Dams and reservoirs - Transforming energy

Dam infrastructure

Overview

A dam is a large wall or barrier that obstructs or stops the flow of water creating a reservoir or a lake. The Snowy Scheme consists of 16 major dams that combine with nine power stations, 80km of aqueducts and 145km of interconnecting tunnels to produce clean, renewable energy.

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The Snowy Scheme dams

Name	Type	Height (m)	Crest length (m)	Gross capacity (10_3m_3)	Year of completion
Talbingo	Rockfill	161.5	710.0	920,600	1970
Eucumbene	Earthfill	116.5	579.1	4,798,400	1958
Blowering	Rockfill	112.2	807.7	1,632,400	1968
Geehi	Rockfill	94.1	265.2	21,100	1966
Tumut Pond	Concrete arch	86.3	217.9	52,800	1959
Jindabyne	Rockfill	71.6	335.3	689,900	1967
Tooma	Earthfill	67.1	304.8	28,100	1961
Island Bend	Concrete gravity	48.8	146.3	3,020	1965
Tumut 2	Concrete gravity	46.3	118.9	1,500	1961
Tantangara	Concrete gravity	45.1	216.4	254,100	1960
Jounama	Rockfill	43.9	518.2	43,500	1968
Murray 2	Concrete arch	42.7	131.1	1,760	1968
Guthega	Concrete gravity	33.5	139.0	1,550	1955
Happy Jacks	Concrete gravity	29.0	76.2	270	1959
Deep Creek	Concrete gravity	21.3	54.9	5	1961
Khancoban	Earthfill	18.3	1,066.8	21,500	1966

More information on dam types:

Rockfill

Rockfill dams combine porous yet firmly packed gravel, sand, or silt in one section, with an area of concrete, metal, clay, or some other substance that completely blocks water. Rockfill dams are one of two types of embankment dams, the other being earthfill

Earthfill

An earthfill dam, also called an earth dam, or embankment dam, is built up by compacting successive layers of earth, using the most impervious materials to form a core and placing more permeable substances on the upstream and downstream sides.

Concrete arch

An arch dam is a concrete dam that is curved upstream. The arch dam is designed so that the force of the water against it, known as hydrostatic pressure, presses against the arch, causing it to straighten slightly and strengthen the structure as it pushes into its foundations or abutments.

Concrete gravity

A gravity dam is constructed from concrete or stone masonry and designed to hold back water by using only the weight of the material and its resistance against the foundation to oppose the horizontal pressure of water pushing against it.