about the products selected for your building? If so, how did the Pilot Credit inform your selection of the same or similar products in the future?
- Are there additional programs or services this PC should add to the credit?
- What did you find confusing or unclear in the PC with regard to selecting compliant products?