Reducing Water Use Through Water Efficiency Labelling - the Australian Experience

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Overview

• Context: Water in Australia
• Australia’s WELS scheme
• Why we support developing an ISO International Standard
• Thoughts on how the ISO standard could operate
Water in Australia – Frequent Droughts

Much of Australia experiences highly variable rainfall and frequent droughts.

Most people live on the east/southeastern coasts.

Not unusual to have a drought covering major cities at one time.
Water in Australia – Urban Water Sources

2016–17:
- 63% surface water
- 24% groundwater
- 8% desalinated water

Source: Bureau of Meteorology National Water Account 2017
Australia’s water efficiency labelling scheme started during the Millennium Drought

Australia’s large dams were less than half full. Many communities had water restrictions. States and territories were concerned about water and agreed to the 2004 National Water Initiative.
Water Efficiency Labelling and Standards (WELS) scheme

Mandatory consumer labelling scheme to reduce water use.

Products:
- **Plumbing products** - showers, taps (faucets), toilets, urinals, flow controllers
- **White goods** - clothes washing machines and dishwashers

Products must be tested, registered and labelled in accordance with Australian standards.
WELS scheme – Underpinning standards

• Australian/New Zealand Standard 6400: Water efficient products – Rating and labelling set requirements for rating and labelling of products
  • Establishes star ratings for each product based on water consumption, eg for taps

<table>
<thead>
<tr>
<th>Star rating</th>
<th>Flow range (L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Star</td>
<td>7.5 – 9.0</td>
</tr>
<tr>
<td>4 Star</td>
<td>6.0 – 7.5</td>
</tr>
<tr>
<td>5 Star</td>
<td>4.5 – 6.0</td>
</tr>
<tr>
<td>5 Star</td>
<td>1.1 – 4.5</td>
</tr>
</tbody>
</table>

• 6400 calls up product-specific standards for testing methods and performance requirements
WELS scheme – Product Registration

Product registration applications must include:

- Test reports from an accredited laboratory showing water consumption in accordance with product-specific and WELS standards
- WaterMark certification for plumbing products
  - WaterMark is a separate scheme that ensures products are fit for purpose
- Product images (to help with verification)
- Registration fees
  - 80% of WELS administration costs are paid through fees
WELS scheme – Compliance and Enforcement

WELS registration and labelling is a legal requirement and most businesses comply. Areas of risk are:

- Changes to traditional supply chains, including online sales
- Building industry, including modular bathrooms

Penalties include:

- Cancelling or suspending registration
- Infringement notices – up to $6300 AUD per offence
- Court imposed penalties – up to $63,000 AUD per offence, or in some cases imprisonment
WELS Effectiveness

Projected water and energy savings and reductions in greenhouse gas emissions attributable to WELS since it commenced in 2005

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2021</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual water savings (GL/year)</td>
<td>70</td>
<td>147</td>
<td>204</td>
</tr>
<tr>
<td>Cumulative GHG reduction (MT CO$_2$-e)</td>
<td>5.5</td>
<td>20.4</td>
<td>46.4</td>
</tr>
<tr>
<td>Annual household utility bill savings ($m/year)</td>
<td>520</td>
<td>1,390</td>
<td>2,063</td>
</tr>
</tbody>
</table>

Source: Evaluation of the Environmental Effects of the WELS Scheme, Institute for Sustainable Futures, University of Technology Sydney, 2015

Australian population: nearly 25 million
Other Asia-Pacific countries have similar water efficiency labelling and standards schemes, eg:

- **Singapore**
- **Malaysia**
- **New Zealand**
- **China**

These differ in label design, voluntary or mandatory, products covered, ranges of water use for each rating.
Why an ISO International Standard?

Australian industry values consistency – reduces manufacturing and compliance costs

Australia committed to developing an ISO International Standard on water efficiency and labelling as part of its membership in the United Nations and World Bank High Level Panel on Water

• UN Sustainable Development Goal 6:
  • Ensure access to water and sanitation for all

• Water scarcity affects more than 40 per cent of the global population

• World Economic Forum consistently ranks water among the top 5 global risks
What an International Standard might cover

In scope – International Standard

What products are included

How products are tested for water efficiency

Rating bands or approaches, eg for showers, rating bands could be based on flow rates such as:

- Band 1: 4.5-6.0 L/min
- Band 2: 6.0-7.5 L/min
- Band 3: 7.5-9 L/min
- Band 4: 9.0-12.0 L/min

ISO label (?)

Out of scope – how the standard is used in each country

- Mandatory or voluntary labelling
- Minimum efficiency requirements, eg in Australia toilets must not exceed an average flush volume of 5.5 L
- Consumer labelling of products, including overall label design (?)
# Banding- hypothetical example

## Water efficiency of taps (faucets)

<table>
<thead>
<tr>
<th>ISO Band</th>
<th>Maximum Flow rate</th>
<th>Australian WELS rating</th>
<th>Country A</th>
<th>Country B</th>
<th>Country C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 L/min</td>
<td>6-star</td>
<td>3-tick</td>
<td>Meets minimum standard</td>
<td>Qualifies for voluntary certification program</td>
</tr>
<tr>
<td>2</td>
<td>3.5 L/min</td>
<td>6-star</td>
<td>2-tick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4.5 L/min</td>
<td>6-star</td>
<td>2-tick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>6 L/min</td>
<td>5-star</td>
<td>1-tick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>7.5 L/min</td>
<td>4-star</td>
<td>Not rated</td>
<td></td>
<td>Does not qualify for voluntary certification program</td>
</tr>
<tr>
<td>6</td>
<td>9 L/min</td>
<td>3-star</td>
<td>Not rated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>12 L/min</td>
<td>2-star</td>
<td>Not rated</td>
<td></td>
<td>Does not meet minimum standard</td>
</tr>
<tr>
<td>8</td>
<td>16 L/min</td>
<td>1-star</td>
<td>Not rated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>&gt;16 L/min</td>
<td>0-star</td>
<td>Not rated</td>
<td></td>
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