



ASIA-PACIFIC
LEGAL METROLOGY FORUM

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Economy Report

Australia

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SECTION 1 – Organisation and structure for metrology

Organisation Structures

NMI Australia

The National Measurement Institute (NMI), a division within the Department of Industry, Innovation and Science is Australia's peak measurement body responsible for biological, chemical, legal, physical and trade measurement. Our vision is to provide measurement policy, science and regulation that underpins the economy and well-being of Australia. NMI is currently focusing on greater engagement with and increasing services to the energy, health, environment and food sectors.

Legal Metrology Branch

NMI's legal metrology branch administers Australia's trade measurement infrastructure. Its policy aims are to provide an efficient and effective national trade measurement system across Australia for the community, business and government; and to provide confidence in all aspects of trade measurement through a unified, national system. The legal metrology branch's objectives are to maintain a high level of general awareness and transparency in trade measurement transactions; to ensure an effective compliance framework; and to continually improve trade measurement.

The legal metrology branch consists of five sections – trade measurement services; pattern approval; legal metrology policy; governance and business performance; and training and technology transfer. Training and technology transfer provides services across all branches of NMI.

In July 2016 the legal metrology branch welcomed a new General Manager, Bill Loizides, and implemented a new governance structure. Bill is Australia's CIML representative.

While there have not been any major changes to the structure/infrastructure or to the legislation there have been departmental changes to the requirements around regulator performance structure and reporting requirements.

Regulatory Reform Agenda

To support the government's Regulatory Reform Agenda all new policies and programmes as well as amendments to existing regulations must be costed. Offsets must be identified for any increase in regulatory burden. The Australian Government Guide to Regulation sets out ten principles for Australian Government policy makers to consider before addressing a policy problem.

Regulator performance structure and reporting requirements

NMI annually self-assesses its performance against a set of Key Performance Indicators in the government's Regulator Performance Framework. The framework consists of six outcomes-based KPIs covering reducing regulatory burden, communications, risk-based and proportionate approaches, efficient and coordinated monitoring, transparency and continuous improvement. NMI is required to look at how it operates and the imposition that it creates when administering regulation.

NMI publishes an annual report which is based on its self-assessment and that is externally validated by stakeholders. The report identifies the extent to which NMI is achieving the KPIs in the Framework and highlights areas for improvement.

Legislative Frameworks

Regulatory reform environment

Regulatory reform continues to be a government priority to drive productivity and efficiency gains within the economy. Key features of this agenda include:

- reducing the regulatory burden for individuals, businesses and the community by at least \$1 billion per year; and
- examining opportunities for greater acceptance of trusted international standards and risk assessments as part of the Government's Industry Innovation and Competitiveness Agenda.

As of 31 December 2015, the Government has taken decisions to remove a net \$4.8bn in red tape, exceeding its original commitment to remove \$3bn in three years.

National Measurement Guidelines

Australia's *National Measurement Guidelines* were remade in 2016. These guidelines govern the way in which Australian legal units of measurement may be combined to produce an Australian legal unit of measurement and with prefixes to produce Australian legal units of measurement. The changes to the Guidelines include how to express geographical coordinates and other minor corrections.

Australian Maritime Safety Authority (AMSA) Safety of Lives at Sea (SOLAS) Convention

On 1 July 2016 the Australian Maritime Safety Authority (AMSA) implemented revisions to the Safety of Lives at Sea (SOLAS) Convention through amendments to Marine Order 42, making the shipper responsible for verifying the gross mass of a container and stating this verified gross mass on the maritime shipping documents. In order to determine the verified gross mass of a container, equipment meeting prescribed standards of accuracy must be used. The weighing equipment must either comply with existing requirements applicable to weighing equipment used for trade purposes under the *National Measurement Act*, or the equipment must be calibrated to accuracy standards approved by AMSA.

International arrangements and engagement

Australia was represented at the following international meetings and fora since the 2015 APLMF meeting:

- OIML Seminar on Legal Metrology Management Systems
- OIML TC 12 meeting to plan future electricity metering projects
- International Electrotechnical Commission (IEC) to improve liaison between OIML and IEC with the objective of improving harmonisation of standards
- Milestones in Metrology – NMI Netherlands, covering weighing, utility metering as well as oil and gas
- OIML TC8/SC3 – review of OIML R 117:2007 Dynamic measuring systems for liquids other than water
- OIML Certification System Project Group (CSPG) Meeting
- 51st CIML Meeting and 15th International Conference on Legal Metrology

- OIML TC17/SC7 – evidential breath analysers
- OIML Committee for Participation Review (CPR) – review of OIML MAA laboratory participation

SECTION 2 – Key activities of 2015/16

Working with industry

Public consultations

In the period October, 2015 to November, 2016 the following public consultations were performed:

- Review of the strategic policy objectives of legal metrology in Australia
- New pattern approval requirements for non-automatic weighing instruments (OIML R 76)
- Review of Part IV of the *National Trade Measurement Regulations 2009* (packaging)
- Cryogenic Metering Systems (OIML R 81)
- Flow metering systems (OIML R 117)
- Level gauging systems (OIML R 80-2)
- Metrological requirements for load cells (OIML R 60)
- Review of LPG density measurement
- Automatic gravimetric filling systems (OIML R 61)

Test procedures for complex measuring instruments

The purpose of the project is to examine and refine the verification, through National Instrument Test Procedures (NITPs), of complex measuring instruments, these comprised of:

- train weighing-in-motion systems;
- belt weighers;
- hoppers; and
- weighbridges.

A targeted consultation was carried out in October – November 2015 and comprised of manufacturers, suppliers, service providers and end users. Based on the analysis of the feedback received, NMI is in the process of developing an optimal, workable solution for complex measuring instruments. NITPs for each of these instruments are expected to be developed/revised following extensive consultation with specific industries.

Grain quality measurement

NMI hosted the 17th Grain Quality Measurement Committee (GQMC) meeting in March 2016, which included representatives from the Australian grain marketers, producers and growers, processing industries (e.g. flour mills) and stock feed lots industries as well as grain research organisations.

This meeting discussed:

- A NMI update on the status of the OIML recommendations applicable to the grain industry.
- A NMI update on government priorities and their implications for the work carried out by NMI, including resultant potential impact for the grain industry.

- Issues potentially arising from the development of a robust framework for measurements in the grain industry, including options to effectively address these issues.
- Updates from industry on development of new technologies and exploring the possibility of setting up a traceable framework for emerging technologies.

Verifier competency assessment

NMI has expanded its verifier competency framework to include recognition kits for Brix hydrometers (instrument subclass 17.1) and compressed natural gas (CNG) dispensers (instrument subclass 12.1). Recognition kits for both instrument types have been trialled with industry and will be made available as online recognition kits.

Training

In 2016 the training and technology transfer section continued to expand its offerings of online training courses. An online course for the verification of fuel dispensers was launched in September, 2016 after trial with industry. To date, four participants have enrolled in the course.

NMI now offers weighbridge operations, non-automatic weighing instruments and fuel dispenser training online. Online course delivery has the advantages of overcoming geographical limitations while offering self-paced flexibility and the possibility for unlimited review of the material. Course cost is significantly reduced when compared to face-to-face training and the associated travel requirement. Furthermore, these programmes align with the government's Service Delivery Reform Agenda.

The online delivery of our three most popular courses means that enrolment in physical training courses has continued to decline. In 2016 NMI delivered 23 courses with 83 participants.

Protecting consumers

Trade Measurement Community Savings Programme

In 2016 NMI launched the Trade Measurement Community Savings Programme to determine the value that trade measurement delivers to the community. Trade Measurement officers visit retail and wholesale businesses to test the accuracy of measuring instruments, the contents of pre-packaged articles and conduct over-the-counter transactions to ensure consumers receive the goods they pay for and to create a level playing field for industry. The data collected by the programme will be used to evaluate the detriment to the community and industry if the non-compliances were undetected.

The programme will:

- involve 2400 targeted business inspections nationally, by 30 June 2017
- increase industry group awareness of trade measurement legislation and the compliance requirements that apply to their members
- identify industry groups which are to be the focus of future compliance programmes
- improve compliance with the legislation by businesses in those industries.

The results of the programme will be used to guide how NMI will support industry sectors with high levels of non-compliance to satisfy national trade measurement laws.

National Compliance Programme

In 2016 NMI published its National Compliance Programme (NCP). The NCP covers a range of strategies which promote awareness of the national trade measurement system and monitor compliance of traders with trade measurement law.

The NCP provides a framework for implementing the Trade Measurement Compliance and Enforcement Policy with effective and efficient use of resources. The Plan aims to minimise non-compliance and maximise business and consumer protection. It includes routine and targeted activities, as well as pilot projects to inform NMI the areas of the economy which may be at a high risk of non-compliance that may have a substantial impact on the Australian economy.

The NCP outlines a list of key categories and performance indicators to ensure a broad, effective and targeted approach to the use of trade measurement resources nationally. Regional targets are derived from the NCP, taking into consideration available resourcing and regional specific priorities.

Major projects - What we did and what we learned

Review of the strategic policy objective of legal metrology

NMI published a discussion paper to seek stakeholder input on the proposed policy objectives for Australia's legal metrology system. The proposed policy objectives included:

- Supporting confidence in the measurement system;
- Facilitating a level playing field for business;
- Consumer/customer protection; and
- Supporting industry development and technological innovation.

The public consultation ran from 12 August to 26 September 2016 across a number of website platforms and email notifications were sent to over 500 stakeholders. NMI received 40 formal submissions.

NMI intends on publishing a response paper summarising the feedback and outcomes of the consultation before the end of 2016. The outcomes of the consultation will inform any future legislative changes that NMI makes to the national measurement legislation.

Transition to online competency assessment for verifiers

After successfully developing online assessment tools for weighbridge operators and verifiers of non-automatic weighing instruments, NMI has reviewed and improved these recognition kits and transitioned a number of kits from paper-based hard copy completion and submission to online format. Verifier recognition kits for all instruments regulated by NMI will eventually be available online. Currently, online kits include:

- Non-automatic weighing instruments (subclasses 6.1, 6.2 and 6.3)
- Point of sale systems (attached to weighing instruments – subclass 18.2)
- Fuel dispensers other than LPG (subclass 5.1)
- Control systems for consoles (subclass 18.1)
- Bulk fuel other than LPG (subclass 5.2)
- Milk flowmetering systems (subclass 5.3)

NMI has worked with an external provider to deliver online recognition kits. A considerable effort was required to design an online system that is both rigorous and robust while ensuring fair, flexible, valid and reliable assessment that complies with all relevant standards for nationally accredited assessment.

SECTION 3 – Future focus

New initiatives planned (next 1-2 years)

The *National Measurement Regulations 1999* and the *National Trade Measurement Regulations 2009* (subordinate regulations under the *National Measurement Act 1960*) are projected to ‘sunset’ in 2019. As part of continuous improvement to legal metrology in Australia these regulations will be reviewed to ensure that they remain ‘fit for purpose’.

Refinement of compliance and enforcement policy

NMI’s compliance and enforcement policies and procedures were last reviewed comprehensively in 2011. As part of continuous improvement to legal metrology in Australia they are being refined, taking into consideration best practice approaches to achieving measurement-related compliance with legislative requirements.

Research into other similar local and international enforcement agencies is being performed to ascertain the approach being applied to the delivery of their services. Feedback from NMI staff has been collated for consideration.

The policy is likely to focus on risk-based approaches to the application of compliance and enforcement activity while ensuring national consistency.

Emerging issues – challenges and opportunities

Alignment of OIML standards with those of other international bodies

A challenge for any international standard-setting body is to produce a standard that is harmonised, accepted and used worldwide. This is even more challenging when there are multiple international bodies developing standards covering similar or overlapping topics. Two very well established international standards-setting bodies are the International Organisation for Standardisation (ISO) and the International Electrotechnical Commission (IEC). ISO and IEC produce a range of standards, some of which are test methods that may be used and adopted by other standards, others of which are type approval standards for specific products. Some years ago, ISO and OIML worked together in a joint committee to develop an aligned standard for water meters. A current challenge is for type approval of electricity meters where both IEC and OIML have produced similar, but not aligned, standards. Australia has submitted a project proposal to OIML to revise the standard for electricity meters (OIML R 46), citing the existence of multiple standards as a challenge and opportunity to address.

Shift to principles-based legislation

The Australian Government is committed to reducing the amount of prescription in regulations and to have more principles-based legislation. By having a clear articulation of the underpinning policies

for legal metrology, innovative technologies could be accommodated in the legal metrology system more easily, brought to market sooner and not be delayed due to prescriptive arrangements. The challenge will be to maintain appropriate levels of business and consumer confidence in the legal metrology system.