

Presentation by Gail Des Moulins, estimated time about 15 minutes.

Concern: Company leaves town without doing reclamation

This mine will supposedly operate for 23 years, according to Riversdale.www.rivresources.com

“Our Grassy Mountain Coal Project (the Project) is a proposed steelmaking coal mine that will be developed on a legacy mining area, 7km north from Blairmore in the Crowsnest Pass, Alberta. The Project is projected to produce around 93 million tonnes of product coal over its currently proposed 23-year mine life.”

In the process of starting up this mine, the ground will be disturbed, water ways will possibly be disturbed, roads will be disturbed, plants and animals may be disturbed.

Up until now, it was thought that only metallurgical coal could produce hot enough temperatures to make steel.

I do not think that the world price of metallurgical coal will remain high enough for this project to be economically worthwhile for that long.

Then the company may declare bankruptcy, so they would not have the money to do the reclamation, or skip town without notice, and not do the reclamation.

We have seen this happen with orphaned and abandoned oil wells, leaving the people with the cost of cleanup.

Also, not long ago, a company came to the Crowsnest Pass, made lots of big promises, started digging up the land, then left town, leaving piles of dirt and machinery laying about. And that was just dirt!

There needs to be some money set aside by the company, up front, to cover the true cost of reclamation, if the company does not do it. This money should be held in a trust, or as a bond, by some third party, such as a government department. Whatever company actually ends up operating the mine. This is a cost of doing business. Empty promises cost nothing. “Fool me once, shame on you, fool me twice, shame on me.”

There is no point in fining the company for not doing proper reclamation. If they skip town and go back to where they came from, it will be very difficult to collect the fine.

Or, if they declare bankruptcy, it may not be possible to collect the fine.

Why I believe that the price of metallurgical coal will decline:

Various articles that I have read show that new technology is being developed, at this very moment, which will replace the need for metallurgical coal with hydrogen or solar power, to fuel blast furnaces used for making steel. And, the

use of Electric Arc Furnaces may replace some blast furnaces. So, the demand for metallurgical coal will decrease, resulting in more supply than demand. The price of coal drops. The mine will no longer make enough profit. If even half the steel making companies switch over to new technologies, the world supply of metallurgical coal will surpass the demand for it, lowering the price.

Articles about alternative fuels for steel making:

Excerpt from economictimes.indiatimes.com

“For China, the largest global steel producer, the bulk of its incremental production is expected to come from the electric arc furnace route which is **not dependant on coking coal**. ...the latest steel production projections from the World Steel Association, seaborne coking coal demand is not expected to significantly increase from major steel-producing nations like China, Japan, South-Korea and the European Union.”

Expert from Press Release Apr 28,2020 www.heliogen.com

“Heliogen, the clean energy company that is transforming sunlight to create and replace fuels, today announced its launch and that it has – for the first time commercially – concentrated solar energy to exceed temperatures greater than 1,000 degrees Celsius. At that temperature, Heliogen can replace the use of fossil fuels in critical industrial processes, including the production of cement, **steel**, and petrochemicals, dramatically reducing greenhouse gas emissions from these activities. This singular scientific achievement was accomplished at Heliogen’s commercial facility in Lancaster, California.”

Exerpt from Fastcompany.com (speaking about Heliogen)

“A mining company that uses steam to extract minerals wants to use the technology to replace coal. The mining company is indifferent to the source of energy, Gross says, but they’re interested in switching because the new **solar tech can beat the price of coal**.”

Excerpt from AL.com Feb 2020

“As many as 600 contractors have spent the last year getting U.S. Steel’s Fairfield Tubular Steel plant ready for the future.

In this case, the future comes in the form of an electric arc furnace, representing a \$412 million investment in the plant. When it is up and running at full capacity, the furnace will employ about 150 full-time employees and be able to produce 1.6 million tons of steel a year.

Electric arc furnaces make steel from melted scrap metal instead of iron ore and can operate with fewer workers. They are also easier to stop and restart than traditional blast furnaces that must operate continuously to avoid damage.

“It’s the newest, most modern way to make steel,” Mat Mathew, plant manager at Fairfield Tubular Steel Operations, said. “It’s flexible. It’s low cost.”

Denson Roy, manager of engineering and capital projects, said the EAF project is the first of its kind for U.S. Steel. The electrical needs required new transmission lines from Alabama Power.

“It’s the right time to be in it,” he said. “This is the latest technology, and it allows us to satisfy our customers’ needs. We feel like it’s a really good strategy.” “

Exerpt from Reneweconomy.com.au

Renew Economy, 13 Nov 2019

“Another nail in coal’s coffin? German steel furnace runs on renewable hydrogen in world first

“German manufacturing giant Thyssenkrupp has completed a successful, first-of-its-kind demonstration of running a steel furnace completely on hydrogen, a development that is likely to further dent the future prospects for the global coal industry.

As part of the demonstration conducted in its ‘furnace 9’, thyssenkrupp fed hydrogen into one of 28 tuyeres, or nozzles, that otherwise supply coal into the blast furnace. Following the successful trial, Thyssenkrupp plans to scale up the injection to all 28 tuyeres within the furnace and **aims to eventually run at least three furnaces completely on hydrogen by 2023.**

Steel production will play an important part in reaching our climate targets because the potential for reducing emissions is huge. That’s why **we’re working flat out** to drive the transition to hydrogen technology.”

The company intends to commission new steel furnaces in the mid-2020s, that will initially use hydrogen to produce ‘sponge-iron’, that will be separately converted into crude steel using renewably powered electric-arc furnaces”

Other methods of producing hydrogen :

Excerpt from www.eia.gov

“Research is underway to develop other ways to produce hydrogen, such as

- Using microbes that use light to make hydrogen
- Converting biomass into gas or liquids and separating the hydrogen
- Using solar energy technologies to split hydrogen from water molecules”

If a company does not believe that this change is coming soon, then they are either very naive about their industry, or purposely denying it. So they may be surprised by the drop in coal prices, and not have the money to do the reclamation properly.

Whatever promises that Riversdale makes about reclamation, it must be applicable to the company that ends up operating the mine. At one of the first open houses about this project, a Riversdale person said that they are developers, not operators.

Even though the company has already spent some money on this project, it does not mean that they will not abandon it. I have seen this happen when I worked in the oil patch. Even after spending large amounts of money on a project, it was cancelled because it was deemed not worthwhile.

It doesn't matter if people here believe this or not. It does not matter if the current government believes it or not. Change is happening. It is not a matter of political ideology or policy. It is just economics.