

Dawson Falls power station



Taranaki

Dawson Falls power station is one of the oldest continuously operating power stations in the world, functioning largely unchanged since operation began in 1934. It services the remotely located Dawson Falls Mountain Lodge in Egmont National Park. The power station was built at the end of the era of small, stand-alone power plants, and is typical of the stations that were once common throughout remote areas of New Zealand before they were reached by the national electricity grid.

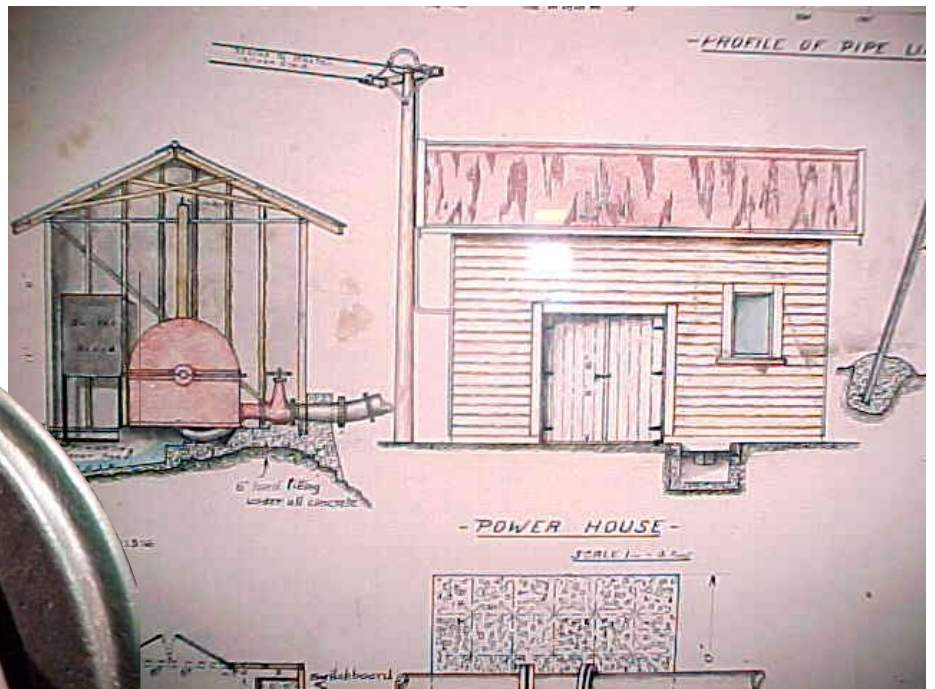
This station is significant on the world scene because of its rare equipment and specifically its generator. Few small stations of this type and age in New Zealand survive in a complete form and even fewer have been in continuous operation (excepting maintenance and breakdown periods) for that length of time. The power station is owned by DOC but managed on a day-to-day basis by the owner of the Dawson Falls Lodge.

History

The first municipal supply of electricity in New Zealand for lighting purposes began at Reefton in 1888. Small generating stations then began to rapidly spread throughout the country. Taranaki province was New Zealand's leader in these developments with stand-alone plants in most towns. However, even though Dawson Falls Lodge (then Hostel) was in Taranaki and opened in February 1896, its relative remoteness coupled with the limited finances of the Egmont National Park Board, meant it was not connected to any of the early electricity suppliers (the nearest being

12 kilometres away at Kaponga).

By the 1930s tourists were pushing for better facilities in winter, but financial resources were still not sufficient to connect to the ever-spreading national grid. The South Committee of the Park Board therefore decided to build a stand-alone hydro-powered station at Dawson Falls. The new station's penstock, tailrace and powerhouse - designed by Thomas Richard Overton, a consulting engineer with the South Taranaki Electric Power Board - opened on 30 June 1934.



Equipment

The plant included a Pelton wheel, a switchboard, a governor and a 74.8 kilowatt (100 horsepower) 'direct current' generator. To minimise costs, the plant used was predominantly second-hand and obtained through Heaton Wear Limited of Wellington. General Electric manufactured the 100 horsepower (75 kW) generator in (or soon after) 1896 at its New York plant. It was sold by the New Zealand Defence Department to the Kelburn and Karori Tramway Company in 1918. The Egmont National Park Board acquired it from them in the early 1930s.

The plant today

The station and original equipment remain in operation some 70 years later. The present supply load utilises half of the plant's capacity. The lodge was connected to the national grid in 1982 for principal purposes but 'direct current' remains in a limited form to complement the electrical energy that is used.

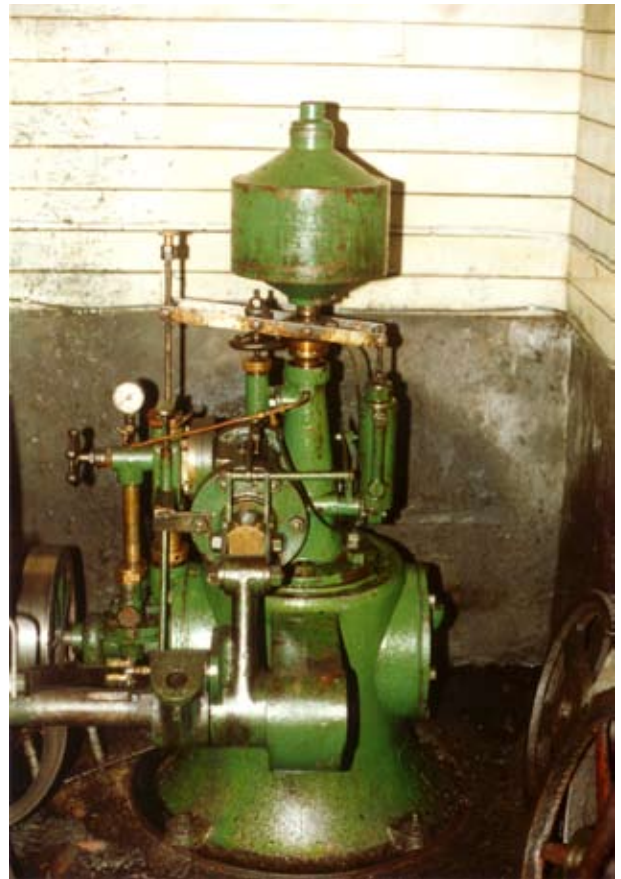
The station is probably the last in New Zealand to supply electricity in direct current form to meet the majority of a tourist lodge's energy needs. All of the lodge's electricity needs for lighting and heating continue to be met by the station. The national grid supply is used for operating fridges and freezers.

The power station utilises natural fresh water springs further up the mountain to supply the 635-metre long spiral-welded, steel penstock. The supplied water in turn drives the Pelton wheel and generator before being discharged into the nearby Kapuni Stream.

Further information

For more information about the Dawson Falls Power Station, contact Stratford Area Office, Department of Conservation (phone 06-765 5144).

Commutator carbon brush gear



Governor M. Kelly

Commutator M. Kelly



Power house



M. Savage

