GREENHOUSE GAS EMISSIONS, RENEWABLE ENERGY

1913. Hon Jim Scott to the Minister for Housing and Works

Further to question on notice No. 1734 of March 2 2004 -

(1) Will the Minister explain how many additional tonnes of greenhouse gases would be produced each year in Western Australia if the proposed 45 gigalitre per annum desalination plant goes ahead using fossil-fuel power?

(2) In view of the Water Corporation's professed interest in reducing its greenhouse emissions, what action does it intend to take to offset the effects of this desalination plant?

(3) Why is the Water Corporation unwilling to consider using renewable energy to power the proposed desalination plant when this form of energy clearly is readily available and does not produce as much greenhouse emissions?

(4) Is the Minister aware of the response to question on notice No. 1732 of March 2004 in which his colleague, the Minister for Energy, stated that a new 40 megawatt wind farm will be built at Cervantes and that further wind farms are planned at other locations?

(5) In view of this information, and the knowledge that the existing Albany wind farm is capable of meeting some of the needs of the desalination plant, will the Minister direct the Water Corporation to consider sourcing all or part of the energy required for the desalination plant from renewable energy (ie. Natural Power)?

(6) If not, why not?

Hon NICK GRIFFITHS replied:

(1) It is estimated there could be up to an additional 85,000 tonnes of greenhouse gas emission per annum for the 45 GL plant based on a gas fired energy source. However, this could increase to a maximum of 231,000 tonnes per annum for power sourced from the Western Power grid. Water Corporation is proactive on greenhouse issues. This commitment is demonstrated by having won the National Australian Greenhouse Office Greenhouse Challenge Gold Award in 2003.

(2) The Corporation is committed to reducing greenhouse gas emissions from its overall operations. The aim of the Water Corporation is to minimise the net greenhouse gas emissions associated with all projects and activities. There are various ways of doing this, including ensuring energy efficiency, fuel switching, use of renewable energy and sequestration.

The choice from these options includes a triple bottom line (i.e. economic, social and environmental) assessment to find the low cost alternatives with the best overall outcomes. Renewable energy, if available, would not provide the secondary benefits provided by a carbon sequestration option. Sequestration, which is readily available, will allow the Corporation to plant trees which will sequester CO_2. Further, such plantings can be designed to maximise secondary benefits of biodiversity enhancement, salinity mitigation and/or water quality (catchment) improvement.

(3) The Corporation is committed to making use of renewable energy wherever economically viable. For example, it has a contract for the supply of renewable energy that services 86 of the Corporation's sites. This contract accounts for approximately 5% of the Corporation's energy use. However, at present and for the near future, there is no source of reliable renewable energy that can supply the proposed desalination plant.

In general terms, the Corporation is not only a major purchaser of renewable energy, but also a producer. It has implemented an innovative environmental solution at the Woodman Point Wastewater Treatment Plant (WWTP) that uses biogas generated by the treatment plant to produce electricity. Woodman Point WWTP generated 5212 MWh of renewable energy in 2002, 6805 MWh in 2003 and is expected to generate in excess of 9000 MWh for 2004/2005 and beyond. This will equate to approximately 3% of the Corporation's electricity demand.

Biogas is also burnt at the Subiaco and Beenyup WWTPs for heating the sludge digestion process, and any excess biogas is flared, reducing the greenhouse gas CO_2-e by 21-fold since methane is converted to carbon dioxide which is 21-fold lower in greenhouse global warming potential.

Further investigation is under way to assess the feasibility of using biogas generated at the Beenyup facility to produce electricity. The Corporation's conversion of biogas into electricity and its

commitment to purchasing renewable energy make a significant contribution to the reduction of greenhouse gases.

(4) Yes.

(5)-(6) Water Corporation maintains an active watch on the entire energy market and enters into direct negotiations with power wholesalers whenever appropriate opportunities arise.

The Corporation's actions to date (i.e. currently deriving 8% of its power from renewable energy sources) demonstrate its commitment.

Consistent with this, the Corporation is committed to reducing greenhouse gas emissions from its operations overall. To this end, the Corporation is developing a new more sophisticated greenhouse gas management strategy to cover all of its activities. As already pointed out, there are various ways of mitigating greenhouse gas emissions, including ensuring energy efficiency, fuel switching, use of renewable energy and sequestration. Further, secondary benefits of biodiversity enhancement, salinity mitigation and/or water quality (catchment) improvement can be obtained.