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07 APR 2006

GPSC's

DEUS Ref: DG06/291

Mr John Young
Principal Council Officer
General Purpose Standing Committee No. 5
Legislative Council
Parliament House,
Macquarie Street
Sydney NSW 2000

Dear Mr Young

Thank you for your letter regarding the "Inquiry into a sustainable water supply for Sydney".

Please see attached an amended copy of the transcript of my comments at the hearing on Thursday 23rd March. Also attached are my answers to the questions taken on notice.

If you require further information in relation to this matter, please contact Ms Kate Iffland, Senior Policy Officer

Yours sincerely

David Nemtzow
Director-General

7/4/06

QUESTION ON NOTICE

GENERAL PURPOSE STANDING COMMITTEE No. 5 – INQUIRY INTO A SUSTAINABLE WATER SUPPLY FOR SYDNEY

1. RENEWABLE ENERGY FOR POWERING A FUTURE DESALINATION PLANT – The Committee Chair, the Honourable Ian Cohen MLC asked the Director-General of the Department of Energy, Utilities and Sustainability -

QUESTION (on pages 19 -18 of transcript)

I understand that approximately 190 gigawatt hours per year is the production of renewable energy in NSW. Would that include the output from the hydro scheme?... (powering a desalination plant using 100% renewable energy) seems to be a bit of an absurdity in terms of the current output from alternative systems, be they hydro or other systems, compared to what the reality of the end use would be.

ANSWER

During 2004-05 renewable energy sources in NSW are estimated to have generated more than 5800 GWh of electricity. The Snowy Scheme generated 4295 GWh, Shoalhaven Scheme 18 GWh and Hume Hydro Scheme 111 GWh with the remainder being generated by various smaller wind, biomass, solar and coal seam methane plants.

During 2004 (2005 data not yet available), generation from accredited Green Power plants in NSW was 402 GWh and consumption through NSW Green Power sales was 175 GWh.

In addition to the available Green Power generation, there are numerous new plants with planning approvals or applying for same that would be available to supply new loads. These include:

- Snowy Plains Wind Farm (near Lake Eucumbene), has planning approval for 16 turbines (<30 MW)
- Crookwell II Wind Farm, has planning approval for 92 MW
- Taralga Wind Farm, has planning approval for 50 turbines (1.5 to 2 MW each, totalling 75 to 100 MW)
- Gunning Wind Farm, has planning approval for 32 turbines (62 MW)
- Ben Lomond Stage 1 Wind Farm, has planning approval for 12 turbines (20 MW)
- Cullerin Wind Farm (30 MW) development application lodged with Department of Planning
- Capital Hill Wind Farm, near Tarago (132 MW) development application lodged with Department of Planning

This is a total of over 400 MW of wind generation capacity that is proposed and under development. Less than 100 MW of this would be sufficient to supply a 125 megalitre a day desalination plant.

2. COSTING OF VARIOUS LARGE SCALE OPTIONS FOR AUGMENTING SYDNEY'S WATER SUPPLY – The Honourable Peter Primrose MLC asked all three witnesses -

QUESTION (on page 18 and 24 of transcript)

Has any work been done on the indicative costs of various schemes for construction, acquisition of land, the use of electricity, greenhouse gases and the likely effect on the electricity account and the water bills? Has any work been done at all on the costs of those schemes?

May I just say that when I asked my question, I know it was very large in relation to pumping from east to west etc. I asked if I could get a preliminary response, but I wonder if people could take on notice any additional comments that people may wish to make.

ANSWER

Sydney Water has advised that the cost of taking treated effluent (recycled water) west from a coastal location depends on a range of factors that include the volume of recycled water, the additional treatment required to make the recycled water suitable for the intended application, the distance the recycled water will be transported, the size of pipelines or tunnels required, and the difference in elevation between the Sewerage Treatment Plant(s) and the end use location.

Sydney Water has undertaken a preliminary analysis of the costs of taking effluent from the major coastal STPs, treating it to a level suitable for indirect potable reuse, and then transporting 500 ML/day of recycled water from the coast (at Malabar) to Lake Burragorang (behind Warragamba Dam) via Nattai in the Southern Highlands. The estimated costs of such an indirect potable reuse scheme are estimated to be \$3.8 billion, with \$175 million per year operating costs. Details of this analysis can be found at the Sydney Water website, via [www.sydneywater.com.au/Publications/EnsuringTheFuture/Desalination/Indirect potable recycling and desalination - a cost comparison.pdf](http://www.sydneywater.com.au/Publications/EnsuringTheFuture/Desalination/Indirect_potable_recycling_and_desalination_-_a_cost_comparison.pdf). It is noted that the costs for 500 ML/day indirect potable recycling are based on a planning estimate (and hence are indicative only), and include energy costs. Costs for land acquisition have not been included, nor has there been an assessment of the impact of such a proposal on customer water bills.

As noted above, the cost of large scale recycling schemes depend on factors such as the distance recycled water will be transported. The February 2006

Progress Report on the Metropolitan Water Plan states that the Government has undertaken planning into the construction and operation of a major Western Sydney Recycled Water Initiative. The schemes proposed as part of this initiative are cost effective because they do not involve pumping effluent over extremely long distances for reuse. Recycled water will be produced from the high quality sewage treatment plants in the western Sydney region. This major recycling initiative is scheduled to be completed by 2009 and is expected to produce 21 billion litres of recycled water a year by 2011, rising to around 27 billion litres a year by 2015.

In addition to the Western Sydney Recycled Water Initiative, the Government is investigating the cost, environmental impacts and benefits of a number of recycling schemes for application by industry and local councils.

3. GRANTS AWARDED UNDER THE WATER SAVINGS FUND – The Honourable Patricia Forsythe MLC asked the Director-General of the Department of Energy, Utilities and Sustainability -

QUESTION (on page 23 of transcript)

Did you make a recommendation that there should be a grant to Sutherland council?

ANSWER

Sutherland Shire Council did not receive a grant under the first round of the Water Savings Fund.

All projects are assessed by an Independent Evaluation Panel in accordance with the Fund's criteria. The rules of the Fund are clearly established as is the criteria for evaluating applications. These are available at www.deus.nsw.gov.au

Please note that the Department of Energy, Utilities and Sustainability does not release the names of unsuccessful applicants. However all unsuccessful applicants have been contacted by the Department and offered the opportunity to discuss the reasons for not receiving a grant; this will give the unsuccessful applicant the opportunity to modify their application for submission in future funding rounds.

7/4/06

David Nemtzow
Director-General
Department of Energy, Utilities and Sustainability