

CANADA HELPS HARNESS WESTERN AUSTRALIA'S WIND

On a quiet ridge in the middle of picturesque Rottneest Island a 21 metre high machine gyrates briskly under the backing of a steady westerly wind.

The machine, which resembles a giant egg beater, is in fact playing a part in international research towards the effective harnessing of energy from the wind.

The 50 kw vertical axis wind turbine was supplied by Daf Indal of Canada to the State Energy Commission of Western Australia in 1980.

It stands about 170 metres away from a wind turbine of another kind, a propellor-like horizontal axis machine supplied by M.A.N. of West Germany.

Individually they are the biggest units of their type in the southern hemisphere.

They are linked to the electricity grid system on Rottneest and collectively supply about 10 per cent of the Island's annual power requirements.

The other 90 per cent of electricity consumed on the Island is produced from a diesel power station, and the use of the wind turbines reduces the amount of costly diesel fuel that has to be shipped to Rottneest from the port of Fremantle 22km away.

A feature of the Rottneest wind turbine experiments has been the co-operative spirits that has existed between the State Energy Commission and the Canadian and West German manufacturers of the machines.

Indeed, Western Australia's vast and windswept coastline offers tremendous potential for the harnessing of nature's windborne energies, and more of Daf Indal of Canada's giant "egg beaters" could eventually find a new home in the west.

Another Canadian connection with the State Energy Commission is through the Royal Bank of Canada, which is the Commission's joint financial advisor for the massive Dampier Perth natural gas pipeline project.

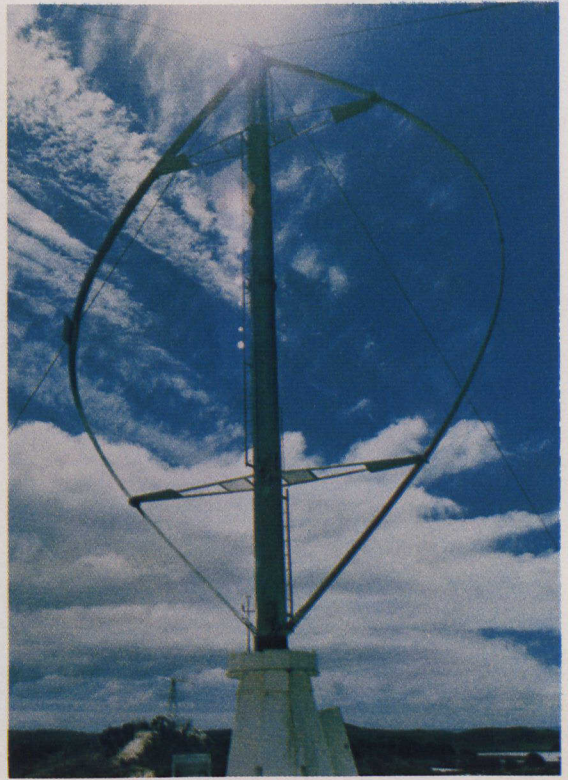
Electrolytic Hydrogen Plant Supplied to SECWA

Modern technology has decreed that hydrogen is an economic choice as a coolant for the Generator in larger (200 MW and above) Power Stations.

Hydrogen has such a high heat capacity that its circulating costs are considerably less than cooling water and outweigh the cost of the hydrogen.

Once the decision has been made to use hydrogen, the alternatives are: on-site hydrogen generation, or buy-in cylinders. Strategic considerations demand on-site generation and this is usually supported from an economic standpoint.

The Canadian company, the Electrolyser Corporation Limited, Toronto, has specifically developed an electrolytic cell for hydrogen production. This is the STUART cell and is a fully enclosed unipolar cell — the oxygen and hydrogen are produced at individual electrodes at the ends of the cell and each cell is a discrete entity with a number of cells in series making up the required hydrogen production. Electrolyser Corp have particularly provided their plants for the Power Industry and they have perfected the modular, skid-mounted, approach to plant fabrication.



The 50Kw vertical axis wind turbine supplied to the State Energy Commission of Western Australia by Daf Indal of Canada

In 1969 SECWA purchased a plant from Electrolyser Corp. for the Muja Station. This was successful and in 1980 a further plant was ordered to cope with the increased hydrogen demand.

Australian American Engineering Corp. — a local Australian process engineering company operating in Australia, New Zealand and South East Asia — is the agent for Electrolyser Corp. and has liaised with SECWA on the plant supply.

Canadian expertise is helping Australia to cope with its electric power requirements.

Horse Talk

An interesting joint venture arose from Trade Minister Ed Lumley's mission to Perth just two years ago. Perth businessman Mick Lombardo of Lombardo Marine Group was invited to a luncheon cruise to meet the visiting Canadians. He was also given the tip that one of the Canadians, Bill Rix of Charlotte Town metal products owned horses, as did Mick. The two discussed their pet sidelines and embarked on a very successful joint venture immediately.

They purchased a horse there and then, and today they own a horse that is considered Australia's best two-year-old, "Meadow Fella", and another horse, "Frost Paloma" is racing in Canada. They have other joint ventures planned too — and it all started with some horse talk.