

**Inspired people creating  
a premier global  
gold company**

# THINKING DIFFERENTLY



**SYDNEY MINING CLUB  
JAKE KLEIN – EXECUTIVE CHAIR**

7 December 2023

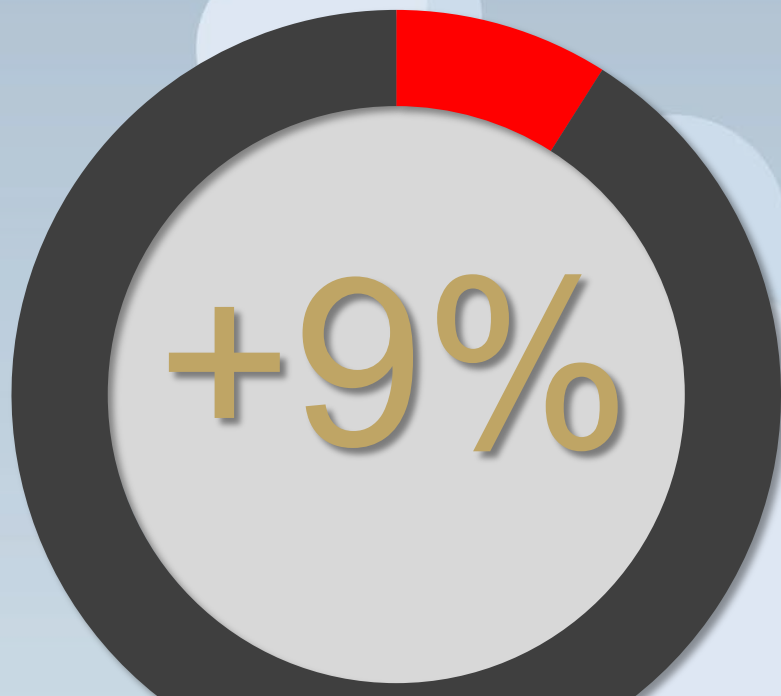
# RISING EMISSIONS



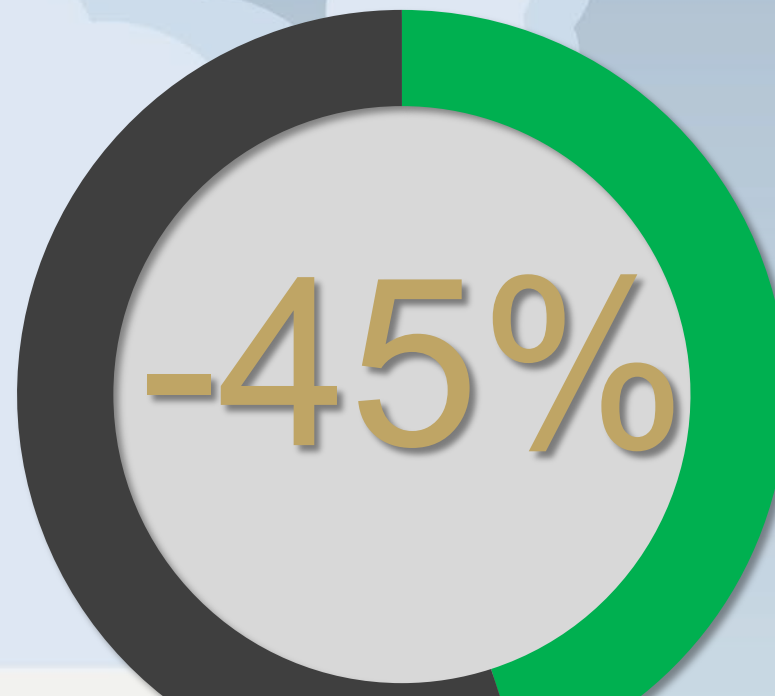
Increasing temperatures



Climate extremes



**Increase in global greenhouse gas emissions** projected by 2030 based on NDCs, compared to 2010



**Reduction in global greenhouse gas emissions** needed by 2030, from 2010 levels for <1.5° warming

**Unprecedented annual emission cuts are required from now to 2030**



# Has Australia cleaned up its act on climate? **B B C**

Australia was the largest emitter of greenhouse gases per head in the G20 in 2021

Greenhouse gas emissions per capita

Australia has raised its climate targets and now needs to accelerate its clean energy transition, says new IEA review

**IEA**

How climate change is making Australians sick, and how government policy is failing

 **MONASH**  
University

## Meeting 2030 energy targets close to 'impossible'

Angela Macdonald-Smith  
and Mark Ludlow

Jul 10, 2023 - 5:00am

### **FINANCIAL REVIEW**

Albanese government to rapidly expand investment scheme for clean energy

## Earth was 2 degrees warmer than pre-industrial levels for two days. What does that mean?

**The Guardian**

needed for Australia to reach its 2030 rate investment slows

ABC Science / By environment reporter Peter de Kruijff

Posted Fri 24 Nov 2023 at 6:00am

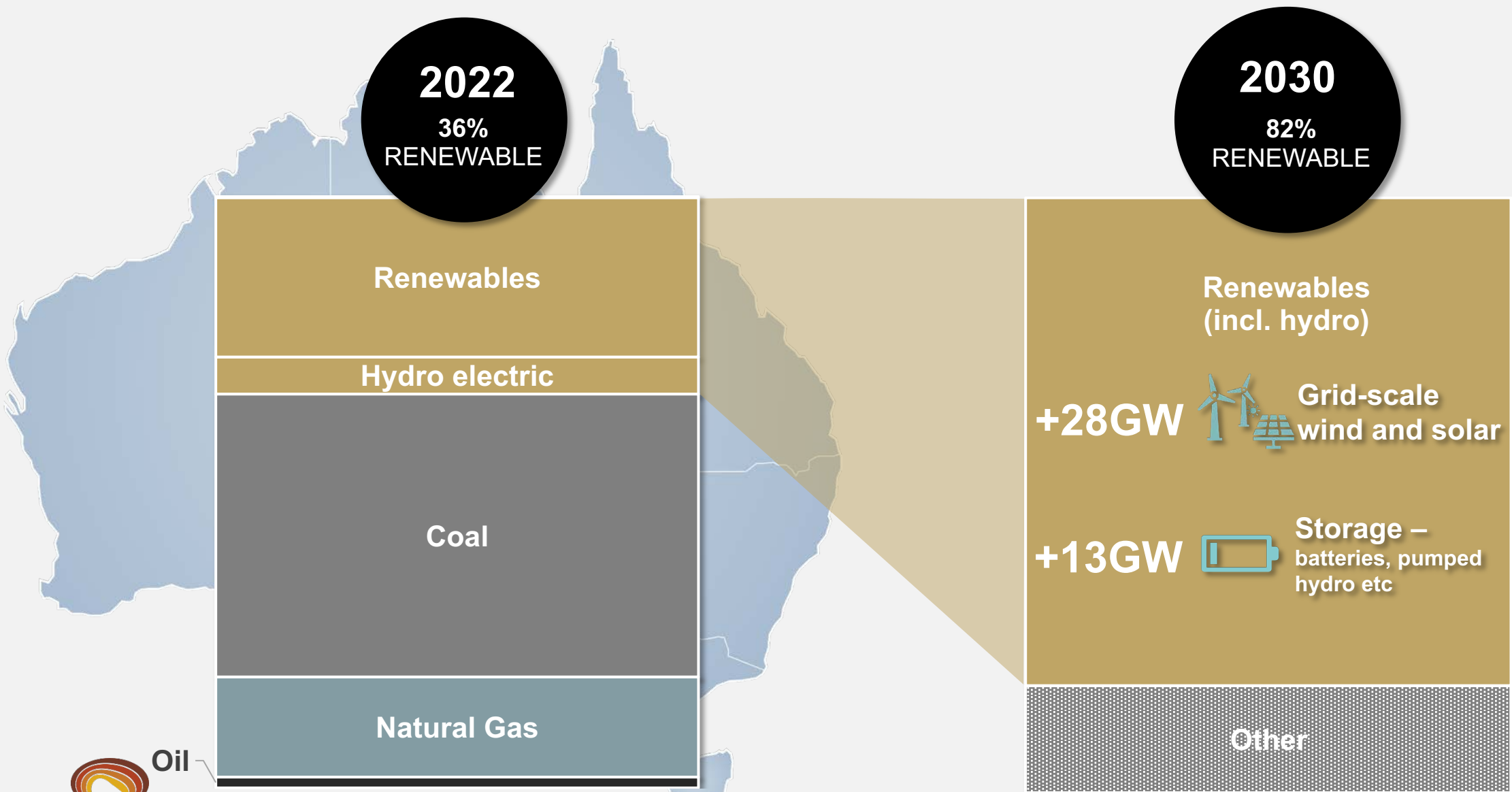
  
**Evolution**  
MINING

## Why is pumped hydro the future of renewable energy?

By Mathew Dickerson

**The Canberra Times**

# THE FUTURE OF ENERGY IN AUSTRALIA



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Sources: QLD Energy & Jobs Plan Sept 2022

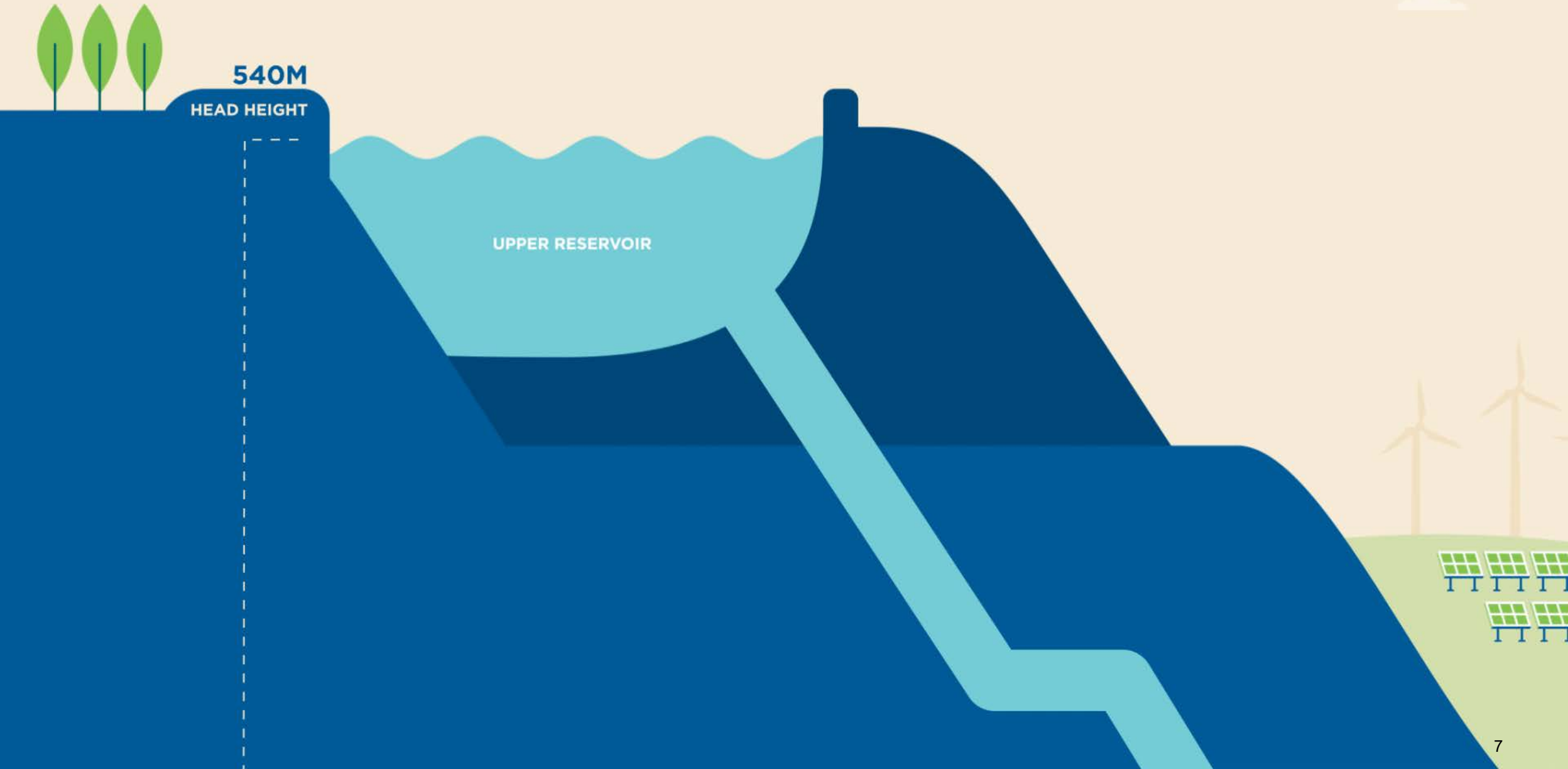
ICA Partners 



- **2018:** ICA Partners identified firming capacity as the **most strategic** component of transitioning to a renewable grid
- **Mt Rawdon** most suitable site for pumped hydro<sup>1</sup>
  - **Topography**
  - **Location** to the national grid
  - **Existing infrastructure**

1. National survey conducted by ICA Partners

# HOW DOES PUMPED HYDRO WORK?





# MT RAWDON PUMPED HYDRO – A STRATEGIC ASSET



Up to  
**2GW**



Up to 10  
**hours**



**20,000MWh**  
storage



**Showcase for**  
repurposing

- **50 / 50 JV with ICA Partners**, an Australian leader in renewables advisory
- **Fully permitted mine site**<sup>1</sup>
- **Enviably topography** with 550 metre head height<sup>2</sup>
- **Well advanced** – can be operational by 2030
- **Reduction in wholesale electricity prices** for QLD<sup>3</sup>

1. Rights to land for upper reservoir already secured
2. Borumba: 330m, Kidston: 218m, Snowy 2: 700m, Big T: 260m, Bowen & Pioneer Burdekin: N/A
3. Modelling projects ~\$27/MWh reduction in prices between 2028 and 2035, or \$12.9 billion between 2028 and 2050 (ACIL Allen (Economic Impact Assessment))



**Mt Rawdon**

Townsville

Brisbane

**Proposed transmission pathway for QLD  
SuperGrid**

*for illustrative purposes only, not to scale*

*Source: Queensland Energy and Jobs Plan 2022*

**Leading sustainable solutions that support local communities beyond life of mine**



# MT RAWDON PUMPED HYDRO – A STRATEGIC ASSET



**20,000MWh  
storage**  
could power 70  
SAG mills for  
24 hours<sup>1</sup>



1. 12MW SAG mill



# RAPIDLY ADVANCING



- Feasibility study well advanced
- No fatal flaws
- Commercially robust attractive project
- On track for “project go” in 2024

## Progress

## Timeline

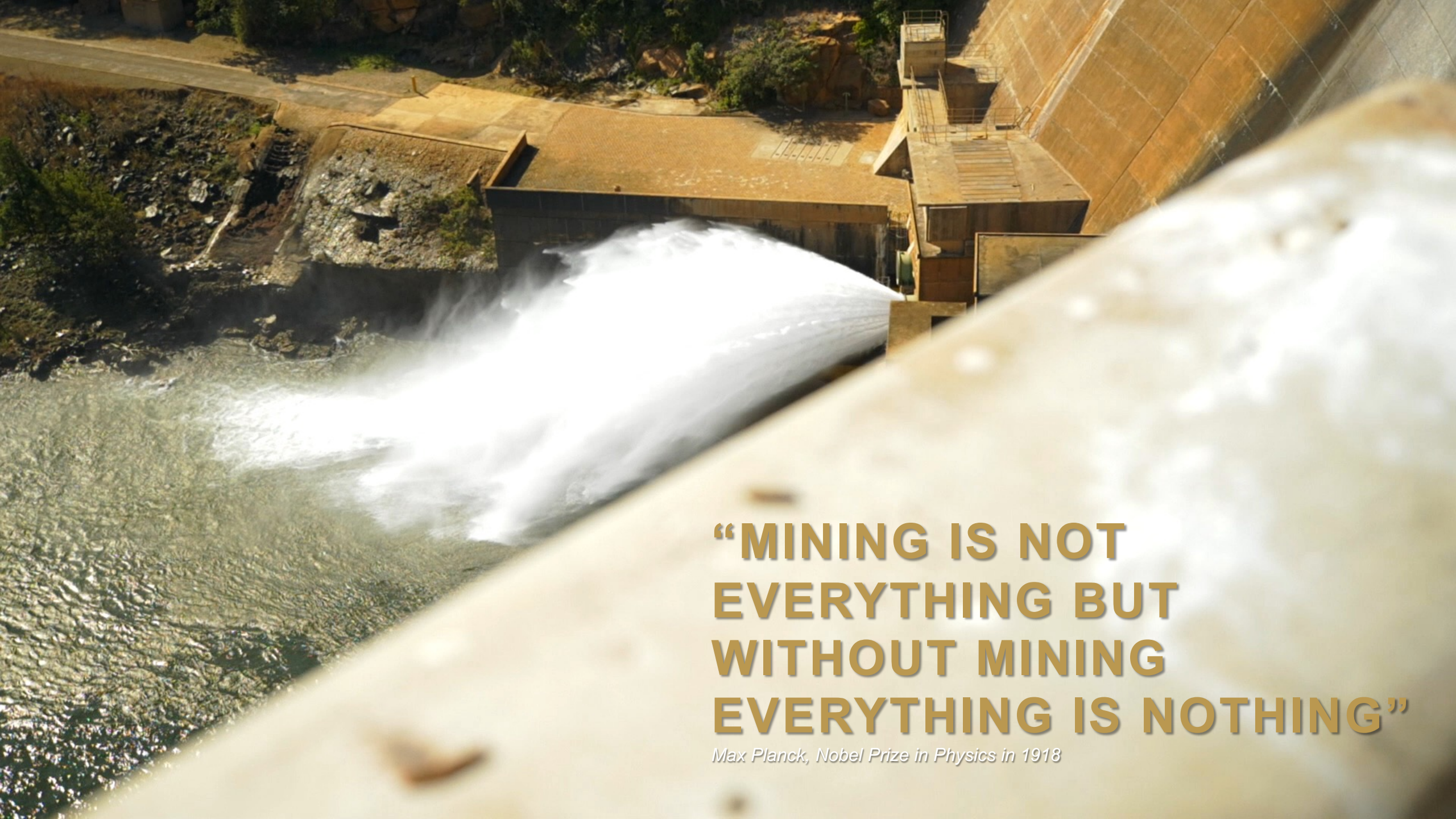
Co-ordinated project status	October 2022	✓
Geotechnical deep drilling campaign	March 2023	✓
Original equipment manufacturer shortlist	April 2023	✓
Baseline layout finalised	May 2023	✓
Flora and fauna studies	FY23 Q4	✓
Environmental impact study submitted	FY24 Q3	
Feasibility study complete	FY24 Q4	
Final investment decision	Dec 2024	

# VALUE DRIVERS

- Complete feasibility study
- Secure offtake agreement
- Secure financing
- Maximise value







**“MINING IS NOT  
EVERYTHING BUT  
WITHOUT MINING  
EVERYTHING IS NOTHING”**

*Max Planck, Nobel Prize in Physics in 1918*

# Evolution

MINING