



## **2nd Annual Orphaned and Abandoned Mines Workshop**

**→ Converting an Idle Mine into a Renewable Energy Complex**

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# Tent Mountain, Alberta, Canada



# The challenge from Montem

- Despite Montem moving the mining restart forward within the Provincial framework at the time, the proposed mining project was ordered to undergo a Federal impact assessment
- The Federal review process in Canada can take many years and with no guarantee of success
- The challenge for Montem was to find a way to deliver a sustainable and stakeholder-accepted alternative project with strong economic value that could attract investment
- The solution would need to be both financially viable and technically feasible



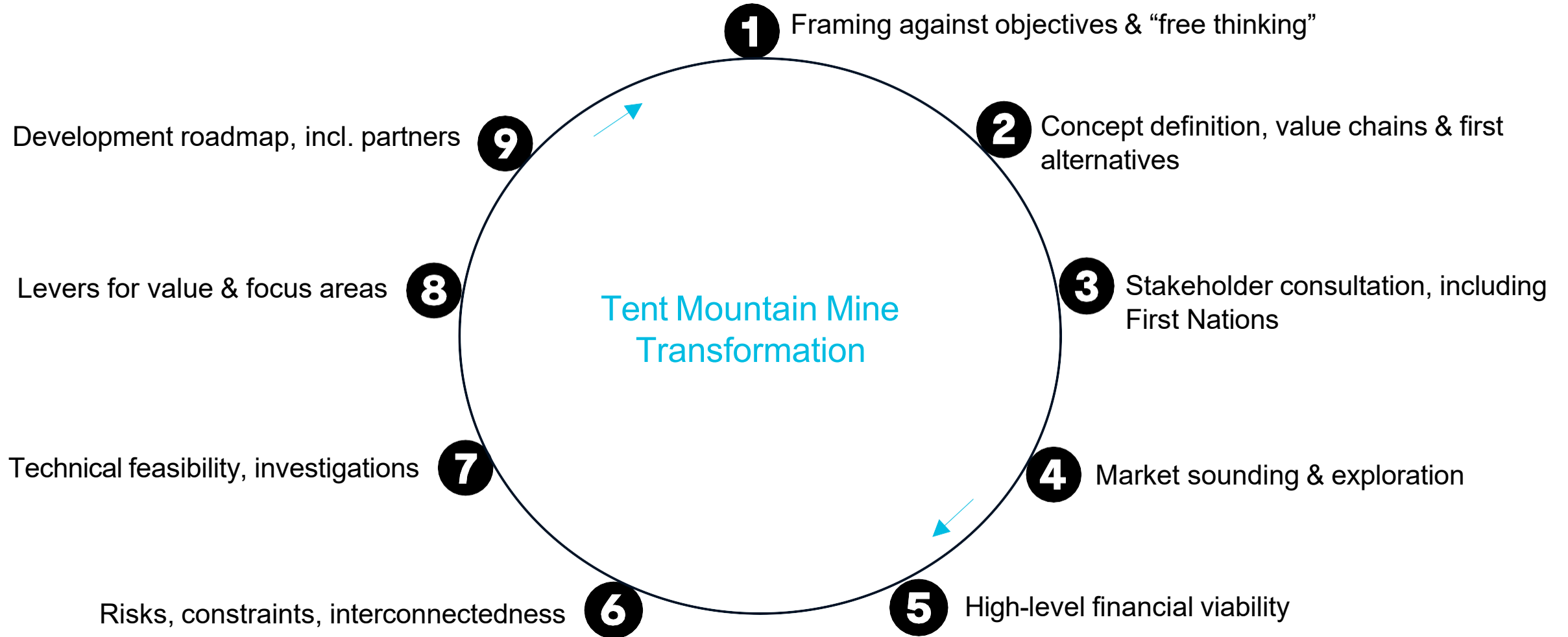
# Addressing the challenge

There are three main ways in which Montem looked to address this challenge. These were:

1. Utilize a diverse set of skill sets and knowledge to look at the problem in different ways
2. Undertake a logical and iterative development process
3. Establish a steering committee of key advisors to move the project forwards with the greatest chance of success



# Iterative definition





UPPER RESERVOIR

Upper Intake

Access Road

Penstock

South Dam

Powerlines

Powerhouse

Access Road

Lower Intakes

LOWER RESERVOIR

North Dam

Spillway

# Key attributes of the Renewable Energy Complex

#01

**Involves Indigenous communities completely**, through ownership stake, a positive solution aligned with First Nation's values

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#02

**Has high societal & environmental impact** in jobs creation in the area and reducing emissions. Environmental impacts minimized, no fish habitat interaction

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#03

**Creates a new business for Montem**, to pivot from coal mining to green power & fuels, a new company now (now called Evolve Power)

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#04

**Will be a first of its kind in Canada**, incorporating renewables with pumped hydro and clean hydrogen production

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#05

**An iconic green energy legacy project**, supporting the energy transition well into the future of low carbon energy. Abates ~600,000 tCO<sub>2</sub>e / year (~130,000 light duty vehicles)

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#06

**Commercial potential is broad and high**, both for hydrogen sales/off-takers and for the pumped-hydro power system to the grid

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# Investment from major utility & broad support



Calgary

## Instead of a coal mine, this Alberta mountain may now become a 'green energy complex'



Montem Resources reveals plan to use Tent Mountain for pumped-hydro energy storage and hydrogen production

Robson Fletcher · CBC News · Posted: Oct 20, 2021 5:18 PM MT | Last Updated: October 20, 2021



An aerial view of Tent Mountain in southwestern Alberta, which was the site of an open-pit coal mine that was active decades ago but has since been abandoned. Montem Resources now aims to use the site for a pumped-hydro energy storage project. (Montem Resources)

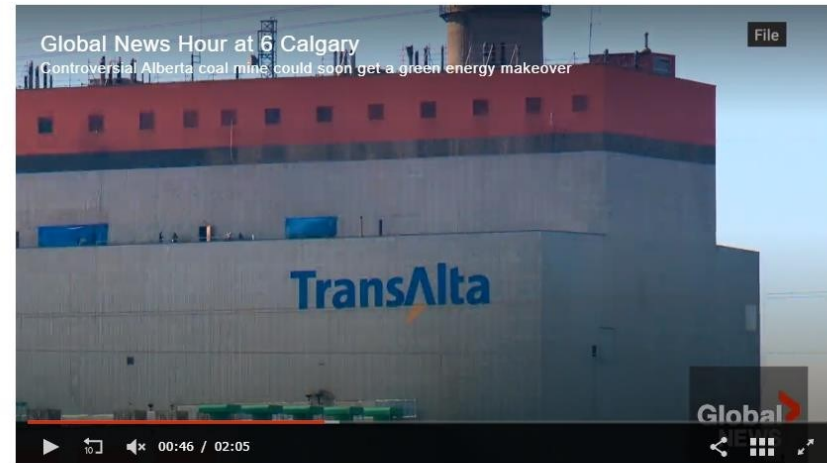
An Australian mining company that had proposed a major open-pit coal mine in southwestern Alberta now says it may want to build a "renewable energy complex" on the site instead.



World Canada Local Politics Money Health Entertainment Lifestyle Watch

## Controversial Alberta coal mine could soon get green energy makeover

By Sarah Offin · Global News  
Posted March 16, 2023 1:37 pm



WATCH: It's the aftermath of a once-booming industry. Recent policy changes have put a sudden stop to new coal mining in Alberta's Rocky Mountains. Many coal mines are left abandoned and are not yet reclaimed. In the first of a two-part series, Sarah Offin explores how relics of Alberta's earliest industries are being transformed by new opportunities. – Mar 16, 2023



# Key take-aways

- This is a novel approach to re-imagining and then physically re-purposing an idle coal mine
- The development is one that achieves many objectives, including Indigenous, social, political, environmental and energy transition elements, importantly, it is a both financially viable and technically feasible
- It is a compelling transformation that is an example of what is possible when multiple, diverse skills and thinking are brought together solve a complex challenge





# \* Thank You



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