

Question No: 49

Question: Studies on Wind or Biomass Energy

Date: 13/08/91

Member: Mr STIRLING

To: MINISTER for TRANSPORT and WORKS

1. Has the government or the Power and Water Authority undertaken any studies of the potential use of wind or biomass energy for power generation in the Northern Territory.
2. If so, what were the findings of such studies.

ANSWER

1. Department of Mines and Energy has conducted a survey of wind speeds at 15 sites across the Northern Territory.

The University of Tokyo is researching the extraction of oil from *Botryococcus Brunii* algae. PAWA has provided samples to the university of the algae that occurs naturally on Darwin River Dam and other Top End waters.

Work has previously been carried out on the use of kenaf and coffee bush by-products but is not currently being pursued.

2. Average wind speeds were in the 2 to 3 metres per second range with Tennant Creek and Kintore having highest average speeds. Research elsewhere has indicated that average wind speeds of more than 6 metres per second are preferable for wind driven generators to compete with other power sources.

A small diesel/battery hybrid station with an 8 kW wind driven generator was satisfactorily tested at Tennant Creek by the Department of Mines and Energy. Larger wind driven generators, suitable for PAWA systems, are currently being trialled by electricity utilities in Western Australia, South Australia and Victoria. PAWA is maintaining a watch brief.

Early research into *Botryococcus Brunii* by the Material Research Laboratories (Melbourne) indicated that the seasonal growth of the algae was insufficient to sustain an oil extraction plant.