

Wood Products and Environmental Product Declarations (EPDs)

New EPDs are part of a growing trend toward increased product transparency

Presented by: Vicki Worden, President, Worden Associates, Inc., environmental consultant to the forestry and wood products community

Sponsored by:



AMERICAN
WOOD
COUNCIL

Canadian
Wood
Council

Conseil
canadien
du bois



This program, “Wood Products and Environmental Product Declarations (EPDs)” is sponsored by:

- American Wood Council
- Canadian Wood Council
- reThink Wood

Objectives

- What are environmental product declarations (EPDs)?
- What is life cycle assessment (LCA)?
- What are international and U.S. trends around EPDs?
- How do EPDs support the industry's efforts to grow sales of wood products?
- What actions can be taken today now that EPDs are available?

The learning objectives for this presentation are that you will understand:

- What EPDs are
- How they differ from LCA
- What trends are prompting companies and industries to create them
- What the market advantage is for those that have them
- AND how the existence of EPDs may change the way you sell products.

How Can EPDs Support Wood Promotion?

- EPDs allow manufacturers to analyze areas where products perform well versus opportunities for reducing potential environmental impacts
- EPDs, combined with forest certification and other verifications, reinforce wood's environmental position relative to other materials
- External trends clearly point to the need for EPDs to avoid market barriers



Image credit: skottieyoung.deviantart.com

There are some basic points about EPDs that we will reinforce during this presentation – so let's start the beginning of this presentation with those key points.

- First, what environmental product declarations do is give you the ability to analyze the areas where products perform well against environmental measures versus where there are opportunities for reducing environmental impacts and potentially reducing operations costs.
- The second take away is that EPDs give you another tool to reinforce wood's very compelling environmental position relative to other materials. EPDs in combination with forest certification and other verifications are proof points that help reinforce the value of wood to those working to meet environmental goals in their building projects.
- And finally, trends clearly point to the need for our industry to have EPDs readily available to avoid the potential for non-tariff trade barriers. We'll talk about these trends throughout our presentation today.

In short - EPDs provide "PRODUCT TRANSPARENCY" that is important for the continuous improvement of lean manufacturing operations. They provide the science and data to support wood's environmental messaging. And staying ahead of environmental trends ensures our products are not disadvantaged in the North American or global markets.

What are EPDs?



Now let's really start to answer our first learning objective:

- What are environmental product declarations and how do they promote product transparency?

This presentation will discuss both Cradle To Gate or Business to Business EPDs as well as Cradle to Grave or business to consumer EPDs – and we'll teach you more about the differences as we progress.

EPDs are declarations of potential environmental impacts

Nutrition labels = food nutrition reporting

Nutrition Facts			
Serving Size 1 cup (228g)			
Servings per Container 2			
Amount Per Serving			
Calories 280		Calories from Fat 10	
		% Daily Value*	
Total Fat	13g		20%
Saturated Fat	5g		25%
Trans Fat	2g		
Cholesterol	2mg		10%
Sodium	660mg		28%
Total Carbohydrate	31g		10%
Dietary Fiber	3g		0%
Sugars	5g		
Protein	5g		
Vitamin A	4%	•	Vitamin C 2%
Calcium	15%	•	Iron 4%
Percent Daily Values are based on a 2,000-calorie diet. Your daily values may be higher or lower depending on your calorie needs.			
	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat. Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Fiber		25g	30g
Calories per gram:			
Fat	9	•	Carbohydrate 4
		•	Protein 4

Source: USDA Nutrition Label

EPDs = product and service environmental impact reporting plus primary energy consumption

Table 3. Global Warming Potential Assessment Results – 1kg North American Softwood Lumber				
Impact category indicator	Unit	Total	Forestry operations	Lumber production
Global warming potential	kg CO ₂ eq.	72.64	10.56	62.09
Acidification potential	kg H ₂ SO ₄ eq.	42.25	5.43	36.82
Eutrophication potential	kg N eq.	0.0328	0.0123	0.0205
Ozone depletion potential	kg CFC-11 eq.	0.0000	0.0000	0.0000
Smog potential	kg O ₃ eq.	14.51	2.84	11.67
Total primary energy consumption	Unit	Total	Forestry operations	Lumber production
Non-renewable fossil	MJ	1113.01	156.99	956.02
Non-renewable nuclear	MJ	114.48	1.60	112.88
Renewable biomass	MJ	1578.86	0.00	1578.86
Renewable other	MJ	60.60	0.27	60.33
Material resources consumption	Unit	Total	Forestry operations	Lumber production
Non-renewable materials	kg	0.11	0.00	0.11
Renewable materials	kg	468.11	0.00	468.11
Fresh water	L	90.02	8.61	81.41
Non-hazardous waste generated	Unit	Total	Forestry operations	Lumber production
Solid waste	kg	14.99	0.10	14.89

Figure 1: Excerpt from page 10 of 15 of ULE certified EPD on North American Softwood Lumber.

An environmental product declaration (EPD) is a standardized tool used to communicate the environmental performance of a product or system.

Like food nutrition labels, EPDs provide transparent, credible information on a product by conveying a product's environmental impacts.

EPDs are based on life cycle assessment (LCA) data, which is developed by following International Organization for Standardization or ISO consensus standards and includes information on impacts throughout a product's life cycle.

These tools promote transparency and full disclosure of potential environmental impacts.

EPD Impact Assessment Results

Table 3: Cradle-to-Gate Impact Assessment Results - 1m³ North American Softwood Lumber

Impact category indicator	Unit	Total	Forestry operations	Lumber production
Global warming potential	kg CO ₂ eq.	72.64	10.56	62.09
Acidification potential	H ⁺ moles eq.	42.25	5.43	36.82
Eutrophication potential	kg N eq.	0.0326	0.0123	0.0203
Ozone depletion potential	kg CFC-11 eq.	0.0000	0.0000	0.0000
Smog potential	kg O ₃ eq.	14.51	2.84	11.67
Total primary energy consumption	Unit	Total	Forestry operations	Lumber production
Non-renewable fossil	MJ	1113.01	156.99	956.02
Non-renewable nuclear	MJ	114.48	1.60	112.88
Renewable, biomass	MJ	1578.86	0.00	1578.86
Renewable, other	MJ	60.60	0.27	60.33
Material resources consumption	Unit	Total	Forestry operations	Lumber production
Non-renewable materials	kg	0.11	0.00	0.11
Renewable materials	kg	468.11	0.00	468.11
Fresh water	L	90.02	8.61	81.41
Non-hazardous waste generated	Unit	Total	Forestry operations	Lumber production
Solid waste	kg	14.99	0.10	14.89

Figure 1: Excerpt from page 10 of 15 of ULE certified EPD on North American Softwood Lumber.

"[W]ood products can displace more fossil-fuel intensive construction materials such as concrete, steel, aluminum, and plastics, which can result in significant emission reductions."

- Intergovernmental Panel on Climate Change

EPDs have worldwide applicability and include information on global warming potential (or carbon footprint), acidification (or acid rain), eutrophication (which can cause unwanted algal blooms), and smog and ozone depletion potential -- among other impacts.

Figure 1 on this slide comes from the North American softwood lumber EPD, which is about a 15 page document. It is a good example of how an EPD reports potential environmental impact data on a product similar to the way a nutrition label reports nutrition in a particular food.

Also available are shorter documents called "transparency briefs," which are 2-page subsets of a full EPD. You can see from Figure 1 that EPDs also report on energy consumption from renewables, such as biomass, and non-renewables, such as fossil fuel.

Did you know before seeing this slide that more than 57% of the energy used to create a softwood lumber product comes from renewable energy? This plus the fact that wood product production and distribution result in lower carbon emissions than alternatives like steel and concrete is a strong selling point for using more wood. It's a point made recently by the Intergovernmental Panel on Climate Change as you can see from the quote displayed here. [READ QUOTE]

"[W]ood products can displace more fossil-fuel intensive construction materials such as concrete, steel, aluminum, and plastics, which can result in significant emission reductions."

- Intergovernmental Panel on Climate Change

We're on the leading edge

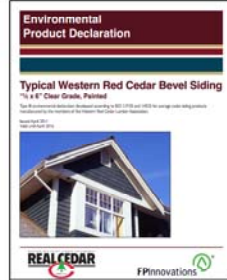
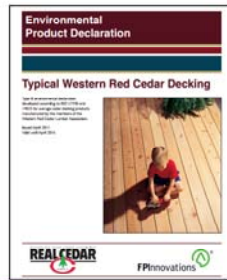


The wood products industry is on the leading edge of developing EPDs for building materials manufactured in North America. There are currently 6 structural and 3 non-structural EPDs that have been published. The six structural are: lumber, plywood, OSB, I-joist, glulam and LVL.

As mentioned previously, EPD documents are typically 15 pages long and the shorter 'transparency briefs' are about 2-pages long and include a summary of the most critical data presented in each EPD.

As is required for EPDs, each of the wood products industry EPDs and corresponding transparency briefs has been independently verified. The ones showed on this page are third-party verified by UL Environment (ULE), a business unit of Underwriters Laboratories. ULE verifies that the EPDs conform to the requirements of the ISO consensus standards mentioned earlier – specifically ISO 14025, the global standard governing EPDs. The verifiers review encompasses the underlying life cycle assessment data and reports as well as the data reported in the EPDs.

Additional EPDs



Coming soon through
AWC/CWC and ULE:

- Particleboard
- Medium-density Fiberboard

Data collection underway
for fiberboard, hardboard

EPDs Available Here

AWC

<http://www.awc.org/greenbuilding/epd.html>

CWC

<http://www.cwc.ca/index.php/en/design-with-wood/sustainability/life-cycle>

As mentioned, there are three non-structural EPDs for cedar siding and cedar decking, which were verified by FP Innovations, and a third EPD for redwood decking, verified by ULE. Upcoming EPDs for particleboard and medium density fiberboard are under development and will be verified through ULE. Also in the future, EPDs will be available for fiberboard and hardboard, but data gathering has just begun for these products.

What is Life Cycle Assessment?

Now that you have seen what an EPD looks like and the various products that are covered, let's take a deeper dive into the science that supports the data.

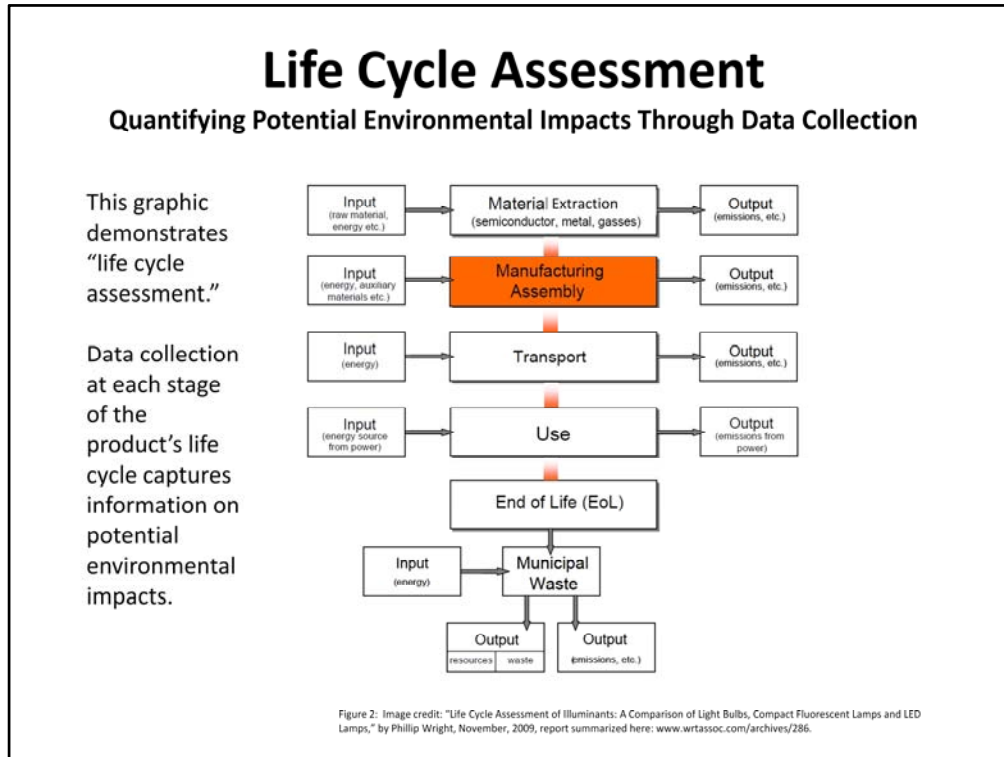
Life Cycle Assessment

- A life cycle assessment report is the source of EPD data
- The LCA report is independently verified
- Results are re-packaged as an EPD
- Life cycle assessment is the same as life cycle analysis – however, “assessment” terminology is preferred
- LCA is not
 - Life Cycle Cost Analysis

The EPD is the result of a series of steps that begins at the mills that manufacture these products. Data collection from a representative sample of mills is essential. Once enough data has been collected, it is processed by researchers and put into a thorough LCA report. The LCA report is independently verified and then re-packaged as an EPD.

It's also important to understand some of the additional terminology that is used in this field, because it can be a bit confusing. Life cycle assessment (LCA) and life cycle analysis are synonyms. However, using the term life cycle “assessment” instead of “analysis” is encouraged to avoid confusion with another type of measurement – that is life cycle cost analysis (LCCA).

Life-cycle cost analysis (LCCA) as applied to buildings is sometimes also referred to as value engineering or life cycle costing and it involves accounting for all costs related to construction, operation, maintenance, and disposal of building materials at the end of the useful life of a structure. It does not typically address environmental impacts – which are important considerations and the reason companies and industries in North America are developing LCAs and EPDs.



Having clarified that terminology...What life cycle assessment really *is* is a scientific, internationally accepted technique for assessing environmental impacts associated with all stages of a product's life. Creating LCAs involves compiling an inventory of relevant energy and material inputs and environmental releases – called a Life Cycle Inventory -- and evaluating their potential impacts – called a Life Cycle Assessment. The results of this assessment are presented in a thorough LCA report. This LCA information can help consumers and end-users make informed decisions about the products they use.

This figure, which is Figure 2, graphically demonstrates how a variety of inputs – from raw material extraction to energy -- feed into production, manufacturing, distribution, and use of a product.

EPDs Use Boundaries Set in LCA Data Collection Process

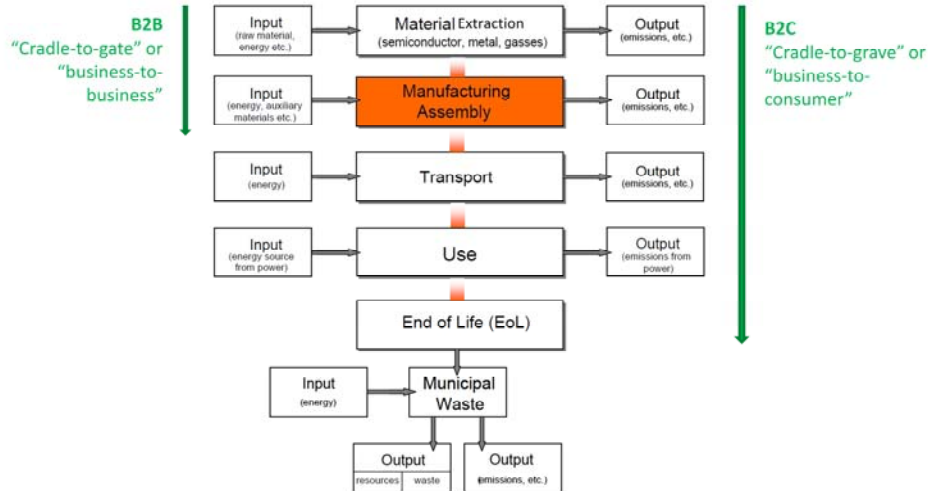


Figure 3: Image credit: "Life Cycle Assessment of Illuminants: A Comparison of Light Bulbs, Compact Fluorescent Lamps and LED Lamps," by Phillip Wright, November, 2009, report summarized here: www.wrtassoc.com/archives/286.

With this slight adaptation to Figure 2, which is the addition of the green text, we can see how LCAs are relevant to manufacturers and end users. For business-to-business – also called “cradle-to-gate” – manufacturers can examine potential impacts from extraction right through factory production – when a product is ready for shipment. LCAs can also be created for an examination of business-to-consumer claims. This is referred to as cradle-to-grave, because it takes into account potential impacts from the service life of the product including its eventual disposal or recycling.

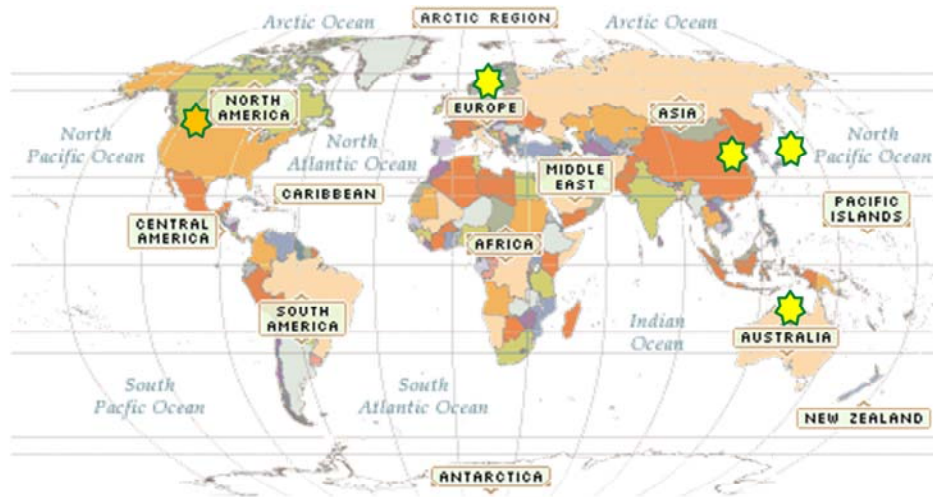
When LCA reports are created for a product, the “boundaries” are often determined by the data available and result in a declaration of the product based on either a cradle-to-gate or cradle-to-grave basis. EPDs reflect the same boundaries and boil down an extremely technical LCA report on inputs and outputs into the simpler, easy-to-use and standardized EPD format. Part of being able to compare “apples to apples” in products within the same category means that they need to have similar rules set so that boundary and other conditions measured are the same. The ISO consensus standards we’ve mentioned previously ensure that EPDs are developed in a common format, based on common rules, known as Product Category Rules (PCR). The creation and maintenance of Product Category Rules or PCRs is addressed in another ISO standard -- ISO 21930.

An EPD for a commodity product like lumber is cradle-to-gate because the manufacturer may not be able to characterize how the product is used after it is sold. As was pointed out at the beginning of our presentation, product manufacturers benefit from creating and analyzing this cradle-to-gate data because it can show both positive attributes of a product – like low use of fossil fuels – as well as opportunities for improving and reducing other environmental impacts that could lead to reduced operating costs and greater return on investment. Downstream manufacturers and other users benefit from this cradle-to-gate information as they use the product to create something new, for instance, pallets, crates, or buildings.

For products like redwood or cedar siding and decking, the boundary conditions used are cradle-to-grave, because the science allows us to track the most likely end use of the products.

**What are international and U.S.
trends around EPDs and LCAs?**

International trends



EPDs are being developed worldwide, with the largest momentum in Europe and Asia.

As we mentioned at the beginning of this presentation, there is growing demand for product transparency to support buying decisions.

EPDs are being developed worldwide. While North America is now just taking initial steps, EPDs already have significant momentum in Europe and Asia. The EU has a number of countries with EPD databases and is working on harmonization of EPD programs. Sweden, Italy, France, Germany, and the UK are among the furthest ahead. France, for instance, has developed an EPD-based national strategy for increasing the importance of environmental data in consumer choices and product manufacturing, and is the first EU nation to move towards mandatory EPDs.

Japan, Korea, China, Taiwan and Australia have some or all of an EPD infrastructure in place. An infrastructure would include having a significant number of EPDs available and one or more databases. Japan has spent significant federal dollars on a national database and the advancement of its EPD program, called EcoLeaf.

The North American industry is out in front of these trends with our own industry-wide EPDs, so that we are not at risk of being subject to what is essentially a non-tariff trade barrier.

U.S. trends



Council on Environmental Quality

Executive Order 13514

- Energy, water, and waste reduction requirements.
- USFS argues that agencies can substitute lower embodied energy and lower carbon emitting building materials to meet EO requirements.
- GSA is largest real estate developer in the world and has explored the possibility of EPD requirements for procurement purposes.

"Wood has a vital role to play in meeting the growing demand for green building materials."

- U.S. Agriculture Secretary Tom Vilsack

In 2009, the White House issued Executive Order 13514, which requires agencies to measure, manage, and reduce greenhouse gas emissions toward agency-defined targets. It describes a process by which agency goals will be set and reported to the President by the Chair of Council on Environmental Quality. The Executive Order requires agencies to meet a number of energy, water, and waste reduction targets. Also, the President's new Climate Change Action Plan specifically targets Carbon Pollution Reduction strategies.

In terms of the federal agencies, our industry is having success in encouraging agencies to further demonstrate compliance with the carbon and energy reduction goals of the Executive Order by recognizing the opportunity available to use low embodied energy and low carbon emitting building materials. The US Forest Service for instance has taken a leadership role in promoting the opportunities to use wood in buildings because of wood's excellent environmental record. Also, the Department of Defense is working to follow the lead of the Forest Service and will be substituting a wood-frame design for an upcoming school at one of the base facilities on the East Coast.

As the number of EPDs available in North America increases, we expect to see increasing government incentives for using EPDs for product procurement and to substantiate compliance with carbon and energy reduction goals. Ultimately, the GSA may become the biggest driver in the federal government and has already begun examining how EPDs can be incorporated into its procurement processes.



As we have discussed, the wood products industry has been among the first few industries in North America to produce what are called “industry-wide” EPDs. They are based on data averaged over the industry and common variations by region are noted within the EPDs. Once other industries that create structural materials catch up – and we encourage competing structural materials industries to do just that – our customers will be able to compare the potential global climate impacts, for instance, of one industry’s structural product versus another industry’s structural product. We are confident about the environmental benefits from using wood products versus alternatives and look forward to continuing the discussion with design teams and building owners once other industries step-up-to-the-plate with industry-wide EPDs.

In the meantime, other industries *are* seeing these global sustainability trends and individual companies in those industries are working to position themselves. The difference between these EPDs is that they are for a select manufacturer’s product – and they are called “brand-specific” EPDs. Brand specific EPDs can be very costly to produce – and may not vary greatly from the industry-averages included in the “industry-wide” EPDs. However, as we progress in our discussion of U.S. trends, we will discuss how the version 4 of the USGBC’s LEED® rating system is now drafted to create incentives to promote growth of brand-specific EPDs.

In summary – our industry is well positioned with industry-wide EPDs for its major product categories. However, our trade associations and manufacturers will want to continue following these trends and the wording in the various codes, standards, and rating systems to evaluate the potential for increased demand for brand-specific EPDs.

Life Cycle Assessment Included in Codes

Building codes



+

Recognition of Life Cycle Assessment
(product, assembly, or in the whole-building
design)

Life cycle assessment has a current role in construction codes, standards, and green building rating systems. Already, trends are moving away from using prescriptive criteria based on presumed benefits for product selection to more science-based or performance criteria.

Codes are driving demand for verified LCA information on products, which will in turn drive the development of EPDs in the building community. LCA criteria is included in the *California Green Building Code* (CALGreen), the *International Green Construction Code* (IgCC), and the *National Green Building Standard* (ICC-700). Each of these standards recognizes the use of LCA for evaluating and selecting a product, assembly or in the whole-building design.

Additionally, EPDs will be used by the design and construction community to demonstrate compliance with performance goals set through programs such as [Architecture 2030](#) and the American Institute and the Architect's [2030 Commitment](#), which call on the global architecture and building community to adopt and meet specific performance goals for reducing greenhouse gas emissions and other environmental impacts by 2030. The 2030 Product Challenge aims to reduce the embodied carbon in building products by 50 percent over the same period.

EPD Use Encouraged in Green Building Rating Systems

USGBC's and CaGBC's LEED® Rating System

LEED 2009 - Pilot Credit 52 – Material Multi-Attribute Assessment – gives immediate credit for using products with EPDs

LEED v4 has 3 levels of recognition for EPDs. Requires 20 products from at least 5 manufacturers to get 1 point. Product values are cumulative across categories.

- Products with LCA conforming to ISO 14044 valued at 1/4 product (e.g. need 80 products to get 1 LEED point)
- Products with industry wide (generic) EPD with third party certification valued at 1/2 product (eg need 40 products)
- Products with product-specific EPD with third party certification valued at 1 product (e.g. need 20 product)



LEED 2009 - Pilot Credit 52 – Material Multi-Attribute Assessment – gives immediate credit for using products with EPDs

LEED v4 has 3 levels of recognition for EPDs and requires 20 products from at least 5 manufacturers to get 1 point.

- products with LCA conforming to ISO 14044 valued at 1/4 product (e.g. need 80 products to get 1 LEED point)
- products with industry-wide EPDs with third-party certification valued at 1/2 product (e.g. need 40 products)
- products with product-specific EPD with third-party certification valued at 1 product (e.g. need 20 product)

Meanwhile LEED Pilot Credit 52 Material Multi-Attribute Assessment gives architects the opportunity to gain points immediately by using EPDs (required for at least 20 products).

EPD Use Encouraged in Green Building Rating Systems

Green Building Initiative's Green Globes® for New Construction

Prescriptive Path – 3.5.1.2.1

- Points awarded for use of products in assemblies that have EPDs, third-party certifications, or third-party verified LCAs based on a percentage of total products in assemblies that have these items
- If 10% to 40% or more of products in chosen assemblies have this documentation, project can earn up to 20 points



Performance Path – 3.5.1.1.1.

- Awards points for use of the Athena Impact Estimator in the conceptual design stage to evaluate two different assembly options for each of the six assembly types typically required in a commercial building and select the “best run” of assemblies
- Or users can use third-party peer reviewed LCAs to justify decisions based on same criteria
- Can earn up to 33 points (it is 1000 pt. rating system)

Prescriptive Path – 3.5.1.2.1

- Points awarded for use of products in assemblies that have EPDs, third-party certifications, or third-party verified LCAs based on a percentage of total products in assemblies that have these items
- Can earn up to 20 points (It is 1000 pt. rating system)

Programs Also Recognize EPDs

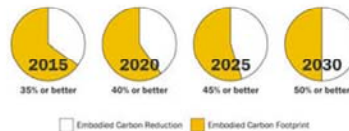
Programs



Calls for changes in building design to achieve carbon neutrality by 2030.



Aims to reduce the embodied carbon-equivalent footprint in building products by 50 percent by 2030.



Architecture 2030, a non-profit challenge movement that came about to address climate change, issues the “2030 Challenge” program calling for changes in building design and construction to achieve carbon neutrality by 2030. Its companion program, the “2030 Challenge For Products” aims to reduce the embodied carbon-equivalent footprint in building products by 50% by 2030.

The plan calls for participating manufacturers to develop accurate and comparative data on the embodied carbon-equivalent footprint of their products. Industry groups are developing PCRs and ultimately EPDs to standardize data across product categories and to track progress toward these type of program goals.

AWC & CWC Cooperative Effort



"Our industry has long been committed to transparency regarding the environmental impact of its products and encourages other building material producers to do the same.

For the first time, users have a science-based and third-party verified tool to understand and weigh what environmental factors are important to them when making their product selections."

- Robert Glowinski, American Wood Council President & CEO, May 7, 2013



"The EPD process is one that is open and transparent, outlining where wood products have optimal environmental performance capabilities as well as areas where various products have a need for improvement," said CWC President Michael Giroux.

"This form of comparison data can help equal the playing field for competing products and mitigate any past false stigmas that may have existed without scientific or justified proof."

- Michael Giroux, Canadian Wood Council President, May 7, 2013

There was widespread agreement that these collective trends pointed toward the need for EPDs and the industry chose to make these new tools available throughout North America. Our trade association leaders worked cooperatively with stakeholders throughout the process.

As Robert Glowinski, the president of the America Wood Council states, we can now for the first time ever use science-based and third-party verified tools to support the claim that "wood products are environmentally preferable" for building construction.

And Canadian Wood Council President Michael Giroux notes EPD data also outlines where wood products have optimal environmental performance capabilities as well as areas where various products have a need for improvement. With this data now available, we are better positioned to equal the playing field for wood versus competing products.

Summary of EPD uses

- **Globally** – industry-wide EPDs help ensure that wood products are not at risk for non-tariff trade barriers
- **Manufacturers** – for transparency, to distinguish product advantages and facilitate product improvement, as well as to support information sharing with secondary manufacturers
- **Specifiers/architects** – make informed product selection decisions, and comply with ‘green’ codes, programs, and rating systems
- **Government** - use EPDs to help demonstrate compliance with EO 13514 and/or state/province-level or other environmentally preferable purchasing (EPP) or green building policies

There are many potential uses for EPDs.

Globally – industry-wide EPDs help ensure that wood products are not at risk for non-tariff trade barriers

Manufacturers – for transparency, to distinguish product advantages and facilitate product improvement, as well as to support information sharing with secondary manufacturers

Specifiers/architects – make informed product selection decisions, and comply with ‘green’ codes, programs, and rating systems

Government - use EPDs to help demonstrate compliance with EO 13514 and/or state/province-level or other environmentally preferable purchasing (EPP) or green building policies

**How do EPDs support our industry's
efforts to grow sales of wood
products?**

EPDs Are Useful as a...

Management tool for manufacturers, purchasers, any procurement functions of an organization. They are useful for product designers and for developing marketing strategies.

Communication tool among manufacturers, suppliers, distributors, purchasers, contractors, and users.

Evaluation/Assessment tool for professionals, procurement, contractors and buyers that use the EPD for making decision and for benchmarking environmental information.

Procurement tool for government, commercial and institutional purchasers.

Action tool for consumers and consumer groups.



EPDs are Useful as a....

Management tool for manufacturers, purchasers, any procurement functions of an organization. They are useful for product designers and for developing marketing strategies. As we've mentioned previously, they are also useful for monitoring the product data and applying the outcomes to improve environmental performance.

EPDs are useful as a...

Communication tool among manufacturers, suppliers, distributors, purchasers, contractors, and users by functioning as a source of environment information, while enhancing environmental awareness and interacting with internal environmental concerns.

Evaluation/Assessment tool for professionals, procurement, contractors and buyers that use the EPD for making decision and for benchmarking environmental information.

Procurement tool for government, commercial and institutional purchasers that increasingly have to justify their purchases as in line with carbon reduction goals or other environmentally preferable purchasing requirements.

Action tool for consumers and consumer groups by disseminating environmental information and product criteria, making comments, and asking for disclosure of consumer concerns.

'Green' Messaging Leads to Stronger Branding & Sales

Article, 7/30/2013 by Jennifer Hicks



Jennifer Hicks, Contributor
I write about robotics, science, green and mobile technology.
Follow (13)

Building Green Increases
Demand For Traditional
Materials

*"...wood construction is
on the rise...."*

According to *Forbes*,
Navigant Research
Report says:

*"Worldwide market for green
construction materials will
grow to \$254 billion"*



There's good news on the horizon for construction materials that are considered 'green.' According to a recent Forbes article, research by the Navigant Research report shows that the worldwide market for green construction materials will grow to \$254 billion in 2020, from \$116 billion today. The article also highlights that due to changes in wood technology and improvements in building codes, wood construction is on the rise.

'Green' Messaging Leads to Stronger Branding & Sales



These sentiments were echoed in an article one day later in Environmental Building News. As this slide shows, the author of "Engineering a Wood Revolution," Brent Ehrlich, states that:

"In the past 20 years, engineered wood technology and production methods have improved the performance of timber products, and for commercial buildings they now offer an intriguing alternative to concrete and steel in many structural applications – while offering environmental benefits."

Key messages to support use of wood

POSITIONING WOOD FOR ARCHITECTS



Vancouver Convention Centre, British Columbia
Musson Cattell Mackay Partnership Architects Designers Planners,
Downs/Archambault & Partners, LMN Architects
Photo: naturallywood.com

ELEVATOR SPEECH

RETHINK WOOD: A NATURAL CHOICE



1. Wood costs less
2. Wood is versatile
3. Wood meets code
4. Wood is renewable
5. Using wood reduced your environmental impact
6. Wood products play a significant role in a modern economy






reThink Wood is a communications initiative supported by the Softwood Lumber Board and Softwood Check-off program, in collaboration with American Wood Council, Woodworks and other forest product associations. It is NOT a branding program, rather a messaging vehicle that is intended to encourage and facilitate broad-based interest in softwood lumber and wood use, particularly in opportunity areas such as mid-rise and non-residential buildings.

Research and testing with architects and specifiers resulted in a targeted messaging platform that addresses key values, as well as correcting misperceptions.

The six key messages – reflected in this suggested elevator speech are:

1. Wood costs less – North American wood products offer advantages in terms of material, construction and environmental costs.
2. Wood is versatile – Wood's design flexibility makes it suitable for a wide range of building types and applications, both structural and aesthetic.
3. Wood meets code – Today's building codes coupled with advances in building science and technology have expanded options for wood construction.
4. Wood is renewable – other products deplete the earth's resources. Wood grows naturally and is renewable.
5. Using wood reduced your environmental impact – wood products have less embodied energy, are responsible for lower air and water pollution, and have a lower carbon footprint than other materials.
6. Wood products play a significant role in a modern economy – sustainability and innovation should be top priorities for all those involved in the design and construction process. Wood products meet these criteria and support job growth and rural economies.

Promoting Wood EPDs

Impact Assessment Categories	
Impact Category Indicators	Characterization Model
Global Warming Potential 	Calculates global warming potential of all greenhouse gases that are recognized by the Intergovernmental Panel on Climate Change. The characterization model scales substances that include methane and nitrous oxide to the common unit of kg CO ₂ equivalents.
Ozone Depletion Potential 	Calculates potential impact of all substances that contribute to stratospheric ozone depletion. The characterization model scales substances that include chlorofluorocarbon, hydrochlorofluorocarbon, chlorine, and bromine to the common unit of kg CFC-11 equivalents.
Acidification Potential 	Calculates potential impacts of all substances that contribute to terrestrial acidification potential. The characterization model scales substances that include sulfur oxides, nitrogen oxides, and ammonia to the common unit of H ⁺ moles equivalents.
Smog Potential 	Calculates potential impacts of all substances that contribute to photochemical smog potential. The characterization model scales substances that include nitrogen oxides and volatile organic compounds to the common unit of kg O ₃ equivalents.
Eutrophication Potential 	Calculates potential impacts of all substances that contribute to eutrophication potential. The characterization model scales substances that include nitrates and phosphates to the common unit of kg N equivalents.

Impact Category Indicators Table from the Softwood Lumber EPD: The life cycle impact assessment (LCIA) results are calculated for impact category indicators such as global warming potential and smog potential. These results provide general, but quantifiable, indications of potential environmental impacts. The various indicators and means of characterizing the impacts are summarized in this table.

reThink Wood shared a link.
October 16 · 🌐

The American Institute of Architects' new sustainability report recommends 4 priorities, including material selection. The American Wood Council has great resources when looking at wood as a material. They have developed third party verified Environmental Product Declarations that describe the environmental performance of many wood products. Find the EPDs here: <http://www.awc.org/greenbuilding/epd.html>



Environment Product Declarations (EPDs) for Wood
www.awc.org

The North American wood products industry is committed to sustainability in its products and their use. In support of this commitment, we are pleased to

Like · Comment · Share

1

reThink Wood @reThinkWood 12 Jul
EPDs provide a reliable evaluation of products' environmental impact. This CEU reviews new EPDs for wood products: owl.li/mUAqP
Expand

reThink Wood strategically positions and builds awareness of wood use with North American audiences such as architects, engineers and regulators. The program uses online and social media channels, as well as continuing education and published articles. Building awareness with these audiences facilitates interest and motivation to use more wood in building projects. The American and Canadian Wood Councils, as well as the US and Canadian Woodworks programs, support increased wood use as problem solvers and local experts with experience in a variety of building types.

This slide shows an example of a Facebook post and a tweet, as well as content published in an architect continuing education unit. The full continuing education document is available through reThink Wood and has been one of the most popular wood continuing education units this year.

Using wood helps reduce your environmental footprint



EPDs should now factor into your key messages on using wood over other materials because EPDs provide an important proof point to the message that “Using wood helps reduce your environmental footprint.”

Wood is also renewable and sustainably harvested. EPDs are complimentary to other third-party independent certifications and labels, such as forest certification programs. EPDs are an important reporting mechanism, and product certification continues to serve important functions too. Sustainably managing forests with future generations in mind, conserving biodiversity, and protecting other values related to forests have great worth and complement the parameters measured in an EPD. Together, EPDs and forest certification provide a more complete picture of the environmental attributes of a forest product.

Summary

- Lean manufacturers need reliable data on environmental impacts
- The market for green construction materials is growing
- Branding wood around its strong 'green' message is an important proof point toward making sales
- Requests for industry-wide EPDs and brand-specific EPDs are likely to increase in the near-term as a result of international and U.S. trends
- Availability of industry-wide EPDs today continues the industry's leadership position in the face of growing demand for product transparency

In closing, our take aways are that:

- Lean manufacturers need reliable data on environmental impacts
- The market for green construction materials is growing
- Branding wood around its strong 'green' message is an important proof point toward making sales
- Requests for industry-wide EPDs and brand-specific EPDs are likely to increase in the near-term as a result of international and U.S. trends and having EPDs available helps ensure wood products are not disadvantaged
- Availability of industry-wide EPDs today continues the industry's leadership position in the face of growing demand for product transparency

Actions and Next Steps

- ✓ Review the EPDs and evaluate products that you sell for positive attributes and areas for improvement
- ✓ Let your customers know about these EPDs
- ✓ Mention the EPDs on your organization/corporate website with a link to find them
- ✓ Inform sales staff about EPDs and how they can help their customers use EPDs to comply with the programs, codes, standards and rating systems described in this presentation

It is beneficial to the industry to make our EPDs available throughout the supply chain. Here are a few next steps you can take to help our industry ensure it achieves the maximum benefits from this effort.

- Let your customers know about these EPDs – send them links to the AWC or CWC webpages along with your sales information. Bring the transparency briefs to sales meetings.
- Mention the EPDs on your organization/corporate website with a link to find them
- Inform sales staff about EPDs and how they can help their customers use EPDs to comply with the programs, codes, standards and rating systems described in this presentation

And to that end, the complete recording of this presentation will be available and link to it will be emailed to all participants. We appreciate your participation this far into the presentation and look forward to taking your questions.

Questions?

Moderators and Presenters for Q&A

- **Robert Glowinski and Ken Bland**, American Wood Council
- **Michael Giroux and Rodney McPhee**, Canadian Wood Council
- **Sonya Zeitler Fletcher**, ReThink Wood

Resources

- American Wood Council – www.awc.org/greenbuilding/epd.html
- Canadian Wood Council – <http://www.cwc.ca/index.php/en/design-with-wood/sustainability/life-cycle>
- ReThink Wood – www.rethinkwood.org