MINUTES
GBI Consensus Body for New Construction- Call #3
Webinar/Teleconference
March 8, from 1:00 to 3:00 p.m. ET

NOTE ALL TIMES ARE EASTERN TIME

Consensus Body Members in Attendance

Full Name	Company	3/8/23	3/1/23	10/13/22
Senthil Arunachalam	BTU Engineers, LLC	N/A	N/A	X
Jeff Bradley	American Wood Council	X	X	X (arrived late)
Karen Butler	EPA, Office of Air and Radiation	X	X	X
Virgil Campaneria (Chair)	Gurri Matute PA	X	X	X
Michael Cudahy	PPFA - PPEF	X	X	X
Larry Eisenberg	Ovus Partners 360	X (Proxy Shymko)	X	X
Ashley Eusey	Hoefer Welker	X	X	X (arrived late, left early)
Tehmina Husain	Merrick and Company	X	Absent	Absent
Josh Jacobs	WAP Sustainability	Absent	Absent	X
Michael Lehman	ConTech Lighting	X	X	X
John Mullen	IAPMO	X	X	X
James O'Brien	Independent Environmental Consultant	X	X	X
Thomas Pape	BMP (representing AWE)	N/A	N/A	Absent
Max Puchtel	American Institute of Steel Construction	Absent	X (left early)	X
Jane Rohde	JSR Associates, Inc. (representing RFCI)	Absent	X	Absent
Gord Shymko	G. F. Shymko & Associates Inc.	X	X	X
Stephen Szoke	American Concrete Institute	X	X	X

Angela Tin	American Lung Association	X	X (Proxy O'Brien)	X

Voting Alternates in Attendance

Full Name	Organization	3/8/23	3/1/23	10/13/22
John Cross	American Institute of Steel Construction	X		

Interested Parties in Attendance

Full Name	Organization	3/8/23	3/1/23	10/13/22
Rob Brooks	Rob Brooks Associate			X
Ron Burke	Alliance for Water Efficiency	X		
Steve Kooy	BIFMA			X
Viken Koukounian	K.R. Moeller Associates Ltd.	X		
Matthew Lemay	NRMCA			X
Julian Mills – Beale	NRMCA	X		

Staff in Attendance

Full Name	Organization	3/8/23	3/1/23	10/13/22
Emily Marx	Secretariat, GBI	X	X	X
Sara Rademacher	Staff, GBI	X	X	X

Roll Call & Welcome

Secretariat Emily Marx welcomed everyone to the meeting, reviewed the GBI Anti-Trust Policy, Code of Conduct policy and notified participants that the call was being recorded for the purpose of preparing minutes. No objections or concerns were raised.

Marx reviewed the Consensus Body for Existing New Construction roster and noted the three interest categories, General Interest, Producer, and User. She stated that there is balance on the Consensus Body for New Construction.

Administrative Items

Chair Virgil Campaneria thanked everyone for attending the meeting. Campaneria reviewed the agenda and asked if anyone had any comments or concerns. There were no comments or concerns.

MOTION: A Motion was made, seconded, and carried unanimously to approve the agenda as presented.

Ashley Eusey joined the meeting.

General Comment Review

CB101
Proposed Revision: 3. NOT APPLICABLES
~~3.1 Not Applicable Criteria~~
Reason: Not necessary
Discussion took place on the editorial revision:

- There were no comments or objections with the editorial revision.

CB102
Proposed Revision: Make ft.^{2} or ft^2 consistent.
Discussion took place on the editorial revision:

- There were no comments or objections with the editorial revision.

Project Management Public Comment Review
The Project Management Subcommittee Chair reviewed each proposed review or public comment before placing a motion.

NCPoints102
Proposed Revision: 6.1.1.1 Performance and green design goals (qualitative AND/OR quantitative) are established in collaboration with the owner in writing and are regularly assessed from pre-design through to completion of construction and occupancy for the following listed items:
• Site design;
• Environmentally responsible construction activities;
• Biophilia and occupant enrichment
• Water conservation, efficiency, alternate water sources, and reuse;
• Building envelope and moisture control;
• Energy efficiency;
• Materials including:
o Efficiency;
o Environmentally preferable products; and
o Storage of hazardous materials;
• Indoor environment including:
o Acoustic comfort;
o Thermal comfort;
o Lighting;

o Air quality; and
• Building resilience.

Assessment criteria:
Pre-design written goals
Design stage review and assessment of goals prior to:
• Conceptual design phase
• Design development phase
• Construction documents
Construction stage review and assessment of goals at:
• Pre-construction
• 25% completion of budget or schedule
• 50% completion of budget or schedule
• Substantial completion
Occupancy assessment of goals:
• Owner obtains a contract for Facility Performance Evaluation or Post-Occupancy Study to evaluate how the building meets the original and emerging goals and requirements within 18 months of being occupied.

Maximum = 20 points
• One point is earned for each written performance and green design goal for listed items at pre-design to a maximum of ~~eight~~ nine points.
• One point is earned for evidence of each design stage review and assessment of goals prior to:
o Conceptual design
o Design development
o Construction documents.
• One point is earned for evidence of each construction stage review and assessment completed at:
o Pre-construction
o 25% completion
o 50% completion
o Substantial completion
• Four ~~five~~ points are earned for a written plan and contract for post-occupancy review and assessment.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 1 abstained.

Abstain: Mike Cudahy

NC102-1

Public Comment: 6.1.1

- Site design;
- Historic Preservation
- Environmentally responsible construction activities;
- Water conservation, efficiency, alternate water sources, and reuse;
- Building envelope and moisture control;
- Energy efficiency;
- Materials including:
  - o Efficiency;
  - o Environmentally preferable products; and
  - o Storage of hazardous materials;
- Indoor environment including:
  - o Acoustic comfort;
  - o Thermal comfort;
  - o Lighting;
  - o Air quality; and
- Building resilience

6.1.2.1

Include historic preservation in the list of job functions

Reason: There is no mention of historic preservation in this standard. Integrated Design and Management, one of the Guiding Principles for Sustainable Federal Buildings, requires federal agencies to protect all historic and cultural resources in the operation and maintenance of buildings. As this standard does not mention historic preservation at all, federal agencies would not be able to use this standard to assess whether they meet one of the federal government's building performance requirements.

Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: Historic preservation is covered under various government regulatory requirements and adherence to those requirements is not within the purview of the standard.

MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.

Discussion took place on the Motion:

- There was discussion on other codes or requirements for historically preserved buildings.
- It was argued that historic presentation doesn't have to be tied to law.
- It was asked if anything is mandated on the federal guidelines that would affect a New Construction certification. Different aspects of historic preservation and building updates were discussed.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NC102-12

Public Comment: 6.1.3.1 Building Risk Assessment:
Suggest adding text that clarifies future risk must be assessed using climate change-informed projections (not historical trends).
Reason: Historical trends are not a good indicator of potential future risks.

e.g., see https://www.technologyreview.com/2021/12/13/1041309/climate-change-rising-groundwater-flooding/ for an example of problems caused by rising groundwater; sinking water tables can cause land subsidence; sea level rise can make groundwater more saline
Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: The current definition of risk assessment is sufficiently robust, already addressing climate change as well as flooding. Additional detail on the risk assessment methodology is deemed as unnecessary.
MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.
Discussion took place on the Motion:

- There was discussion on mapping and the public commenter's intent. It was argued that new maps are released by different entities and could be used to complete this criterion.
- It was argued that GBI shouldn't be too prescriptive, and this proposal would restrict projects when they should be able to use various tools to complete the criteria.

VOTE: The Motion carries with 11 in favor, 1 opposed, 1 abstained.
Opposed: Steve Szoke
Abstention: Karen Butler

NC102-11
Public Comment: Resilience "the ability to withstand and recover rapidly from adverse events ~~and to adapt to changing environmental conditions~~."

Add a new definition for adaptation:

Adjustment in natural or human systems to a new or changing environment that exploits beneficial opportunities or moderates negative effects.
Reason: Adaptation is distinct from resilience; while there is overlap, they have different goals and require different strategies. Suggest removing "to adapt to changing environmental conditions" from the definition for resilience and adding a definition for adaptation. The National Climate Assessment defines adaptation as "Adjustment in natural or human systems to a new or changing environment that exploits beneficial opportunities or moderates negative effects."

Christopher Flavelle in the New York Times ("Searching for Hidden Meaning in Climate Jargon," 10/31/21) differentiates between the two this way:
"[Adaptation] is sometimes used interchangeably with resilience, but the terms have important differences. Resilience means maintaining a way of life, but with better protection; adaptation means

changing a way of life that is becoming too hard to sustain. Think of protecting a beach town from hurricanes with a seawall (resilience), versus helping people move somewhere else (adaptation)."
Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: The proposed definition expands the intent of the criteria and definition is not compatible with the use of the term within the draft standard.
MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NC102-5
Public Comment: 6.2.1.1.4 A construction management policy for protecting the indoor air quality during construction is developed and continuously implemented by the project team. This plan prohibits smoking within 25 ft. (7.62 m) of the building perimeter and construction zone during the construction phase.

o Smoking is defined as the inhalation of smoke from burning tobacco, use of electronic-cigarettes, or other substance encased in items such as, but not limited to, cigarettes, pipes, and cigars for recreational or medical use.
Reason: Outside of preventing tobacco smoke from penetrating the building perimeter, there is no other mention of protecting the project's indoor air quality during construction. This is included in the Guiding Principles for Federal Sustainable Buildings.
To meet the Guiding Principles, agencies would need to ensure they develop and implement a plan or policy for protecting IAQ during construction for not only tobacco smoking, but all other potential IAQ contaminants during construction.
Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: 6.2.1.1.4 deals with smoking and this topic is already addressed in 6.2.1.1.1, "Includes policies and practices that support the health of humans and site-environment during construction."
MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NC104-1, NC104-2
NC104-1 Public Comment: Do we need to state which software can be used for providing the LCCA? Should points be awarded depending on the number of options reviewed for the project? This seems pretty open ended the way it is written.

NC104-1 Reason: Keep consistency in submissions as well as verify the accuracy of what is being submitted. It also keeps it fair so that a project that submits multiple items gets more points than a project that just does one.
NC104-1 Recommended Response: Thank you for your comment. Your comment has been acknowledged. However, software is continually changing and trying to state any specific software within the standard would be restrictive.

NC104-2 Public Comment: Do we need to state which software can be used for providing the moisture analysis
NC104-2 Reason: Keep consistency in submissions as well as verify the accuracy of what is being submitted
NC104-2 Recommended Response: Thank you for your comment. Your comment has been acknowledged. However, software is continually changing and trying to state any specific software within the standard would be restrictive.
MOTION: The Motion was made and seconded to acknowledge the comments NC104-1, NC104-2, and reply with the proposed responses.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NCPM103, NCPM104
NCPM103 Proposed Revision: 6.5.1A.1 Commissioning and building operator training is conducted in accordance with ANSI/ASHRAE/IES Standard 202–2018, Commissioning Process for Buildings and Systems, ~~and~~ ASHRAE Guideline 0-2019, The Commissioning Process, ~~and~~ or CSA Z320-11, Building commissioning for the following building systems as applicable. Alternatively, ASTM E2813-18 Standard Practice for Building Enclosure Commissioning and ASTM E2947-16a Standard Guide for Building Enclosure Commissioning meet this requirement for the building envelope.
6.5.1B.1 Produce a systems manual in accordance with ASHRAE Guideline 0-2019, The Commissioning Process, Informative Annex O – Systems Manual, Sections 4 to 10, inclusive or CSA Z320-11, Building commissioning.
6.5.1B.2 Conduct systems training in accordance with ASHRAE Guideline 0-2019, The Commissioning Process, Informative Annex P – Training Manual and Training Needs or CSA Z320-11, Building commissioning.
NCPM103 Reason: Client Feedback

NCPM104 Proposed Revision: CSA Canadian Standard Association

MOTION: The Motion was made and seconded to accept the proposed revisions (NCPM103, NCPM104).
Discussion took place on the Motion:

- It was argued that CSA should be added to the Acronym list, which was stated as Canadian Standard Association.
- A member noted that CSA is already accepted/recognized by various states.
- There was discussion on whether it should be an 'or' instead of an 'and.' There was agreement to change 'and' to 'or' in the proposal for 6.5.1A.1.

VOTE: The Motion carries with 13 in favor, 0 opposed, abstained.

Water Public Comment Review

The Secretariat reviewed each proposed revision.

NCWater101

Proposed Revision: 9.2.1.1 Cooling towers are ~~equipped~~ designed to be in conformance with Section 6.3.2.3 HVAC Systems and Equipment of ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2020. ~~with conductivity controllers and minimize the amount of makeup water required by achieving one of the following:~~

~~• A minimum of 5 cycles of concentration for makeup water having less than or equal to 200 ppm (200 mg/L) total hardness as calcium carbonate or 3.5 cycles for makeup water with more than 200 ppm (200 mg/L) total hardness as calcium carbonate;~~
~~OR~~
~~• A minimum discharge conductivity of 1500 micromhos/cm or a maximum of 150 ppm (150 mg/L) of silica measured as silicon dioxide.~~

~~Maximum =~~ 7 points or N/A
~~• Four points are earned where a conductivity controller is installed, and cooling towers achieve the respective threshold cycles of concentration.~~
~~• Three points are earned when either;~~
~~o 6 cycles are achieved where the tower target performance metric is defined in 9.2.1.1 as 5; OR~~
~~o where 4.5 cycles are achieved where the target performance metric is defined in 9.2.1.1 as 3.5 and these cycles of concentration are sustained while maintaining the defined threshold water quality parameters in 9.2.1.1.~~
• Not applicable where there are no wet-cooling towers.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- It was argued that the consolidation of the requirements to just one standard should not be done within a Green Globes certification.

VOTE: The Motion carries with 10 in favor, 2 opposed, 1 abstained.

Opposed: Jeff Bradley, John Cross
Abstain: Steve Szoke

NCWater115

Proposed Revision: Not applicable where there are no wet-cooling towers.
MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NCWater104, NCWater103

NCWater104 Proposed Revision: 9.4.1.2 The following appliances and fittings meet the prescribed limits for water usage:

• 9.4.1.2.1: Combination ovens consume 1.5 gal per pan/hr. (39 L/hr.) or less in the steamer mode.
o N/A where there are no combination ovens;
• 9.4.1.2.2: Pre-rinse spray valves consume 1.28 gal/min (4.8 L/min) or less;
o N/A where there are no pre-rinse spray valves.
• 9.4.1.2.3: Boilerless/connectionless food steamers comply with ENERGY STAR 1.2 requirements and consume 2 gal/hr./compartment (7.5 L/hr.) or less.
o N/A where there are no food steamers;
• 9.4.1.2.4: Commercial dishwashers comply with ENERGY STAR2.0 requirements. Rackless flight-type dishwashers consume 160 gal/hr. (605.7 L/hr.) or less.
o N/A where there are no dishwashers; and
• 9.4.1.2.5: Ice Makers comply with ENERGY STAR 3.0 requirements where such requirements exist.
o N/A where there are no ice makers.
NCWater104 Reason: Add N/A?

NCWater103 Proposed Revision: Maximum = ~~3~~ 5 points or N/A
• One point is earned where each listed appliance or fitting meets the specified water usage limits ~~up to a maximum of 3 points~~.
• Not applicable where the listed appliance or fitting is not present.
NCWater103 Reason: Very complicated and not user friendly in the online system.
MOTION: The Motion was made and seconded to accept the proposed revisions (NCWater104, NCWater103).
Discussion took place on the Motion:

- There was a question on whether this is mandatory, and it was noted that projects can select N/A if they don't use these applications.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NCWater122
Proposed Revision: 9.4 WATER INTENSIVE APPLICATIONS (~~19~~ 21 POINTS)
MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 1 abstained.
Abstain: Ashley Eusey

NCWater124
Proposed Revision: 9.4.3.1 Self service clothes washers ~~meet the prescribed Integrated Water Factor (IWF) performance as follows:~~

~~• Clothes washers~~ have an Integrated Water Factor (IWF) of 4.3 or less and comply with ENERGY STAR 8.0 requirements.

2 points or N/A
~~• Two points are earned where all machines comply with the specified water factor.~~
• Not applicable where there are no clothes washers.
Reason: Clean up of text
MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:
- There was no discussion.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NCWater116, NCWater117, NCWater118, NCWater119, NCWater120, NCWater121
NCWater116 Proposed Revision: 9.9 IRRIGATION (~~27~~ 25 POINTS)
9.9.1 Irrigation
Two paths are provided for assessing a project's irrigation.
• 9.9.1A Path A: No irrigation system is installed: 25 points
OR
• 9.9.1B Path B: An irrigation system is installed: 25 points
Points cannot be combined between paths. Select one of the paths below.

NCWater117 Proposed Revision: 9.9.1A NO IRRIGATION SYSTEM IS INSTALLED
9.9.1A.1 No irrigation system, or a temporary system that is dismantled after one year, is installed. 25 points
OR

NCWater118 Proposed Revision: 9.9.1B IRRIGATION SYSTEM IS INSTALLED
9.9.1B.1 ~~No irrigation system is installed.~~
~~OR~~
Use the EPA WaterSense Water Budget Tool to determine landscape water allowance (LWA) and the landscape irrigation design and installation aligns with the allowance.
Exclusion: The area of the landscape used to grow food for human consumption is not included in the calculations.

Maximum = ~~16~~ 14 points ~~or N/A~~

~~• Sixteen points are earned only where there is no irrigation system.~~

• Six points are earned when there is a 30% reduction in water demand compared to the baseline as determined by the EPA WaterSense Water Budget Tool.

• One point is earned for each additional 5% reduction in water demand above 30% to a maximum of an additional ~~9~~ 8 points.

~~• Not Applicable where there is no landscaping or the landscaping has no vegetation.~~

NCWater119 Proposed Revision: 9.9.1B.2: An irrigation plan is developed by a certified/licensed irrigation designer for the approved landscape plan that shows calculations for landscape water requirements compared to the LWA.

Maximum = 4 points ~~or N/A~~

• Four points are earned where there is an irrigation plan.

~~• Not applicable where there is no landscaping, the landscaping has no vegetation, or where no irrigation system is installed.~~

NCWater120 Proposed Revision: 9.9.1B.3 The irrigation system includes the following:

• 9.9.1B.3.1: WaterSense labeled weather-based irrigation controller, WaterSense labeled bypass soil moisture sensors, on-demand soil moisture sensor, AND/OR automatic rain shutoff devices;

• 9.9.1B.3.2: Pressure regulation for each zone to maintain proper operating pressures for landscape irrigation sprinklers or drip components;

• 9.9.1B.3.3: Drip irrigation on all planting beds where mature plant height is 10 in. (25.4 cm) or greater AND/OR in any planted area with a dimension less than 5 ft. (1.5 m) in any direction;

• 9.9.1B.3.4: Flow sensing incorporated in the control system to suspend irrigation in any zone where flows exceed expectation; AND/OR

• 9.9.1B.3.5: Landscape irrigation sprinklers and drip emitters that comply with ASABE/ICC 802-2020 Landscape Irrigation Sprinkler and Emitter Standard.

• 9.9.1B.3.6: Spray sprinkler bodies are WaterSense labeled.

Maximum = 5 points ~~or N/A~~

• One point is earned for each of the listed features included in the irrigation system up to a maximum of 5 points.

~~• Not applicable where no irrigation system is installed.~~

NCWater121 Proposed Revision: 9.9.1B.4: Sprinkler system is inspected for proper installation of all components specified on the irrigation plan and to assure that there is no runoff or overspray onto impervious surfaces.

Maximum = 2 points ~~or N/A~~

• Two points are earned where there is a sprinkler system inspection.

~~• Not applicable where no irrigation system is installed.~~

MOTION: The Motion was made and seconded to accept the proposed revisions to the Irrigation Section (NCWater116, NCWater117, NCWater118, NCWater119, NCWater120, NCWater121).

Discussion took place on the Motion:

- An assessor noted that this is a change that will greatly benefit projects and is fixing an issue that has been a problem in the past.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

Energy Public Comment Review

The Energy Subcommittee Chair reviewed each proposed revision or public comment before placing a motion. The Chair reviewed the extensive changes proposed to 8.1.1 Assessing Energy Performance, including the changes to Path A, ASHRAE 90.1 and new pathways for ENERGY STAR, ASHRAE EQ, and Net Zero Carbon or Energy certification. He argued that the points are aligned as well as possible to discourage gaming by projects.

NCEnergy111, NCEnergy112, NCEnergy113, NCEnergy101, NCEnergy109, NCEnergy110

NCEnergy111 Proposed Revision: ~~Three~~ Five paths are provided for assessing energy performance. ~~Path A and Path B~~All paths provide a maximum of 180 points out of 180, ~~and~~ except for Path ~~C~~ E, which provides a maximum of 111 points out of 180. Select one of the paths below. Points cannot be combined between paths.

• 8.1.1A Path A: Performance - ANSI/ASHRAE/IES Standard 90.1-2010, Appendix G or ANSI/ASHRAE/IES Standard 90.1-2013, 90.1-2016, or 90.1-2019: Up to 180 points

OR

• 8.1.1B Path B: Performance - ENERGY STAR Benchmarking: MURBS and Offices: Up to 180 points

OR

• 8.1.1C Path C: Performance – ASHRAE Building EQ: Up to 180 points

OR

• 8.1.1D Path D: Performance- Net Zero Carbon or Energy Certification 180 points

~~• 8.1.1B Path B: Performance - Building Carbon Dioxide Equivalent (CO_2e) Emissions: 180 points~~

OR

• 8.1.~~1C~~ 1E Path ~~C~~E: Prescriptive: Up to 111 points

NCEnergy111 Reason: Update numbering/lettering of Path E, Prescriptive

NCEnergy112 Proposed Revision: 8.1.1A PATH A: ANSI/ASHRAE/IES STANDARD 90.1-2010, APPENDIX G OR ANSI/ASHRAE/IES STANDARD 90.1-2013, 90.1-2016, OR 90.1-2019 (180 POINTS)

8.1.1A.1 The building complies with minimum performance based requirements of ANSI/ASHRAE/IES Standard 90.1-2010 or the 2012 IECC;

AND

The building demonstrates an improvement over an ANSI/ASHRAE/IES Standard 90.1-2010 Appendix G baseline ~~using Appendix G~~ through the use of ~~a~~ whole-building energy modeling ~~simulation program showing energy cost savings~~.

OR

The proposed building complies with the minimum performance-based requirements of either ANSI/ASHRAE/IES Standard 90.1-2013, 90.1-2016, or 90.1-2019, or the 2015, 2018, or 2021 IECC.

AND

The proposed building demonstrates an improvement over an estimated ANSI/ASHRAE/IES Standard 90.1-2010 Appendix G baseline through the use of whole-building energy modeling in accordance with Appendix G for either ANSI/ASHRAE/IES Standards 90.1 2013, 2016, or 2019, utilizing the Green Globes® Energy Baseline Translator™ to estimate the ANSI/ASHRAE/IES Standard 90.1-2010 Appendix G baseline.

~~• Energy cost calculations may include price components based on time of day and demand if these are available. Credit for demand-saving measures, cogeneration, and energy storage may be claimed by utilizing rate schedules that reflect the billing rates in effect for the local utility, rather than using EIA state average utility rates.~~

Maximum = 180 points

• One hundred eighty points are earned for a ≥45% improvement over the baseline.
• One hundred sixty points are earned for a ≥40% to <45% improvement over the baseline.
• One hundred forty points are earned for a ≥35% to <40% improvement over the baseline.
• One hundred twenty points are earned for a ≥30% to <35% improvement over the baseline.
• One hundred points are earned for a ≥25% to <30% improvement over the baseline.
• Eighty points are earned for a ≥20% to <25% improvement over the baseline.
• Sixty points are earned for a ≥15% to <20% improvement over the baseline.
• Forty points are earned for a ≥10% to <15% improvement over the baseline.
• Twenty points are earned for a ≥5% to <10% improvement over the baseline.
• No points are earned for a <5% improvement over the baseline.

~~• One hundred eighty points are earned where the project achieves a level of 45% improvement over the baseline.~~
~~o Four points are earned for every 1% improvement up to 45% improvement over the baseline for a maximum of 180 points.~~
~~o No points are earned where the building complies only with the minimum performance based requirements of either ANSI/ASHRAE/IES Standard 90.1-2010 or the 2012 IECC.~~

NCEnergy113 Proposed Revision: 8.1.1B ENERGY STAR® BENCHMARKING – MURBS AND OFFICES (180 points)

8.1.1B.1 The ENERGY STAR® score of the proposed building is 75 or greater as determined by whole building energy modeling in accordance with the modeling guidelines prescribed in ANSI/ASHRAE/IES Standard 90.1-2010 Appendix G,

For MURBS and Office buildings only.

Maximum = 180 points

• One hundred eighty points are earned for an ENERGY STAR® score of 97 to 100 for a MURB.
• One hundred seventy-five points are earned for an ENERGY STAR® score of 95 to 96 for a MURB.
• One hundred sixty-eight points are earned for an ENERGY STAR® score of 93 to 94 for a MURB.
• One hundred sixty-one points are earned for an ENERGY STAR® score of 91 to 92 for a MURB.
• One hundred fifty-four points are earned for an ENERGY STAR® score of 89 to 90 for a MURB.
• One hundred forty-seven points are earned for an ENERGY STAR® score of 87 to 88 for a MURB.
• One hundred forty points are earned for an ENERGY STAR® score of 85 to 86 for a MURB.
• One hundred thirty-three points are earned for an ENERGY STAR® score of 83 to 84 for a MURB.

• One hundred twenty-six points are earned for an ENERGY STAR® score of 81 to 82 for a MURB.
• One hundred nineteen points are earned for an ENERGY STAR® score of 79 to 80 for a MURB.
• One hundred twelve points are earned for an ENERGY STAR® score of 77 to 78 for a MURB.
• One hundred five points are earned for an ENERGY STAR® score of 75 to 76 for a MURB.
• No points are earned for an ENERGY STAR® score <75 for a MURB.
• One hundred eighty points are earned for an ENERGY STAR® score of 98 to 100 for an office building.
• One hundred seventy points are earned for an ENERGY STAR® score of 96 to 97 for an office building.
• One hundred fifty points are earned for an ENERGY STAR® score of 94 to 95 for an office building.
• One hundred thirty points are earned for an ENERGY STAR® score of 92 to 93 for an office building.
• One hundred ten points are earned for an ENERGY STAR® score of 90 to 91 for an office building.
• Ninety points are earned for an ENERGY STAR® score of 88 to 89 for an office building.
• Seventy points are earned for an ENERGY STAR® score of 86 to 87 for an office building.
• Fifty points are earned for an ENERGY STAR® score of 84 to 85 for an office building.
• Thirty points are earned for an ENERGY STAR® score of 82 to 83 for an office building.
• Ten points are earned for an ENERGY STAR® score of 80 to 81 for an office building.
• No points are earned for an ENERGY STAR® score of <80 for an office building.

NCEnergy101 Proposed Revision: OR
8.1.1C ASHRAE BUILDING EQ (180 points)
8.1.1C.1 The ASHRAE Building EQ as designed rating is 85 or less.
Maximum = 180 points
• One hundred eighty points are earned when the building's ASHRAE Building EQ as designed rating is ≤50.
• One hundred seventy-five points are earned when the building's ASHRAE Building EQ as designed rating is 51 to 55.
• One hundred seventy points are earned when the building's ASHRAE Building EQ as designed rating is 56 to 60.
• One hundred fifty points are earned when the building's ASHRAE Building EQ as designed rating is 61 to 65.
• One hundred thirty points are earned when the building's ASHRAE Building EQ as designed rating is 66 to 68.
• One hundred ten points are earned when the building's ASHRAE Building EQ as designed rating is 69 to 71.
• Ninety points are earned when the building's ASHRAE Building EQ as designed rating is 72 to 74.
• Seventy points are earned when the building's ASHRAE Building EQ as designed rating is 75 to 77.
• Fifty points are earned when the building's ASHRAE Building EQ as designed rating is 78 to 80.
• Thirty points are earned when the building's ASHRAE Building EQ as designed rating is 81 to 83.
• Ten points are earned when the building's ASHRAE Building EQ as designed rating is 84 to 85.
• No points are earned when the building's ASHRAE Building EQ as designed rating is ≥86.

NCEnergy109 Proposed Revision: OR
8.1.1D NET ZERO CARBON OR ENERGY CERTIFICATION (180 points)
8.1.1D.1 The project has achieved a Net Zero Carbon or a Net Zero Energy certification from a nationally or regionally recognized certification program within the last three years.
180 points
NCEnergy109 Reason: Technical Manual Note: The list of accepted programs will be included in the Assessment Guidance. Currently, Zero Carbon Certification from International Living Future Institute (ILFI) and Net Zero Carbon buildings listed as 'Verified' in the New Building Institute's (NBI) Getting to Zero database are accepted.

NCEnergy110 Proposed Revision: ~~8.1.1B PATH B: BUILDING CARBON DIOXIDE EQUIVALENT (CO2E) EMISSIONS (180 POINTS)~~
~~8.1.1B.1The building achieves more than a 50% reduction in carbon dioxide equivalent (CO2e) emissions over the baseline building for its geographical location. This reduction is calculated using the following formula:~~
~~Percent reduction in CO2e =100 X (1 – PER/BER), where:~~
~~• The Baseline Equivalent Emission Rate (BER) is the baseline building's carbon dioxide equivalent (CO2e) emission rate.~~
~~• PER is the proposed building's carbon dioxide equivalent (CO2e) emission rate.~~
~~• PER is less than BER.~~
~~Assessment Guidance:~~
~~Baseline Equivalent Emission Rate (BER) Calculations~~
~~BER is calculated using the following formula:~~
~~BER = (baseline Energy Use Intensity (EUI)) X product of [(percentage of each fuel in the annual energy fuel mix for the planned building type and location) X (CO2e Emission Factor for each fuel)], where:~~
~~• The baseline building's site Energy Use Intensity (EUI) is determined using ENERGY STAR Target Finder.~~
~~• The baseline building's site EUI is 35% better than the Energy Performance Rating (Target Finder) score of 50.~~
~~• The annual energy fuel mix for the baseline building is determined from DOE-EIA and reported at the top of Target Finder's Results page.~~
~~• The CO2e emission factor for each fuel in the baseline building's annual energy fuel mix can be found in Table 8.1.1–A.~~
~~Proposed Equivalent Emission Rate (PER) Calculations~~
~~PER is calculated using the following formula:~~
~~PER = (proposed EUI) X product of [(percentage of each fuel in the annual energy fuel mix for the proposed building) X (CO2e Emission Factor for each fuel)], where:~~
~~• The proposed building's Energy Use Intensity (EUI) is calculated using a computer-based simulation program that conforms to the requirements outlined in Section 506 of the 2009 International Energy Conservation Code or ANSI/ASHRAE/IES Standard 90.1-2010, Appendix G, Section G2.2.~~
~~• Determine the Proposed Building's Equivalent Emission Rate (PER) by performing an EUI calculation~~

for the proposed building using the energy performance requirements specified by Table G3.1 Modeling Requirements for Calculating Proposed and Baseline Building Performance in ANSI/ASHRAE/IES Standard 90.1-2010. Only the Proposed Building Performance column is used for modeling the PER.

• Use the annual energy fuel mix planned for the proposed building for this calculation.

• The CO2e emission factor for each fuel in the proposed building's annual energy fuel mix can be found in Table 8.1.1.B of this document.

Table 8.1.1B: CO2e Emission Factors6

Fuel	CO2e Emission Factor kg/kWh (lb./kWh)
Biomass	0.026 (0.057)2
Coal	0.379 (0.836)7
Fuel oil (residual)	0.341 (0.751)7
Fuel oil (distillate)	0.320 (0.706)7
Gasoline	0.313 (0.689)7
Grid-delivered electricity	0.630 (1.387)7
Grid-displaced electricity3	0.833 (1.835)1
LPG	0.272 (0.600)7
Natural gas	0.219 (0.483)7
Off-site renewable electricity4	0.758 (1.670)1
Waste heat5	0.019 (0.042)2
District chilled water	0.151 (0.332)7
District steam	0.368 (0.812)7
District hot water	0.348 (0.767)7

1 Deru, M., P. Torcellini. 2007. Source Energy and Emissions Factors for Energy Use in Buildings. NREL/TP-550-38617, June 2007. Golden, CO. National Renewable Energy Laboratory.

2 L2A Conservation of Fuel and Power in New Buildings other than Dwellings. April 2006. Office of the Deputy Prime Minister, United Kingdom.

3 Grid displaced electricity comprises all electricity generated at the building site by, for example, PV panels, wind power, combined heat and power systems (CHP), etc. The associated CO2e emissions are subtracted from the total CO2e emissions for the building before determining the PER. CO2e emissions arising from fuels used by the building's power generation system (e.g., to power the CHP plant) is included in the building's CO2e emission calculations.

4 The associated CO2e emissions from off-site renewable electricity (e.g., using renewable energy certificates or "green power") are subtracted from the total CO2e emissions for the building before determining the PER. Contracts have a duration of at least three years. Only 25% of off-site renewable electricity can be credited to the proposed building's CO2e calculation.

5 This includes waste heat from industrial processes and power stations rated at more than 10MWe and with a power efficiency of greater than 35%.

6 Values include direct and indirect emissions.

7ASHRAE/USGBC/IES Standard 189.1-2014 Standard for the Design of High-Performance Green Buildings

~~Maximum = 180 points~~
~~• Four points are earned for each percent reduction in CO2e emissions above the BER, to a maximum total of 180 points.~~

MOTION: The Motion was made and seconded to accept the proposed revisions to the Energy Performance section (NCEnergy111, NCEnergy112, NCEnergy113, NCEnergy101, NCEnergy109, NCEnergy110).
Discussion took place on the Motion:

- There was discussion on the translator that was created for projects to help complete Path A. Staff noted it is still being reviewed by GBI's legal team, but members can contact staff to be able to see the tool in advance of its release to the public later this year.
- It was asked if Path B, ENERGY STAR, will be broadened to include other project types. It was stated that it would be great to include more but it will depend on the data available that would allow the path to continue to be aligned with other pathways.
- There was discussion on the proposals for Path A, B, and C and the Prescriptive Path's points maximum of 111.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NC104-5, NC102-3, NC104-4, NC102-4
NC104-5 Public Comment: Is there a reason the Energy Star compliance option was removed?
NC104-5 Reason: Since so many civic buildings have to do Energy Star reporting and many also do Green Globes this seems like an obvious cross over.
NC104-5 Recommended Response: Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

NC102-3 Public Comment: Replace all references to ASHRAE 90.1-2010 with ASHRAE 90.1-2013.
NC102-3 Reason: The standard references ASHRAE 90.1-2010, which is over 10 years old. For Federal agencies, agencies must use ASHRAE 90.1-2013 and, where lifecycle cost effective, be 30% more energy efficient than ASHRAE 90.1-2013. At a minimum, this standard should replace all references to ASHRAE 90.1-2010 and make them ASHRAE 90.1-2013 or newer [although the Department of Energy has not yet finalized its regulation that agencies use ASHRAE 90.1-2019; the regulation still requires agencies to use ASHRAE 90.1-2013.]
NC102-3 Recommended Response: Thank you for your comment. Your comment has been accepted with modification. Energy Pathways utilizing all versions of ASHRAE 90.1 2010 through 2019 have been implemented in the standard.

NC104-4 Public Comment: Upgrade ASHRAE to 2013 or 2016
NC104-4 Reason: At this point, most IECC requirements are higher than this. By just meeting code you're getting points here which isn't exactly pushing building performance.

NC104-4 Recommended Response: Thank you for your comment. Your comment has been accepted with modification. Energy Pathways utilizing all versions of ASHRAE 90.1 2010 through 2019 have been implemented in the standard.

NC102-4 Public Comment: remove reference to ASHRAE 90.1-2010
NC102-4 Reason: ASHRAE 90.1-2013 should be the reference used in lieu of ASHRAE 90.1-2010.
NC102-4 Recommended Response: Thank you for your comment. Your comment has been accepted with modification. Energy Pathways utilizing all versions of ASHRAE 90.1 2010 through 2019 have been implemented in the standard.

MOTION: The Motion was made and seconded to accept public comment, NC104-5, and accept with modification the proposed responses for comments, NC102-3, NC104-4, NC102-4.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 13 in favor, 0 opposed, 0 abstained.

NC103-2
Public Comment: renewable energy: energy that is continuously replenished on the Earth, such as wind, solar thermal, solar electric, geothermal, and hydropower.~~, and various forms of biomass from recovered waste sources~~
Reason: Energy derived from biomass is not necessarily renewable or carbon-free like the other examples listed in the definition.
Recommended Response: Thank you for your comment. Your comment has been accepted with modification. The reason for modification is the following language will be incorporated in the standard.

renewable energy: energy that is continuously replenished on the Earth, such as wind, solar thermal, solar electric, geothermal, hydropower, and various forms of biomass utilized in a sustainable manner ~~from recovered waste sources.~~
MOTION: The Motion was made and seconded to accept with modification the proposed response.
Discussion took place on the Motion:

- The Energy Subcommittee Chair argued that the definition for on-site renewable energy should be updated as well.

VOTE: The Motion carries with 12 in favor, 1 opposed, 0 abstained.
Opposed: John Cross

NC103-1
Public Comment: off-site renewable energy:~~ green power~~ renewable energy, such as in the form of ~~or~~ Renewable Energy Certificates (RECs), and purchased from a third-party source such as an electrical utility. There is no physical renewable energy system either on site or specifically connected to the building.

on-site renewable energy: ~~energy derived from sun, wind, water, the Earth's core, and various forms of biomass from recovered waste sources~~ renewable energy that is captured, stored and used on the building site, using such technologies as wind turbines, photovoltaic solar panels, transpired solar collectors, solar thermal heaters, and small-scale hydroelectric power plants.
Reason: The term, "renewable energy" is already defined itself in this section and should only appear in these two definitions by reference. Additionally, any redundancy of the definition of "renewable energy" here should be eliminated.
Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: The present language provides adequate clarity for renewable energy measures.
MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 12 in favor, 0 opposed, 1 abstained.
Abstain: Mike Cudahy

Mike Cudahy left the meeting.

CB105
Proposed Revision: on-site renewable energy: energy derived from sun, wind, water, the Earth's core, and various forms of biomass ~~from recovered waste sources~~ utilized in a sustainable manner, that is captured, stored and used on the building site, using such technologies as wind turbines, photovoltaic solar panels, transpired solar collectors, solar thermal heaters, and small-scale hydroelectric power plants.
MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:

- There was discussion on the meaning of "utilized in a sustainable manner." There was agreement that it's vague, but others noted that the definition for renewable energy is hard to develop and perfect.
- A member noted that this should be defined further in a Technical Manual. Another member argued that if the definition is not ready then it shouldn't be brought forth to the Consensus Body.
- An assessor on the call noted that he believes there could be a way to give proper and adequate information in the Technical Manual.
- An attendee noted that there may be a way to provide extra information on the definition outside of the ANSI process.

VOTE: The Motion carries with 9 in favor, 2 opposed, 1 abstained.
Opposed: John Cross, Steve Szoke
Abstain: Mike Lehman

Mike Lehman left the meeting.

Materials Public Comment Review
The Materials Subcommittee Chair reviewed each proposed revision or public comment before placing a motion.

NCMaterials114, NCMaterials108, NCMaterials109
NCMaterials114 Proposed Revision: 10.1.1.1 The project team conducts a whole building life cycle assessment.
The life cycle assessment shall conform to ASTM E2921-22 Standard Practice for Minimum Criteria for Comparing Whole Building Life Cycle Assessments for Use with Building Codes, Standards, and Rating Systems.

The life cycle assessment minimally reports the following life cycle impact indicators:
• Global warming potential (GWP) ;
• Acidification potential;
• Eutrophication potential;
• Ozone depletion potential (ODP); and
• Smog potential.
Operating energy consumption and MEP systems can be included in the life cycle assessment.
3 points

NCMaterials108 Proposed Revision: 10.1.1.2~~1~~ The project team evaluates ~~a minimum of~~ two different building designs of similar size and function comparing global warming potential (GWP) to select the building with the lower GWP impact through either of the following methods:. ~~using ASTM E2921-16a and the following assessment protocol to select the building with the lower environmental impact.~~
Method 1: Conduct a Whole Building Life Cycle Assessment (LCA) that conforms to ASTM E2921-22 Standard Practice for Minimum Criteria for Comparing Whole Building Life Cycle Assessments for Use with Building Codes, Standards, and Rating Systems.
Method 2: Conduct a GWP comparison assessment using an embodied carbon calculator.
The life cycle assessment or GWP assessment report~~s~~ includes the following life cycle impact indicator~~s~~:
• Global warming potential (GWP)~~/climate change;~~
~~• Acidification potential;~~
~~• Eutrophication potential;~~
~~• Ozone depletion potential (ODP); and~~
~~• Smog potential.~~
~~The proposed final design of the building with the lower anticipated environmental impact achieves the following performance targets compared to the reference design:~~
~~• A minimum 5% reduction each, for at least three impact indicators, one of which is global warming potential; and~~

~~• No other impact indicator exceeds the reference design by more than 5%.~~
~~Operating energy consumption and MEP systems can be included. A registered design professional verifies structural material quantities, with the exception of existing buildings.~~
Maximum = 7 points
Points are earned where the following percentage reduction is demonstrated for global warming potential:
• Seven points are earned for a total of ≥20% reduction.
• Six points are earned for a total of ≥17% to <20% reduction.
• Five points are earned for a total of ≥15% to <17% reduction.
• Four points are earned for a total of ≥13% to <15% reduction.
• Three points are earned for a total of ≥11% to <13% reduction.
• Two points are earned for a total of ≥10% to <11% reduction.
• One point is earned for a total of ≥9% to <10% reduction.
• No points are earned <9% reduction.
NCMaterials108 Reason: Technical Manual reference included on GWP.

NCMaterials109 Proposed Revision: 10.1.1.3 The project team evaluates a minimum of two different building designs of similar size and function to select the building with the lower environmental impacts across three impact indicators, one of which must be GWP.
The selected building design shall be consistent with the design chosen for 10.1.1.2, if applicable.
Conduct a Whole Building Life Cycle Assessment (LCA) that conforms to ASTM E2921-22 Standard Practice for Minimum Criteria for Comparing Whole Building Life Cycle Assessments for Use with Building Codes, Standards, and Rating Systems.

The life cycle assessment minimally reports the following life cycle impact indicators:
• Global warming potential (GWP);
• Acidification potential;
• Eutrophication potential;
• Ozone depletion potential (ODP); and
• Smog potential.
The proposed final design of the building with the lower anticipated environmental impact has no other impact indicator exceeding the reference design by more than 5%.
Maximum = ~~20~~ 16 points
Points are earned where the following cumulative percentage reduction is demonstrated by adding at least ~~three~~ two impact indicators:
~~• Twenty points are earned for a total ≥25% reduction.~~
~~• Nineteen points are earned for a total ≥24% to <25% reduction.~~
~~• Eighteen points are earned for a total ≥23% to <24% reduction.~~
~~• Seventeen points are earned for a total ≥22% to <23% reduction.~~
• Sixteen points are earned for a total ≥25~~21% to <22%~~ reduction.
• Fifteen points are earned for a total ≥23~~20~~% to <25~~21~~% reduction.

• Fourteen points are earned for a total ≥21~~19~~% to <23~~20~~% reduction.
• Thirteen points are earned for a total ≥19~~18~~% to <21~~19~~% reduction.
• Twelve points are earned for a total ≥17% to <19~~18~~% reduction.
• Eleven points are earned for a total ≥15~~16~~% to <17% reduction.
• Ten points are earned for a total ≥13~~15~~% to <15~~16~~% reduction.
• Five points are earned for a total ≥1% to <13% reduction.
• No points are earned for <1~~5~~% reduction.

MOTION: The Motion was made and seconded to accept the proposed revisions to 10.1.1 (NCMaterials114, NCMaterials108, NCMaterials109).

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 10 in favor, 0 opposed, 1 abstained.

Abstain: John Cross

NCMaterials110

Proposed Revision: 10.2.1.1 Product Manufacturers provide one or more of the following for a minimum of fifteen products that evaluate the cradle-to-gate product life cycle:

• Third-party verified Type III Environmental Product Declarations (EPD) according to ISO 21930: 2017 or ISO 14025: 2006, either product specific or industry wide~~average~~. Environmental Product Declaration developed according to ISO 21930: 2007 shall be acceptable through December 31, 2024;
• Third-party Multiple Attribute Product Certification; AND/OR
• Third-party verified product life cycle assessment based upon ISO 14040: 2006 and ISO 14044: 2006.

MOTION: The Motion was made and seconded to accept the proposed revision.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCMaterials111

Proposed Revision: 10.2.1.2 A minimum of five products include one or more of the following verifications that evaluate the products through end of life (cradle-to-grave product life cycle):

• Third-party verified Type III Environmental Product Declarations (EPD) according to ISO 21930: 2017 or ISO 14025: 2006. Environmental Product Declaration developed according to ISO 21930: 2007 shall be acceptable through December 31, 2024;
AND/OR
• Third-party verified product life cycle assessment based upon ISO 14040: 2006 and ISO 14044: 2006.

Product count c~~C~~ompliance with 10.2.1.2 can also be used for 10.2.1.1 product count compliance.

MOTION: The Motion was made and seconded to accept the proposed revision.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCMaterials112, NCMaterials106
NCMaterials112 Proposed Revision: 10.3.1.1 Select at least one formulated product that has a completed Occupant Exposure Screening Report (OESR) prepared in accordance with ASTM E3182-20 - Standard Practice for Preparing an Occupant Exposure Screening Report (OESR) for Substances in Installed Building Products or other third party verified transparency documentation that includes any chemical constituents that are carcinogenic, mutagenic, or reprotoxic (CMR) to reproduction or human development and related exposure risk.

Points are earned for discrete products with different functional uses that have an OESR, SDS, HPD, or equivalent labeling/certification that includes transparency and ingredient listing for specified products ~~and not variations of the same product, unless the manufacturers show substantial difference between the chemical constituents or components~~.

NCMaterials106 Proposed Revision: 10.1 WHOLE BUILDING LIFE CYCLE ASSESSMENT (~~20~~ 26 POINTS)
10.3 PRODUCT RISK ASSESSMENT (~~10~~ 4 POINTS)

MOTION: The Motion was made and seconded to accept the proposed revisions (NCMaterials112, NCMaterials106).
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 10 in favor, 0 opposed, 1 abstained.
Abstain: Ashley Eusey

NC104-7
Public Comment: Better define requirements here or perhaps provide an alternative path.
Reason: Have had project teams confused by this requirement and if there are even any products that have this. When we've reached out to GBI on this requirement they seem equally confused.
Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: We are rejecting the comment because we are seeking alternatives for product risk assessment processes that are better utilized in the marketplace. In the meantime the points have been reduced from 10 points to 4 points and an update will be provided once another process has been identified.

Maximum = ~~10~~ 4 points
Points are earned where products undergo a screening-level product risk assessment:
~~• Ten points are earned for 10 products.~~

~~• Nine points are earned for 9 products.~~
~~• Eight points are earned for 8 products.~~
~~• Seven points are earned for 7 products.~~
~~• Six points are earned for 6 products.~~
~~• Five points are earned for 5 products.~~
• Four points are earned for 4 products.
• Three points are earned for 3 products.
• Two points are earned for 2 products.
• One point is earned for 1 product.

MOTION: The Motion was made and seconded to reject the comment and reply with the proposed response.

Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCMaterials113, NC103-3

NCMaterials113 Proposed Revision: 10.4.1.1 Points are earned based on the Sustainable Materials Index (SMI), the percentage of the total value of the building materials that have sustainable materials attributes. The sustainable materials attributes considered in calculating the SMI are pre-consumer recycled content, post-consumer recycled content, biobased content, third-party sustainable forestry certification content and materials or that meet the requirements of the Eco-Certified Composite sustainability standard. The SMI is the sum of the value of these attributes divided by the Total Project Materials Cost ~~Value (TMV)~~ expressed as a percentage.

Sustainable Materials Index (%) =
100 x
($ value of pre-consumer recycled content
+
$ value of post-consumer recycled content
+
$ value of biobased content
+
$ value of third-party sustainable forestry certification content
+
$ value of Eco-Certified Composite)~~/TMV~~
÷
Total Project Materials Cost

See example Sustainable Materials Index (SMI) Worksheet in the Technical Reference Manual.

Only the portion of materials that has the identified attribute should be included. For example, if a

product has 40% pre-consumer recycled content, only 40% of the value of that product is included.

Products that are claimed for credit under Third-Party Sustainable Forestry Certification are not ~~also~~ included as biobased content.

Biobased content percentage may be calculated by weight or in accordance with ASTM D6866-16 Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis.

The following forest certification systems and standards are recognized:
• Forest Stewardship Council (FSC): https://us.fsc.org/en-us (last accessed ~~8/30/17~~1/23/23)
• Sustainable Forestry Initiative, Inc. (SFI): http://www.sfiprogram.org/ (last accessed ~~8/30/17~~1/23/23)
• American Tree Farm System (ATFS): https://www.treefarmsystem.org/ (last access ~~8/30/17~~1/23/23)
• Canadian Standards Association Sustainable Forestry Management (CSA): http://www.csasfmforests.ca/ (last accessed ~~8/30/17~~1/23/23)
• Programme for the Endorsement of Forest Certification (PEFC): https://www.pefc.org/ (last accessed ~~8/30/17~~1/23/23)
• Products categorized as Responsible or Certified Sources in accordance with ASTM D7612-21 Standard Practice for Categorizing Wood and Wood-Based Products According to Their Fiber Sources.
NCMaterials113 Reason: Text in red approved as part of comment, NC105-1.

NC103-3 Public Comment: Sustainable Materials Index (%) =
100 x
($ value of pre-consumer recycled content
+
$ value of post-consumer recycled content
+
$ value of biobased content
+
$ value of third-party sustainable forestry certification content
+
$ value of Eco-Certified Composite)/TMV
NC103-3 Reason: Add the closing parenthesis
NC103-3 Recommended Response: Thank you for your comment. Your comment has been accepted and the changes have been implemented in the draft Standard.

MOTION: The Motion was made and seconded to accept the proposed response for comment NC103-3, and the proposed revision for NCMaterials113.
Discussion took place on the Motion:

- There was no discussion.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NCMaterials104
Proposed Revision: • One additional point is earned for facilities that have verified their annual average recycling rate of construction waste from an independent third-party organization.
Reason: Assessor Feedback
MOTION: The Motion was made and seconded to reject the proposed revision.
Discussion took place on the Motion:

- The secretariat noted that this change is no longer accurate or necessary with the approval of NCMaterials107 on March 1, 2023.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

NC102-6, NC102-7
NC102-6 Public Comment: 10.4.1 Product Sustainable Materials Attributes
NC102-6 Reason: Should cite EPA's Comprehensive Procurement Guideline Program.
While the standard covers procurement of recycled content, it is included in combination with other factors defining a 'sustainable' product (Pre-consumer recycled content % + Post-consumer recycled content % + Biobased content % + Third Party Sustainable Forestry Certification content %) and therefore can't be assured to meet the Guiding Principles requirement.
To meet the Guiding Principles, federal agencies must purchase products that meet or exceed EPA's recycled content recommendations.
NC102-6 Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: The addition is too prescriptive for the standard, but members recommend the following to go into the Technical Manual for reference: If you want to meet the Federal Guiding Principles, see the EPA's Comprehensive Procurement Guidelines Program for required percentages.

NC102-7 Public Comment: 10.4.1 Product Sustainable Materials Attributes
NC102-7 Reason: While the standard covers procurement of biobased content, it is included in combination with other factors defining a 'sustainable' product (Pre-consumer recycled content % + Post-consumer recycled content % + Biobased content % + Third Party Sustainable Forestry Certification content %) and therefore can't be assured to meet the Guiding Principles requirement.

To meet the Guiding Principles, federal agencies must purchase products that meet or exceed the USDA's biobased content recommendations.
NC102-7 Recommended Response: Thank you for your comment. Your comment has been rejected for the following reason: The addition is too prescriptive for the standard, but members recommend the following to go into the Technical Manual for reference: If you want to meet the Federal Guiding Principles, see the EPA's Comprehensive Procurement Guidelines Program for required percentages.
MOTION: The Motion was made and seconded to reject the comments, NC102-6, NC102-7, and reply with the proposed responses.
Discussion took place on the Motion:

- It was asked if the resource could be added to the Technical Manual and it was indicated that the experts of the Materials Subcommittee thought it was a good reference to add.

VOTE: The Motion carries with 11 in favor, 0 opposed, 0 abstained.

Public Participation
There was no discussion.

New Business
There was no discussion.

Review Schedule
Marx stated that all comments and proposed revisions have been reviewed.

MOTION: The motion was made, seconded, and carried unanimously to adjourn.

Meeting adjourned at 3:01 PM EST.