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Production

New Zealand coal production in 2007 was 4.83 million tonnes. Almost all production is of bituminous and sub-bituminous coals, in approximately equal quantities.

Four underground and 21 opencast mines were operating in 2007. Solid Energy, owner of the two largest West Coast mines, was responsible for around 85% of the national production. Production is centred on the Waikato (2.2 million tonnes), the West Coast (2.15 million tonnes), and Otago/Southland (0.47 million tonnes). Over 60% of national production was from two large opencast operations, at Rotowaro and Stockton.

Domestic Markets

Coal supplies approximately 13% of New Zealand's primary energy supply or about 97 PJ/year. The biggest domestic user is the 1000MW Huntly power station (about 2.5 Mt/year, providing about 12% of New Zealand's electricity generation), followed by the Glenbrook steel mill (800,000 t/year). Coal is also used extensively in the dairy (300,000 t/year), cement (170,000 t/year), meat processing (120,000 t/year), timber and health industries. Over 70% of New Zealand's coal production for domestic use is from the Waikato, underlining the regional interdependence of coal supply, industry and electricity supply. About 1 million tonnes of thermal coal is imported to the North Island each year, indicating a substantial domestic production shortfall.

Exports

Premium New Zealand bituminous coals are valued internationally for their low ash and sulphur contents, and other characteristics such as high swelling, fluidity and reactivity, which allow them to be blended with other coals for use in the steel industry. Exports of bituminous coal, produced entirely from the West Coast, reached 2 million tonnes in 2007. New Zealand coal is exported mainly to India and Japan, with smaller quantities going to Chile, South Africa, Brazil, China, USA and Australia. Most exports are of coking coal, with smaller amounts of thermal and specialist coals. The Pike River mine is being developed for coking coal exports, with first production expected in 2008.

New Zealand coal resources

New Zealand has extensive coal resources, mainly in the Waikato and Taranaki regions of the North Island, and the West Coast, Otago and Southland regions of the South Island. National in-ground resources of all coals are over 15 billion tonnes, of which 80% are South Island lignites. Sub-bituminous and bituminous in-ground resources are approximately 3.5 billion tonnes, but recoverable quantities of these coals are uncertain.

Lignite

The world-scale South Island lignite deposits account for 80% of New Zealand's coal resources. Recoverable lignite figures are well established at over 6.2 billion tonnes, equivalent to 72,000 PJ or 20 times the original energy content of the Maui gas field. Current estimates of South Island lignite mining costs are NZ\$1.0 – 3.0/GJ, making these resources a globally competitive energy source. Coal to liquids conversion offers a substantive, long-term option to achieve a sustainable and secure supply of transport fuels, upon which New Zealand is so heavily reliant, until such time as renewable transport fuels are commercially viable.

New Zealand coal resources survey

New Zealand's coal resources are generally well explored. A major Government-funded coal exploration programme, known as the [New Zealand coal resources survey \(NZCRS\) \[409 kB PDF\]](#), explored almost all of New Zealand's realistic coal prospects between 1975 and 1989. More than 1,800 holes were drilled and extensive resource evaluation, geotechnical, geophysical, utilisation, environmental and mining feasibility studies were carried out. The discovery of very large resources of lignite in Otago and Southland also led to a series of investigations in the 1980s by the Liquid Fuels Trust Board to evaluate the potential of the lignites for conversion to transport fuels.

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