



PAPER
EXCELLENCE

NEW HORIZONS

PAPER EXCELLENCE CANADA TO BECOME
PART OF A BIGGER WHOLE



Paper Excellence Canada
2023 SUSTAINABILITY REPORT



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INTRODUCTION





THE INTEGRATED PAPER EXCELLENCE GROUP

During 2024 we will reach the single most significant milestone yet in the remarkable progression of what remains a relatively new entrant into the forest products industry.

Since its establishment in North America fewer than 20 years ago, the Paper Excellence Group has become a continental consolidator and growth story in an industry where contraction has been the recent norm.

We have acquired operations and companies where we see complementarity with our existing assets, the potential to unlock more value for the benefit of diverse stakeholders, and the building blocks of a diversified and resilient global forest products company.

Our three North American companies – Paper Excellence Canada, Domtar and Resolute Forest Products – began integrating into a single corporate structure 2023. We are confident in the competitive strength of this important new entity. And we see tremendous potential to build on safe and environmentally responsible operational track records, on innovative product-development capacities, and on constructive relationships with communities and other stakeholders. Potential to build, in other words, on our shared values.

More details on the integration process and outcomes will be released over the course of 2024 and 2025.



THE INTEGRATED PAPER EXCELLENCE GROUP NORTH AMERICA

While our three North American companies – Paper Excellence Canada, Domtar and Resolute – have until now operated separately and under their legacy brands, in 2023 we began to integrate them into a single corporate structure that we expect to formalize in 2024 and 2025.



Revenue



US\$7.7 B

Employees



14,070

Production Capacity



PULP

5.8 M ADMT

PAPER AND PACKAGING

4.3 M ST

TISSUE

0.1 M ST

LUMBER

2.9 M MBF

All figures are for 2023. Pulp production includes 3.1 M ADMT of marketable pulp.

Product Segments



Papers

Uncoated mechanical, uncoated freesheet, coated groundwood, communication (printing and writing), newsprint, technical and specialty, food service, and directory



Packaging

Recycled containerboard and industrial packaging



Pulp

High-quality softwood, hardwood and recycled kraft chemical pulp, and chemithermo-mechanical pulp



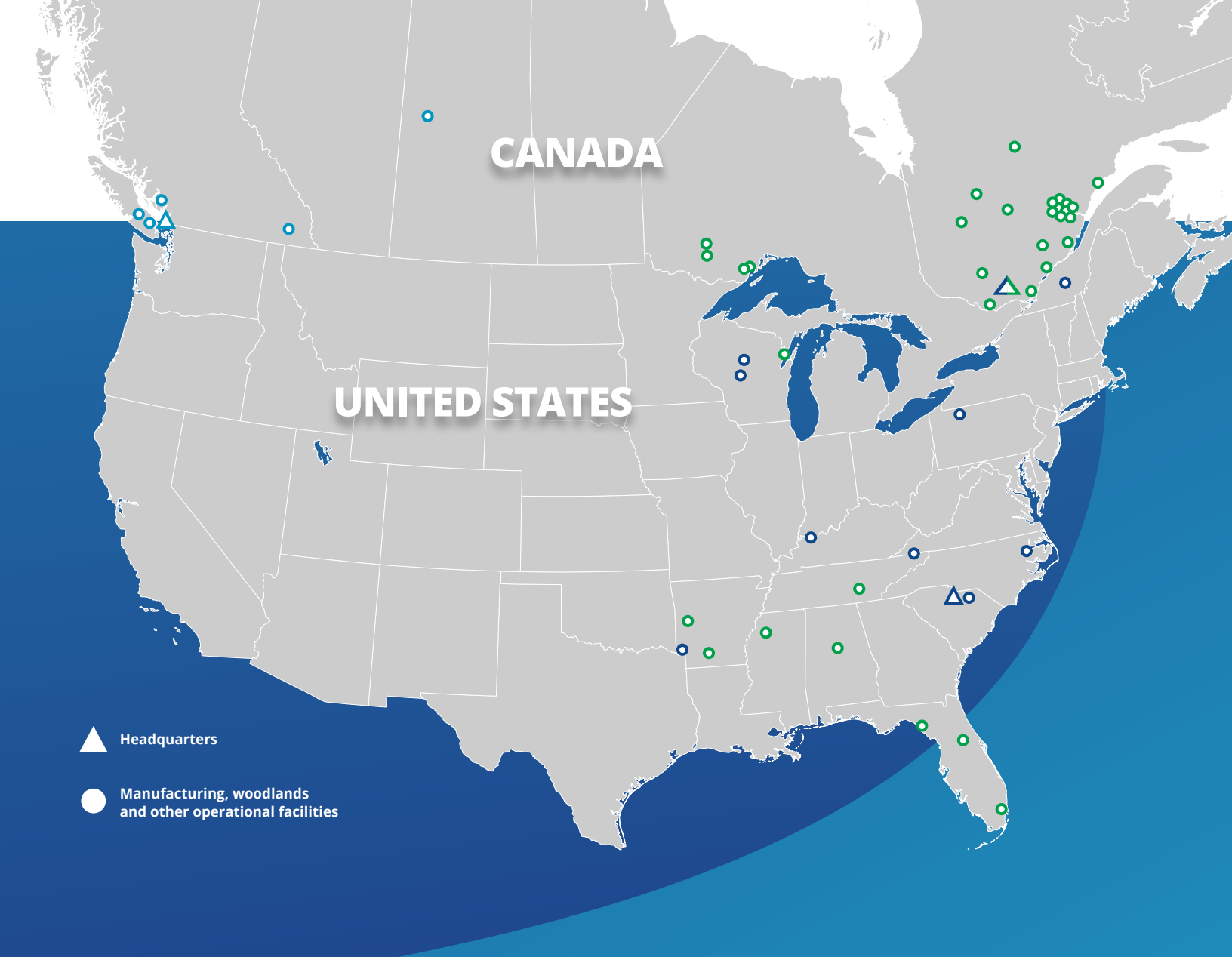
Tissues

Bath tissue, paper towels, facial tissue and napkins, tissue and towel dispensers



Wood Products

Lumber, engineered wood, wood pellets



▲ Headquarters

● Manufacturing, woodlands and other operational facilities

Paper Excellence Canada

Paper Excellence Canada is a diversified manufacturer of pulp and paper, including printing and writing, packaging, and specialty papers. The company operates six facilities in Canada with a workforce of more than 2,000.

Domtar

Domtar produces communication, specialty and packaging paper, market pulp and airlaid nonwovens. With 19 manufacturing and converting facilities in the U.S. and Canada, Domtar employs close to 6,000 people and is headquartered in Fort Mill, South Carolina and Montréal, Quebec.

Resolute Forest Products

Resolute Forest Products produces a diverse range of wood, pulp, tissue and paper products. Headquartered in Montréal, Quebec, the company operates some 40 facilities, as well as power generation assets, in the United States and Canada, and employs more than 6,000 people.

Additional Business Unit

The Paper Excellence Group has an additional business unit in France (Fibre Excellence). It will continue to operate as a separate business unit and is not part of the North American integration process.

NEW HORIZONS: PAPER EXCELLENCE CANADA TO BECOME PART OF A BIGGER WHOLE

With this report we are looking to new horizons in two important respects. First, this is the final sustainability report that will be issued by Paper Excellence Canada in its current corporate form. And, as outlined above, we're releasing it concurrent with the integration of Paper Excellence Canada and our two other North American legacy companies, Domtar and Resolute.

We're integrating these valued assets to create a single, larger and more diversified entity. This is a tremendously exciting development for the people and operations of Paper Excellence Canada.



Plotting Out Our Shared Sustainability Roadmap

Sabrina Branco comments on the wealth of long-standing best practices and industry leadership that the Paper Excellence Group has to draw upon in crafting its new strategy and roadmaps.

 [Watch Video](#)

Building on Shared Sustainability Leadership

One of the most important elements of the integration, from my perspective, is the emergence of a new global sustainability strategy, which we began to develop in 2023 in a highly collaborative way with the participation of our stakeholders.

The definition of this new strategy began with active listening, as well as with analysis of the many best practices that each of our legacy companies has developed over their years of operation.

Based on this analysis – and with a clear understanding of our main impacts, risks and opportunities – our sustainability strategy and principles will provide fully aligned guidance in the form of robust roadmaps, performance monitoring tools, and a governance structure encompassing all Paper Excellence Group business units.

Our group-wide strategy will leverage the long-standing sustainability-related expertise within individual business units – while fully accounting for region-specific realities – and will focus in particular on deepening our ongoing engagement with stakeholders.

Hundreds of people from different stakeholder groups provided input by the end of 2023, including through a detailed survey and interviews conducted by PwC Canada, which gave us invaluable insight into the relative materiality of specific sustainability issues across the Paper Excellence Group.

At year-end we were continuing to analyze the outcomes, which will be a key basis on which to prioritize our sustainability focal points, impacts and objectives going forward.

We have also benchmarked ourselves against our peers, and developed a fuller understanding of the emerging sustainability trends, regulations and expectations with which we need to adhere – including with respect to sustainability reporting.

Building on Paper Excellence Canada's Track Record

The balance of this report, however, focuses on sustainability-related issues, challenges and achievements in 2023 at Paper Excellence Canada's current operations – primarily comprised of five operating mills in British Columbia and Saskatchewan.

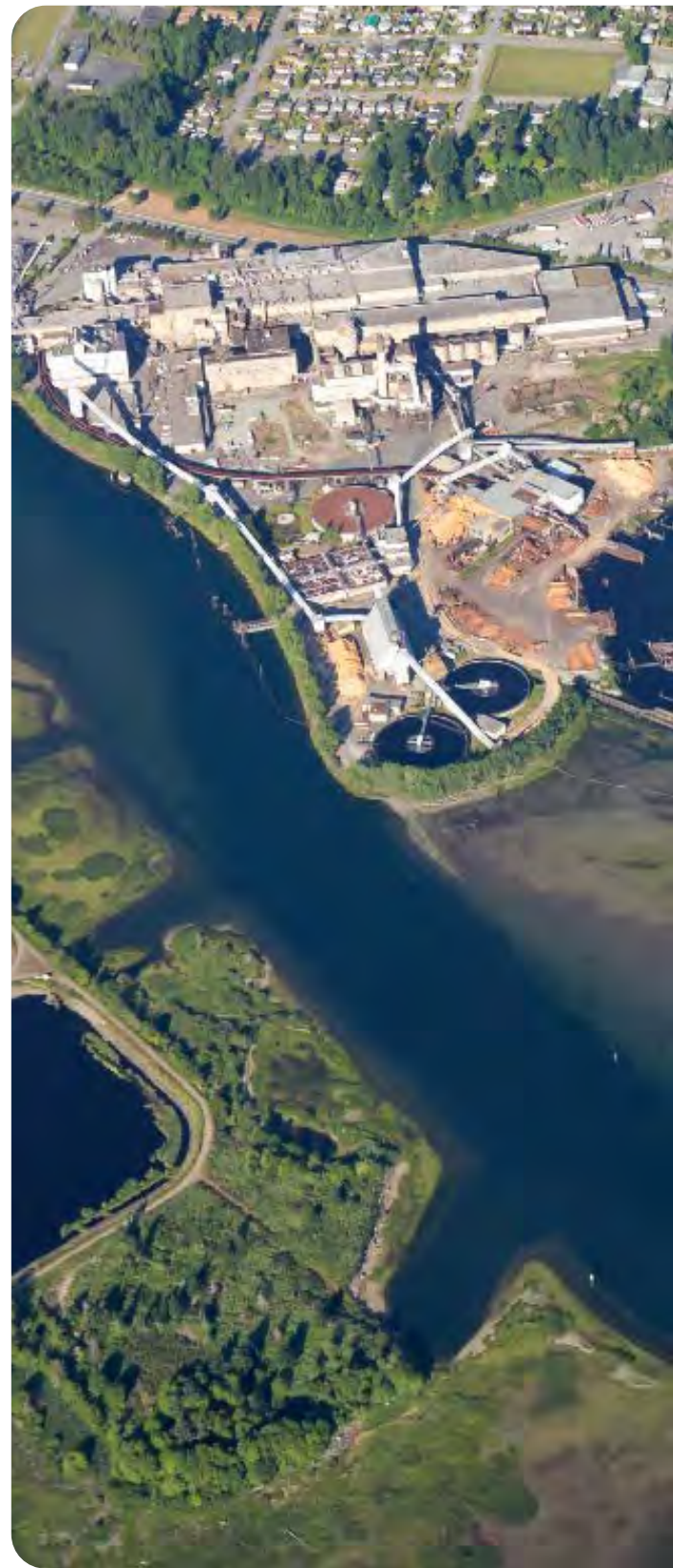
I'm particularly proud of the energy profile of these mills. This reflects both long-standing efforts to replace carbon intensive fuels, and a sustained commitment to reach for the higher-hanging fruit of further energy-efficiency improvement and carbon reductions.

I'm also gratified by our progress in the development of a Diversity, Equity and Inclusion program, and by efforts to extend and solidify our relationships with Indigenous peoples, in procurement and other contexts. These initiatives and programs are also being developed based on stakeholder input – reflecting both our belief that engagement and transparency are essential to our success, and our intent to strengthen our approach even more.

With an expanded scope and greater breadth of experience and diversity of thought within the new and integrated Paper Excellence Group, we will be better equipped to continue our now-shared sustainability journey, and to gradually progress closer to the ideal of industrial circularity.

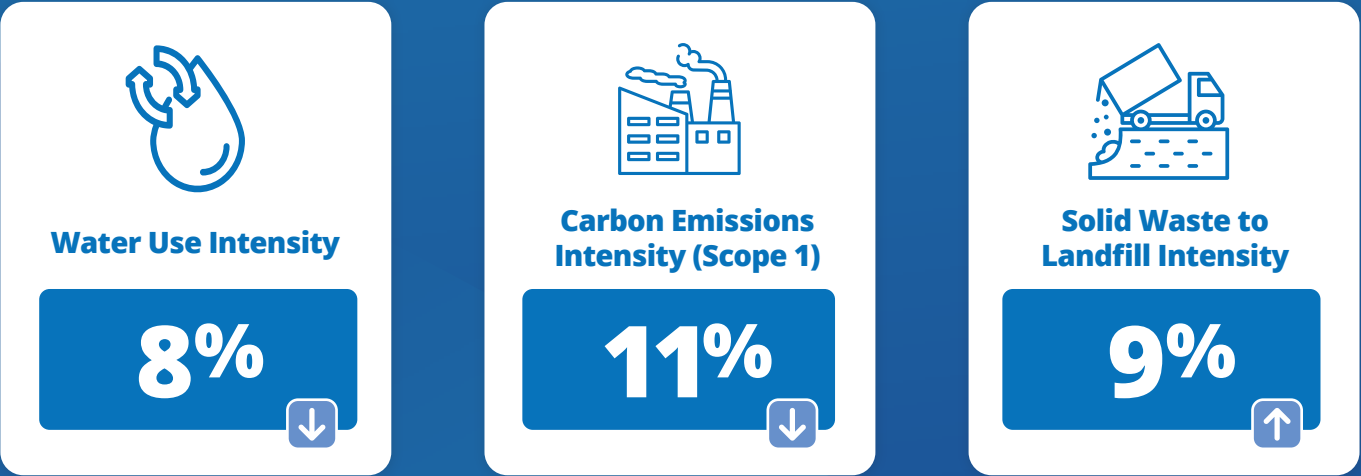


Sabrina Branco
*Global Head of Sustainability,
Paper Excellence Group*
May 2024



PAPER EXCELLENCE CANADA 2023 PERFORMANCE DASHBOARD

Year-Over-Year Trendlines



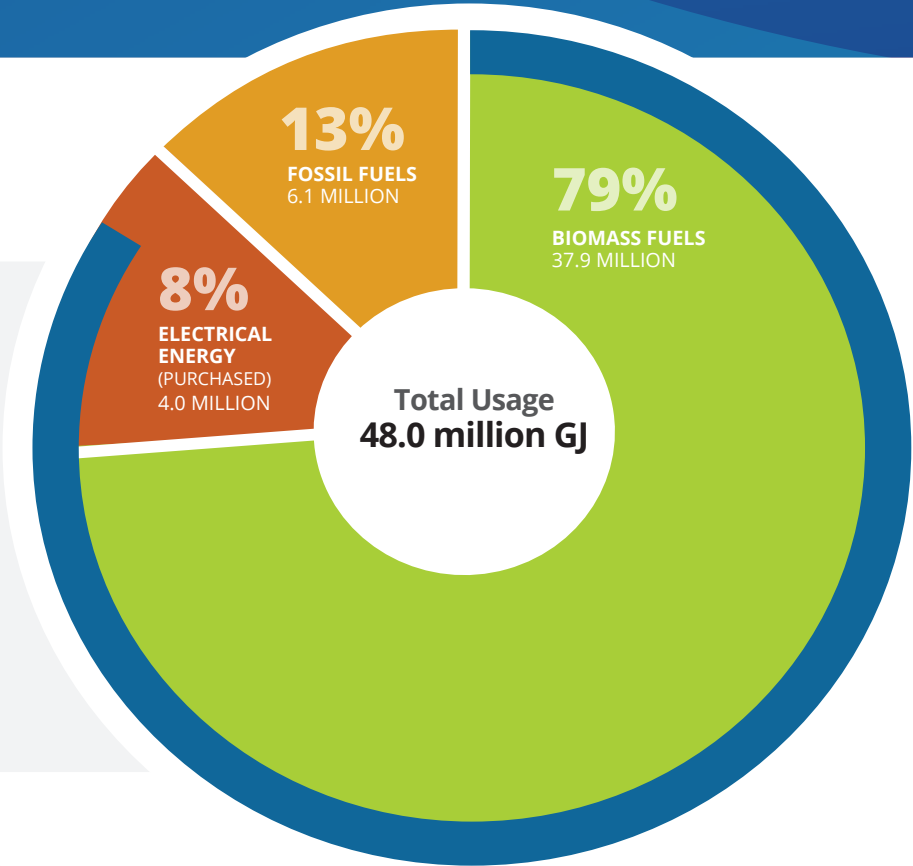
"Intensity" refers to inputs or outputs on a per-tonne-of-production basis.

Energy Profile and Direct Emissions Reductions

85% of our total energy use in 2023 was renewable

76% Reduction* in our total greenhouse gas emissions (Scope 1) since 1990

Although the reported emissions for 2023 include Meadow Lake Mechanical Pulp, credit for any emissions reductions the mill has achieved have not been taken because it was built after 1990.





Certified Wood Fibre¹

76%

of Total Fibre Used

[2022 = 69%]



Environmental Incidents²

139

[2022 = 102]



Medical Incident Rate³

1.7

[2022 = 3.0]

¹ Certified to one or more of three globally recognized sustainability certification systems.

² Permit non-compliances, spills and other releases, and administrative errors.

³ Injuries and incidents requiring medical attention per 200,000 hours worked.

*Correction

In Paper Excellence Canada's 2021 and 2022 sustainability reports, we incorrectly described the methodology used to calculate our greenhouse gas emissions reduction. We stated that greenhouse gas emissions from Paper Excellence Canada mills that were in operation in 1990 (baseline year) and were since closed, were not included in our baseline emissions. This is incorrect. The 1990 emissions baseline includes all Paper Excellence Canada mills that were in operation in 1990 unless they have since been sold. This methodology is consistent with the World Resource Institute's Greenhouse Gas Protocol.

People and Community

- ✓ We completed a DEI Maturity Survey and advanced our DEI program
- ✓ We made more than \$500,000 in donations to local communities
- ✓ We launched our Indigenous Procurement Policy

Recognition for Paper Excellence Canada

One of Canada's **Best 50 Corporate Citizens**,⁴ as ranked by Corporate Knights (for the 16th time). See [here](#) for more information.



Corporate Pioneer of the Year, in the Foresight Canada BC Cleantech Awards, in recognition of our adoption, championing and leadership with respect to sustainable practices in our industry. See [here](#) for more information.



The Best 50 corporate citizens ranking by Corporate Knights is judged using key performance indicators that relate to an organization's raw material resource use, emissions profile, social performance, safety performance, and percentage of revenue from clean sources. Left to right: Graham Kissack, Vice President, Environment, Health, Safety and Corporate Communications with Toby Heaps, CEO, Corporate Knights.

Other Business Unit Performance

For insight into sustainability highlights from our other North American business units in 2023, please visit: <https://www.domtar.com/sustainability-at-domtar> and <https://www.resolutefp.com/Sustainability>



⁴50 Best recognition prior to 2021 was accorded to Catalyst Paper, which is now wholly owned by Paper Excellence Canada.

ABOUT THIS REPORT

This is Paper Excellence Canada's fourth sustainability report, focusing on 2023 and encompassing all its operating facilities. While the acquisition of Catalyst Paper was effective March 15, 2019, the historical environmental performance of Catalyst operations has been incorporated into data from prior to that date (unless otherwise noted). Paper Excellence Canada does not disclose financial performance.

This report provides a year-specific overview of sustainability-related performance at a time of large-scale change within Paper Excellence Canada and the broader Paper Excellence Group, during a year when we began to advance towards an integrated corporate structure.

This voluntary reporting initiative is intended to present a holistic perspective on our sustainability priorities, initiatives, challenges and opportunities. We have exercised due diligence in compiling and internally verifying the data and factual characterizations contained in this report, but they have not been audited or otherwise externally verified.

This report has been informed by standards and best practices relating to sustainability disclosure. While we do not declare it to be in accordance with any specific guidance of that type, we have included an index indicating where select Global Reporting Initiative and SASB⁵ indicators are at least partially addressed (found in Appendix 5). Readers can provide feedback to: info@paperexcellence.com



⁵ Now part of the IFRS Foundation.

ESG AND RISK MANAGEMENT AT PAPER EXCELLENCE CANADA

As a company within a privately held corporate group, Paper Excellence Canada has a distinct organizational and governance structure. It was designed, however, to provide similar rigour in terms of oversight, accountability, and consideration of a broad range of stakeholder interests and non-pecuniary impacts and objectives.

GLOBAL LEADERSHIP TEAM

A five-member global management board had oversight responsibilities in 2023 parallel to those of a board of directors in publicly traded companies. This included signoff on key policies, strategies and goals; and receipt of regular reports on environmental and other key performance indicators. Members of it reviewed and approved the content of this report.

CANADIAN LEADERSHIP TEAM

Paper Excellence Canada had its own 13-member leadership team in 2023, which was led by Stew Gibson, Chief Operating Officer. This team was responsible for ongoing risk and opportunity identification and management, including on key sustainability-related matters such as climate change.

EMPLOYEE CODE OF CONDUCT

Paper Excellence Canada employees are guided by a corporate Code of Conduct addressing key matters relevant to the sustainability of our business. We actively promoted both employee awareness of and adherence to the code in 2023. This includes a “Speak Up” program – with multiple channels by which concerns could be registered with respect to harassment, fraud and corruption, and to health, environmental and reputational matters. Anonymity was provided for, along with a strict no-retaliation policy.

Thoughtful Long-Term Ownership

Questions were raised in media coverage in 2023 with respect to Paper Excellence Canada’s ownership and the structure of the broader corporate group. At an appearance before a Parliamentary committee in May, a delegation of Paper Excellence Group executives emphasized the absence of any cross-ownership among the Paper Excellence Group and any other company, and outlined the Group-wide corporate vision.

Specific environmental groups continued in 2023 to ask that the Forest Stewardship Council (FSC) further investigate the alleged ties. FSC Canada, however, has confirmed that it has evaluated the relevant shareholder interests on multiple and recent occasions, and has concluded each time Jackson Wijaya is the sole owner and controller of all the companies within Paper Excellence Group.

For more information: <https://paperexcellence.com/jackson-wijaya-committed-to-canadian-communities>

We have this vision. We think there are opportunities in the Canadian forest products industry to really build a strong business, hence the reason we've purchased both Domtar and Resolute... I think we've proven, and will continue to prove, that we're a good long-term owner of these assets and a thoughtful long-term owner of these assets.



John Williams

Non-Executive Chairman, Paper Excellence Group, speaking at the Parliamentary committee hearing.



CLIMATE CHANGE

Climate change and carbon management create a number of increasingly material risks and potentially promising opportunities.

Read more about how we assessed them at Paper Excellence Canada in 2023 in Appendix 4.

CYBER SECURITY

Paper Excellence Canada maintains robust cyber security measures including continuous monitoring of threats, development of appropriate controls, and routine penetration testing and other concrete assurances of the effectiveness of our safeguards. Employees are trained on the full range of means by which IT systems can be breached. Measures were also in place in 2023 to maintain the privacy of employee and customer data, compliant with evolving legal requirements in the jurisdictions where we operate.

United Nations Sustainable Development Goals

In 2015, the United Nations set 17 global Sustainable Development Goals (SDGs), targeting achievement by 2030. All countries have been called upon to act on them, in an effort to promote shared prosperity while also protecting the planet. Throughout the performance sections of this report, we identify those specific SDGs that we believe our operations contribute to most directly. For more insight into the UN SDGs, please visit: <https://sdgs.un.org/goals>



OUR PERFORMANCE: ENVIRONMENTAL





ROUNDING OUT THE CURVES AND CLOSING THE GAPS

The circle is an elegant and foundational geometric form, with symbolic importance that's tightly woven into human cultures. It is also the framework for the kind of industrial value chains that are increasingly recognized as the best expressions of sustainability.

Striving for this ideal involves moving away from linear models where natural resources are consumed at one end and waste and externalities are churned out at the other. It requires closed-loop processes, beneficial use instead of disposal, and other creative means of gradually bending lines into circles.

No industry's value chain is a perfect circle yet – although in pulp and paper we have some head-starts in getting there. In 2023 at Paper Excellence Canada, we continued working to round out the curves and achieve greater circularity, while also striving to close more of the gaps where value leaks out.

Advancing Circularity in Our Operations



⁶ For more details, see SmartWay Transport Partnership program information on page 43.

A Growing Global Focus on Biodiversity

Canada hosted the most recent UN Biodiversity Conference (COP 15), where sweeping targets were set to address what's widely seen as a global biodiversity crisis. While Paper Excellence Canada manages a relatively small land base, we know that the biodiversity imperative has to inform our actions.

Our Biodiversity Vision

- Healthy, natural forests where well-planned harvesting does not compromise habitat
- Mill operations that do not negatively impact local air quality or terrestrial or aquatic ecosystems
- Products that offer lower production and end-of-life environmental impacts than the alternatives
- Community donations that support efforts to address legacy impacts on fish and wildlife and to strengthen ecosystem health



The rest of this section focuses largely on key elements of environmental management at each Paper Excellence Canada mill in 2023. It provides an on-the-ground perspective on how our environmental specialists and other employees balance the complex interplay of operational, climatic and regulatory considerations that shape environmental performance – all while striving to advance circularity.

PAPER EXCELLENCE CANADA

ENVIRONMENTAL PERFORMANCE METRICS

A NOTE ON MEASURES

We present both total (or “absolute”) and “intensity” measures. Total measures represent the amount of a substance released in units such as cubic meters or tonnes. “Intensity” is arrived at by dividing each total by the number of tonnes of product manufactured during 2023. Since production levels can change significantly from one year to another, intensity measures generally provide a truer indication of environmental performance.

Water Use and Impacts

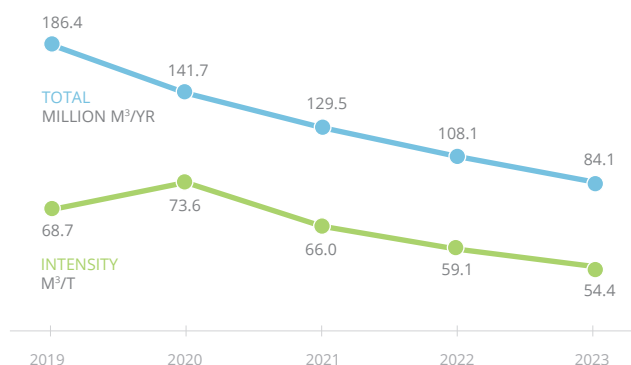
Most of our mills use water from nearby lakes and rivers and then release that water, now called treated effluent, back into the environment. While located in areas with low overall water risk, many of our mills are experiencing climate-related supply constraints. Avoidance of water-quality impacts is also essential in maintaining aquatic habitat values.

UN SUSTAINABLE DEVELOPMENT GOALS



Process Water Discharges

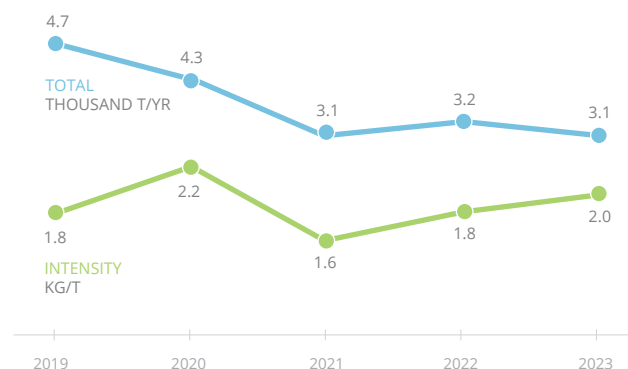
YOY Trend
↓ ↓



Consistent with standard industry practices, Paper Excellence Canada tracks water use based on treated effluent discharges, consisting of water used in manufacturing processes. In 2023 an additional 3.9 million m³ of water was used for cooling purposes, but did not come into direct contact with production processes.

Total Suspended Solids (TSS)

YOY Trend
↓ ↑

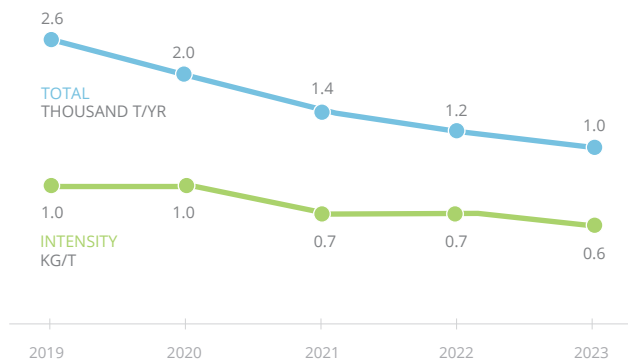




Rainy River on the Sunshine Coast provides the Howe Sound mill with its water supply.

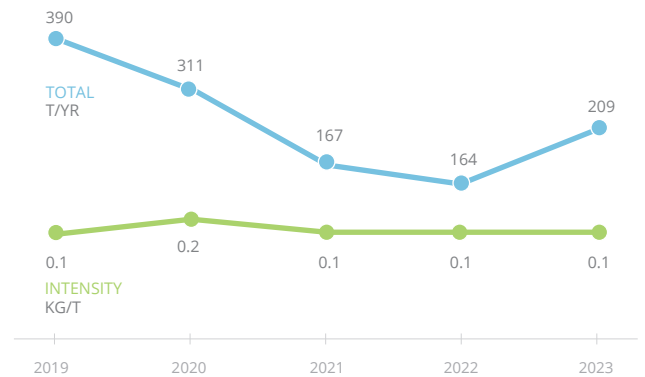
Biochemical Oxygen Demand (BOD)

YOY Trend ↓ ↓



Adsorbable Organic Halides (AOX)

YOY Trend ↑ —



Air: Energy Use, Carbon Management & Air Emissions

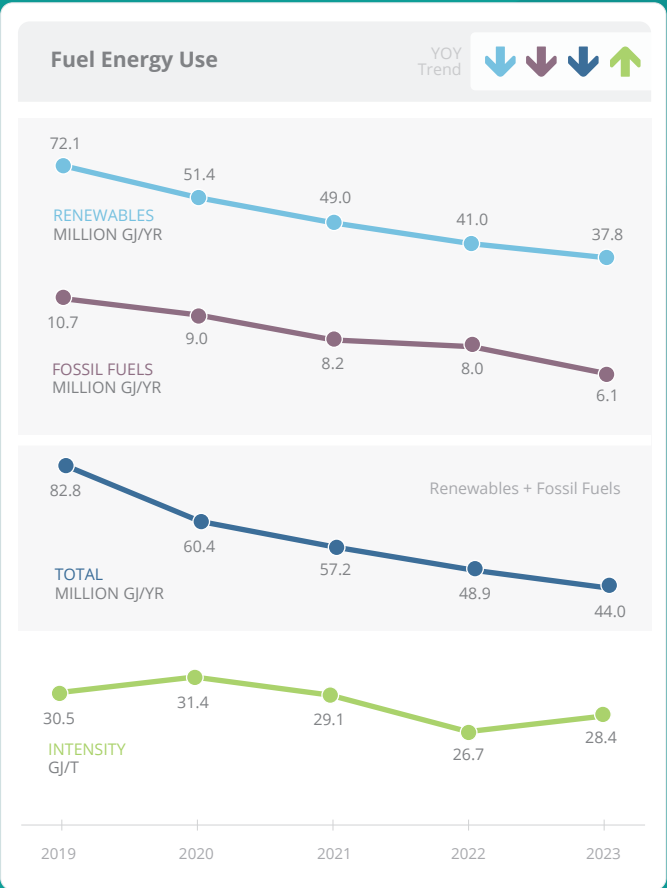
Our energy mix is mostly renewable and we have reduced our absolute Scope 1 greenhouse gas emissions by 76 per cent since 1990⁷ – but we’re committed to driving our emissions levels lower still. We are also focused on meeting regulatory requirements and stakeholder expectations relating to operational air-quality impacts.

UN SUSTAINABLE DEVELOPMENT GOALS

7
AFFORDABLE AND CLEAN ENERGY

12
RESPONSIBLE CONSUMPTION AND PRODUCTION

13
CLIMATE ACTION

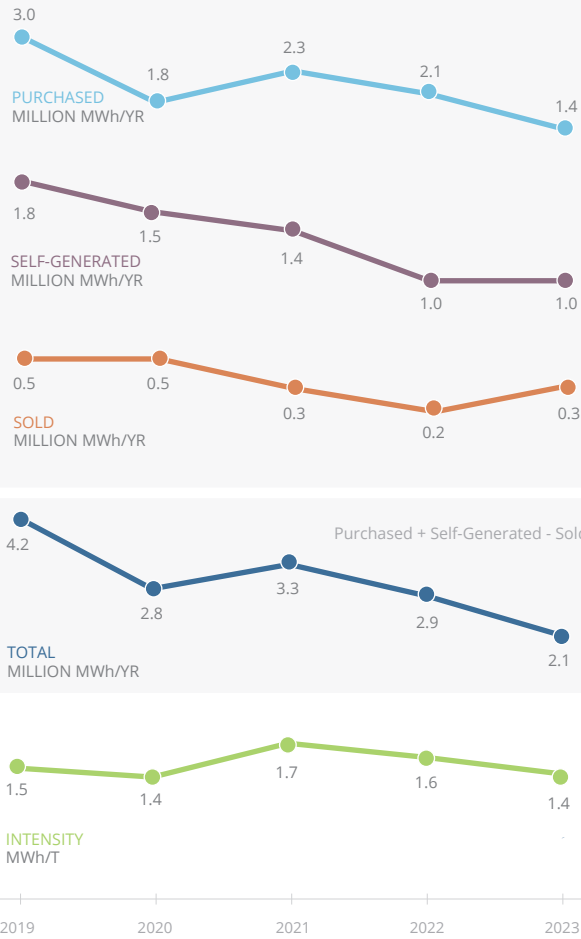


⁷ See page 11 for a correction on how our greenhouse gas emissions calculations were described in previous sustainability reports.



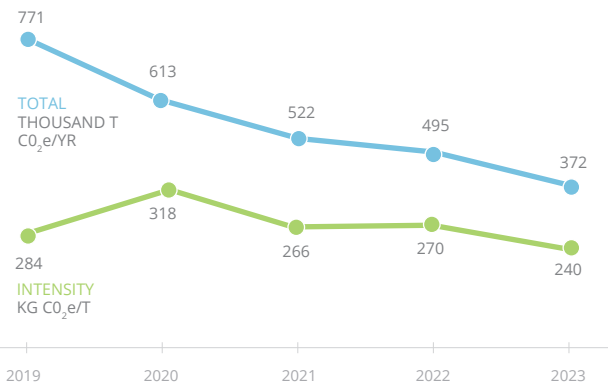
Electricity Use

YOY
Trend



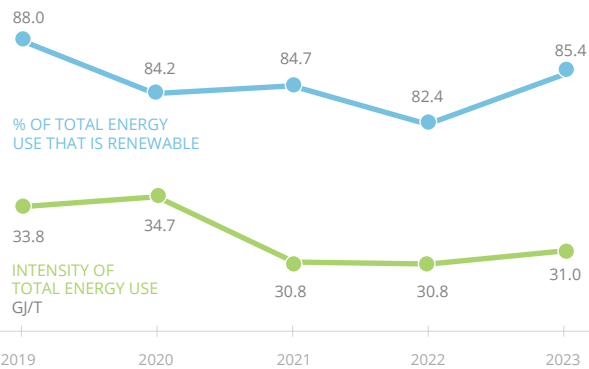
Greenhouse Gases Scope 1

YOY
Trend



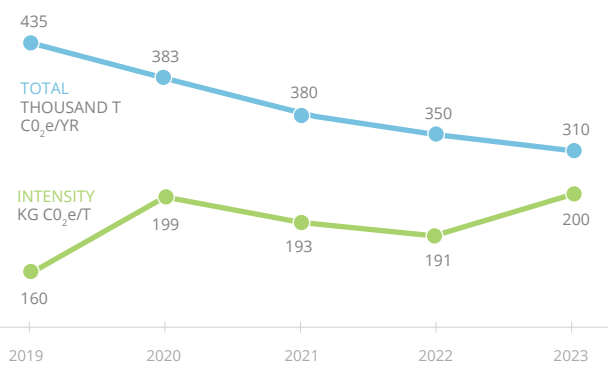
Renewable Energy & Overall Intensity of Energy Use

YOY
Trend



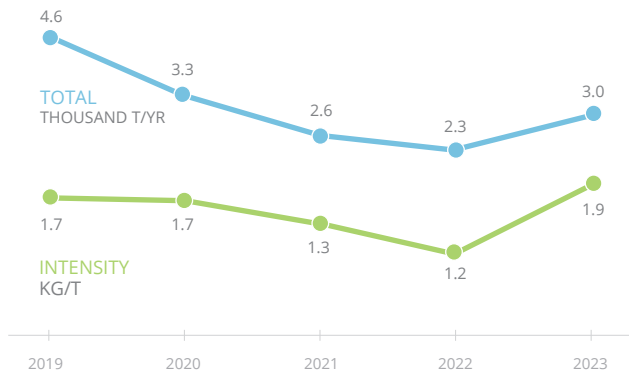
Greenhouse Gases Scope 2

YOY
Trend



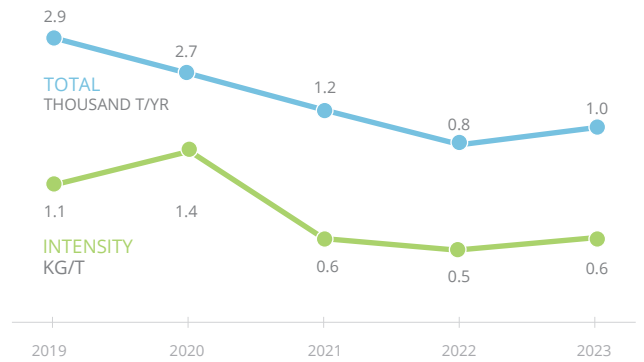
Sulfur Dioxides

YOY Trend  



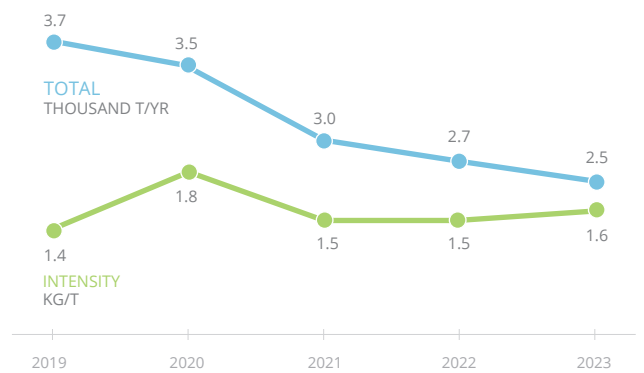
Air Particulates

YOY Trend  



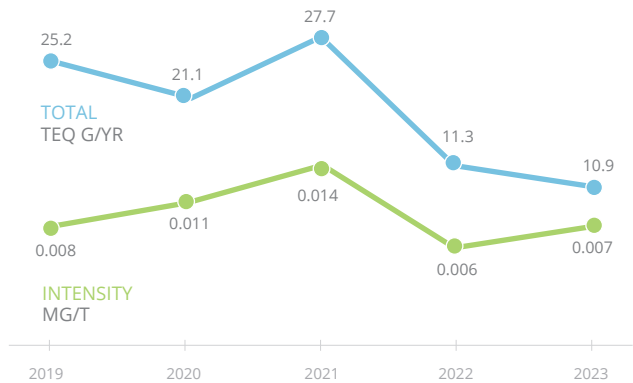
Nitrogen Oxides

YOY Trend  



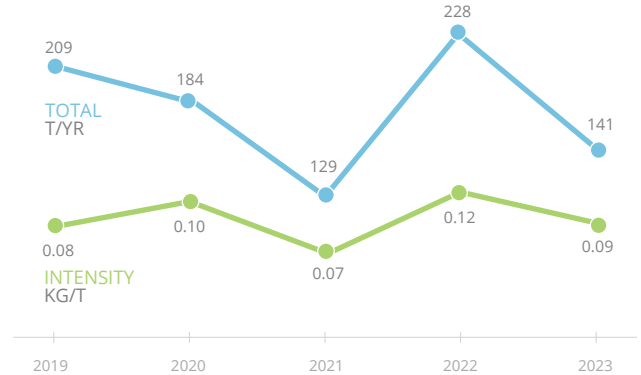
Dioxin & Furan Releases

YOY Trend  



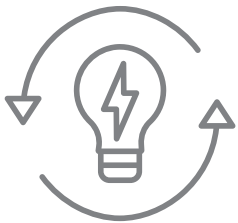
Total Reduced Sulphur (TRS)

YOY Trend  



Dioxin and furan figures include releases into air, effluent and landfill. Results are heavily influenced by factors such as operating conditions and fuel characteristics at the time of testing and are often highly variable. All operation-specific emissions in 2023 were below a Canadian federal standard for dioxin.

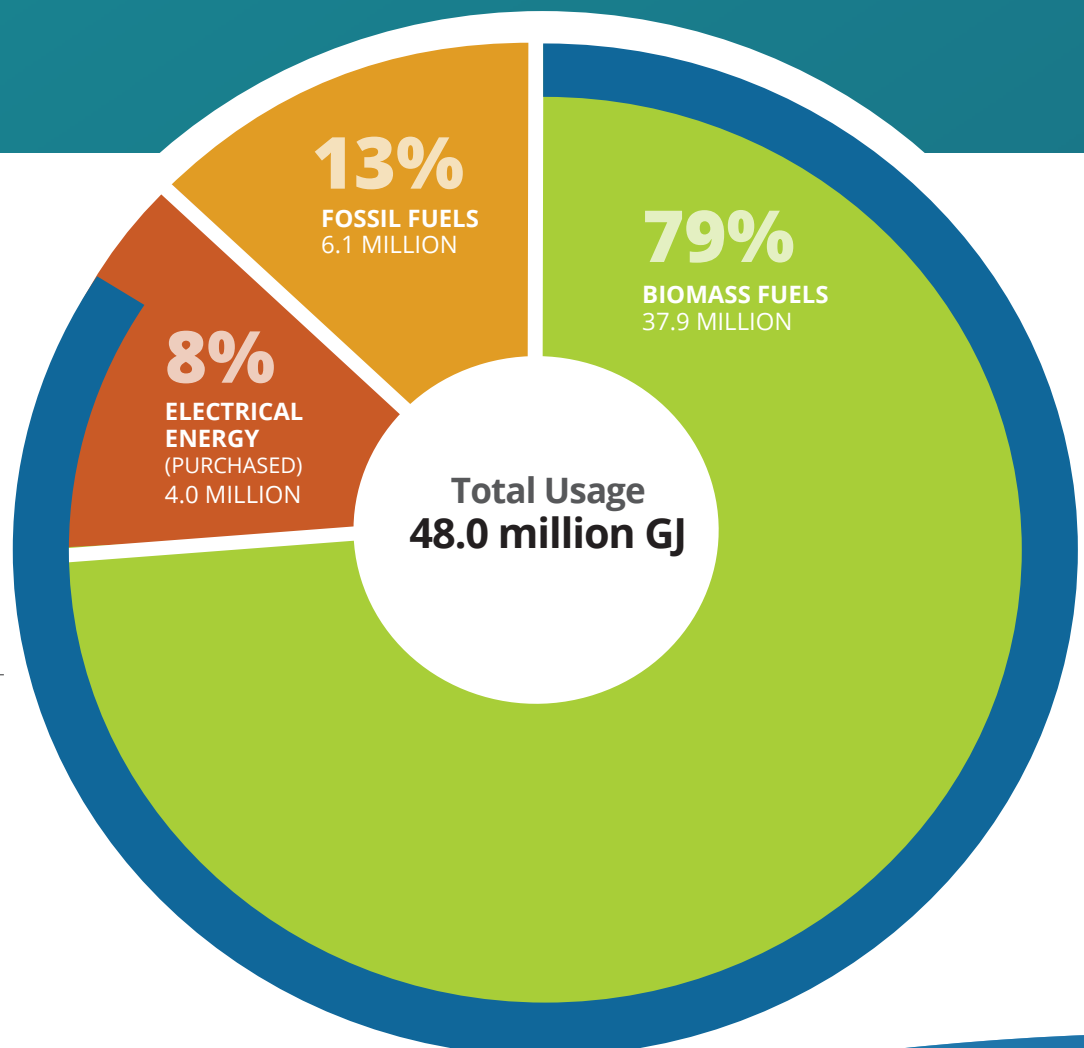
ENERGY MIX IN 2023



85%

OF OUR TOTAL
ENERGY USE IN 2023
WAS RENEWABLE

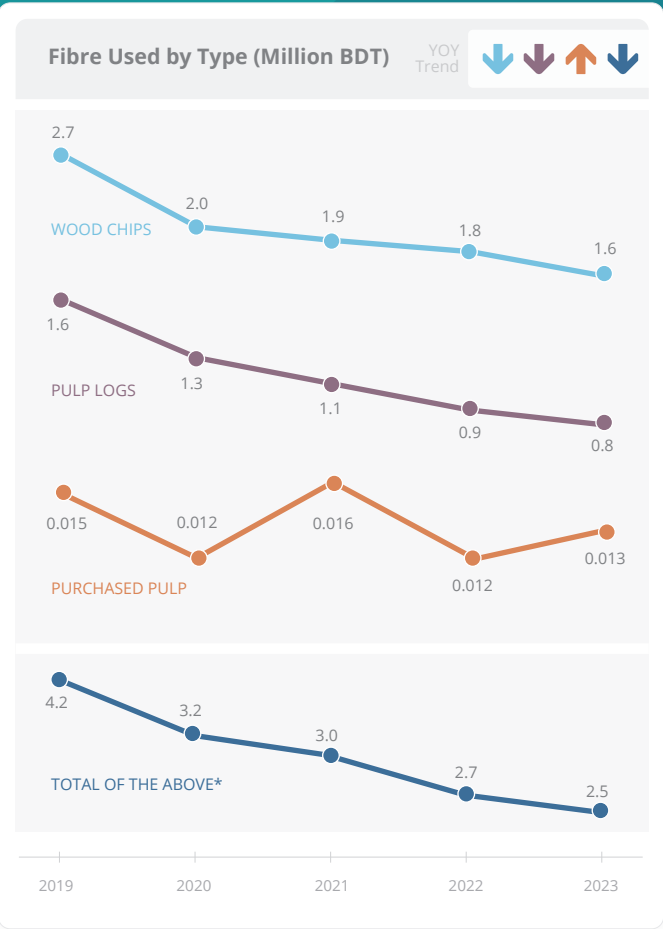
100% of biomass and 78%
of purchased electricity



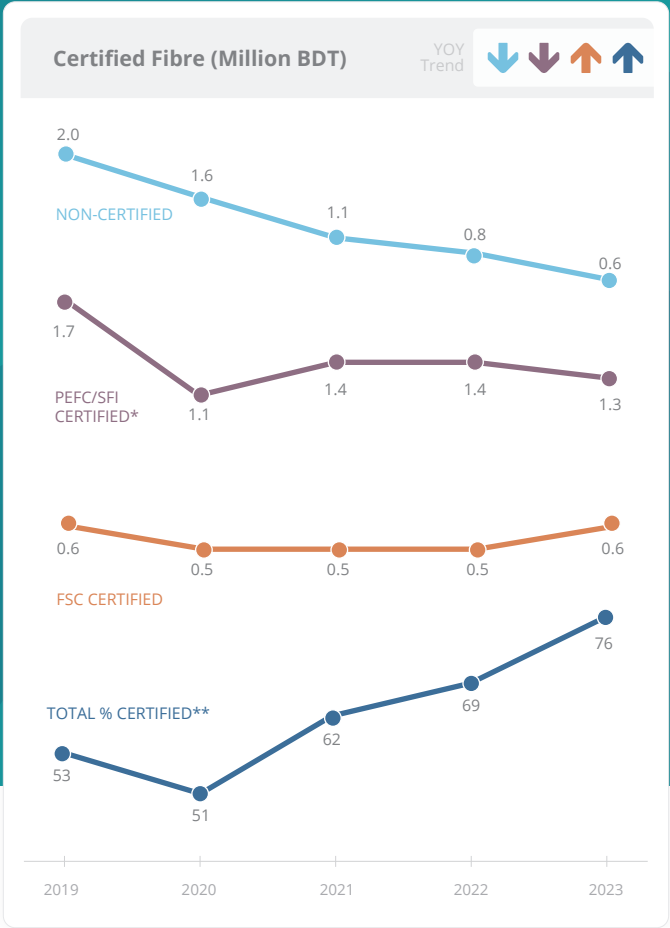
Land: Forest Fibre and Solid Waste

Our products are made mainly from by-products of lumber production, and from logs that are unsuitable for lumber production. We're committed to sourcing fibre from sustainably managed forests, and to using chain-of-custody systems that allow us to track fibre purchases back to the point of origin. We also work to carefully manage and reduce landfilling requirements and to find beneficial re-use opportunities.

UN SUSTAINABLE DEVELOPMENT GOALS



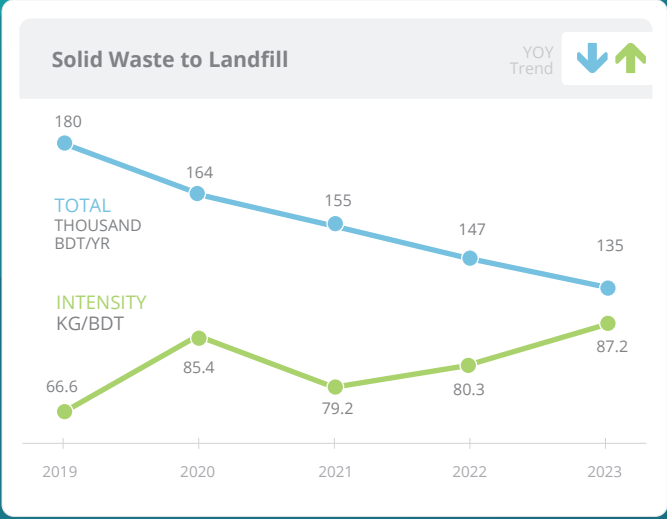
BDT = Bone Dried Tonnes
 * Year-over-year fibre use is dropping due to mill closures and curtailments caused by restricted supply.



*PEFC and SFI are parallel forest-management certifications. This proportion of our fibre meets the requirements of both and can be designated as either PEFC or SFI depending on customer preference.

** The percentage of certified fibre purchased has increased because while fibre purchases overall are reduced, the percentage which is non-certified is less.





BDT = Bone Dried Tonnes

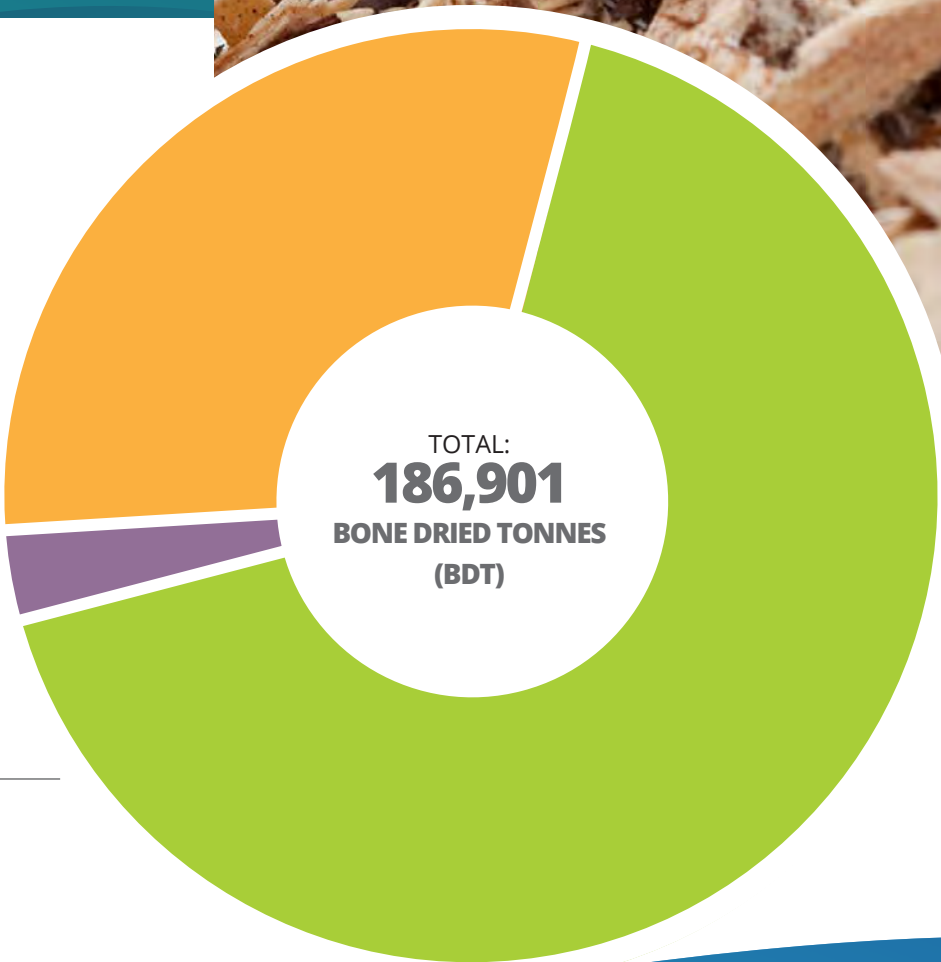


2023 SOLID WASTE DISPOSITION

24%
BURNED FOR ENERGY
43,894 BDT

4%
OTHER BENEFICIAL RE-USE
8,254 BDT

72%
TO LANDFILL
134,753 BDT








CROFTON MILL

ENVIRONMENTAL PERFORMANCE

Our Crofton mill is in the Cowichan Valley and on the southeastern coast of Vancouver Island, BC. Opened in 1957, the mill has two paper machines and two pulp lines and in 2023 produced a total of 286,000 tonnes.⁸ The mill has its own deep-sea port facility.

Crofton registered variable performance on some environmental metrics in 2023 including increased emissions intensities (although the number of reportable environmental incidents was down). This is typical when total production volumes are significantly lower (Crofton production was at 51% of 2022 levels). The mill also went through multiple production shutdown and re-start procedures in 2023.



	Reduction in Scope 1 GHG Emissions Intensity Since 1990	64% (2022 =61%)
	Renewable Percentage of Total Energy Use in 2023	88% (2022 =84%)
	Environmental Incidents in 2023	11 (2022 =16)
	Direct Employment December 31, 2023	518 (2022 =569)
	Total Contribution to Canadian GDP (2019 figure)	\$431.0 Million

Keeping the River Flowing

Our Crofton mill operates a weir controlling water flows into the Cowichan River. In addition to providing important fish habitat, the river supplies both the mill and local residents with fresh water. This task has become more challenging under recent drought conditions.

Pumping was required for a record 36 days starting in September to maintain minimum river flows. This involved a significant draw-down on the level of Cowichan Lake and additional boating safety measures. Paper Excellence Canada funded and managed this work despite our mill being inoperative at the time.

We supported the continued efforts of both the Cowichan Tribes and the Cowichan Valley Regional District to access funding and address licensing issues associated with building a higher weir.⁹ With the additional storage capacity of such a weir, optimal river levels could have been maintained without pumping even under conditions as challenging as those of 2023.

⁸ Crofton paper operations have been indefinitely curtailed status since January 2024.

⁹ \$14 million in funding in support of this initiative was announced as part of the British Columbia provincial budget in February 2024.

Curtailment Creates Environmental Challenges

Mill shutdowns and restarts are complex exercises that can create environmental management challenges. As Crofton ramped operations back up in the fall, following a complete curtailment, it saw intermittent exceedances of acidity (pH) permit levels in effluent over a 15-hour period, while biological treatment processes were being re-activated.

This could normally have been managed through effluent flow adjustments, but that was not possible since the event coincided with elevated total suspended solids (TSS) which were also associated with the restart. Preventative measures have been identified to address possible recurrence of these circumstances.

A single failure on an effluent toxicity test in December was also associated with the higher pH levels in effluent that has been common while the mill operates on a partially curtailed basis. Corrective actions were taken and subsequent weekly tests had favourable outcomes.

Improvement on Odours

Crofton had lower and more typical total reduced sulphur in air emissions in 2023 after elevated levels and non-compliances in 2022. More noncondensable gases (a contributor to TRS) were directed to the lime kiln for optimal combustion. Re-build of the mill's diffusion washer (part of a CleanBC project – see page 38), is expected to result in a further step-down in TRS emissions, and a corresponding odour reduction.



A Renewed Focus on Flow

Municipal wastewater releases were found to be the root cause of a July 2023 fish die-off in the Cowichan River. While corrective actions are being taken, this has also sparked a stronger focus on summertime river flow management. In early 2024, Paper Excellence Canada was collaborating with regulators and stakeholders on means of better ensuring consistent flows of at least seven cubic metres per second throughout July and August. Climatic conditions, however, will continue to create challenges.

Ratcheting Down Emissions

The mill continued to work with provincial regulators in 2023 to finalize a new air permit under which the mill began operating in early 2024. Most notably, it includes a corrected methodology for measuring chlorine dioxide, which has been a long-standing compliance challenge at Crofton.

Chlorine dioxide emissions below a stringent 10 ppm threshold were achieved during 2023, and in 2024 the mill will determine its ability to sustain this performance under the terms of the new permit. As part of the transition to the new permit, the mill installed improved monitoring equipment and in early 2024 was also trialling chemical applications that could further limit chlorine dioxide releases.

HOWE SOUND MILL

ENVIRONMENTAL PERFORMANCE

Our Howe Sound mill sits on the western shore of the fjord for which it is named, on the Sunshine Coast in southwestern BC. Opened in 1909, the mill makes high-quality Northern Bleached Softwood Kraft (NBSK) pulp and in 2023 produced a total of 365,000 tonnes. It also supplies green energy to the provincial electricity grid, and has its own deep-sea port facility.



	Reduction in Scope 1 GHG Emissions Intensity Since 1990	79% (2022 = 78%)
	Renewable Percentage of Total Energy Use in 2023	92% (2022 = 88%)
	Environmental Incidents in 2023	40 (2022 = 36)
	Direct Employment Dec. 31, 2023	371 (2022 = 426)
	Total Contribution to Canadian GDP (2019 figure)	\$381.7 Million

Putting Landfill to Better Use

Howe Sound is exploring potential diversion of two major waste streams, for use in soil improvement in agricultural and forestry contexts. Working with an external contractor – who in turn engaged with farmers and other potential end users – waste from the mill’s lime kilns was tested on fields in BC’s Fraser Valley, and this will be extended to effluent treatment byproducts testing in 2024. A baseline study of wood fibre losses and related waste generation in production processes was also completed in 2023.

New Air Permit Pending

Howe Sound continues to await finalization of a new air permit, one element of which is expected to be allowance for more effective management of odorous non-condensable gases (NCGs) by directing them to the recovery boiler as the primary combustion point.

In the interim, lime kiln operational upgrades are planned during 2024 to improve its NCG incineration efficiency. The precipitator (pollution control equipment) on the recovery boiler performed well in 2023 following an extensive upgrade completed in 2022.

Managing for Scarcity and Excess

Howe Sound faced an increasingly dire water-supply outlook during a hot, dry 2023. The mill gets its water from the Rainy River with additional supplies in summer from Lake 7. Water use is balanced against ecological needs and a springtime assessment indicated that available mill supplies could be depleted as early as August.

The mill therefore took early actions to reduce its consumption, including recapture of a flow of previously wasted water at the main mill pump, and adjusted the timing of a mill maintenance shutdown (when water consumption goes down). Additional water was also pumped from coves downstream of the dam to ensure that enough water was available at the fish ladder for spawning salmon.

The mill was able to both delay and reduce its daily summertime drawdown on Lake 7 to about a third of what it needed in 2022 and less than half the average of the preceding eight years. Lake 7 is therefore expected to replenish to its full level before summer 2024.








In November, the mill faced an inverse challenge when 52 mm of rain fell in two hours, during a storm causing road damage that took weeks to repair. There were on-site overflows from a landfill leachate collection pond and the mill's sewer system. Actions are planned to better enable the mill to withstand such extreme weather, including increased leachate pumping and storage capacity, dredging and landfill capping.

MEADOW LAKE MILL

ENVIRONMENTAL PERFORMANCE

Our Meadow Lake mill is located in the mid-boreal uplands of northwestern Saskatchewan. Opened in 1992, the mill produces bleached and unbleached Chemi-Thermomechanical Pulp (CTMP), using mixed hardwood and softwood tree species and in 2023 produced a total of 419,000 tonnes. It was the first successful zero-liquid effluent mill in the world, with no discharge into any nearby body of water.



	Reduction in Scope 1 GHG Emissions Intensity Since 2015 ¹⁰	30% (2022 = 28%)
	Renewable Percentage of Total Energy Use in 2023	28% (2022 = 28%)
	Environmental Incidents in 2023 ¹¹	23 (2022 = 12)
	Direct Employment December 31, 2023	177 (2022 = 187)
	Total Contribution to Canadian GDP (2019 figure)	\$176.2 Million

Building Further on a GHG Reduction

Meadow Lake continued to optimize an effluent treatment alteration, which in 2022 eliminated methane generation as a byproduct of the biological process taking place in a treatment pond.

This initially hinged on converting from an anerobic to an aerobic treatment process, that is, to a process requiring oxygen to be pumped into the pond. The mill, however, is now using a different bacterium that improves effluent quality while requiring less nutrient addition. It will also likely enable discontinuance of aerating the pond, and associated energy use, all while continuing to avoid methane generation.

Energy efficiency was prioritized mill-wide in 2023, with a particular focus on the high-consistency pulp refiner. It accounts for about half of the mill's total electricity consumption, and energy use associated with it was reduced by four per cent in 2023, relative to average use in 2019-2022. This involved improved controls and operational refinements, and the trialling of new refiner plates may drive further improvement. Meadow Lake achieved an overall reduction in its intensity of total electricity use in 2023 relative to the previous two years.

¹⁰ Earliest data available.

¹¹ The increase in TEIs in 2023 is largely due to an increase in ash-related complaints and an increase in airborne pulp fibre releases, both of which have minimal impacts on the surrounding environment.



Continued Focus on Drying Efficiency

Efforts continued to maximize the performance of a recently installed dryer, which helps incinerate effluent treatment byproducts more effectively. Equipment modifications were made in late 2023 to ensure a less obstructed flow of materials through the vertical vessels in which drying occurs, and continuity of feeding of materials into the dryer was improved.

Progress continued on eliminating an on-site backlog of wood fibre residuals that built up before the dryer was installed. Reduction of effluent treatment byproducts will be a focal point in 2024, and the potential to re-capture more wood fibre before it enters the mill's waste stream was under assessment at year-end.

Lake Intake Complete

The mill draws a limited amount of water from the lake on which it's situated, and in 2023 fully completed a new containment and intake facility, which will limit future dredging requirements, prevent fish entry, and reduce silt in the mill's water supply.



PORT ALBERNI

ENVIRONMENTAL PERFORMANCE

Port Alberni mill is located on the Alberni Inlet, which opens onto the west coast of Vancouver Island. Opened in 1946, the mill operates the largest coated paper machine on the west coast of North America and in 2023 produced a total of 234,000 tonnes with an increasing focus on food and other specialty paper grades.



	Reduction in Scope 1 GHG Emissions Intensity Since 1990	71% (2022 = 69%)
	Renewable Percentage of Total Energy Use in 2023	89% (2022 = 88%)
	Environmental Incidents in 2023	10 (2022 = 8)
	Direct Employment December 31, 2023	322 (2022 = 328)
	Total Contribution to Canadian GDP (2019 figure)	\$223.4 Million

Effluent Upgrade Fully Complete

Installation of new piping, to more securely carry treated effluent to a dispersion point on the Alberni Inlet, was fully completed in August when tide conditions were optimal. It was engineered to allow for continued use of the existing wooden support structure and installed without requiring mill downtime.

Port Alberni saw noteworthy improvement on effluent-related metrics in 2023 (TSS and BOD), attributable to production-mix changes, and to operational improvements that included a reduction in wastewater going to the sewer and improved settling efficiency in secondary clarifier tanks.

Managing Local Water Flows

Port Alberni manages both a weir and a dam on nearby water bodies. The Great Central Lake Dam is legacy infrastructure and no longer operationally relevant, but is managed to safeguard habitat requirements and dam integrity. A hydrological study in 2023 will be the basis for implementing a tool that will provide real-time warnings of weather conditions that could lead to overflows at the dam.

Sprout Lake is the source of the mill's freshwater, and has provided sufficient volumes even under recent drought conditions. Historically low levels in 2023 were a result of delays in accessing the dam for level-management purposes while a new agreement was being negotiated with the relevant landowner.

Water use has trended upward at the mill in recent years, and water-use auditing and development of a reduction plan were initiated in 2023. Finalization and implementation will be a 2024 focal point.

Proactive Efforts on Emissions

Steam tubes on the mill's biomass boiler required more frequent repairs in 2023, resulting in operational interruptions and increased reliance on natural gas-generated power. An action plan was put in place and significant capital spending budgeted for 2024 to fully replace the generator bank within which the steam tubes are located.

Port Alberni saw an upward spike in particulate emissions in 2023 (although still well within permit levels), after achieving a significant reduction in 2022. Its focus on this performance metric in 2023 included ongoing proactive repair and operational optimization of individual fields within a power boiler precipitator. All eight fields were operational at year-end, and the potential need for further structural upgrades within this key piece of emissions-control technology will be assessed during a maintenance shutdown in 2024.

The mill continued to pursue a permit amendment through which it will lock-in its commitment to keep particulate emission levels far below those specified in the current permit. It is undertaking an additional airshed study in this regard at the direction of provincial regulators.



SKOOKUMCHUCK MILL

ENVIRONMENTAL PERFORMANCE

Our Skookumchuck mill sits along the western edge of the Rocky Mountains, in BC's East Kootenay region. Opened in 1968, the mill produces high-quality Northern Bleached Softwood Kraft (NBSK) pulp and in 2023 produced a total of 242,000 tonnes. It also supplies green energy to the provincial electricity grid.

Scaling Back Sulphur

Challenges with effluent management during the summer (see facing page) negatively impacted compliance with permit limits on the amount of total reduced sulphur (TRS) in the air around the mill (on an hourly average basis) and contributed to a significant increase in reportable environmental incidents in 2023.

Extensive investigation identified multiple contributing factors, including byproduct accumulation in a treatment basin, and provided the basis for restored compliance. One key corrective action was to better track specific liquid discharges which contribute to TRS generation if allowed to mix. Accelerated dredging of effluent treatment basins will also reduce TRS generation.

Opacity issues (visible fine particulates in air emissions) were largely resolved and avoided in 2023. A related permit amendment process was in its final review stages at year-end, which will set limits better aligned with the variability naturally associated with use of carbon-neutral biomass fuel at the mill.



Reduction in Scope 1
GHG Emissions
Intensity Since 1990

63%
(2022 = 60%)



Renewable
Percentage of Total
Energy Use in 2023

93%
(2022 = 90%)



Environmental
Incidents in 2023

55
(2022 = 30)



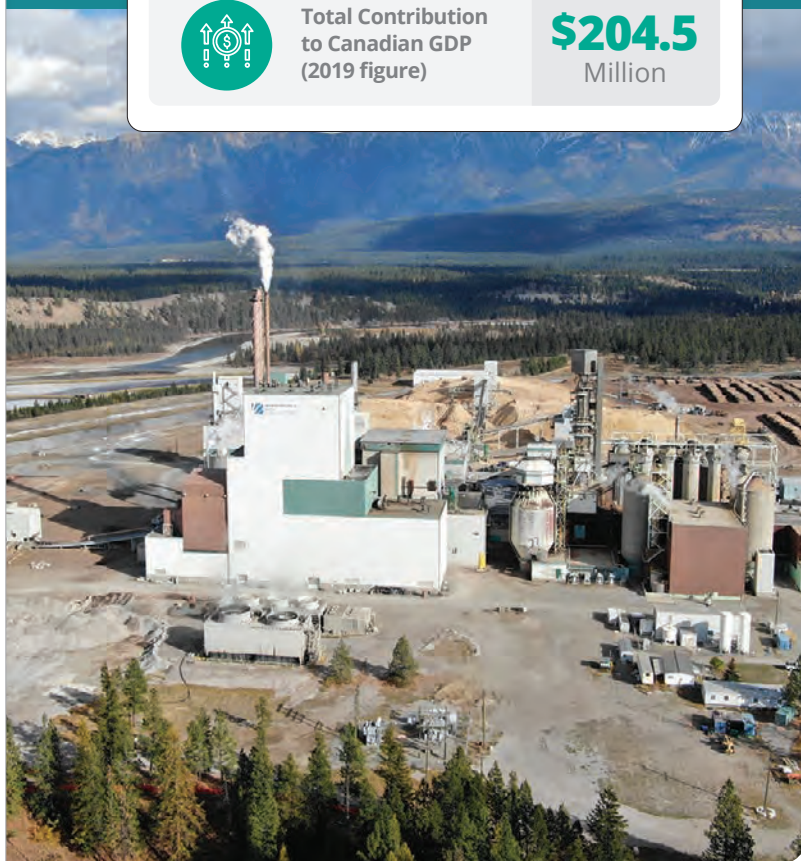
Direct Employment
December 31, 2023

287
(2022 = 279)



Total Contribution
to Canadian GDP
(2019 figure)

\$204.5
Million



Keeping Effluent Contained

Two of the mill's reportable spills in 2023 reflect the challenges of hotter summers. Heat increases effluent flows, given higher operational water use and the need to keep biological treatment processes in balance. In combination with accumulated effluent treatment byproducts in treatment basins, this resulted in overflows in July at a connection point between two basins.

The mill's response included immediate overflow containment, a short-term production reduction, improved level measurement where the overflow occurred, pumping at another constrained connection point, and development of a quick-response water-reduction plan to implement as needed in future.

While the mill received permission to temporarily increase its effluent discharges, it was able to bring volumes back within capacity without doing so. Dredging of accumulated effluent treatment byproducts in 2024 will restore more system capacity.

The mill continues to advance a three-year baseline study of the impact of treated effluents after release into the Kootenay River, based on which new long-term monitoring requirements may be set. The mill also further expanded its groundwater monitoring capacity in 2023.

Skookumchuck also had a single failure on an effluent toxicity test in July. Effluent recirculation rates were increased to address the higher ammonia levels that were observed at the time, and while root causes were not definitively identified subsequent weekly tests had favourable outcomes.



Constructive Uses for a Waste Stream

Testing of an on-site backlog of gravel, generated at the mill's power boiler, indicates it can be safely used as a backfill material. Pending regulatory approval, this may enable beneficial use of this waste both at the mill (where a decommissioned effluent basin needs to be filled), and as a material to be sold to local construction contractors.

CONTINUED CUTS TO CARBON EMISSIONS

A Sustained Operational Focus

Additional and more aggressive carbon-reduction efforts at our BC mills have been made possible in part by the CleanBC Industry Fund, through which the provincial government reinvests a portion of its carbon tax revenue to support specific projects.¹² Since 1990 we have reduced our Scope 1 greenhouse gas emissions by 76 per cent.¹³

Six previously funded CleanBC projects focused either on reduced energy use or greater reliance on carbon-neutral biomass fuel. By the end of 2023, implementation of one of these projects remained underway – a Crofton project relating to steam-use reductions in handling black liquor – while most of the rest were in the reductions-verification phase.

We were also awarded CleanBC funding for a seventh project in 2023, involving advanced process controls for the lime kiln at the Skookumchuck mill. Lime kilns account for much of the remaining fossil fuel use at mills, and we will test tools, such as infrared cameras, to monitor and moderate energy requirements.

Our sustained focus on energy efficiency and fossil fuel displacement improves our cost structure. It is of strong interest to the many customers who are increasingly focused on their own supply chain and inputs-related emissions.

Paper Excellence Canada partners with a number of external entities to advance product development, environmental improvement and other innovations. This includes our membership in FPIInnovations, a private not-for-profit with a mission to accelerate forest sector growth and transformation.



¹² BC was the first North American jurisdiction to implement an economy-wide carbon tax, in 2008, which as of year-end 2023 sat at the comparatively high rate of \$65/tonne.

¹³ See page 11 for a correction on how our greenhouse gas emissions calculations were described in previous sustainability reports.

Focal Points of Ongoing Feasibility Studies

Crofton

Use of advanced, AI-based process control systems for mill powerhouses

Howe Sound

Conversion of coastal biomass into a higher-value form of carbon-neutral fuel

Port Alberni

Improvement to feeding system for carbon-neutral biomass fuel

Power boiler flue gas heat recovery

Skookumchuck

Renewable natural gas and biochar

Innovation and Advocacy

A feasibility study completed at the Howe Sound mill in 2023 involved the potential use of a new technology that can convert wood biomass into a high-quality synthetic gas that could be used to power lime kilns. Five other feasibility studies – similarly intended to assess longer-term and more experimental reduction opportunities – were underway at our mills at year-end with CleanBC funding, including three newly awarded in 2023.

Paper Excellence Canada engaged with the BC government on the design of its new industrial carbon-pricing system, set to take effect in 2024. Our input has focused on equitable treatment of industries, maintaining incentives for mill-based electricity generation, and avoiding carbon leakage to other jurisdictions.

Consistent with the *Corporate Knights Action Declaration on Climate Policy Engagement*, in 2023 we assessed our climate policy-related advocacy – and that of our trade associations – for alignment with the Paris Agreement on climate change. In the context of provincial and federal lobbying, we have found positions on specific issues to be aligned with enabling and incentivizing operational decarbonization. Please see Appendix 3 for more details.



From Carbon Neutral to Carbon Negative

One of the most exciting elements of the future vision for carbon management at Paper Excellence Canada mills relates to the “biogenic” carbon emissions from burning of waste wood – carbon that was withdrawn from the atmosphere as the trees grew. The capture of these emissions, either for use in new products or for permanent underground storage, offers the potential to mitigate the effects of climate change.

[Full Story and Video](#)

SUPPORTING AND ASSURING GOOD FOREST STEWARDSHIP

Leveraging and Supporting Certification

Long-standing procurement requirements and audited due-diligence systems provide assurance that all of our wood fibre meets the Forest Stewardship Council's (FSC®) "Controlled Wood Standard".

Additionally, all fibre we buy is either certified to one or more of the three main globally recognized, voluntary forest-management standards; or goes through extensive due-diligence review prior to purchase.

We track certified fibre under what are now multi-site chain-of-custody certificates - FSC® (FSC-C004353) and the Programme for the Endorsement of Forest Certifications (PEFC/26-31-43) - encompassing all Paper Excellence Canada mills, and we can transfer credits to buyers who want to be able to verify wood fibre attributes for their customers.

We continued to engage with major certification bodies in support of efforts to increase both awareness of forest-management certification and the supply of certified fibre – with a particular focus in 2023 on means by which we may be able to contribute to availability of FSC-certified wood in Western Canada.



Paper Excellence Canada maintains chain-of-custody certification with multiple, globally recognized voluntary certification programs, including:

Forest Stewardship Council® (FSC®) (FSC-C004353)

Programme for the Endorsement of Forest Certifications (PEFC) (PEFC/26-31-43)

Sustainable Forestry Initiative® (SFI®) (SFI-01 629)





Wood Fibre Availability

Acquisition of a new facility on BC's Sunshine Coast will result in more efficient handling of part of our fibre stream. Originally a log sort, what is now known as Bayview Fibre is being redesigned into a combined log sorting and chipping facility, following environmental due diligence.

This facility will reduce current transportation requirements and carbon emissions associated with supplying the Howe Sound mill with wood fibre.

Fibre supply remained limited on the BC coast in 2023, and fibre prices rose to unprecedented levels particularly in the front half of the year. We continued to build relationships with Indigenous groups in the province who are acquiring larger areas of forest tenure.

Paper Excellence Canada secured further funding in 2023 through the provincial government's Forest Enhancement Society of BC, both directly and through partnerships, for initiatives at multiple mills aimed at improved fibre recovery from harvested areas. We also continued to cooperate with the BC government on projects to reduce wildfire intensity and to protect critical infrastructure in the East Kootenay region.

Paper Excellence Canada did not use any recycled or recovered fibre in 2023.



GETTING PRODUCTS TO MARKET



The Port Alberni crew, San Group Terminal employees, and Timber Rose employees who worked together to build a plan and secure a towing company to tow a barge to the Surrey Distribution Centre, then to Crofton and ultimately to Port Alberni.

Yet again in 2023, weather and related conditions created major operational challenges. A wildfire fully shut down the highway serving our Port Alberni mill for an extended period in June, largely preventing raw materials from getting in and product from getting out via the usual mode.

Barging to and from Port Alberni was temporarily reinstituted, with the cooperation of the local port authority. This complex exercise involved traversing open ocean on the west side of Vancouver Island. It was all the more challenging since it hadn't been done for many years, and since the road closure coincided with a mill re-start after a curtailment.

The first incoming barge had to transport not only production supplies and equipment needed for the re-start, but also the necessary materials to put a long-disused barge dock safely back into operation. A number of barge trips were successfully completed, and some trucking suppliers also stepped up to use a logging road detour as an additional mill lifeline.

A summertime strike at the Port of Vancouver further stressed export supply chains in BC. Paper Excellence Canada was able to avoid any resulting need for production curtailments, in light of ongoing improvement to supply chain resiliency through new partnerships and inventory-management models.



Paper Excellence Canada is a long-standing participant in the SmartWay Transport Partnership, established by the U.S. Environmental Protection Agency. This is a continental effort to promote lower environmental-impact supply chains, and better enables us to partner with freight carriers that share our values and invest in energy efficiency.

On the first day of unloading at Port Alberni the operators were learning the process of unloading the barge that arrived from the Crofton mill.



Jumping Right Into It

Paper Machine Manager Nici Darychuk comments on the drive behind the exceptional effort to keep the Port Alberni mill operating despite a highway closure, and on the inspiring success achieved by the team.

 [Watch Video](#)



OUR PERFORMANCE: RELATIONSHIPS



MP Gord Johns toured the Port Alberni mill and met with employees to discuss sustainability, supply chains and his belief in the pulp and paper industry.



Howe Sound mill employees joined the broader Sunshine Coast community in showing respect for shíshálh (Sechelt) Nation after they released the results of their investigation of St. Augustine Residential School; ground-penetrating radar identified 40 unmarked graves of children.



The total class of participants representing 11 Domtar facilities and three Paper Excellence Canada mills at the Project Manager training program.

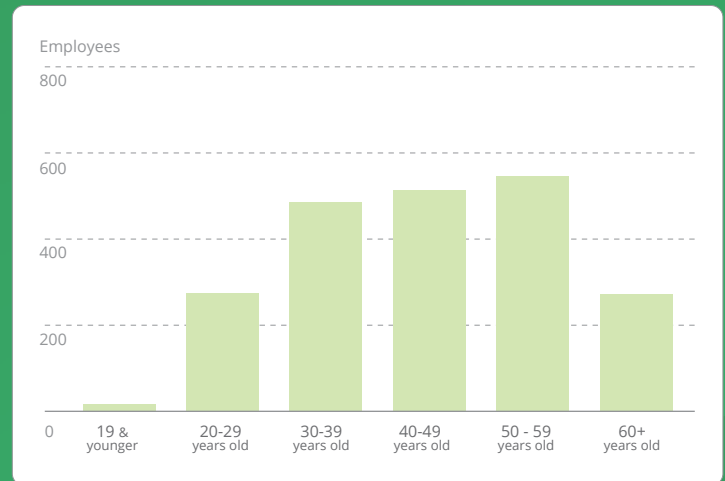
WORKFORCE PROFILE AND WELLBEING

UN SUSTAINABLE DEVELOPMENT GOALS

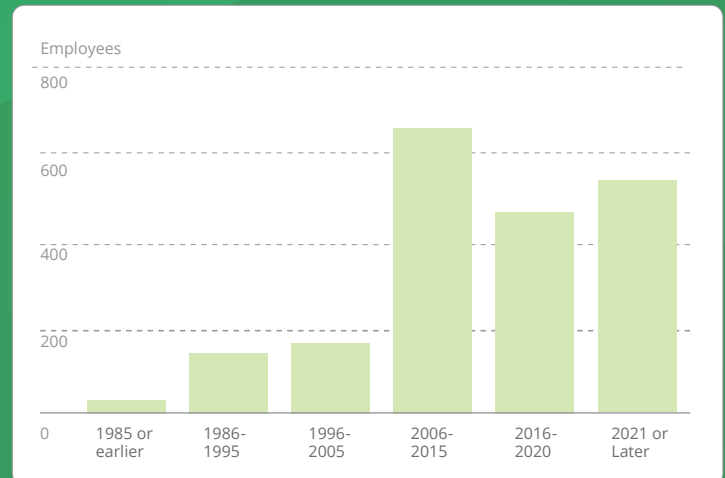


Howe Sound mill apprentices are congratulated for completing their Apprenticeship Certification.

EMPLOYEE PROFILE: AGE (AT DECEMBER 31, 2023)



EMPLOYEE PROFILE: TENURE (YEAR OF HIRE)



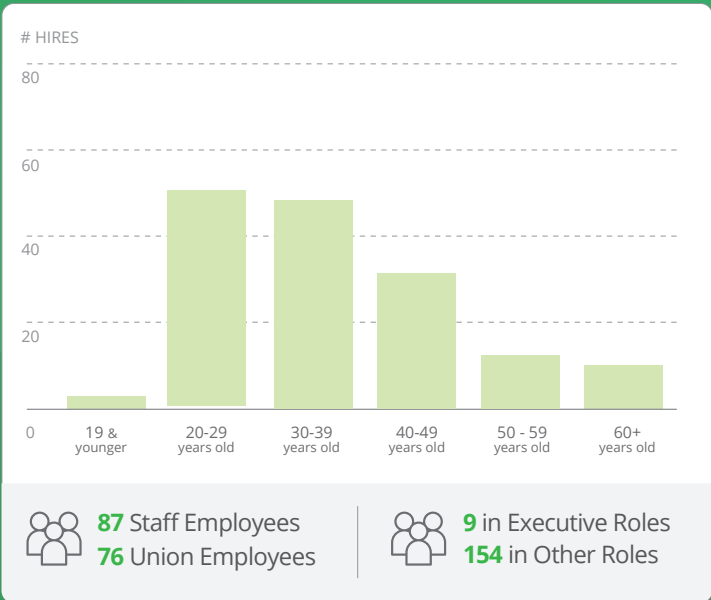
2,066 Total Employees
(At December 31, 2023)



60 in Executive Roles
2,006 in Other Roles

673 Staff Employees
1,393 Union Employees

NEW HIRES IN 2023 BY AGE (163 IN TOTAL)



EMPLOYEE TURNOVER

	2019	2020	2021	2022	2023
Retirements	5.5%	2.5%	3.0%	2.9%	3.5%
Voluntary Departures	3.1%	5.3%	7.5%	6.5%	6.2%
Total	8.6%	7.8%	10.5%	9.4%	9.7%

Pre-acquisition figures (March 15, 2019) include Paper Excellence Canada only.

Workforce Transitions

Our workforce is more than two-thirds unionized, and represented predominantly by various locals of the Public & Private Workers of Canada (PPWC) and of Unifor, with smaller numbers of employees at specific locations represented by the United Steelworkers and MoveUP unions. Only one collective agreement expired during 2023, with Unifor Local 433, and it was successfully renegotiated for a four-year term.

At Crofton, one of two paper machines re-started early in the year, but both paper and pulp production were later curtailed. Pulp operations re-started in October, but paper machines remained down at year-end due to market conditions, leaving about 75 employees on layoff.

The permanent closure of our tiskwat mill in BC, which had been indefinitely curtailed since late 2021, was announced in 2023. In the 18 months since the indefinite curtailment, the majority of employees took voluntary severance, and a small number chose to transfer to another Paper Excellence Canada mill. When fully operating, tiskwat employed approximately 200 people.

Five Paper Excellence Canada employees representing three mills plus corporate engineering, took part in Domtar's Project Manager training program.



Embarking on the DEI Journey

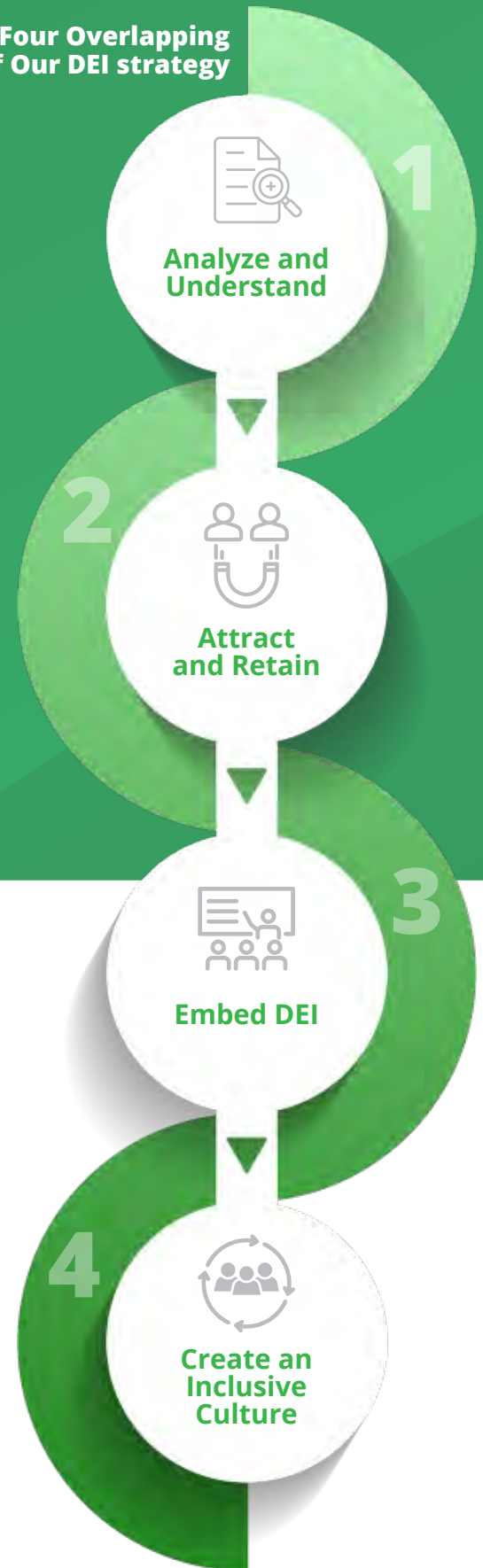
In 2023, we initiated a multi-year effort to lay the groundwork to ensure that all employees are valued, respected and appreciated in our workplaces; and that no one is disadvantaged on the basis of factors such as age, gender, ethnicity, orientation or disability.

This complex and challenging effort is shorthand as “DEI” – for Diversity, Equity and Inclusion. Our approach is company-wide and highly consultative, directed by a multi-level DEI committee established in 2023, and guided by external advisors with specialized expertise.



A presentation held by Chief Richard Williams from the Skwxwú7mesh Úxwumixw (Squamish Nation) helped employees better understand the truths of the Indigenous Peoples in the Howe Sound area and how to work toward achieving reconciliation through collaboration.

The Four Overlapping Phases of Our DEI strategy



Our focus in 2023 was to analyze and understand three key features of our current circumstances and the broader context we operate in:

Our Internal Culture

A high proportion of employees stepped up with responses to a DEI maturity survey, through which we learned more about our workforce demographics, and perceptions of current practices and circumstances influencing equity and inclusion within it.

Our Relationships with Indigenous Communities

Leaders from Indigenous communities near our operations, and within Indigenous organizations with which we partner, sat down for in-depth discussions of the state of current engagement with them, and how we can deepen and improve these relationships.

What Others are Doing

We researched current practices on the part of corporate peers and best performers to gain further insights into DEI best practices.



Paper Excellence Canada sponsored the session "Indigenous Business Successes – Pathways to Prosperity" at the 7th Annual Indigenous Resource Opportunities Conference.



The Customer Solutions Group and the Pulp Customer Service Team combined efforts and celebrated Customer Service Week together.

A Few Learnings So Far

- Our workplaces are "somewhat diverse", with opportunities for DEI improvement, and variable starting points at different operations.
- We must build and maintain relationships with Indigenous groups before engaging on projects or policy.
- The inclusion of long-term employees, who may question whether they have a continued role in the DEI era, also needs to be considered.

Workforce Development

We continued to build out training and educational opportunities for employees. This included a second intake of our Dynamic Leadership Development Program – an in-house mini-MBA program – and launch of a similar program for new supervisors and emerging leaders.

We worked to create better awareness of the career opportunities we offer, via career fairs and other means, in and around our host communities. Our Engineers-in-Training program remained an effective recruitment tool for new graduates, and was supplemented by co-op placements in various skill sets. Paper Excellence Canada employed 26 trade apprentices at year end.



A Dynamic Leadership Development (DyL) program team gathered to accept their certificates and awards with their corporate sponsor.



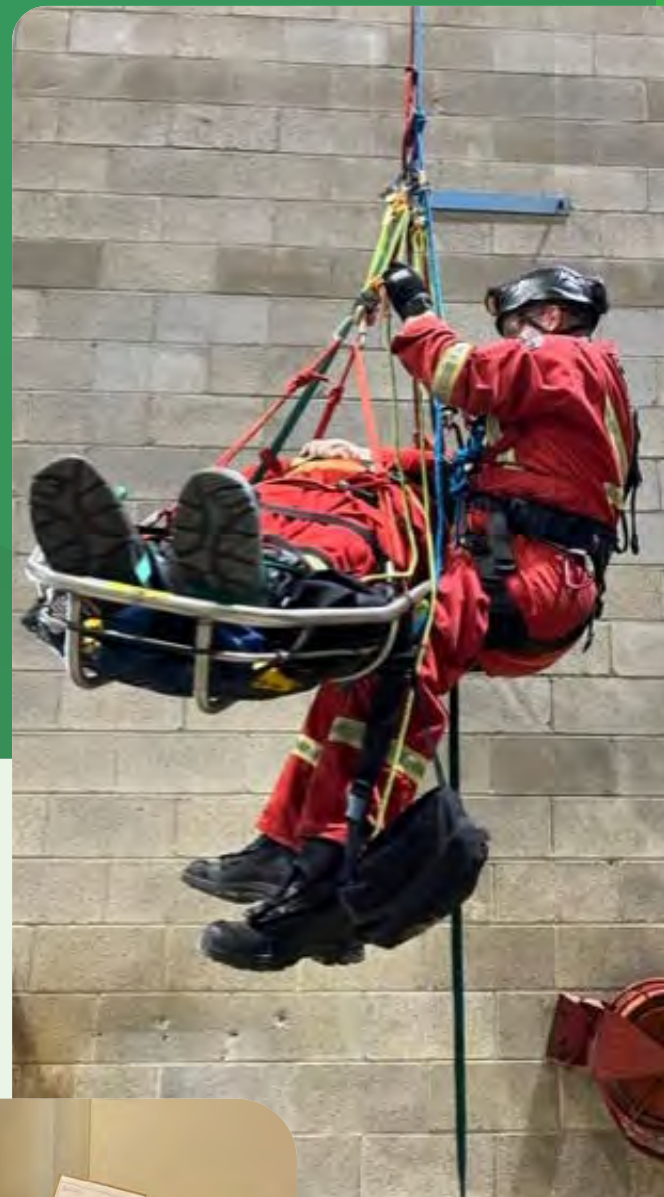
Attracting Talent – from a Global Market

Global talent pools are a crucial part of Paper Excellence Canada’s recruitment strategies, and the unique opportunities they offer were also a focal point for one of our 2023 Dynamic Leadership Development program teams.

 [Full Story and Video](#)



For the past 10 years, Paper Excellence Canada's Arthur Tsai has been a volunteer forest industry presenter to classes of students of the University of British Columbia's Faculty of Forestry.



Crofton Division Protection Department took part in Rope Rescue Technician with Confined Space Rescue training.

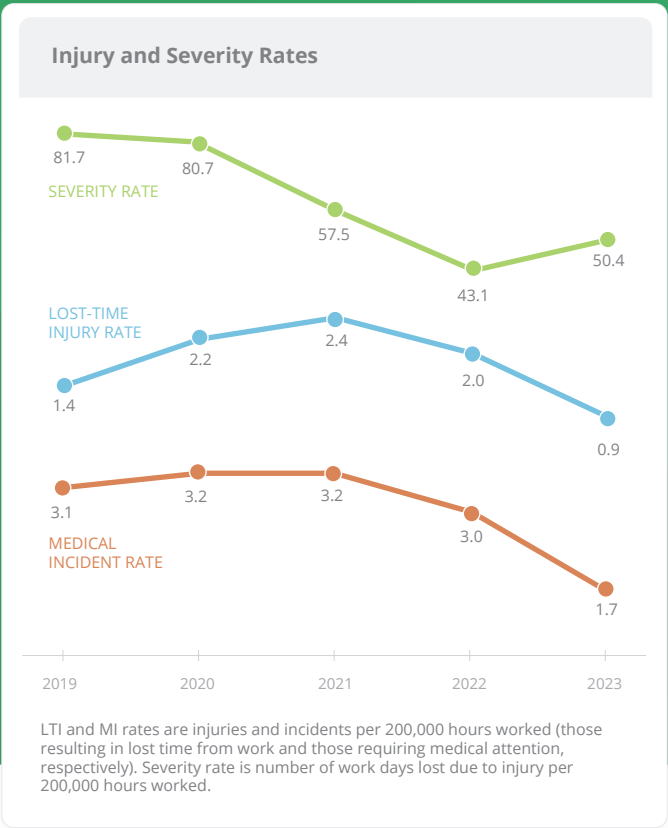


Howe Sound mill employees celebrate their win in the Continuous Excellence Intra-Mill competition.

Workforce Safety

Our long-standing focus on continuous safety improvement yielded dividends in 2023 with our lost-time injury rate down by more than half, and a significant reduction in our medical incident rate – bringing the latter closer to our target of 1.0. The severity rate was up from 2022, but remained in a lower range than in preceding years.

Safety is among the corporate functions that are already leveraging extensive cross-learning among Paper Excellence's North American business units, including during implementation of common safety-management enterprise software. Extensive work was also done in 2023 to begin to integrate and align the safety management systems in place at each of these three existing companies.



Engineering Out the Safety Hazard

Paper Excellence Canada's acquisition and ongoing development of the Bayview Facility on Howe Sound required it to both understand and assess safety practices at an existing log sort operation, and to safely undertake the demolition, design and construction work involved in adding a log-chipping facility. Corporate Safety Manager Jason Lennox comments on the value of risk elimination and of building in safeguards right from the design-drawing phase of a complex project.

 [Watch Video](#)

Efforts to further improve near-term performance continued, building on the outcomes of comprehensive safety audits conducted in 2022, which were reviewed at a company-wide safety summit in early 2023.

Additional and more focused safety audits were conducted at all sites in 2023 with a focus on prevention of potentially life-changing safety incidents.

One SIF-related priority was line break safety. Line breaks involve opening a pipe or vessel containing chemicals, hot or pressurized water, or another hazardous substance. Our mills are adopting a more rigorous internal permitting process for such procedures.

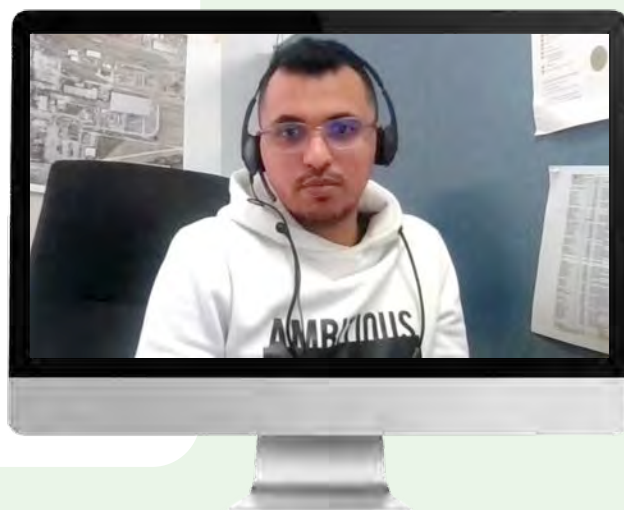


The annual Joint Pulp and Paper Safety Conference was held March 27-29 in Vancouver with about 350 employees from various pulp and paper companies across Canada.

Change Represents Opportunity Rather Than Uncertainty

Nawaf Salem, a participant in the Engineers-in-Training program at our Skookumchuck mill comments on his vision of the future of the forest products industry – a future that will require embracing change but also driving growth.

 [Watch Video](#)



SUPPORT FOR COMMUNITIES

UN SUSTAINABLE DEVELOPMENT GOALS



ECONOMIC IMPACT FROM LOCAL TO NATIONAL LEVELS

The importance of our mills within operating communities tends to be self-evident, given that they are visually prominent on the landscape, and are widely acknowledged as a significant source of employment, business opportunities and tax revenues that power local economies.

While many urban Canadians may feel themselves to be far removed from the country's rich endowment of natural resources, Paper Excellence Canada's operations make a material contribution to GDP and public revenues both provincially and nationally.



Port Alberni mill donated five large air cylinders to the Beaver Creek Volunteer Fire Department (BCVFD).



Howe Sound mill donated \$5,000 to School District 46 in support of their Indigenous learning programs.

Explaining the Numbers

The figures to the right include direct, indirect and induced economic contributions. They are derived from an analysis using input-output modelling and based on Statistics Canada economic impact multipliers. This analysis was completed for our 2021 sustainability report. As year-end 2021 data was not available at the time of the analysis, and given major market and operational disruptions in 2020, the analysis was based on 2019 data. We have deferred updating this analysis given the pending integration of Paper Excellence Canada with other members of the Paper Excellence Group. The economic impact of the no-longer operating tiskwat mill has been backed-out in the numbers shown to the right.

OUR ECONOMIC CONTRIBUTION



\$4.3 Billion

Total annual economic activity created by Paper Excellence Canada's operations



\$890 Million

Labour income across Canada supported by our operations



\$519 Million

Total Public Revenues Generated



11,460

Jobs Created



\$1.8 Billion

Contribution to Canada's GDP

A Voluntary Contributor to Community Wellbeing

In 2023 we made more than half a million dollars in donations, carefully selected to improve key environmental, social and other outcomes in our operating communities and across the regions where they are located. Donations align with the focal areas identified to the right.

Mill-specific donations are managed by local Community Engagement Teams. Local donations were also made in 2023 in Nova Scotia and in Prince Albert, Saskatchewan, where we own non-operating mills.

Corporate-Level Donations

- Indigenous Reconciliation
- Education and Entrepreneurship
- Environment and Sustainability
- At-Risk Children and Youth

\$200,000

Mill-Based Donations

- Environmental Stewardship
- Education (including scholarships for local First Nation, Métis and other graduates)
- Indigenous Reconciliation
- Local Emergency Responses
- Arts, Sports and Culture
- Health and Wellness

\$313,000

Total 2023 Donations

\$513,000



A \$4,000 donation to the Chemainus Theatre Festival supported their Discover Theatre Workshops. These workshops were offered to schools in our Crofton mill community and engaged students in creative collaboration, imaginative play, and building confidence.

Among our Donations in 2023:

- A \$10,000 donation to the Meadow Lake Hospital Foundation represented 10% of that volunteer organization's annual fundraising goal, and will help it deliver on a wish list of new health care equipment developed each year by local medical professionals. The foundation's goal is to better enable local residents to get their health care needs met close to home, rather than having to travel.
- A \$50,000 donation to the Nature Trust of British Columbia will support conservation projects in the Kootenays region, where our Skookumchuck mill is located. The Kootenays are home to some of Canada's most iconic wildlife species including the Rocky Mountain elk, American badger and grizzly bear, and the Nature Trust works to sustain the ecosystems and migration corridors they rely on.
- A \$50,000 donation will support the ongoing critical care operations of STARS Air Ambulance, including fuel, medical equipment, and training for their highly skilled flight and medical crews. STARS carries out thousands of missions annually from six bases in Western Canada, and is relied on particularly heavily in Paper Excellence Canada operating regions in the BC Interior and Saskatchewan.



Paper Excellence Canada donated \$50,000 to the Nature Trust of British Columbia to support their conservation projects in the Kootenays which focus on sustaining migration corridors and ensuring ecosystems remain intact.



In Times of Crisis, Community Shines Through

Paper Excellence Canada was among the members of the Nova Scotia business community that stepped up with help when an unprecedented wildfire upended lives and devastated a large swath of the southwestern part of the province.



[Full Story and Video](#)

INDIGENOUS RELATIONSHIPS

UN SUSTAINABLE DEVELOPMENT GOALS



Employees, visitors and even passersby will sometimes see visible reflections at our mills of the priority we place on building strong relationships with neighbouring Indigenous groups. An especially poignant one is the flying of the “Survivors Flag” on National Day for Truth and Reconciliation – an orange flag that honours the children who never returned home and survivors of residential schools, as well as their families and communities.

Such symbolic gestures are important, but our efforts go much further. In 2023, we remained committed to continually improving our understanding of and capacity to engage with Indigenous communities, and in particular to improving procurement and employment opportunities for them.

Our actions are guided in part by our participation in the Canadian Council for Aboriginal Business’s (CCAB) Progressive Aboriginal Relations (PAR) Program. In 2023, we passed another audit and were certified as having completed the second phase at the “Committed” level of engagement under PAR. Like any third-party certification program, PAR holds companies to account and makes sure they are putting action behind their words.

**Progressive
Aboriginal
RELATIONS**

COMMITTED

Canadian Council for
Aboriginal Business



Howe Sound mill employees gathered for a moment of silence and management and union representatives said a few words recognizing the National Day for Truth and Reconciliation.



The Port Alberni mill management team hosted a residential school survivor speaker who has taken her traumatic experiences and responded with love, kindness and inclusion.





Howe Sound mill was privileged to host Hereditary Chief Ian Campbell, Xwe'xwelacha Chief Richard Williams, and Michael Montecalvo, the Lands Manager of the Skwxwú7mesh Úxwumixw (Squamish Nation), who made a presentation to our employees about the history of the mill site K'ik'éln and the Squamish Peoples.

Internal Capacity and Awareness Building

During the week of the National Day for Truth and Reconciliation two First Nation chiefs from coastal British Columbia spoke to the corporate leadership not only of Paper Excellence Canada but also of sister companies Domtar and Resolute.

Chief Ian Campbell of the Skwxwú7mesh Úxwumixw and Rob Everson, Hereditary Chief of the Giga'gam 'Walas Kwagu'l shared their perspectives on the history and effects of colonialism on Indigenous Peoples and their own personal perspectives on Truth and Reconciliation. They also provided links to resources for employees to learn more.

At a more local level, our Howe Sound Mill sits on a former village site (K'ik'éln) of the Squamish Nation (Skwxwú7mesh Úxwumixw). In 2023 Hereditary Chief Ian Campbell, Xwe'xwelacha Chief Richard Williams, and Michael Montecalvo, Lands Manager of the Skwxwú7mesh Úxwumixw came to the mill for the first time. They spoke to a well-attended gathering of employees about the site's significance for the Squamish Nation.

Internal capacity building was further advanced through our involvement in events and forums, including the Indigenous Partnerships Success Showcase in BC, the CCAB's 39th West Coast Business Forum, the Indigenous Business Gathering in Saskatchewan, and the Muiwatmnej Etuaptmumk Conference in Nova Scotia.



A New Procurement Policy

The Indigenous Procurement Policy launched in 2023 was developed through extensive assessment of existing and best practices, and outreach to Indigenous leaders and organizations. Through it, Paper Excellence Canada has committed to the development of measurably enhanced opportunities for Indigenous businesses throughout the procurement process.

A key go-forward focal point will be better identification of and outreach to Indigenous businesses operating near our mills. Cultural awareness training will also be provided to our procurement teams.

The policy was trialled in the context of construction of a new log chipping facility on the BC coast; and it may be a basis for better addressing local supply gaps in areas such as trucking and mobile services, while potentially supporting business formation in Indigenous communities.

Through our emerging Diversity, Equity and Inclusion program (see page 48) we are also striving to increase the presence of Indigenous Peoples among our employees. Both procurement- and employment-related work are guided by and consistent with Call-to-Action #92 of Canada's Truth and Reconciliation Commission, as well as with Canada's National Indigenous Economic Strategy.



Paper Excellence Canada sponsored and attended the Indigenous Partnerships Success Showcase held in Vancouver.

'From a Long Time Ago You Have Nurtured Us'¹⁴

We remained in dialogue with the Tla'amin First Nation, on whose former village site our now permanently closed tiskwat mill sits. Paper Excellence Canada is committed to ensuring that all care is taken, during the process of divesting this site, to work closely with the Tla'amin Nation.

Paper Excellence Canada was honoured to be an invited guest at a ceremony in October at which the Tla'amin and the Province of British Columbia signed an memorandum of understanding (MOU) to work together to protect this former village site.

Called yixmetštəm tiskwat ("we are going to take care of tiskwat"), the MOU commits the partners to collaboration on environmental stewardship, economic development, and the Tla'amin's long-term goal of securing ownership of the land.

¹⁴ Opening line of a poem recited in the Ayajuthem language at the MOU signing ceremony.



Investing in Indigenous Communities

Many of our corporate donations are directed to Indigenous initiatives and recipients. In 2023, this included a \$50,000 commitment to the Outland Youth Employment Program – a national network of land-based education, training, and work opportunities for high school-aged Indigenous youth. Participants complete a six-week placement in a supportive space that replicates work environments.

Other donations are diverse, ranging from ongoing support for Indspire's national Building Better Futures bursaries and scholarship program, and for the CCAB's Indigenous Women's Entrepreneurship Fund; though to mill-initiated donations such as \$5,000 to support two Indigenous learning initiatives offered by the local school district in the area where our Howe Sound mill is located.

One of those programs provides soon-to-graduate students and their caretakers with the opportunity to visit prospective post-secondary institutions and training schools; while the other will involve bringing Skwxwú7mesh Úxwumixw Knowledge and Culture Keepers and Language Keepers to visit schools to share their culture.



This young woman took part in the Outland Youth Employment Program (OYEP) which provides land-based education, training and work opportunities for high school-aged Indigenous youth.



Courtesy of the Province of British Columbia

APPENDIX 1

NON-OPERATING MILL SITES



Crofton Paper Operations Curtailed

2023 was a challenging year for the Crofton mill, and in particular in connection with our efforts to identify a more stable and promising future for paper production at this site. Production at the mill was entirely curtailed beginning in July. Pulp operations resumed in October, but paper production remained curtailed and this became indefinite as of January 2024, impacting about 75 employees.

Market dynamics, inflationary pressures on input costs, and a lack of local domestic fibre supply have combined to create substantial and material challenges impacting the current and future financial viability of the Crofton paper operation.

The mill's pulp operations employ several hundred people and the Crofton team is focusing on ensuring that these operations remain cost competitive and aligned with our overall business strategies and direction.

Paper Excellence Canada is greatly appreciative of financial commitments from the federal and provincial governments in 2023 in support of our efforts to transform Catalyst Crofton's paper operations. However, in light of the indefinite paper operation curtailment, Paper Excellence Canada has returned the provincial funding in full and as of early 2024 was working through the administrative process of returning the federal funding.

Seeking a Sustainable Foundation for Nova Scotia's Forest Industry

On May 23, 2024, Paper Excellence Canada announced that it had reached a settlement with the Province of Nova Scotia that acknowledged plans to transform and reopen Northern Pulp Nova Scotia in Pictou will not proceed and provided for a review process agreed between the Northern Pulp group and the Province of Nova Scotia that is aimed to determine whether a new, modern mill in Nova Scotia is viable.

The agreement also provides for the settlement of outstanding litigation and loans between the two parties and fully addresses the pensions of former mill employees. The settlement agreement is subject to approval by the Supreme Court of British Columbia.

Prince Albert Secures Environmental Approval

In May, the Saskatchewan provincial government completed its thorough Environmental Assessment of our proposal to restart our pulp mill at Prince Albert (closed by its previous owners in 2006), and issued its authorization. Completion of this process reflected extensive work by Paper Excellence Canada to assess this mill's operational potential, and to develop a detailed proposal and environmental plan aimed at capturing it.

During 2023, Paper Excellence Canada continued to assess and pursue various development options for this site while keeping rightsholders and stakeholders informed of project progress. The re-start, however, remained subject to market conditions and financing as of early 2024. The site continues to be closely monitored and actively managed to avoid any environmental impacts.

Closure Plans in Process at Mackenzie and tiskwat

The sites of these now-permanently closed former mill operations continue to be closely monitored and actively managed to avoid potential environmental impacts from onsite wastes and other legacy issues. Consistent with regulatory requirements, site disclosure statements have been issued to the provincial government and detailed site investigations are in progress.

APPENDIX 2

MILL-SPECIFIC ENVIRONMENTAL PERFORMANCE DATA

CROFTON

	2019	2020	2021	2022	2023
WATER USE & WASTEWATER					
Process Water Use m ³	47,848,809	46,661,729	49,372,169	46,671,481	27,858,475
Process Water Use m ³ /tonne	75	104	89	87	98
TSS kg/day	3,340	3,016	4,757	4,850	4,597
TSS kg/tonne	1.79	2.61	3.12	3.39	4.86
BOD kg/day	1,442	939	1,384	1,308	1,046
BOD kg/tonne	0.77	0.74	0.91	0.90	1.11
AOX kg/day	320	277	165	219	256
AOX kg/tonne	0.28	0.26	0.26	0.17	0.20
2378TCDD ppq	ND	ND	ND	ND	ND
2378TCDF ppq	ND	ND	ND	ND	ND
Trout Toxicity % Compliance	96	100	100	100	94

ND = non-detectable test result.

2378TCDD ppq & 2378TCDF ppq are specific dioxin and furan congeners in wastewater.

ENERGY USE					
Fuel Energy Use GJ	19,501,111	16,674,748	17,410,696	16,584,839	11,757,603
Fuel Energy Intensity GJ/tonne	28.02	37.06	31.72	29.26	41.17
Electricity Use MWh	1,177,907	605,300	1,020,936	1,031,870	412,505
Electricity Intensity MWh/tonne	1.69	1.35	1.83	1.83	1.44
Total Energy Use (excl. self-generated electricity) GJ	22,787,355	17,981,193	20,397,202	19,488,448	12,704,505
Total Energy Intensity (excl. self-generated electricity) GJ/tonne	32.75	39.97	36.63	34.59	44.49
Renewable Energy - % of Total Use	87.0	84.4	84.4	83.5	88.5

GJ = Gigajoules; MWh = Megawatt-hours

Fuel energy measures include all purchased fuels and self-generated biomass (black liquor); electricity measures include all purchased and self-generated electricity.

SOLID WASTE					
Solid Waste to Landfill bone dried tonnes	28,789	17,695	15,567	20,752	23,930

	2019	2020	2021	2022	2023
CARBON & OTHER AIR EMISSIONS					
Total GHGs as kg CO ₂ e/year (Scope 1/Direct)	183,345,030	168,155,000	185,562,138	195,739,018	91,868,332
Total GHGs as kg CO ₂ e/tonne (Scope 1/Direct)	264	374	333	347	322
Total GHGs as kg CO ₂ e/year (Scope 2/Indirect)*	11,228,002	14,520,600	8,046,974	10,041,000	2,972,216
Total GHGs as kg CO ₂ e/tonne (Scope 2/Indirect)*	16.14	32.27	14.45	17.82	36.93
Particulate Matter kg/day	773	775	1,047	785	1,044
Particulate Matter kg/tonne	0.40	0.61	0.69	0.51	0.88
Sulphur Dioxides kg/day	7,997	4,246	2,276	2,210	3,675
Sulphur Dioxides kg/tonne	2.60	2.05	1.49	1.43	2.99
NO _x kg/day	2,544	2,626	2,607	2,607	2,385
NO _x kg/tonne	1.32	2.05	1.71	1.69	2.08
TRS kg/day	279	214	198	328	203
TRS kg/tonne	0.145	0.168	0.110	0.212	0.168
Power Boiler adt ng/m ³ TEQ	0.014	0.013	0.024	0.002	0.014
Ambient TRS % compliance A level 24-hr average	98.6	96.1	95.7	76.8	83.0
Ambient PM 2.5 average, ug/m ³	6.1	6.5	4.2	5.0	4.1

PM = particulate matter; TEQ = total dioxin equivalence; ug = microgram

* Variability in the timeframe shown reflects in part significantly revised emissions factors for the electricity purchased from the BC grid.

FIBRE - PAPER PRODUCTION					
Fibre Use By Type - Tonnes					
Wood Chips	215,556	204,843	294,847	255,425	77,190
Pulp Logs	59,133	42,264	15,411	2,516	1,070
Total Fibre Used	274,689	247,107	310,258	257,941	78,260
Certified Fibre - %					
FSC Certified	0	0	0	0	0
PEFC/SFI Certified	38	31	52	58	84

FIBRE - PULP PRODUCTION					
Fibre Use By Type - Tonnes					
Wood Chips	568,508	529,714	524,513	540,255	453,015
Pulp Logs	257,458	138,497	97,585	86,992	51,736
Total Fibre Used	825,966	668,211	622,098	627,247	504,751
Certified Fibre - %					
FSC Certified	0	0	0	0	0
PEFC/SFI Certified	33	32	52	58	84

FIBRE FROM PRIVATE LANDS - %	15	15	15	15	15
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Private land figures are estimates

HOWE SOUND

	2019	2020	2021	2022	2023
WATER USE & WASTEWATER					
Process Water Use m ³	20,558,625	23,141,000	23,400,000	20,516,000	19,658,000
Process Water Use m ³ /tonne	50	55	61	58	54
TSS kg/day	1,413	1,005	1,059	1,134	1,540
TSS kg/tonne	1.26	0.87	1.00	1.16	1.53
BOD kg/day	487	365	462	412	452
BOD kg/tonne	0.43	0.32	0.44	0.42	0.52
AOX kg/day	370	237	174	117	209
AOX kg/tonne	0.33	0.21	0.17	0.12	0.21
2378TCDD ppq	ND	ND	ND	ND	ND
2378TCDF ppq	ND	ND	ND	ND	ND
Trout Toxicity % Compliance	100	93	100	100	100

ND = non-detectable test result.

2378TCDD ppq & 2378TCDF ppq are specific dioxin and furan congeners in wastewater.

ENERGY USE					
Fuel Energy Use GJ	18,151,370	18,557,501	16,245,589	15,522,316	15,456,679
Fuel Energy Intensity GJ/tonne	44.36	44.26	42.24	43.84	42.38
Electricity Use MWh	373,917	372,182	361,742	366,939	342,405
Electricity Intensity MWh/tonne	0.91	0.89	0.94	1.04	0.94
Electricity Sales MWh	303,793	341,628	209,284	154,631	169,809
Total Energy Use (excl. self-generated electricity) GJ	18,340,410	18,745,094	16,301,256	15,555,148	15,493,942
Total Energy Intensity (excl. self-generated electricity) GJ/tonne	44.82	44.71	42.38	43.93	42.48
Renewable Energy - % of Total Use	90.7	90.8	90.3	88.4	91.9

GJ = Gigajoules; MWh = Megawatt-hours

Fuel energy measures include all purchased fuels and self-generated biomass (black liquor); electricity measures include all purchased and self-generated electricity.

Total energy metrics exclude electricity sold to the grid.

SOLID WASTE					
Solid Waste to Landfill bone dried tonnes	48,380	58,422	55,063	55,156	50,709

	2019	2020	2021	2022	2023
CARBON & OTHER AIR EMISSIONS					
Total GHGs as kg CO ₂ e/year (Scope 1/Direct)	109,734,487	102,441,430	103,487,531	112,571,166	107,776,904
Total GHGs as kg CO ₂ e/tonne (Scope 1/Direct)	268	244	269	318	296
Total GHGs as kg CO ₂ e/year (Scope 2/Indirect)*	1,575,330	2,084,360	149,991	104,880	116,966
Total GHGs as kg CO ₂ e/tonne (Scope 2/Indirect)*	3.85	4.97	0.39	0.30	0.32
Particulate Matter kg/day	987	1,215	1,136	791	833
Particulate Matter kg/tonne	0.88	1.06	1.08	0.82	0.83
Sulphur Dioxides kg/day	3,311	3,692	3,654	3,133	3,882
Sulphur Dioxides kg/tonne	2.95	3.21	3.47	3.22	3.89
NO _x kg/day	2,613	3,101	2,799	3,082	2,767
NO _x kg/tonne	2.33	2.70	2.66	3.18	2.77
TRS kg/day	172	177	124	151	155
TRS kg/tonne	0.154	0.154	0.117	0.156	0.156
Power Boiler adt ng/m ³ TEQ	0.053	0.011	0.019	0.016	0.001
Ambient TRS % compliance A level 24-hr average	99.9	99.8	100.0	100.0	99.1
Ambient PM 2.5 average, ug/m ³ **	3.4	6.4	5.5	5.7	5.4

PM = Particulate Matter; TEQ = total dioxin equivalence; ug = microgram

* Variability in the timeframe shown reflects in part significantly revised emissions factors for the electricity purchased from the BC grid.

** Results for 2020 were heavily impacted by forest fires.

FIBRE					
Fibre Use By Type - Tonnes					
Wood Chips	463,000	451,000	362,000	360,000	449,000
Pulp Logs	397,000	447,000	460,000	390,000	319,000
Total Fibre Used	860,000	898,000	822,000	750,000	768,000
Certified Fibre - %					
FSC Certified	0	0	0	0	0
PEFC/SFI Certified	29	27	45	51	43
Fibre from Private Lands - %	15	15	15	15	15

Private land figures are estimates

MEADOW LAKE

2019 2020 2021 2022 2023

WATER USE & WASTEWATER

Not applicable: Closed loop mill with no effluent

ENERGY USE

Fuel Energy Use GJ	1,917,821	1,949,373	1,929,590	2,024,430	2,109,004
Fuel Energy Intensity GJ/tonne	4.82	4.80	4.93	5.00	4.99
Electricity Use MWh	564,953	564,953	569,354	592,928	581,057
Electricity Intensity MWh/tonne	1.42	1.39	1.46	1.46	1.39
Total Energy Use (excl. self-generated electricity) GJ	2,385,171	3,983,204	3,979,264	4,158,972	4,200,809
Total Energy Intensity (excl. self-generated electricity) GJ/tonne	6.00	9.81	10.16	10.27	10.02
Renewable Energy - % of Total Use	36.1	32.3	32.0	28.4	28.3

GJ = Gigajoules; MWh = Megawatt-hours

Fuel energy measures include all purchased fuels and self-generated biomass (black liquor); electricity measures include all purchased and self-generated electricity.

SOLID WASTE

Solid Waste to Landfill bone dried tonnes	19,509	19,102	21,181	22,246	23,697
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	2019	2020	2021	2022	2023
CARBON & OTHER AIR EMISSIONS					
Total GHGs as kg CO ₂ e/year (Scope 1/Direct)	77,878,600	68,673,840	78,522,262	70,875,979	71,170,117
Total GHGs as kg CO ₂ e/tonne (Scope 1/Direct)	196	169	201	175	170
Total GHGs as kg CO ₂ e/year (Scope 2/Indirect)	387,557,934	328,832,949	362,678,964	332,632,860	300,987,400
Total GHGs as kg CO ₂ e/tonne (Scope 2/Indirect)	975	810	927	821	718
Particulate Matter kg/day*	2,086	2,275	820	436	407
Particulate Matter kg/tonne*	1.92	2.04	0.76	0.39	0.35
Sulphur Dioxides kg/day	36	13	41	38	36
Sulphur Dioxides kg/tonne	0.03	0.01	0.04	0.03	0.03
NO _x kg/day	403	353	452	426	414
NO _x kg/tonne	0.37	0.32	0.42	0.38	0.36

*Lower particulates reflect improved combustion resulting from the re-build of the mill's Olivine burner (used to dispose of waste wood); and installation of a dryer for effluent treatment byproducts. There were also improved dust control activities in the summer.

FIBRE					
Fibre Use By Type - Tonnes					
Wood Chips	131,577	112,052	171,605	147,990	170,405
Pulp Logs	326,852	338,231	211,103	204,552	281,474
Total Fibre Used	458,429	450,283	382,708	352,542	451,879
Certified Fibre - %					
FSC Certified	45	52	35	55	61
PEFC/SFI Certified	46	30	51	40	34
Fibre from Private Lands - %	9	18	14	5	5

PORT ALBERNI

	2019	2020	2021	2022	2023
WATER USE & WASTEWATER					
Process Water Use m ³	22,329,272	21,641,494	25,863,525	26,908,840	22,655,711
Process Water Use m ³ /tonne	83	90	99	102	97
TSS kg/day	1,070	1,123	1,031	1,236	840
TSS kg/tonne	1.45	1.68	1.45	1.70	1.31
BOD kg/day	520	450	720	580	340
BOD kg/tonne	0.71	0.67	1.01	0.80	0.53
Trout Toxicity % Compliance	100	100	100	100	100

ENERGY USE					
Fuel Energy Use GJ	4,568,174	4,578,093	4,940,522	4,967,681	4,611,065
Fuel Energy Intensity GJ/tonne	17.04	18.80	19.03	18.78	19.67
Electricity Use MWh	655,242	664,240	690,121	658,047	573,057
Electricity Intensity MWh/tonne	2.44	2.73	2.66	2.49	2.45
Total Energy Use (excl. self-generated electricity) GJ	6,693,452	6,722,153	7,155,252	7,084,069	6,449,033
Total Energy Intensity (excl. self-generated electricity) GJ/tonne	24.97	27.61	27.57	26.78	27.52
Renewable Energy - % of Total Use	95.2	93.2	89.2	88.0	89.2

GJ = Gigajoules; MWh = Megawatt-hours

Fuel energy measures include all purchased fuels and self-generated biomass (black liquor); electricity measures include all purchased and self-generated electricity.

SOLID WASTE					
Solid Waste to Landfill bone dried tonnes	20,597	19,287	23,481	25,161	19,803

	2019	2020	2021	2022	2023
CARBON & OTHER AIR EMISSIONS					
Total GHGs as kg CO ₂ e/year (Scope 1/Direct)	28,012,653	28,538,955	46,659,535	50,799,333	41,639,393
Total GHGs as kg CO ₂ e/tonne (Scope 1/Direct)	105	117	180	194	178
Total GHGs as kg CO ₂ e/year (Scope 2/Indirect)*	17,710,650	23,822,880	5,967,469	6,760,678	5,769,249
Total GHGs as kg CO ₂ e/tonne (Scope 2/Indirect)*	66.08	97.84	23.00	25.56	25.00
Particulate Matter kg/day	37	28	35	8	45
Particulate Matter kg/tonne	0.05	0.04	0.04	0.01	0.06
Sulphur Dioxides kg/day	516	429	732	867	494
Sulphur Dioxides kg/tonne	0.63	0.57	0.90	0.94	0.60
NO _x kg/day	740	606	718	683	721
NO _x kg/tonne	0.90	0.81	0.88	0.75	0.88
Power Boiler adt ng/m ³ TEQ	0.04	0.03	0.35	0.00	0.09
Ambient PM 2.5 average, ug/m ³	8.8	8.9	7.1	7.4	6.4

PM = particular matter; TEQ = total dioxin equivalence; ug = microgram

*Variability in the timeframe shown reflects in part significantly revised emissions factors for the electricity purchased from the BC grid.

FIBRE					
Fibre Use By Type - Tonnes					
Wood Chips	39,854	48,821	66,020	49,962	50,530
Pulp Logs	131,994	106,047	101,028	96,719	70,009
Purchased Virgin Pulp	15,194	12,204	15,643	12,364	13,435
Total Fibre Used	187,042	167,072	182,691	159,045	133,974
Certified Fibre - %					
FSC Certified	8	9	9	8	11
PEFC/SFI Certified	79	76	52	58	84
Fibre from Private Lands - %	15	15	15	15	15

Private land figures are estimates

SKOOKUMCHUCK

	2019	2020	2021	2022	2023
WATER USE & WASTEWATER					
Process Water Use m ³	13,202,770	13,345,802	13,972,345	14,051,487	13,956,060
Process Water Use m ³ /tonne	51	53	55	58	58
TSS kg/day	1,765	1,482	1,185	1,552	1,497
TSS kg/tonne	2.48	2.15	1.71	2.32	2.25
BOD kg/day	1,336	927	917	968	858
BOD kg/tonne	0.01	0.00	1.32	1.45	1.29
AOX kg/day	128	113	118	113	108
AOX kg/tonne	0.18	0.16	0.17	0.17	0.16
Trout Toxicity % Compliance	88	100	100	100	92

ENERGY USE					
Fuel Energy Use GJ	11,641,133	10,786,356	9,909,807	9,807,115	10,046,330
Fuel Energy Intensity GJ/tonne	44.80	42.81	39.14	40.18	41.44
Electricity Use MWh	210,432	211,064	209,468	207,472	205,618
Electricity Intensity MWh/tonne	0.81	0.84	0.83	0.84	0.85
Electricity Sales MWh	213,180	123,379	83,402	73,310	89,074
Total Energy Use (excl. self-generated electricity) GJ	11,986,661	10,939,061	9,980,878	9,883,511	10,074,820
Total Energy Intensity (excl. self-generated electricity) GJ/tonne	33.49	43.42	28.11	25.21	24.57
Renewable Energy - % of Total Use	93.9	90.2	89.1	89.6	93.2

GJ = Gigajoules; MWh = Megawatt-hours

Fuel energy measures include all purchased fuels and self-generated biomass (black liquor); electricity measures include all purchased and self-generated electricity.

Total energy metrics exclude electricity sold to the grid.

Calculations impacting various energy-use metrics at this mill have been corrected, resulting in a restatement of some data for past years.

SOLID WASTE					
Solid Waste to Landfill bone dried tonnes*	12,472	16,239	13,642	25,408	24,252

*Solid waste to landfill increased beginning in 2022 due to sludge generated from the dredging of an effluent treatment pond, and due to a change in handling of gravel originating at a biomass power boiler which had previously been stockpiled on the mill site.

	2019	2020	2021	2022	2023
CARBON & OTHER AIR EMISSIONS					
Total GHGs as kg CO ₂ e/year (Scope 1/Direct)	52,382,345	66,558,588	62,365,842	65,263,945	59,087,061
Total GHGs as kg CO ₂ e/tonne (Scope 1/Direct)	202	264	246	262	244
Total GHGs as kg CO ₂ e/year (Scope 2/Indirect)*	2,879,400	1,696,720	191,497	244,041	89,270
Total GHGs as kg CO ₂ e/tonne (Scope 2/Indirect)*	11.08	6.73	0.76	1.00	0.37
Particulate Matter kg/day	214	398	292	299	273
Particulate Matter kg/tonne	0.30	0.58	0.42	0.43	0.41
Sulphur Dioxides kg/day	140	75	70	62	97
Sulphur Dioxides kg/tonne	0.20	0.11	0.10	0.09	0.15
NO _x kg/day	781	916	585	558	507
NO _x kg/tonne	1.10	1.33	0.84	0.83	0.76
TRS kg/day**	29	31	32	147	29
TRS kg/tonne**	0.041	0.045	0.047	0.212	0.044
Power Boiler adt ng/m ³ TEQ	NA	NA	NA	NA	NA
Ambient TRS % compliance A level 24-hr average***	99.9	99.9	99.9	99.9	99.9
Ambient PM 2.5 average, ug/m ³	4.3	7.1	6.9	7.8	8.6

TEQ = total dioxin equivalence; ug = microgram; NA = not applicable

* Variability in the timeframe shown reflects in part significantly revised emissions factors for the electricity purchased from the BC grid.

** The increase in TRS in 2022 was largely attributable to an elevated result on an annual test from miscellaneous sources at the mill site. Given operating conditions, comparisons with historical data, and 2022 re-test results it is believed to have been an erroneous test result.

***In the case of this mill, this metric is based on a 20 ppb A-level limit on a 1-hour basis.

FIBRE					
Fibre Use By Type - Tonnes					
Wood Chips	391,665	425,810	433,806	414,330	419,564
Pulp Logs	153,686	185,833	115,708	117,182	102,641
Total Fibre Used	545,351	611,643	549,514	531,512	522,205
Certified Fibre - %					
FSC Certified	63	49	55	52	53
PEFC/SFI Certified	33	44	37	46	45
Fibre from Private Lands - %	4	7	8	7	7

ADDITIONAL PERFORMANCE DATA

	2019	2020	2021	2022	2023
SALEABLE PRODUCTION BY MILL (TONNES)					
Crofton	695,873	449,921	556,826	563,445	285,569
Howe Sound	409,209	419,261	384,622	354,056	364,700
Meadow Lake	397,558	406,075	391,240	405,115	419,058
Port Alberni	268,030	243,477	259,564	264,523	234,376
Skookumchuck	259,861	251,959	253,162	244,073	242,443

TOTAL WASTE GENERATION 2023 (BONE DRIED TONNES)	Generated	Landfilled	Used for Energy Generation	Other Beneficial Re-uses
Fly ash	73,860	67,000		6,860
Effluent treatment sludges	46,062	2,168	43,894	
Grate ash & sand	16,397	16,397		
Dregs & grits	35,181	35,181		
Other	14,160	14,007		153
Scrap metal	1,241			1,241
Total	186,901	134,753	43,894	8,254

TOTAL ENVIRONMENT INCIDENTS IN 2023 = 139					
By Type		By Impacted Area		By Significance	
Permit non-compliance	97	Water	28	High	8
Release	39	Land	16	Medium	93
Admin. error	3	Air	95	Low	38

The increase in TEIs in 2023 largely occurred at the Skookumchuck mill, where most of the incidents were related to ambient TRS (see further discussion on page 36 - "Scaling Back Sulphur"). There was also an increase in TEIs at Meadow Lake, largely due to an increase in ash-related complaints and an increase in airborne pulp fibre releases, both of which have minimal impacts on the surrounding environment.

TOTAL ENVIRONMENT INCIDENTS IN 2022 = 102					
By Type		By Impacted Area		By Significance	
Permit non-compliance	71	Water	23	High	36
Release	24	Land	12	Medium	43
Admin. error	7	Air	67	Low	23

TEIs for 2022 have been re-stated from previous reported figures due to further data verification and clarification of internal incident reporting guidelines.

Community Complaints in 2023 = 25	
Odour	19
Particulate	3
Noise	2
Other	1

Community Complaints in 2022 = 33	
Odour	22
Particulate	3
Noise	6
Other	2

APPENDIX 3

ALIGNMENT ON CLIMATE POLICY ENGAGEMENT

In 2022, Paper Excellence Canada signed the *Corporate Knights Action Declaration on Climate Policy Engagement* (the “Declaration”), which was launched at the 27th United Nations Climate Change Conference of the Parties (COP27). To fulfill our commitments as a signatory, in 2023 we comprehensively reviewed both our own direct engagement on climate-related policy matters, and that of the major trade associations to which we belong.

Our objective was to ensure that all such engagement is consistent with the scope and pace of decarbonization required to meet the overarching goals coming out of COP21, those being to: hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels”.

Our own direct engagement consists of a range of ongoing dialogue with elected and unelected officials, on the part of both Paper Excellence Canada subject matter experts and contracted government-relations consultants. We engage primarily on matters such as carbon pricing and other aspects of policy that directly influence the financial viability of efforts to pursue further operational decarbonization. We rely on trade associations to reinforce our positions, focusing on policy considerations that are broadly relevant across our industry peer group.

In 2023, this suite of engagement activities focused on: eligibility of biomass (wood waste) fuels for federal investment tax credits; effective design of the new industrial output-based carbon pricing system in BC (from the standpoint of both incentivizing further decarbonization and avoiding penalization of early actors such as Paper Excellence Canada); and access to carbon tax revenues in Saskatchewan in support of further operational decarbonization.

Given that all of this advocacy is aimed at sustaining and accelerating decarbonization at our operations and more broadly within our industry, we deem it to be aligned with the Paris Agreement. We note that in some cases the engagement outcomes we seek would also improve climate resiliency, for example by reducing residual wood in harvested areas and thereby moderating wildfire risks.

In light of our status as a Declaration signatory, we continue to monitor all direct and indirect engagement through the lens of Paris Agreement alignment, and to ensure we are refraining from any misaligned direct engagement. Our monitoring of indirect engagement focuses on a small number of trade associations that are both active on climate-related policy matters and with which we are broadly and substantively involved as a member.

If at any point we deem there to be a misalignment relative to such indirect advocacy we would: firstly, engage with the relevant association to better understand and attempt to correct the misalignment; and, secondly and if necessary, clearly disassociate ourselves from the relevant position(s). Disassociation could extend from issuing a formal statement of dissent with the relevant position(s) to policymakers (typically identifying our preferred policy alternative), to withdrawal from membership, as may be appropriate in the circumstances. We did not deem any such actions necessary in 2023.

APPENDIX 4

Climate Change-Related Risks and Opportunities

Effective risk-management is an important element of corporate governance, and of efforts to improve the sustainability of industrial activities. Climate change and carbon-management create a number of increasingly material risks and potentially promising opportunities. Paper Excellence Canada assessed them in 2023 as shown below.

Climate Change Risks	How They're Being Managed
Pricing & Regulatory Measures The already material and rising cost of carbon is embedded in energy use, and in other purchased inputs (e.g. chemicals produced in jurisdictions with carbon-heavy electricity supplies)	<ul style="list-style-type: none">• Sustained focus on reduced carbon intensity• Pursuit of further progress in part by leveraging available public funding (e.g. CleanBC), and through collaborative efforts (e.g. FPInnovations)• Advocacy for better certainty and visibility on future carbon pricing• Exploration of the applicability of carbon capture and other emerging technologies and of the policy measures needed to enable them
Extreme Weather Occurrences of extreme weather have created challenges in transporting raw materials to mills, and in moving products to market Meanwhile BC mills have already experienced acute short-term water shortages	<ul style="list-style-type: none">• Diversification of transportation and inventory options to increase resilience• Advocacy for improved reliability and availability of rail service• Sustained focus on the efficiency of mill water use• Engagement in multi-stakeholder water management planning exercises (e.g. Cowichan River)
Raw Materiality Availability Climate change could impact forest health and productivity, and the scope and profile of available fibre Increased need to leverage the carbon storage capacity of forests could further impact fibre availability	<ul style="list-style-type: none">• Advocacy for policies and support for industry efforts to ensure maximum recovery/utilization of available fibre in harvested areas• Sustained focus on efficiency of mill fibre use, and on growing market share for products requiring lower fibre inputs• Continual assessment of fibre availability in viable supply areas and ongoing development of Indigenous and other supply partnerships

Climate Change Opportunities

How They're Being Leveraged

Product Displacement/Market Share Capture

Plastics bans are indicative of growing recognition of the recyclable nature of wood-based products in various contexts

Supply-chain Scope 3 emissions increasingly guide purchasing decisions

- Sustained product-development focus on displacement opportunities in areas such as food packaging
- Leveraging of existing low-carbon profile, and of expertise with respect to high fibre-use efficiency, in sales development efforts
- Support for research on potential additional alternative uses of wood fibre

Leveraging of Green Energy Infrastructure

Mills have the capacity to generate surplus biomass energy which when sold to provincial utilities can contribute to jurisdictional decarbonization goals

- Power purchase agreements with BC Hydro
- Advocacy for a supportive policy environment to enable the continuation and potential expansion of these arrangements

Other Forms of Green Energy and Carbon Utilization

Existing mill infrastructure, materials and expertise could be leveraged in support of the production of new forms of energy and other products and revenue streams

- Exploration of next-generation thermal conversion processes that may be a basis for the production of clean e-fuels and e-chemicals
- Exploration of carbon capture for storage and/or use in commercial applications such as solid carbon fibres, potentially creating the opportunity to remove even biogenic carbon emissions

APPENDIX 5

SELECT GRI AND SASB INDEX

This report has been informed by standards and best practices relating to sustainability disclosure. While we do not declare it to be in accordance with any specific guidance of that type, for the convenience of readers we indicate below where specific disclosures recommended by the Global Reporting Initiative and the Sustainability Accounting Standards Board are at least partially addressed.

GLOBAL REPORTING INITIATIVE

GRI 2: General Disclosures 2021, Effective Date 1 January 2023; and 300 Series Topic Standards

Disclosures

The Organization and Its Reporting Practices		SECTION
2-1	Organizational details: Legal name, nature of ownership and legal form, location of headquarters, countries of operation	Introductory Section
2-2	Entities included	About This Report
2-3	Reporting period, frequency and contact point	About This Report
2-4	Restatements of information	Throughout as relevant (see graphs and tables)
Activities and Workers		SECTION
2-6	Activities, value chain and other business relationships	Environmental Performance Non-Operating Mill Sites
2-7	Employees	Workforce Profile and Wellbeing
Governance		SECTION
2-9	Governance structure and composition	ESG and Risk Management
2-12	Role of the highest governance body in overseeing the management of impacts	ESG and Risk Management
2-13	Delegation of responsibility for managing impacts	ESG and Risk Management
2-14	Role of the highest governance body in sustainability reporting	ESG and Risk Management
2-16	Communication of critical concerns	ESG and Risk Management

Strategies, Policies and Practices		SECTION
2-22	Statement on sustainable development strategy	Throughout (see in particular “Rounding out the Curves” and commentary under “Corporate Wide Performance Metrics”)
2-25	Processes to remediate negative impacts	Environmental Performance
2-26	Mechanisms for seeking advice and raising concerns	ESG and Risk Management
2-27	Compliance with laws and regulations	Throughout (see in particular “Environmental Performance”) and “Additional Performance Data” (page 74)
2-28	Membership associations	Appendix 3

Stakeholder Engagement		SECTION
2-29	Approach to stakeholder engagement	New Horizons and Relationships
2-30	Collective bargaining agreements	Workforce Profile and Wellbeing

Topic Specific Disclosures		SECTION
301-1	Materials used by weight or volume	Environmental & Appendix 2
302-1	Energy consumption within the organization	Environmental & Appendix 2
302-3	Energy intensity	Environmental & Appendix 2
303-1	Interactions with water as a shared resource	Environmental
303-2	Management of water discharge-related impacts	Environmental
303-4	Water discharge	Environmental & Appendix 2
305-1	Direct (Scope 1) GHG emissions	Environmental & Appendix 2
305-2	Energy indirect (Scope 2) GHG emissions	Environmental & Appendix 2
305-4	GHG emissions intensity	Environmental & Appendix 2
305-5	Reduction in GHG emissions	Environmental & Appendix 2
305-7	Nitrogen oxides, sulfur oxides, and other significant air emissions	Environmental & Appendix 2
306-1	Waste generation and significant waste-related impacts	Environmental & Appendix 2
306-2	Management of significant waste-related impacts	Environmental
306-3	Waste generated	Environmental & Appendix 2
306-4	Waste diverted from disposal	Environmental & Appendix 2
306-5	Waste directed to disposal	Environmental & Appendix 2

SUSTAINABILITY ACCOUNTING STANDARDS BOARD¹⁵

Pulp & Paper Products (Version 2023-12)

Disclosures

Greenhouse Gas Emissions - RR-PP-110a.1 & RR-PP-110a.2	SECTION
<p>Gross global Scope 1 emissions</p> <p>Discussion of long- and short-term strategy or plan to manage Scope 1 emissions</p>	<p>Environmental & Appendix 2</p> <p>Continued Cuts to Carbon Emissions</p>
Air Quality - RR-PP-120a.1	SECTION
<p>Air emissions including NO_x SO₂ and particulate matter</p>	<p>Environmental & Appendix 2</p>
Energy Management - RR-PP-130a.1	SECTION
<p>(1) Total energy consumed, (2) percentage grid electricity, (3) percentage from biomass, (4) percentage from other renewable energy and (5) total self-generated energy</p>	<p>Environmental & Appendix 2</p>
Water Management - RR-PP-140a.1 & RR-PP-140a.2	SECTION
<p>Water withdrawal, consumption</p> <p>Description of water management risks and discussion of strategies and practices to mitigate those risks</p>	<p>Environmental & Appendix 2</p>
Supply Chain Management - RR-PP-430a.1 & RR-PP-430a.2	SECTION
<p>Percentage of wood fibre sourced from (1) third-party certified forestlands and percentage to each standard and (2) meeting other fibre sourcing standards and percentage to each standard</p> <p>Amount of recycled and recovered fibre procured</p>	<p>Supporting and Assuring Good Forest Stewardship</p>
Pulp Production - RR-PP-000.A	SECTION
<p>Air-dried metric tonnes (t)</p>	<p>Appendix 2</p>
Paper Production tonnes (t) - RR-PP-000.B	SECTION
<p>Air-dried metric tonnes (t)</p>	<p>Appendix 2</p>
Total Wood Fibre Sourced - RR-PP-000.C	SECTION
<p>Metric tonnes (t)</p>	<p>Supporting and Assuring Good Forest Stewardship & Appendix 2</p>

¹⁵ Now part of the IFRS Foundation.





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