



ASIA-PACIFIC
LEGAL METROLOGY FORUM

24th APLMF Meeting
Siem Reap, Cambodia

Working Group Report - 2017

Working Group on Utility Measures

Report developed/ approved by:	Alan E. Johnston
Position:	President
Organisation:	Measurement Canada
Contact details:	151 Tunney's Pasture Boulevard Standards Building Room 253 Ottawa, Ontario K1A 0C9 Canada
Telephone:	613-952-0655

SECTION 1 – Details of the membership of the Working Group

BACKGROUND

The Working Group on Utility Meters was established at the second Asia-Pacific Legal Metrology Forum meeting held in Beijing on 22 October 1995. Utility meters comprise a range of measuring instruments that are used for trade and these include water meters, gas meters, electricity meters, taximeters, telephone meters and parking meters. There is a need to ensure that the pattern approval requirements for these instruments are harmonized, as there is significant international trade in these meters. The Working Group aims to identify the usage of, and requirements for, utility meters in Asia-Pacific economies with the view of harmonization and uniformity of utility meters requirements in the region.

SCOPE

The Working Group on Utility Meters covers utility meters including water meters, gas meters, electricity meters, taximeters, telephone meters and heat meters.

OBJECTIVES

To ensure that requirements for utility meters, namely water meters, gas meters, electricity meters, taximeters, telephone meters and parking meters, are harmonized within the Asia-Pacific region.

SECTION 2 – Key activities of 2016/17

TRAINING ON UTILITY METERS

No training delivered on utility meters in 2016/17.

2017/17 OIML ACTIVITIES

ELECTRICITY METERS

OIML TC12/P1 has the responsibility for revising OIML R 46 "Active electrical energy meters". There are currently thirty participating and eleven observing members. Australia is acting as the secretariat/convenor for this technical committee.

Issues of significance related to R46 include:

- Addressing new technologies and market applications
- Interpretation of harmonic content requirements
- Making R46 more adaptable (modular), and more widely applicable.

A project proposal was approved by CIML at the October 2016 conference. The development of a first working draft is currently in progress.

WATER METERS

OIML TC8/SC5 has the responsibility for OIML R49 “Water Meters for Cold Potable Water and Hot Water”. There are currently twenty seven participating and nine observing members. The United Kingdom is acting as the secretariat/convenor for this technical committee.

There was no activity related to R49 in 2016. OIML model requirements for water meters are considered up to date and are harmonized with ISO.

NATURAL GAS METERS

OIML TC8/SC7 has the responsibility for OIML R137 “Gas Meters”, R139 “Compressed Gaseous Fuel Measuring Systems or Vehicles” and R140 “Measuring Systems for Gaseous Fuels”. There are currently twenty six participating and nine observing members. The Netherlands is acting as the secretariat/convenor for this technical committee.

There is currently no work underway related to R137.

A first committee draft of R139 was issued on May 24, 2017. Comments were due for August 28, 2017. A work group meeting is scheduled for September 18 to 20, 2017 in Delft, The Netherlands.

A first working draft of R140 is expected to be circulated to project group members and PG meeting is to be held in 2017.

APPLICATION OF STATISTICAL METHODS

OIML TC3/SC4 currently has sixteen participating and seventeen observing members. Germany is acting as the secretariat/convenor for this technical committee.

TC3/SC4 has been developing a new document entitled “Surveillance of utility meters in service on the basis of sampling inspections”. CIML consultation phase was initiated and a first draft was submitted to CIML preliminary ballot for vote by 21 July 2017.

SOFTWARE

OIML TC5/SC2/P3 is responsible for OIML D31 “General Requirements for software controlled measuring instruments. There are currently twenty five participating and twelve observing members. Germany is acting as the secretariat/convenor for this technical committee. A project group was established in October of 2016. A Working Draft was issued in April of 2017 for comments by 31 July 2017.

A project group meeting will be held in Berlin, Germany on September 20 and 21 2017.

SECTION 3 – Future focus - Recommendations

It is recommended that discussions take place on defining a possible role for the Working Group on Utility Measures. If there is a need for this working group, or if a specific project is identified, an appropriate way forward will need to be developed.

Discussions should also take place to identify a possible expert on utility metering.

SECTION 4 – Future focus – emerging issues

Electric Vehicle Charging Stations (EVC Stations)

Recent initiatives have been introduced by some federal departments, provincial governments and regional municipalities to install advanced transportation technologies such as electric vehicle charging stations as part of a growing trend to invest in clean technology alternatives for consumers. Many of the electric vehicle charging stations being installed are designed with measurement systems involving new technology, which has raised questions about the applicable federal measurement statutes administered and enforced by Measurement Canada to which these devices would be subject.

The total number of registered chargers in Canada is approximately 5000 but this number is increasing rapidly and does not include most of the residential chargers. Revenue models for EV charging stations will likely vary from region to region depending on the local regulations pertaining to who can and cannot offer electricity for resale.

Some of the common revenue models are explained below for commercial/public charging operations:

- *Free parking. Free Charging.* — In this scenario, the parking lot operator would install a charging station for the benefit of its customers. An example of this would be a store or hotel installing a charging station as a means to attract customers.
- *Paid Parking. Free Charging.* — In this scenario, the parking lot operator would charge a flat rate for the parking stall which would include power for PEV charging.
- *Flat Rate Charging Fee or Time Based.* — Unlimited charging for a flat fee or charges based on a set rate per minute.
- *Metered Charging* — Users charged per kilowatt hour (kWh) of electricity supplied.

The application of either the *Electricity and Gas Inspection Act* (EGIA) or the *Weights and Measures Act* (WMA) will be largely dependent on the intended use of the measuring device. With respect to EVC stations, Measurement Canada's mandate is restricted to the *Metered Charging Time Based* models.