



On the cover

Riding high on safety: A turnaround at Pinnacle Renewable Energy is helping to advance pellet mill health and safety standards.

Owning safety in wood pellet manufacturing

By Ryan Parton

Three years ago, Pinnacle Renewable Energy was an unlikely contender to become a role model for occupational health and safety. In October, 2014, a fire broke out at their wood pellet plant near Burns Lake, B.C., injuring three workers. By 2015, fines and orders were stacking up, workers continued to be at risk from combustible dust, and Pinnacle was ready to make a change.

The world's third-largest manufacturer of wood pellets — with seven pellet mills, one shipping terminal, and some 300 employees across British Columbia — Pinnacle had been assessed 10 monetary penalties for combustible dust and other violations over a span of less than two years. The organization possessed a culture that had, by some accounts, simply accepted that fires were “part of the business,” says Pinnacle's chief executive officer, Rob McCurdy.

Before 2015, the entire wood pellet industry in B.C. struggled to be compliant with health and safety regulations. Pinnacle itself had several workplace incidents to which WorkSafeBC officers responded. In the summer of 2012, WorkSafeBC established a formal combustible-dust strategy in the aftermath of two devastating sawmill explosions. Though the strategy initially focused exclusively on sawmills, it was eventually expanded to include pellet mills, and other wood-product manufacturers.

The increased focus led to Pinnacle taking a bold risk in August of 2014: The company laid its deficiencies on the table and asked WorkSafeBC for help. It was the start of an innovative process that led to a remarkable transformation and a steadfast commitment to continual improvement.

And it all started when Pinnacle's executives decided to view their relationship with WorkSafeBC through a whole new lens.

A unique challenge

Pellet mills present a variety of occupational risks, from heavy machinery and confined spaces to combustible dust — a hazard that can be particularly problematic in this industry. Unlike most manufacturers, for whom dust is a byproduct of their processes, pellet mills use sawmilling residuals — essentially sawdust and wood shavings — as their raw material.

Combustible dust, therefore, is a key part of Pinnacle's manufacturing process, rather than an expendable byproduct. That dust is dried to a moisture content of 4 to 6 percent and often conveyed via ventilation systems, which could increase the risk of combustion. In the end, it will be made into wood pellets that are sold as fuel for applications such as home heating, industrial processes, and power generation.

“Pellet mills, in general, didn't appear to have a good handle on their health and safety risks,” recalls Geoff Thomson, a Kamloops-based occupational hygiene officer and one of two WorkSafeBC officers assigned to the pellet mill initiative. When it came to Pinnacle, he noted, “There had been several accidents and a number of fairly serious orders written on several other issues besides combustible dust.”

“I really thought Pinnacle was going to go down one of two roads,” echoes Mike Tasker, the other occupational safety officer on WorkSafeBC's pellet mill inspection team. “They were either going to have a catastrophic event, like an explosion, and possibly hurt or kill some of their people, or we were going to end up imposing so many sanctions against them that they just couldn't operate.”



Demonstrating a lockout procedure at Pinnacle Renewable Energy's Meadowbank/Hixon pellet plant.



Pinnacle plant manager Greg Lobsinger and WorkSafeBC occupational safety officer Mike Tasker survey the Meadowbank/Hixon worksite.

A bold solution

Within the offices of Pinnacle Renewable Energy, the signs that something needed to change did not go unnoticed.

“We realized we were struggling,” admits Scott Bax, Pinnacle’s senior vice-president of operations. “The officers were making it clearer and clearer with every visit the level of deficiencies we had with respect to our systems.”

That, says Bax, is when he and McCurdy decided to take the bold step of writing a letter to WorkSafeBC’s Prevention Services, asking for help in improving Pinnacle’s performance. A second letter in November of 2014 outlined Pinnacle’s new “Owning Safety” program, which identified the company’s deficiencies, established priorities, and laid out a roadmap to progressive improvement.

Putting their deficiencies in ink for all to see was no easy task during a period in which Bax describes the relationship between Pinnacle and WorkSafeBC as “difficult,” “acrimonious,” and “confrontational.”

“We had a lot of, I’ll call it heartburn or indigestion, going down that road,” he recalls. “But if you’re going to change anything, it starts with you; it never starts with the other party.”

“Some of the guys thought I was nuts,” adds McCurdy. “They said, ‘You’re just giving WorkSafeBC something to hang yourself with.’ And I said, ‘Yes, I am, but I believe in what we’re going to do and I know we’re going to deliver on this.’”

And deliver they did.

Pinnacle’s earnest request for assistance kicked off a series of regular conference calls between company representatives and WorkSafeBC. Baseline and follow-up inspections were undertaken at pellet mills throughout the province, and Pinnacle itself began the process of reinventing its organizational culture.

Pinnacle hired a new director of health and safety, overhauled its safety management system, and actively focused on breaking down barriers to communication between the company’s various sites. Pinnacle employees also took on active roles within the industry in order to better facilitate knowledge sharing. Scott Bax, for example, became chair of the Wood Pellet Association of Canada’s safety committee; employee Steven Mueller also sits on that committee, as well as on the B.C. Forest Safety Council’s Manufacturing Advisory Group.

“As an organization, we went all in,” says Bax. “We fully committed to being better, and acknowledged that we

weren't experts. There were no sacred cows; everything was open for discussion and change."

The results of this unique working relationship have been nothing short of exemplary. Little more than two years after that initial letter, Pinnacle reports a 70 percent reduction in its medical incident rate and an 80 percent drop in lost-time accidents. By February 2017, each of its facilities had gone at least an entire year without a single lost-time accident.

"We're smashing our budgeting numbers and this has been the best year in Pinnacle's history," adds plant manager Greg Lobsinger. And employees are more engaged as well. "By working together, we had 100 percent employee buy-in."

"I've seen the crew morale improve," says millwright Jordan Fouty. "People are part of the process now. They're owning safety; they're being recognized for their involvement."

Thomson points to Pinnacle's own improved relationship with WorkSafeBC as evidence of success.

"They're not afraid to pick up the phone and call us to report a minor incident or to ask us questions," he says. "Before it was very much not that way. Pinnacle's leadership has embraced health and safety as a corporate value, and I think that's why you've seen so much success from them."

Safer pellet mills in all of B.C.

Since Pinnacle made this commitment, the formal, province-wide Pellet Mill Initiative has seen changes industry-wide. Other wood pellet manufacturers such as Pacific BioEnergy, Premium Pellet, and Princeton Standard Pellet have made great strides, and even pioneered some of their own innovative health and safety strategies, says Thomson.

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—Geoff Thomson, WorkSafeBC occupational hygiene officer

The story of B.C.'s wood pellet industry highlights the importance of not just recognizing weaknesses when it comes to occupational health and safety, but actually taking ownership for those shortcomings and actively working toward improvement. It also shows the immense value of viewing WorkSafeBC as more than just an enforcement agency, notes Bax.

"I don't think most industries or employers view WorkSafeBC as actual safety experts that can make them better; they see them as the necessary regulator," says Bax. "If you really want to be better from a safety perspective, WorkSafeBC is a powerful ally to help you get there."

Find out more

For more on this story, see the video on Pinnacle's journey to improvement at worksafebc.com/annualreport. WorkSafeBC also offers a wide variety of employer resources at worksafebc.com. For a free, online safety-certification program for supervisors, visit supervisingforsafety.com. ☺



WorkSafeBC Ergonomics Forum

When: Tuesday, Oct 17, 2017 | 12:30 to 4:30 p.m.

Location: WorkSafeBC auditorium
6951 Westminster Hwy, Richmond, BC

October is Ergonomics Month and in recognition WorkSafeBC is hosting an ergonomics forum.

Join us for an afternoon of presentations and networking.

Register for the event at worksafebc-ergonomics-forum-2017.eventbrite.ca

For more information, email ergomonth@worksafebc.com

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