

CAN BC BECOME A 'GREEN COPPER' SUPERPOWER?¹

Christopher Pollon©

Imagine there was a way to develop British Columbia's vast northern copper reserves without exporting the unprocessed ore like so many raw logs. And say you could ramp up the number of high-paying jobs in the disadvantaged north, while slashing the greenhouse gas emissions created by the current practice of shipping and processing our raw copper in Asia. All of this becomes possible, says environmentalist James Bourquin, with the construction of a low-carbon copper smelter at the strategic coastal port of Kitimat, B.C. "We're at the dawn of a new era of big open pit copper mines in northwestern B.C.," says Bourquin, founder of Cassiar Watch, a small environmental advocacy group based in the copper-rich Stikine River watershed about 1,700 kilometres northwest of Vancouver. "We have to seriously look at those downstream opportunities before we forego them to other countries that want our copper."

With the certainty that the B.C. electrical grid will be extended into the northwest corner of B.C. within a few years, at least four potential open pit copper mines are closer to becoming a reality - a development that has forced Bourquin, an Oregon-born river guide turned environmental activist, to focus on development. "As an environmental campaigner, you need to have a fallback plan," he says. "We're not going to stop the transmission line, so how do you ensure the smallest footprint and biggest benefit for British Columbians and Canadians if new mines move forward?"

A Vision of 'Green Copper'

Most active and proposed B.C. copper mines follow the same basic model: mine the ore from open pits, mill it to about 30 per cent purity at the mine-site (this milled raw copper is called "copper concentrate") and truck it to port. From there, copper concentrate is typically shipped to places like Japan, China, India or the Philippines, where it is further purified within a fossil-fuel (often high-sulphur coal) smelter. Much of our own copper is ultimately sold back to us as finished pipes and wire, shipped the return route by the same dirty-fuelled ships.

Bourquin says there's a better way. Raw copper could be moved by slurry pipeline, using much of the new power-line right of way, eliminating the need for diesel trucks and the untold millions taxpayers pay to maintain "haul road" highways. A clean hydro-powered smelter could be built on the Pacific coast near Kitimat. Bourquin envisions a time when the huge cost of infrastructure and smelter construction are offset by carbon credits earned by the massive avoidance of greenhouse gas emissions compared to the business-as-usual approach; the product of the smelter could then be branded and marketed as sustainable, B.C. green copper. In the same way that Forest Stewardship Council certification ensures market preference by validating claims of sustainability, a scheme to certify B.C.-smelted "green copper" could be created to provide market access, enabling our higher cost product to compete against the comparatively cheap and dirty copper processed across Asia.

Establishing a smelter terminus for B.C. copper at Kitimat will also prevent the future flow of minerals and other economic benefits through closer potential ports in Alaska, where there is

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already a growing movement to connect the state to B.C.'s electrical grid. Since the early 1960s, British Columbian governments, miners and workers have unsuccessfully clamoured for local copper processing -- resulting in 50 years of ideological posturing, about faces and lost opportunities.

In 1970, the provincial government proposed legislation that would allow it to divert up to 50 per cent of any B.C. copper mine's production to a designated smelter in an attempt to ensure adequate domestic smelter copper supply. "We don't want to be the hewers of wood and drawers of water forever," then mines minister Frank Richter said in defence of the plan. But the mining industry balked, fearing the loss of both Japanese investment and markets for raw copper; the province backed down.

Two years later, the newly elected Barrett NDP erased incentives and scuttled two advanced smelter plans, one for Kimberley and another near Clinton, B.C. Soon after, the government threatened to bypass industry altogether and build its own smelter, striking a taskforce whose recommendations were ignored. Years later, the bitterness over the lost opportunities was still raw: "If we had not had a socialist government we might have two copper smelters today," spat Socred mines minister Jim Chabot in 1977. By 1980, hopes for a B.C. smelter were all but dashed. Industry had a litany of concerns: labour unrest; high taxes; pollution guidelines were unclear; and uncertainty persisted around raw copper supply and securing markets for both smelted copper and sulphur by-products.

Tex Enemark's decade-long quest to bring a smelter to Kitimat is just the latest failed attempt to value-add copper in B.C. (see sidebar). In the early 1990s, Enemark, a former president and CEO of the Mining Association of B.C., assembled five local and international investors and got as far as completing a preliminary feasibility study; Alcan had optioned 165 acres of available land at Kitimat, and the group received commitments for enough copper concentrate to get up and running. As Enemark tells it, just as everything was coming together, Glen Clark tabled his first budget as finance minister in the spring of 1992, which raised income taxes and extended the corporation capital tax to all companies with more than \$1 million capital; the investors got spooked, the assumptions of the feasibility study withered, and the plan fell apart. "That's why we don't have a half-billion dollar smelter capable of smelting probably half of the copper currently being mined in B.C., and that's why we're not as competitive in the world as we should be," he says.

Enemark maintains that Kitimat is still "the best site on the whole Pacific rim to locate a copper smelter," situated on a natural shipping route between Santiago (Chile) and Tokyo. From this location, a "toll smelter" could source copper concentrates from not only B.C., but anywhere in the world. Miners would save the expense of fuelling ships to transport copper across the Pacific Ocean, which is only going to get more expensive; they would also likely get paid faster and receive a better price for other minerals -- like gold and silver -- often present in the concentrate. "You build these complexes and they become much more than just a smelter," he says, noting the potential for spin-off businesses, including fertilizer plants using sulphur, a smelting waste product. A B.C. smelter could also "recycle" the scrap copper currently collected in B.C. and sent to Asia.

Supporters Cite Big Obstacles

Pierre Gratton, the current president and CEO of the Mining Association of B.C., says he would love to see a copper smelter in BC -- but isn't banking on it anytime soon. "The biggest challenge

is the huge investment, it's into the billions of dollars," he says. "You can't just build a smelter." Then there are the uncertainties of going head-to-head with the Chinese, Chileans, Japanese and Koreans, who not only have low-cost industries, but established sources of raw copper supply. Gerry Martin, president of the Kitimat Terrace Industrial Development Society, supports the idea for a Kitimat smelter, but says the chances of opening a major B.C. copper smelter under present global conditions is "slim to zero." Not only is there excess refining capacity in other smelting countries like Japan, he says, but large subsidies currently support those off-shore industries.

A new copper smelter would also disrupt a decades-old business model in which B.C. mining companies rely on foreign smelting interests to finance their copper mines: in exchange for sending B.C. raw copper offshore for smelting -- historically to Japan -- the companies access the capital to build the mine. "The problem in B.C. is that the mining industry is comfortable with the existing system," says Enemark. "They have good relations [with smelters], they're probably getting financed, so why make life difficult for themselves?"

How Newfoundland Obtained Its Smelter

By early 2013, Newfoundland will have its own smelter to process all of the nickel mined from the *Voisey's Bay mine*, which will create 450 permanent smelting jobs. All it took was a world-class mineral deposit and plenty of government threats. Early in development of the mine, the province insisted that construction of a smelter was a precondition to the project moving forward. "If that's not acceptable, they can pack their bags and leave," said Mining Minister Charles Furey. The province also explored building a smelter to process copper mined at same site, but concluded there was insufficient supply.

In Newfoundland it was politically unacceptable to send smelting jobs out of province; today in B.C., no such imperative exists. "The decision of where and how to market and refine mined ore is made by the mining company and is not directed by government," says ministry of energy mines and petroleum resources spokesperson Liz Bicknell when asked if the government would support a new smelter. "The idea would need to be industry-led [and] to date there have been no companies come forward with such a plan."

This was not always the philosophy of the B.C. government: in the early 1950s, the government "invited" Alcan to build the massive Kenney Dam on the Nechako River in northern B.C. -- for the express purpose of establishing an aluminum smelter and jobs at Kitimat. Today, a \$2 billion Kitimat smelter "modernization" promised by the company -- which was bought by U.K.-based Rio Tinto in 2007 for about \$38 billion -- remains uncertain, although the 1,400 existing jobs will be reduced to about 1,000 if the plan moves forward.

'Green' is Key to Making It Work

As this article is being written, Bourquin is in Vancouver knocking on the doors of environmental groups to explore how environmentally focused, activist market campaigns might one day be applied to copper and other metals. He admits the smelter is not easy to sell to some environmentalists, who are wary of mine and smelter pollution, and the impacts to land and water from a system of copper-moving slurry pipelines. (Two B.C. environmentalists interviewed for this story were lukewarm about the plan -- and both asked their comments not be quoted.) "I don't want to hold this out there as a perfect solution," says Bourquin, noting that

each individual proposed copper mine has its own serious environmental issues. "But if we can do this better, we should."

Bourquin points to the near-future when the economics of low-carbon copper will improve as "dirty" Asian-smelted copper will be penalized in developed world marketplaces much the same way rainforest old-growth is already demonized. Future carbon-trading schemes and carbon taxes will evolve as well to encourage the green industries B.C. will need to prosper. "This is all at the early stages of conceptualization," says Bourquin, who hopes to assemble a regional task force to refine the vision. "But nobody is saying 'absolutely not,' which excites me. There is grudging support from all different angles." 🌱