**Flow metrology at NMIA: current and future projects**

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Accurate flow measurement is essential for the reliable and efficient operation of transport, manufacturing, energy and biomedical industries in Australia. To underpin the operations of the many Australian ISO-17025 accredited calibration and testing laboratories that support these industries, NMI has established a broad range of calibration capabilities for both liquid hydrocarbon and gas flows. An overview of NMI’s existing primary standards and calibration services at both NMI’s Linfield and Londonderry sites will be presented, covering NMI’s interferometric Bell and glass-tube provers, ultra-fine flow-discrimination nozzle arrays, and facilities for high-flow propane, butane, petrol and diesel flowmeter calibration. The rationale and status of several new projects arising from Australia’s increasing adoption of gas as an energy source will also be discussed, including: CNG metering, the development of a new ultra-high accuracy PVTt flow standard, well-head ultrasonic metering, and a new facility for pipeline gas flows to 7000m3/h. Recent improvements to NMI’s capabilities, such as the calibration of critical-flow nozzles in humid air and of flowmeters using real hydrocarbon under near-boiling conditions, will also be presented.