



# MANAPOURI Underground Power Station



Your Manapouri Underground Power Station excursion begins with a cruise across the crystal clear waters of Lake Manapouri to West Arm. On arrival at West Arm Visitor Centre there is plenty of time available to view the fascinating interpretation displays on Fiordland National Park and the power station construction.

Then travel by coach 2km down the spiral tunnel hewn from solid granite to the immense power station machine hall. From the interpretation displays, learn more about the power station construction and how it harnesses the energy of rushing water to generate electricity.

- Te Anau coach connections available (transfers from most accommodation)
- Delicious picnic lunches available (if pre-ordered)
- Suitable for all ages

## Timetable

• **Depart Manapouri**  
Oct - Apr 12.30am daily  
Duration 3 / 4hrs approx

• **Depart Te Anau**  
Oct - Apr 11.30am daily  
Duration 4 / 5hrs approx

• Check in 20mins prior to departures

• Note: Access to the power station may not always be possible and we reserve the right to reschedule

• A power station visit is also available with selected Doubtful Sound Wilderness Cruises

## What to bring

- Boots / shoes (non-slip)
- Waterproof jacket
- Warm sweater / fleece jacket
- Sunscreen / sunglasses
- Insect repellent
- Camera



## MANAPOURI UNDERGROUND POWER STATION EXCURSION INCLUDES:

- Scenic cruise across island-studded Lake Manapouri
- Visit to West Arm Visitor Centre
- Travel by coach 2km down the underground access tunnel to the power station's machine hall

## FOR ALL ENQUIRIES AND RESERVATIONS CONTACT REAL JOURNEYS VISITOR CENTRE

MANAPOURI: PEARL HARBOUR  
Freephone 0800 65 65 02, Phone 03 249 6602

TE ANAU: LAKEFRONT DRIVE  
Freephone 0800 65 65 01, Phone 03 249 7416

[www.realjourneys.co.nz](http://www.realjourneys.co.nz)



RJMUPS 09/11

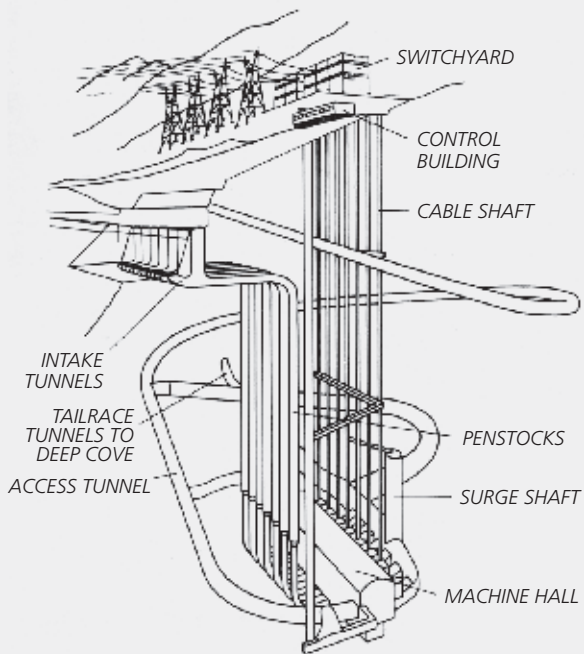


**BOOKING CONDITIONS:** Bookings are essential and pre-payment is required to confirm a booking. If cancelling, or amending a retail booking, a refund will only be granted when Real Journeys receives notification 24 hours prior to departure. Real Journeys reserves the right to amend timetables, cancel departures, substitute plant or equipment and alter ticket prices at any time.

Ask about our 'Kids Go Free' promotion during the NZ School Holidays

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## MANAPOURI Underground Power Station



### CONSTRUCTION AND OPERATION

Manapouri Underground Power Station was built to supply electricity for the Comalco aluminum smelter, 191km away at Bluff. Work began on the power station in 1963 and was completed in 1972.

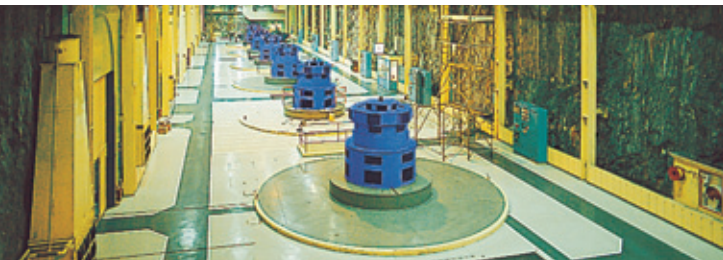
West Arm, on the western shores of Lake Manapouri, was an ideal location, due to its high rainfall (3,780mm annual mean). Lake Manapouri and adjoining Lake Te Anau also provide substantial water storage within normal operating levels. Because Lake Manapouri is 178m above sea level and located only 10km from Doubtful Sound it offers a large head of water for generating electricity.

The huge project involved construction of the power station beneath West Arm with a 2km spiral access road, plus a 9.8km tailrace tunnel to Doubtful Sound. A road also had to be built between West Arm and Doubtful Sound to transport workers and equipment.

The construction was an awesome engineering feat bringing together drillers, tunnellers and engineers from 22 countries. At any one time there were around 1,800 men working on the project. Tragically 16 men died during construction.

Water drawn from Lake Manapouri flows through the intake structure at West Arm, then down through vertical penstocks. The force of the water through the penstocks powers the turbines. Seven turbines drive seven generators, each with an output of 121.5MW. "Rooms" excavated in the walls of the machine hall contain transformers, one for each generator and one spare. Cables carrying 220,000 volts lead from the transformers to the station switchyard, vertically above. After the water has been discharged from the turbines, it flows through the tailrace tunnel system to exit at Doubtful Sound.

A second tailrace tunnel was completed in 2001 to improve the electricity output from the power station. Having a second tailrace tunnel means that the power station can now generate 840MW of electricity (30% increase approx) from the same volume of water.



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Fiordland, New Zealand

