How to Count Your Responsible Source Product for a LEED Point

Sourcing of Raw Materials – Leadership Extraction Practices via the Legal Wood Alternative Compliance Path (2017)

The U.S. Green Building Council (USGBC) currently has a pilot Alternative Compliance Path (ACP) for wood and paper products in its Leadership in Energy and Environmental Design (LEED) LEED v4 and v4.1 rating systems, which enables all Responsible and Certified source products to be eligible for LEED credit.

Builders and architects can now use wood and paper products that are:

- Legally sourced
- Responsibly Sourced
- Certified Sources according to these standards:
    1. Sustainable Forestry Initiative (SFI),
    2. American Tree Farm System (ATFS),
    3. Canadian Standards Association (CSA) and
    4. Programme for the Endorsement of Forest Certification (PEFC)

to achieve a point in the "Sourcing of Raw Materials" under LEED v4 and v4.1, in addition to the current requirement for certification by the Forest Stewardship Council or USGBC-approved equivalent.

An Alternative Compliance Path allows LEED projects to achieve an existing green building credit, using an alternative approach to what is specified in the existing rating tool. In this case, the ACP pilot is used as an alternate pathway to the Forest Stewardship Council (FSC) certification. The ACP pilot credit is a defined pathway to eventually become part of the LEED rating system, subject to modification and approval by USGBC.

The Alternative Compliance Path applies to all LEED v4 and v4.1 systems.

For v4, this includes New Construction, Core and Shell, Schools – New Construction, Retail – New Construction, Healthcare, Data centers – New Construction, Hospitality – New Construction, Warehouse and distribution centers – New Construction, Commercial Interiors, Retail – Commercial Interiors, Hospitality – Commercial Interiors, Existing Buildings, Schools – Existing Buildings, Retail – Existing Buildings, Data centers – Existing Buildings, Hospitality – Existing Buildings, Warehouse and distribution centers – Existing Buildings, and Multifamily Existing Buildings.

For v4.1, this includes Existing Buildings, Schools – Existing Buildings, Retail – Existing Buildings, Data centers – Existing Buildings, Hospitality – Existing Buildings, Warehouse and distribution centers – Existing Buildings, Multifamily Existing Buildings, and Interiors – Existing Buildings.

The Alternative Compliance Path categorizes the various forest certification standards based on the ASTM D7612-10 (2015) standard which is titled "Categorizing Wood and Wood-Based Products According to Their Fiber Sources." ASTM (American Society for Testing and Materials) International is a globally recognized leader in the development and delivery of voluntary consensus standards. ASTM standards are used to certify the structural and fire characteristics of wood- and wood-based materials, in addition to categorization of Legal, Responsible and Certified sources.

The ASTM D7612 standard defines three sourcing categories that USGBC uses:

1. Legal (non-controversial)
2. Responsible sources
3. Certified sources

Products from responsible sources are produced with wood fiber acquired according to an independently certified procurement standard or are from a proprietary forestry standard or from jurisdictions with regulatory or quasi-regulatory programs to implement best management practices. These standards or programs are typically consensus-based proprietary certification standards or public legislative and regulatory processes. To qualify for this category, the applicable standard or forest governance in the applicable geography shall document a system designed to require compliance with best management practices to protect water quality and ensure all fiber comes from known and legal sources.

For example, the state of Oregon Department of Forestry (ODOF) currently has approximately 10 million acres of timber certified under the Responsible source designation that are subject to the Oregon Forest Practices Act (OFPA). The Pacific Lumber Inspection Bureau (PLIB) and West Coast Lumber Inspection Bureau (WCLIB) both offer a Responsible source certification program for wood product manufacturers, based upon traceability requirements developed by ODOF.

Below is a chart that specifies the forest management certification, wood product manufacturer traceability certification and the compliance to the three sourcing categories. The ODF-based Chain of Custody certification relates to the PLIB and WCLIB Responsible Source programs.

By definition, Responsible sourcing is also Legal sourcing. Certified sourcing is also both Responsible and Legal sourcing.

ASTM D7612 Classification of Forest Management and Traceability Systems for LEED ACP Pilot Credit				
Forest Management Certification for Timberland Owner	**Wood Product Manufacturer Traceability Certification**	**Legal compliant?**	**Responsible Sources Compliant?**	**Certified Compliant?**
Sustainable Forestry Initiative (SFI)	SFI Chain of Custody	Yes	Yes	Yes
American Tree Farm System (ATFS)	SFI Chain of Custody			
Canadian Standards Association (CSA)	SFI Chain of Custody			
Programme for the Endorsement of Forest Certification (PEFC)	PEFC Chain of Custody			
Forest Stewardship Council (FSC)	FSC Chain of Custody			
ASTM D7612 Responsible Source	SFI, PEFC, FSC or ODF-based Chain of Custody	Yes	Yes	No
SFI Fiber Source Requirements	SFI Fiber Sourcing certificate			
No Certification	PEFC Due Diligence System	Yes	No	No
	FSC Controlled Wood Certificate			
	ODF-based Chain of Custody			

There are two requirements to satisfy the Sourcing of Raw Materials credit:

First Requirement (per the ACP)

The required proportions of the various sources of wood listed in the credit to achieve a LEED point are:

- 100% (minus a 3% amount where documentation is not available) of the forest products are from *legal* (non- controversial) sources, and
- 70% from *responsible* sources, and
- The remainder product must be *certified* sources as evidenced by a chain of custody certification (CoC).

Second Requirement

After the above criteria are satisfied for wood materials, then the second requirement is that:

- At least 25% (based on cost) of all wood and non-wood, permanently installed building materials meet a responsible extraction criteria in LEED v4 rating

For example, using LEED v4 BD+C, the purpose of the "sourcing of raw material" credit is to reward project teams for selecting products verified to have been extracted or

sourced in a responsible manner. In order to qualify for a point under the "sourcing of raw material" credit, a builder or architect must use **at least 25%** (based on cost) of permanently installed building materials that meet at least one of the responsible extraction criteria below, which can be satisfied with products that compliant to Certified Sourcing in ASTM D7612.

Responsible Extraction (or sourcing) Criteria

- Extended producer responsibility (EPR) – Products purchased from a manufacturer that participates in an EPR program or is directly responsible for Extended producer responsibility uses financial incentives to encourage manufacturers to design environmentally friendly products by holding producers responsible for the costs of managing their products at end of life.
- Bio-based materials – Bio-based products must meet the Sustainable Agriculture Network's Sustainable Agriculture Standard. Bio-based raw materials must also be tested using ASTM Test Method D6866 and be legally
- Reused materials and recycled content – "Reused" includes salvaged, refurbished, or reused products and recycled content is calculated as the sum of post-consumer recycled content plus one-half the pre- consumer recycled
- Wood products – Wood products sourced from "Certified" sources as defined by ASTM D7612-10 (2015) are deemed to satisfy the requirements of this credit.

Calculation Example

Ten wood products with a total value of $5,565 are sourced for a LEED project. Each product comes from a different source and qualifies for Legal, Responsible and Certified sourcing in accordance with the above table. The products are entered into the USGBC LEED v4 Legal Wood calculator spreadsheet version 2.0, under the tab "Calculator". Note that Product 10 represents a $2,000 value for the ODF-based CoC, as represented by "SFI Certified Sourcing" in the spreadsheet which qualifies it as a Responsible source.

The following table copies the output of the USGBC LEED v4 Legal Wood calculator spreadsheet, which calculates the first requirement per the ACP (assuming 100% source content for each product):

Total value of non-wood permanently installed			
Value of non-wood eligible products			
Value of wood eligible certified products		$	2,150.00

Description	Product Type	Cost		Sourcing	Legal		Responsible		Certified	
Product 1	flooring	$	1,500.00	FSC - forest management via FSC chain of custody	$	1,500	$	1,500	$	1,500
Product 2	case work	$	900.00	SFI - fiber sourcing	$	900	$	900	$	-
Product 3	windows	$	25.00	ATFS - forest management via SFI or PEFC chain of	$	25	$	25	$	25
Product 4	furniture	$	250.00	CSA - forest management via SFI or PEFC chain of	$	250	$	250	$	250
Product 5	FF&E	$	100.00	PEFC - forest management via PEFC chain of custod	$	100	$	100	$	100
Product 6	FF&E	$	100.00	PEFC - due diligence	$	100	$	-	$	-
Product 7	Doors	$	275.00	FSC - forest management via FSC chain of custody	$	275	$	275	$	275
Product 8	Structural lumber	$	375.00	FSC - controlled wood	$	375	$	-	$	-
Product 9	FF&E	$	40.00	Not certified	$	-	$	-	$	-
Product 10	structural lumber	$	2,000.00	SFI - fiber sourcing		2,000	$	2,000	$	-
					$	-	$	-	$	-

Similarly, the "Summary" tab of the same spreadsheet, complies the ACP credit calculation as shown below:

Summary

Note: All information on this tab is READ-ONLY. To edit, see previous tabs.

% Legal	99%
% Responsible	91%
Certified Value	$ 2,150.00
Certified Value eligible for ACP	$ 2,150.00

LEED v4 Credit Calculations

Total value of permanently installed building products	$ 5,565
Value of eligible building products	$ 2,150
% value of eligible building products	38.6%
Credits Achieved	1

The Legal source products exceeds 97% and the Responsible Source products exceed 70% when combined. This satisfies the first requirement of the credit. The value of Certified source products is $2,150, which is used to evaluate the second requirement of the "Sourcing of Raw Material" credit.

The second requirement is evaluated by totaling the value of all permanently installed building products (wood, concrete and steel), which in this example is $10,000.

The value of materials in the Responsible Extraction criteria is as follows (assuming 100% source content for each material):

Responsible Extraction Classification	Value
Extended producer responsibility products	$0
Bio-based products	$0
Reused/recycled products	$1,500
Certified Source products per ASTM D7612	$2,150
Total value of all eligible products that meet the responsible extraction criteria	$3,650
Total of all permanently installed building products (wood, concrete and steel)	$10,000
Percentage of all permanently installed building products (wood, concrete and steel) versus 25% requirement	**36.5% (meets the 25% test)**

Therefore, there is a point achieved under the LEED v4 "Sourcing of Raw Material" credit because the first and second requirements are fulfilled.   See USGBC LEED guide for additional details on determination of product cost, criterion valuation factors, location valuation factors and required documentation, as appropriate.