

SCIENCE OF THE SNOWY SCHEME

with Kirsten Banks

SNOWY SCHEME OVERVIEW

Multiple choice questions

1

Who is Kirsten Banks?

CIRCLE ANSWER

Astrophysicist

Science communicator

Snowy 2.0 TBM namesake

All of the above

2

Where is the mighty Snowy Scheme situated?

CIRCLE ANSWER

Blue Mountains, NSW

Snowy Mountains, NSW

Melbourne, VIC

3

The Snowy Mountains Scheme was originally developed to mitigate drought. Which way was the water diverted?

CIRCLE ANSWER

Westward

Across the Nullabor

Eastward

Use the word bank below to complete this paragraph

renewables | captures | snowmelt | critical | water | tunnels | reservoirs |
underpinning | network | stores | light | diverts

The Snowy Scheme has a critical role in keeping the lights on and underpinning Australia's transition to renewables. The Scheme captures, stores and diverts the water from snowmelt combined with spring rainfall using a complex network of aqueducts and trans-mountains tunnels. This network channels the water into 16 major reservoirs to be stored as energy in waiting.

Match the facts and assets

Draw a line connecting the fact/asset to a number

More than _____ men
and women from over _____
different countries worked
on the Snowy Scheme

Snowy Scheme was built
between _____

_____ of tunnels

_____ of aqueducts

Hydro power stations

4,215MW

Almost 800m

30

100,000

1

145km

1949 - 1974

27km

80km

33

Megawatts of power
annually

_____ of Snowy 2.0 new water
way tunnels

Snowy 2.0 underground
power station

Generating units

Pumping station

Complete the sentences and questions

Circle the correct answer

Example - Tunnels, dams and hydro power stations | coal, rocks and train stations use the power of water to generate clean renewable energy

- What is Snowy 2.0? A new event in the winter Olympics | **pumped-hydro expansion project**
- Is Snowy 2.0 Australia's largest committed renewable energy project? **No** | Yes
- Snowy 2.0 project will reuse water between two existing reservoirs, **Talbingo and Tantangara** | Jindabyne and Guthega
- What does TBM stand for? Totally Big Machine | **Tunnel Boring Machine**
- Pumped-hydro provides **on-demand dispatchable renewable energy** | on-order dispatchable renewable energy.
- The Snowy 2.0 project will pump when demand is high | **low** and there is excess renewable energy supply.
- Snowy 2.0 will generate when demand is **high** | low, or when other generation sources are not producing, such as seaweed and tide output or outages in nuclear power stations | **wind and solar output or outages at base load coal power stations**