



OIML Seminar on Conformity to Type (CTT)

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Conformity to Type Testing and the Australian Urban Water Industry – Recent Developments and Experiences –

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Outline

- Background
 - The Australian Urban Water Industry
 - The Role of National Measurement Institute
- Recent Developments
 - National Framework for Urban Water Metering
 - Water Metering Codes of Practice
- Compliance Testing Code of Practice
 - Development
 - Issues
- Experience and Lessons
 - User Funded Conformity Testing
 - Applications for Other Sectors
- Questions

Background – Australian Urban Water Industry

- What does it look like?
- Australian water service providers vary extensively in size, scope as well as metering experience and knowledge.



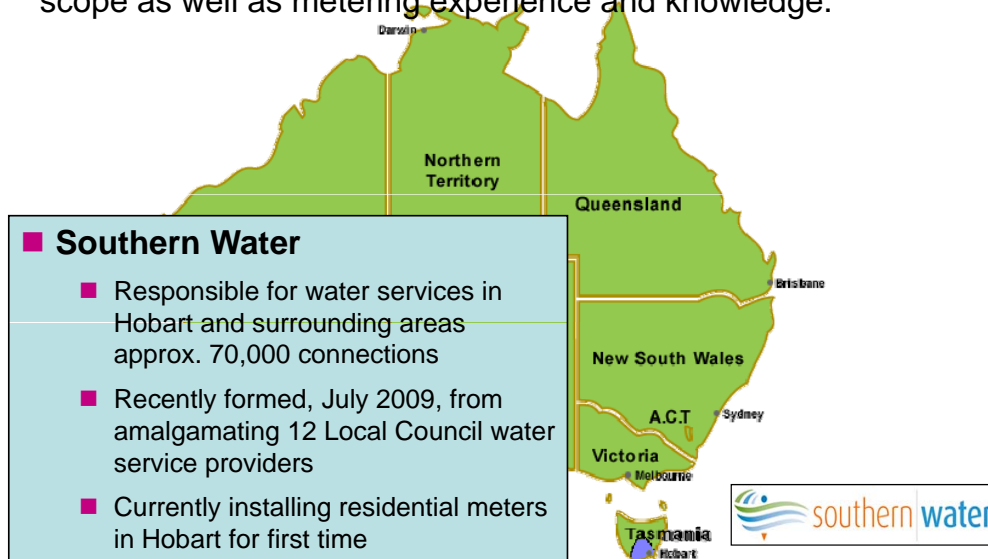
■ Water Corporation of WA

- Responsible for water services across most of WA – 2.5 million km²
- 100,000's customers – residential, industrial, agricultural and mining
- Meter testing facilities – NMI appointed Approving Authority



Background – Australian Urban Water Industry

- What does it look like?
- Australian water service providers vary extensively in size, scope as well as metering experience and knowledge.



Background – Australian Urban Water Industry

- What does it look like?
- Water Services Association of Australia
 - Peak industry association with 30 members and 29 associate members (water service providers).
 - Members provide water and waste water services to approximately 16 million Australians and many industrial and commercial enterprises.
 - Produces industry Codes of Practice and facilitates communication across industry.
 - Focus on all aspects of the urban water industry, including water metering.





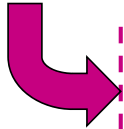
Background – The Role of NMI

National
Measurement
Act
1960 (Cth)

- Under the Act, the National Measurement Institute (NMI) has responsibility for the type (pattern) approval and initial verification of utility meters (inc. water meters) in Australia.

National
Measurement
Regulations
1999 (Cth)

- The Regulations currently provide an exemption for larger sizes of water meters – to be removed in future – however residential water meters must comply with the Act.

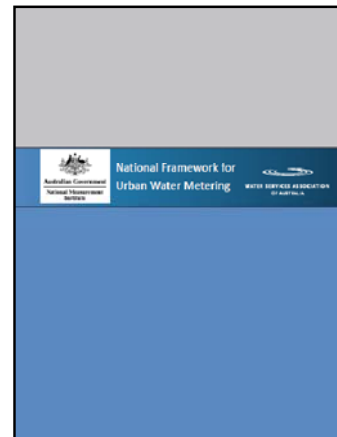


The Regulations also give NMI authority to examine approved measuring instruments to ensure that they conform to the approved pattern.











Recent Developments – A National Framework

- Includes metering workshops, technical consultation, Smart Water Meter Specification
- In 2010 the National Framework for Urban Water Metering was published
- Joint NMI and WSAWA document intended to provide nationally consistent principles and approaches to the metering of cold and heated, drinking and non-drinking water
- In addition to outlining current regulatory requirements, the framework specifies best practice principles and recommendations related to the metering of water



Recent Developments – Codes of Practice

- A supporting series of Codes of Practice containing technical requirements that underpin the guiding principles established in the Framework are being developed:
 - Sub Metering Code of Practice (CoP)  Finalised, pub. July 2011
 - Meter Compliance Testing CoP  Under development, pub. late 2012
 - Meter Selection CoP  Development to commence late 2011
 - Meter Installation CoP  ...
 - Meter Exchange CoP  ...
 - Fire Service Metering CoP  ...
 - Stand Pipe and Hydrant Metering CoP  ...
 - Trade Waste Metering CoP  ...

Compliance Testing Code of Practice - Development

- Work began in early 2011
- Progress...
 - First meeting 8-9 March 2011 – Sydney Water
 - Initial drafting of documentation underway
 - Industry-wide survey circulated – awaiting response
- Scope includes In-service Compliance Testing...
 - Testing meters after years of in-field service
 - Test Methodology – AS 3565.4
- ...and **Conformity to Type Testing**
 - Type testing new production-run meters
 - Test methodology – NMI/OIML R 49
 - NMI currently has a regulatory role ensuring Conformity to Type



Compliance Testing Code of Practice - Development

- Technical Working Group membership includes:
 - Sydney Water - Working Group Leader
 - ACTew AGL – Australian Capital Territory
 - Barwon Water – Geelong, Victoria
 - Hunter Water – Newcastle, New South Wales
 - Queensland Urban Utilities – Brisbane, Queensland
 - SA Water – South Australia
 - South East Water – Melbourne, Victoria
 - Southern Water – Hobart, Tasmania
 - Water Corporation of Western Australia – Western Australia
 - Yarra Valley Water – Melbourne, Victoria ... plus WSAA and NMI

The need for conformity/compliance testing is accepted and well understood by many water service providers



Compliance Testing Code of Practice - Issues

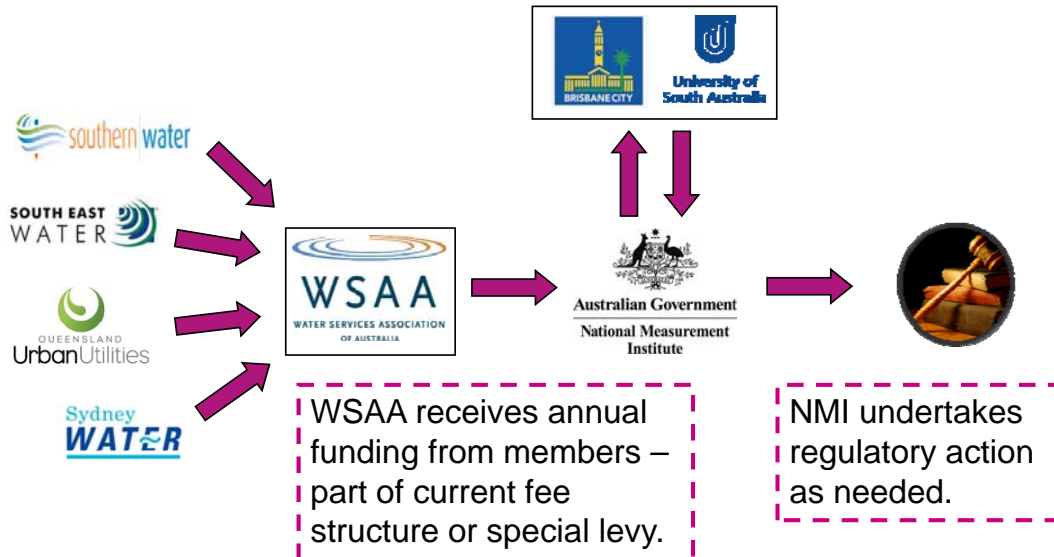
- Issues:
 1. Funding the costs of Conformity to Type Testing
 - In principle agreement from working group that WSAA members will fund the costs of meter testing, both in-service compliance and conformity to type.
- For those water service providers that currently undertake some testing (almost exclusively in-service compliance), there are available cost savings due to increased batch/lot sizes across a nationally coordinated approach.
- For those water service providers that currently do not undertake compliance or conformity testing, there are obvious benefits and costs would be less than individual approaches.

Compliance Testing Code of Practice - Issues

■ Issues:

1. Funding models

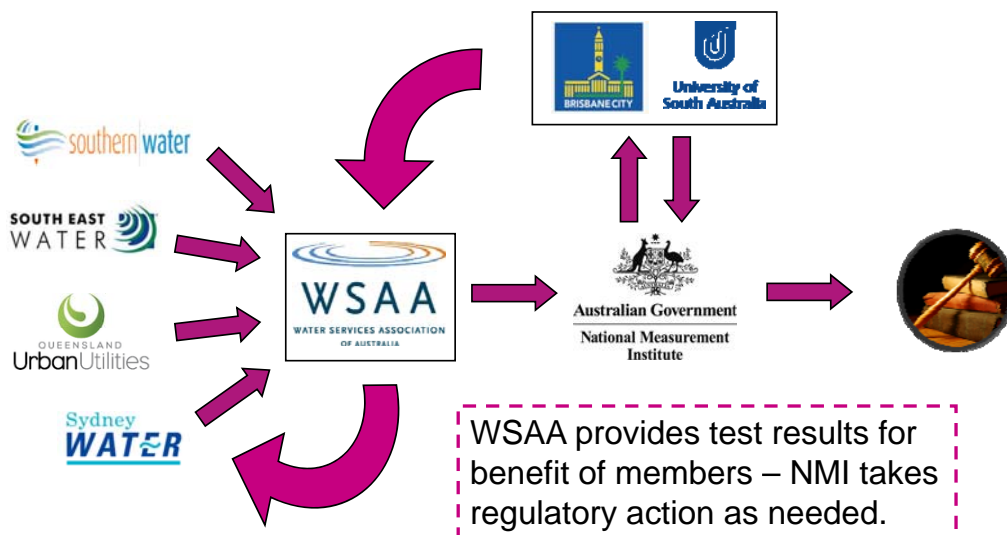
NMI receives WSAA funding and commissions testing at approved & accredited laboratories.



Compliance Testing Code of Practice - Issues

■ Issues:

1. Funding models continued...





Compliance Testing Code of Practice - Issues

- More issues...
 2. Actual costs of testing
 3. Test infrastructure capacity
 4. Statistical sampling
 5. Program coordination
 6. Responses to non-conformities
 7. Ownership and sharing of results
 8. Liability and privacy
- Most of these issues are highly interrelated, with solutions to one area creating problems in others and vice-versa



Lessons – User Funded Conformity Testing

- *Manufacturers* do not want to pay for Conformity Testing.
- *Consumers* are unable or do not want to pay for Conformity Testing.
- *National Authorities* can not afford to pay for Conformity Testing.

Generalisation

...BUT...

- *Users* of measuring instruments want to ensure the instruments they use every day are accurate, and many large Users have the capacity and inclination to pay for Conformity Testing.

“The water meter is the industry’s cash register”

- Users of measuring instruments could provide funding, under a range of models, for conformity to type testing, such as:
 - Utility Companies – water, gas and electricity meters
 - Grocery Stores – weighing instruments
 - Etc...



Lessons – Applications for Other Sectors

- Proactive engagement with user industries is vital.
- A coordinated approach is ideal – for example, contact through industry associations and groups.
- Obvious limitations depending upon the measuring instrument and industry in question.

There is no one-size-fits-all approach, however developing partnerships with industries and sectors that use measuring instruments can produce innovative funding models for Conformity to Type Testing.



Thank you!
Questions?



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