

INQUIRY INTO A SUSTAINABLE WATER SUPPLY FOR SYDNEY

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Subject:

Summary

GPSC5 GPSC5 - Inquiry into a sustainable water supply for Sydney / Submission

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Subject: Inquiry into a sustainable water supply for Sydney / Submission
CC: "Warwick Rule"

Legislative Council
 GENERAL PURPOSE
 STANDING COMMITTEES

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To: The Director, General Purpose Standing Committee No. 5, Legislative Council
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I refer to the Inquiry into a sustainable water supply for Sydney.

This submission focuses on item c in of the terms of reference "methods for reducing the use of potable water for domestic, industrial, commercial and agricultural purposes, including sustainable water consumption practices". It addresses the opportunities for potable water usage reduction in the Heating, Ventilation, Air Conditioning and Refrigeration (HVAC&R) industry, and the challenges facing innovative water saving technologies in gaining widespread acceptance.

HVAC&R systems are either air-cooled or water-cooled. Water-cooled systems are the most preferred cooling option in existence, as the evaporation of water is by far the most energy-efficient heat-rejection method. As a result, commercial and industrial cooling systems use significant amounts of potable water. By careful management of the water quality in these systems to control scaling, corrosion and bacterial growth the total amount of water used in water-cooled systems can be minimized. Traditionally the water quality is managed using a mix of chemical additives. Although chemical treatment can effectively manage the water quality it also has significant disadvantages and risks, resulting in a less-than-ideal water consumption profile and, by definition, water discharge streams which are contaminated with toxic and hazardous chemicals, making them unsuitable for further use.

There are existing non-chemical treatment technologies that can drastically improve the water efficiency of these HVAC&R systems. These innovative technologies have proven to deliver equally as good or better performance in cooling water treatment and provide environmental and OH&S benefits. Additionally, the cooling system water discharge streams are free from chemicals and can be re-used or recycled in non-potable applications such as irrigation which otherwise would have utilized potable sources.

Unfortunately, conventional water treatment technologies have a firm hold on the marketplace in Australia – a situation which is underpinned by legislation heavily biased towards chemical methods. It seems that alternative water treatment technologies for cooling water systems can only exist by the grace of the main players in the market.

A cautious approach to the acceptance of new technologies is necessary. Yet, with the current pressures on finite and scarce resources such as energy and water it is also necessary to facilitate an environment which is conducive to progress and improvement to allow a fair and objective assessment of the merits of new, promising technologies.

A proactive and cooperative approach from all stakeholders - including suppliers, water treatment service providers, industry associations, State and Federal government and end-users - is required to drive the development and uptake of new technologies in the industry. The intense pressures on our water resources no longer allow the luxury of a "laissez-faire" attitude - the role of government is an important one to drive the evaluation and integration of new technologies to enable the community to capitalize on the potential benefits which are there for the taking!

As the National Sales Manager for Imatech Water Technologies I feel strongly about this. I presented the chemical-free water treatment system "VRTX" at a Water Treatment Conference in Sydney in November 2005. The VRTX system has an extensive track record in the USA and Europe, and has independent scientific substantiation. VRTX was also recently awarded the 2006 Green Building Innovation Award by AHR Expo / ASHRAE, an important achievement that underlines the merits of this system in this industry. VRTX is delivering water savings around the world, yet it seems to be an uphill battle to let innovative technologies such as VRTX have a fair chance of proving its capabilities in Australia.

Roland van Amstel

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Sustainable Water Treatment Solutions