

Water Efficient Cooling Towers Program

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Water Efficient Cooling Towers Program

Background Statistics

- Over 4100 registered cooling towers in Victoria
- 2300 sites
- 1800 sites in greater Melbourne
- Estimated 35 million litres of water used per day by cooling towers in Melbourne CBD
- Up to 50% of use in some buildings in cooling towers
- 10% saving is around 1 billion litres per annum

Water Efficient Cooling Towers Program

Objectives

All cooling towers in Victoria to be operated water efficiently

- Best water operational practices
- Installation of water meters on water supply to towers
- Consistent reporting framework and documentation
- Water efficiency training and education for stakeholders – owners/operators, service providers

Target 1 billion litres of savings

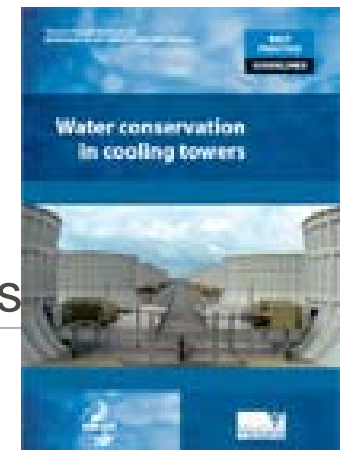
Water Efficient Cooling Towers Program

Implementation

Program delivered by AIRAH in consultation with DSE, Victorian water corporations, Dept of Health and HVAC industry, CWW led.

Audits of sample of cooling towers across state

- Reports with recommendations for improvement
- Verification of improvements
- Estimate of savings
- Best Practice Guidelines and DA 17 technical manual developed with AIRAH member expertise
- Water efficiency calculator
- Training for owners, operators and managers of towers
- mycoolingtower.com.au – widely advertised and promoted
- waterMAPs -documenting and implementing improvements



O-I Glass Cooling Tower Replacement

- **Scope:** Replacement of existing cooling towers with those that operate on ambient air temperature and variable speed drives
- **Savings:**
 - 22 ML/year water
 - 440,000 kilowatt hours/year electricity
 - 550 tonnes greenhouse gas emissions reduction
 - Legionella risk reduced, chemical use eliminated
 - Exceeding O-I's global benchmark for water use



Olex Cables – variable speed drives

- **Scope: Improve water and energy efficiency in cooling towers using variable speed drives**
- **Savings**
 - 4.8 ML/yr of water savings
 - 78.1MWh/yr of electricity
 - 95.2 tonnes CO2-e
- Leveraging the benefits of integrated water, energy and waste efficiency



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Future from Victorian government and water industry perspective

Water from a range of sources

- Traditional sources – dams within traditional catchments
- Alternative water – recycled and stormwater
- Water efficiency – use water but not more than needed

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Where to in future?

Implementing recommendations from the project

mycoolingtower.com.au

Top tips towards water efficiency – new and innovative promotional tools

Improving the water efficiency of all towers

Regional centres - high importance as worst performers!

Service providers have major role to achieve this

Engagement and empowering those who influence this outcome