

# 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 Nullarbor

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-mountain 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

27km

Almost 800m

30

100,000

9

80km

1

145km

33

1949 - 1974

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

1. What is Snowy 2.0? A new event in the winter Olympics | **pumped-hydro expansion project**
2. Is Snowy 2.0 Australia's largest committed renewable energy project? No | **yes**
3. Snowy 2.0 project will reuse water between two existing reservoirs, **Talbingo and Tantangara** | Jindabyne and Guthega
4. What does TBM stand for? Totally Big Machine | **Tunnel Boring Machine**
5. Pumped-hydro provides **on-demand dispatchable renewable energy** | on-order dispatchable renewable energy.
6. The Snowy 2.0 project will pump when demand is high | **low** and there is excess renewable energy supply.
7. 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**