Commentary-Dave Pasolli-Western Wood Truss Association of Alberta

Takeaways from BCMC 2024

In the past I did not typically attend the BCMC show. As the CWTA has been having ongoing talks with the SBCA this year and both are working towards mutual collaboration, I thought it may be a good idea to represent the WWTA. Plus, it was a good opportunity for me to stay up to date on what is current and network with some industry people.

Yours Truly and Jess Lohse, SBCA Executive Director

This year the conference was held in Milwaukee October 8-11, and they had 1857 attendees registered with 120 companies represented in the exhibit hall.

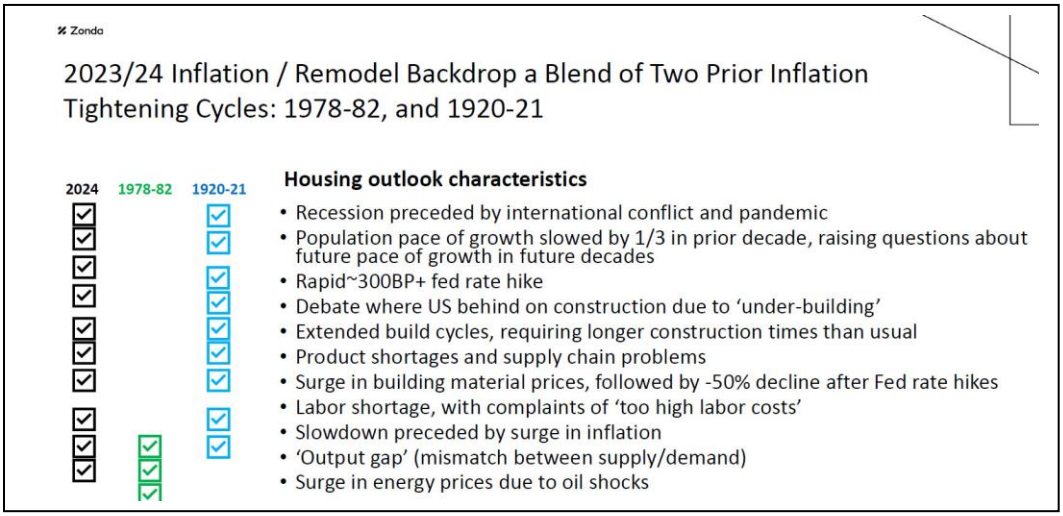
It was interesting to hear keynote speaker Daymond John from Shark Tank talk about his entrepreneurial rise to success in the fashion industry and his ability to challenge the status quo in a mature market. He certainly took some risks in his early days developing his brand and combined with a bit of luck has an interesting story to tell.

I also found the economic presentation from Todd Tomalak from Zonda to be quite interesting. Although it was obviously dedicated to the US market, so much of what does happen here is related. Zonda is the largest home-building property tech company in North America and Todd is an 11-time winner of the Most Accurate Category Forecaster from the Chicago Federal Reserve. His analysis is regularly featured in various media.

Tomalak Economic Presentation

Some of the things I took away from the Economic Forecast was that because of low inventory during the past couple of years, a lot of buyers are not living where they actually prefer to, and festering dissatisfaction with housing choices today will lead to wave of future moves, remodels, or both in the next 5 years. I could also see this happening in our market as a lot of new buyers are just trying to get their foot in the door of home ownership.

We must also keep in mind that with all the talk of making housing more affordable ,at the same time there has been an enormous amount of equity created for people that own their home and how is that going to shape the construction industry in the next decade.



The above was a slide taken from Todd's presentation where he was relating the current conditions to previous inflation tightening cycles. We all know what happened after the roaring 20's.

Todd's Summary:

•Risks to Building Products are culminating now particularly with large swings in DIY and PRO demand, pricing, and multifamily vs single family demand. We see more risk in 'mid-range' remodels than previously forecast.

•The story of 2024 is 'deferral', is increasingly looking similar to the deferral/rebound path of the early 1980's but with far higher home equity, which changes the pace of growth. Building Product spending from 2026-30 will be elevated significantly higher than current levels, which is hard to prepare for when industry activity is slow.

•Labor shift ahead, with change underway in distribution. Don't be complacent.

https://zondahome.com/

The Buzz Words of the Show

You could hardly attend an educational session without hearing the words AI, Automation, or Cloud Computing. Just use these terms in the pitch of your product and you will get an audience. They promise cost savings, consistency, efficiency, and speed, giving any company a competitive advantage if they only invest in them now.

Companies should not be motivated by the fear of mission out and be pressured to adopt these technologies just because they see their competitors doing so. They have to do a thorough evaluation of their needs and bottlenecks based on their market and customers demands. Does it really make sense to have a new expensive saw that can produce 5000 board feet per man hour if you demand is only for 2000?

Remember for AI to work it must have good data to begin with. If AI doesn't know the answer, it's going to make it up. Use it wisely – reviewing is very important.

A truss designer asked me if I thought that AI would take his job, and I responded that as long as the information you are given to design a job remains incomplete there is not much likelihood.

One of the presenters on AI used the example of training it to win at rock, paper, scissors by rewarding it when it gets the answer correct and punishing it when it guesses wrong. The only problem with his presentation is that this game is spontaneous, if anyone knows what the other person was going to throw down it would be easy to always win. It is really more like tic-tac-toe where you are asking the AI to determine a response based on where your opponent places their mark.

I think there are a lot of opportunities for AI in our industry, but they must be created around real problems that need a solution, not just be cool.

Primary Lumber Producers

I was actually quite surprised by the number of Primary Lumber Producers at the show and their interest in actually having discussions with the people that use their product. I have often felt that this is not the case in Canada as they almost like to avoid any customer contact. I have never seen them at a WoodWorks event or had any interest in them being supportive of either the Canadian Wood Truss Association or our regional associations. By my count there were about 12 lumber producers at the show, many of them the same companies from Canada that have lumber in your yard.

Now, I think that our brokers here do a great job in supporting our industry and perhaps our supply chain has developed differently, but I found it interesting none the less.

Quality Control

I had the opportunity to spend a significant amount of time and geek out with QC guru Glenn Traylor that quite often contributes quality control articles to the SBCA.

We talked a lot about the similarities of theory of QC in truss manufacturing and the subtle differences between the countries, our standards and requirements.

Glenn Traylor demonstrating the velum method of inspecting plate placement on a truss for Dave Pasolli

The show also gave me a good opportunity to have some discussions around the differences between TPI in the US and what our TPIC is doing in Canada. Again, a lot of similarities and they obviously have significant resources, but there are some differences based on building code and jurisdictional requirements. However, most of what they are working on usually finds it's way to Canada.

As I mentioned earlier there seems to be a desire for Canadian fabricators to work more collaboratively with the SBCA and discussions are ongoing to determine how we can do that. Hopefully we will have an agreement for Canadian manufacturers to utilize some of their benefits like attending the show before BCMC 2025.

If you have an idea for a commentary or would like to submit your own commentary for a future newsletter please let me know at dave@wwta.ab.ca

Economic Update

Housing Starts

In Alberta, urban housing starts totaled 3766 in September 2024, a year-over-year decrease of 8.3%. Canadian housing starts decreased by 15% over the same period. Edmonton had another strong month with a 32% increase compared to September 2023, while Calgary was down 24%. Housing starts in Alberta were down from 4040 in the previous month of August 2024.

I know we still have 3 months left, but it is going to be a bit of a stretch to hit Trudeau's target of 488,000 units before the end of the year, I guess we will just have to do better in 2025.

Housing Starts Alberta						
	Sep-24	Sep-24	% Change	YTD 2024	YTD 2023	% Change
Alberta	3766	4108	-8.33%	33575	24905	34.81%
Edmonton	1435	1084	32.38%	13359	9099	46.82%
Calgary	2090	2734	-23.56%	17414	14141	23.15%
Red Deer	14	23	-39.13%	314	146	115.07%
Grande Prairie	19	11	72.73%	148	74	100.00%
Lethbridge	22	32	-31.25%	599	148	304.73%
Wood Buffalo	4	0	#DIV/0!	19	21	-9.52%
Whitehorse*	30	105	-71.43%	42	211	-80.09%
Canada	18806	22184	-15.23%	168442	165243	1.94%
*Whitehorse Starts are for the quarter, statistics are not available monthly.						

Housing Starts by Dwelling Type (Centres 10K+)

	SEP-24	SEP-23	YTD-24	YTD-23
Total	3,766	4,108	33,575	24,905
Single	1,441	1,185	11,295	8,578
Semi-detached	265	251	2,776	2,048
Row	560	500	4,606	3,911
Apartment	1,500	2,172	14,898	10,368

What is Happening in Whitehorse?

I visited our member Kilrich the first week of September and what is happening here is a great example of what can happen when the government gets too involved in the housing market and feels they must make some changes. The city recently had a change in the Building Department that has resulted in long delays for permits. With an already short building window in the Yukon, builders were just not ready for the new rules and permit system that were going to be put into effect, like providing a heat loss calculation. The bureaucracy implemented has resulted in building permits being down 39% from the same period last year.

Imagine what would happen to housing starts in Alberta if the government started implementing more requirements for permits such as authenticating placement plans.

Looking a lot like 2007: Alberta home construction booming

Resale house prices have been on the rise in Calgary and Edmonton. The increases have been driven by strong population growth, low resale market inventory and a gap between household formations and new home construction.

Home builders have responded to this by ramping up housing starts in Alberta, which have averaged 46,052 units* over the first nine months of 2024. That puts Alberta on pace to record the highest level of starts in 2024 since 2007 (when they averaged 50,929 units through September).

The current pace of housing starts is looking a lot like the last Alberta housing boom of 2006/07. While there were some surges in 2014/15, we have to go back to December 2007 to find a hotter streak.

Driven by multi-family construction projects, this is up by 37% from last year with September marking the 14th month in a row that house starts have been at or above 40,000 units.

Alberta's residential construction activity stands out even more when compared to elsewhere in the country. Starts over the first nine months of the year in the rest of Canada are now down to their lowest point since the pandemic.

Building permits, another indicator of new home construction, have been showing similar trends. Relative to the first eight months of 2023, the number of residential permits issued in Alberta was up 36% while they declined 2.4% in the rest of Canada.

All of this is in line with our latest October outlook released earlier this month. We expect housing starts to average close to current levels in 2025. Home construction is one of the key factors, along with rising energy production, pushing Alberta's forecast for real GDP growth ahead of the national average.

The more the merrier: Multi-dwelling construction leading the way in Alberta
Rob Roach, ATB ECONOMICS | October 22, 2024

The rise in housing starts and residential building permits shows that the Alberta construction sector has been responding to the surge in demand that has accompanied the province's rapid population growth.

Both single-dwelling and multi-dwelling projects are part of this, but it is the multi-dwelling category that has been posting the strongest numbers.

On a year-to-date (YTD) basis, 74% of the new housing units awarded permits from January to August of this year were in multi-dwelling buildings—8 percentage points higher than the average YTD share since 2017 (when the current data series begins).

In absolute terms, YTD multi-dwelling permits will add 23,576 new housing units compared to 9,821 single-dwelling homes.

Other indicators point to a similar trend. Spending on new** buildings has also increased more in the multi-dwelling category, which was up by 45% YTD compared to 27% in the single-dwelling category.

Spending on new multi-dwelling buildings also represented more than half of total YTD spending on new buildings for the second year in a row.

It is a very different story nationally, with spending on the construction of new homes up only 2% YTD. Single-dwelling spending was actually down by 8% while multi-dwelling spending was up by 9%.

Despite the uptick in activity in Alberta, it will take time for new home construction to catch up to the record-setting population growth Alberta has been experiencing. The province recently added over 204,000 new residents in just a 12-month period.

Benchmark home prices continue to rise in Calgary and Edmonton

The streak continues: the seasonally-adjusted price of a benchmark home* on the resale market in Alberta increased for the 22nd month in a row in September.

On a year-over-year (y/y) basis, the provincial benchmark price of $513,700 was 6.7% higher than the same month last year.

In Calgary, the y/y benchmark price was up 6.3% to $583,100 in September; in Edmonton, it increased by 7.5% to $399,300.

While prices have been rising steadily in Alberta since the end of 2022, the national average has lost ground. At $718,200 in September, the national benchmark price was 3.6% lower than 12 months earlier.

Jumbo Cut: The Bank of Canada doesn't want to be behind the curve

As expected, the Bank of Canada slashed its policy interest rate by 50 basis points from 4.25% to 3.75% Oct 23—the largest cut since the early stages of the pandemic and a rare 'oversized' move outside a recession period.

The jumbo cut comes because inflation has already fallen to target and such restrictive policy rates are no longer needed. Last month's CPI report sealed the 50 basis point cut in the view of ATB. Headline inflation broke through the 2% target to land at only 1.6%. And now the Bank expects inflation to be lower than it was forecasting in July (see below).

ATB take: The right call, and a key moment in the battle against inflation. Late out of the gate when inflation took off, the Bank of Canada doesn't want to be behind the curve as inflation normalizes. It takes 18 to 24 months for the impacts of policy rate changes to fully kick in, and speeding back to its neutral rate (estimated by the Bank to be 2.25-3.25%) will help prevent the economy from cooling too much. Even with this latest cut, policy will remain restrictive—more people are renewing loans at higher rates than before the rate hikes started. And if inflation flares up again, the Bank can simply hold longer at the current policy rate.

new-federal-mortgage-policies-will-boost-canadian-home-prices-in-2025-td-132602713.html

Lumber

Lumber prices held near $530 per thousand board feet, close to the four-month high of $534 reached on September 24th, as supply constraints broadly offset concerns about weakened demand. Despite a partial recovery in production, output remains historically low, with US production down 3.2% from last year. Recent mill closures and curtailments, particularly by Canfor, have further tightened supply, sustaining upward pressure on prices as producers adapt to softer demand. Still, demand has weakened in line with a rebound US mortgage rates, which have returned to August highs as hopes for a soft landing in the US economy tempered dovish Federal Reserve expectations. This was reflected in a drop for US building permits and housing starts.

https://www.census.gov/construction/nrc/pdf/newresconst.pdf
Builders continue shift to condos and townhomes amidst affordability crisis - Oct 17, 2024
https://www.woodbusiness.ca/some-prices-surge-in-wake-of-hurricane-helenes-impact-madisons/

[why the future of BCs forests has become a huge election issue]

US Dept. of Commerce Revises New Duties for Softwood Lumber Products From Canada
Posted on October 2, 2024

The US Department of Commerce (DOC) has revised two antidumping duty rates for imports of certain softwood lumber products from Canada. These rates are effective September 24th, 2024, the date of publication in the Federal Register.

The slightly lower rates are noted in bold in the table below:

AR5 Final Determination (Revised)

	Antidumping	Countervailing	Combined
Canfor	10.44%	6.14%	16.58%
West Fraser	**5.04%**	6.85%	**11.89%**
J.D. Irving	7.80%	3.88%	11.68%
Tolko	7.80%	9.61%	17.41%
All Others	**7.66%**	6.74%	**14.40%**

Revisions in bold

The final determinations from the fifth administrative review were originally published and took effect on August 19th.

The new notice in the Federal Register is available here

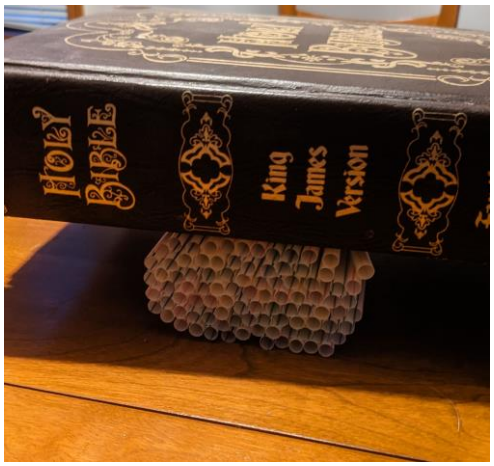
Quality Control

Wane at Bearing

When designing a truss, especially one that is carrying a lot of load, you always have to be aware of the reaction it creates at the bearing and that this reaction can be accommodated at the bearing, including the truss member and what it is transferring the load to.

The reaction capacity is determined by the resistance of the material or their design values, and this differs on the orientation of the grain. The straw-like fibers that create the grain structure in the lumber, run the length of each piece of lumber. For example, if you pushed on the end of a tight pack of straws, parallel to grain, there will be very little "give" by the straws. However, if you pushed on the side of the straws, or perpendicular to the grain direction, it will be much easier to crush the pack.

Lumber is like this and can withstand approximately three times more load in the parallel direction than it can in the perpendicular direction.



Load on straws parallel to the straws and perpendicular to the straws

When you are designing and building a truss the grade of the lumber may be a good indication of it having a high reaction, because the lumber may specified because it has higher design properties to account for the reaction.

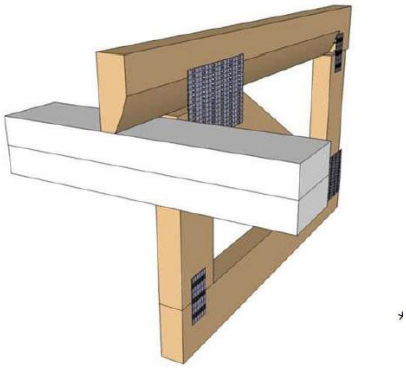
Once you know the reaction, and the capacity of the lumber you can then determine the square inches of bearing that is required. Now that you know the required area you can divide it by the member width and determine the bearing length.

For example: A 1 ½" truss bearing on a 3 ½" wall has 5 1/4" in^2 of bearing area.

If the reaction of the truss is 2000 lbs and the bearing capacity of the wall plate is 425 psi then the bearing area required would be 4.7 in^2.

Now when that truss is designed it is assumed that it has bearing for the full width of the truss member, so you can see how important it is not to reduce the bearing surface of the truss because the width is less than the assumed 1 ½".

Lumber Wane



If the wane is the maximum ½" allowed, it will reduce the area from 5 ¼ in^2 on a 2x4 wall to 3 ½ in^2 or a 67% reduction in the area, which would not work in the above example.

This is not to mention the number of ineffective teeth you may have at the joint in the picture above, but that is a different issue.

So, the lesson is to pay attention to the wane at the bearing especially in situations like the illustration above. Although your builders may prefer the wane not be on the top of the truss because it makes it harder to hit with a nail, it is typically better for the design of the truss to have the wane not on the bearing side. This also applies for plating.

Builders should pay attention to the lumber if there is going to be wane at the bearing, especially if the reaction is high or the lumber is a higher grade with higher perpendicular to grain capacity.

It also may be helpful if the truss designer puts a note on the drawing that no wane is allowed at the bearing in some instances.

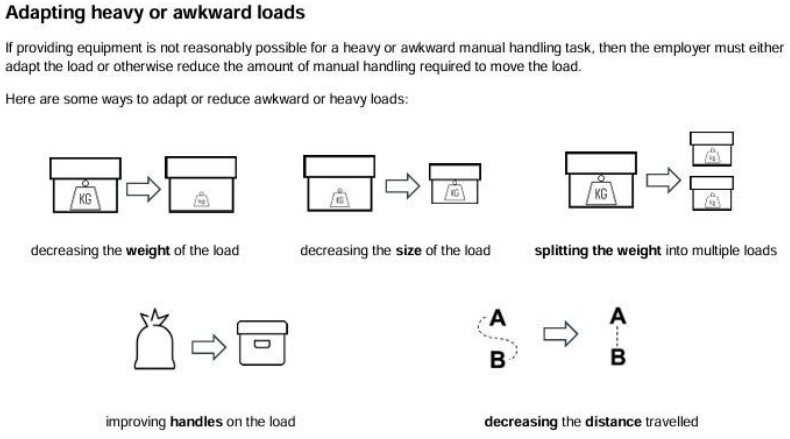
Health and Safety Toolbox

Ergonomic hazards in the workplace

October is Global Ergonomics Month, during which organizations around the globe raise public awareness about ergonomics.

Workers can face all kinds of potential hazards at their work site. Some may be relatively easy to spot, such as toxic chemicals or sharp objects. But there's another type that can be harder to identify: ergonomic hazards which can result in musculoskeletal disorders (MSDs).

Workplace ergonomic hazards include actions such as lifting heavy objects, making repetitive movements or using vibrating power tools. These can cause a range of musculoskeletal injuries and disorders, either immediately or over long periods of time.



Design changes and control measures

Here are some common manual handling hazards and example controls.

Heavy lifting

- provide lifting equipment
- reduce the weight of the load
- reduce the size of the container (to lighten the load)
- organize workstations so lifting occurs between knee and chest height (i.e. in the low risk zone)

Awkward postures while lifting

- provide lifting equipment
- change workstation or workstation layout so neutral postures can be used to limit reaching
- provide long-handled tools to reduce the need for reaching
- maintain clear work areas to allow for neutral, safe body positioning
- reduce the size of the load to reduce reaching
- avoid lifts that start or end below knee height and above shoulder height
- use powered lifts to raise pallets or product to better handling heights

Frequent lifting

- provide lifting equipment
- use mobile storage racks to avoid unnecessary loading/unloading
- reorganize work to decrease the need to handle and re-handle loads
- rotate workers to tasks with light or no manual handling

Pushing/pulling tasks

- eliminate the need to push/pull by installing conveyors
- use power-assist moving equipment
- adjust handles on carts so they are between waist and chest height
- reduce the distance of the push/pull through work organization
- maintain a clear and unobstructed pathway
- do not obstruct worker's view by overloading equipment
- reduce required force by making sure wheels are maintained and are well lubricated

There is a good lifting assessment tool on the OHS website ergonomics in the workplace.

To learn more about ergonomic hazards, the injuries they can cause and how to identify, eliminate and control these hazards in the workplace, see the ergonomics resources on the OHS Resource Portal.

The Alberta Government has a new format OHS eNews you can subscribe to with all kinds of good material at: https://ohs-pubstore.labour.alberta.ca/

News and Events

STANDATA on Authenticating Documents

Since the STANDATA 23-BCB-002 was issued in August there had been no further discussion on the issue by Municipal Affairs, until last week when we had a meeting that included Municipal Affairs, APEGA, BILD Alberta, and the WWTA. We are going to be holding monthly meetings with the goal of defining requirements through future STANDATA.

Although this was our first meeting, and we should not put the cart before the horse, because throughout this process the goal posts have been constantly moving, a couple of things that I took away from it were:

It is up to Municipal Affairs to determine if engineering is required to authenticate and if they do, it is then APEGA gets involved to help determine how it is done and provide guidance to authenticating engineers.

In a change since we had our first discussions back in December of 2022 there is an understanding by Municipal Affairs that cost is an issue, and affordability is an important consideration in determining guidelines.

Current Situation

In the meantime, it appears that some Authorities Having Jurisdictions (AHJ's) are interpreting 23-BCB-002 to the letter which means:

It is very specific to layouts for one and two-family dwellings. This is similar to the wording used in the old STANDATA 14-BCV-016 which was from 2017. We encouraged them to align it with the definition of Part 9 buildings, but they kept this terminology. This means that a 3- or 4-unit building may require sealed layouts if the AHJ requests them.

There are also instances where some AHJ's are requesting authentication on a layout for any truss design that indicates it falls in Part 4 in the design information. This could be a floor truss or a truss with a span over 40' for example.

There has also been an instance where an AHJ requested sealed layouts for a separate garage, presumably because it was not a family dwelling. If you run into this there would be an argument for not requiring it because it falls within 9.4.2.1.1) as a simple building with repetitive members. A bit of a tricky situation because a garage could be quite simple or quite complicated. If it had girder trusses for example, they may consider that not to meet the condition of having repetitive members.

So, for now it is important for all companies to have discussions with their members when they see buildings that do not strictly fall within the scope of 23-BCB-002 and inform them that their AHJ may require additional engineering authentication that they may have not seen in the past and what the ramifications to them as a customer are.

Wood Solutions Conference 2024
Tuesday December 3, 2024
The Westin Edmonton

The Wood Solutions Conference Edmonton 2024 is an event that brings together architects, engineers, and designers to discuss advancements and sustainability in construction. Focused on biophilic design principles and wood product innovations, this conference is a must-attend for professionals looking to enhance their expertise and certifications in sustainable building.

Early Bird Registration ends October 31, 2024

Alberta Wood Solutions Conference 2024

Life Cycle Analysis (LCA) and Environmental Product Declarations (EPD)

Last year, the Canadian Wood Council undertook a Life Cycle Analysis (LCA) survey with members of our association. The purpose was to gather life cycle information from the 2022 production year. The survey was sent out to more than 400 forest product manufacturers across the country.

The resulting data has contributed to the creation of five LCA reports[1]:
- Lumber
- Plywood
- OSB
- I-Joists
- Open Web Wood Trusses

The LCA reports are currently undergoing a third-party verification after which will be sent to the funder, the National Research Council of Canada, for inclusion in the Life Cycle Inventory database which is being complied for all major structural materials.

These reports will be used to create Environmental Product Declarations (EPDs) for the various production regions of each product listed. They will also send our association copies of the relevant reports which we can share with your members. These will be available early in the new year.

Next steps:
The data is most valuable when it is collected annually. We will be launching the next survey in November to gather 2023 production year data.

The yearly survey is necessary for a few reasons:

- To fill in gaps from producers who were not able to complete the survey last year;
- To gather input from companies as to how best to gather this information going forward; and
- To provide year-over-year benchmarking for companies.

The new data collected will NOT be used to create new LCA Reports and EPDs, but will serve as a benchmark to inform future LCA reports and EPDs by examining for any data anomalies. We hope to have data collection completed by late November or early December, 2024.

This data is of great importance. The marketplace is increasingly demanding current and regionalized EPDs. Government agencies (local, provincial, and federal) are moving in the direction of requiring LCA data for procurement purposes. By 2030, the National Building Code is expected to have provisions to limit embodied emissions, again derived from this data.

While gathering and providing this data may be challenging, it is essential for our industry's future, but we anticipate it will become routine. They appreciate the support of our members in this effort.

They have updated our list of company contacts from the last survey and will be reaching out to them in the next week to request their participation. If you have any questions or concerns, please feel free to contact Peter Moonan, National Sustainability Manager, Canadian Wood Council pmoonen@cwc.ca.

WWTA Online Training

As the year is coming to an end it is important that you go into the training change the status from anyone that is not active to inactive before December. Otherwise, you will be charged for their seat in 2025. The current cost per seat is $35 per active user per year and is invoiced in December.

If you have not yet taken a look at the WWTA online training program I would encourage you to, as no doubt you will be hiring new workers in the near future, and it is a good method to get them productive earlier and safer. If you want an overview of the program, go to the WWTA website at: http://www.wwta.ab.ca/truss-training-online.html

Did You Know?

At the BCMC show I did run across this company that makes truss parts and they had a nifty plate remover.

tbp plate remover