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# U.S. National Work Group on Measuring Systems for Electric Vehicle Fueling and Submetering

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In August 2012, the National Institute of Standards and Technology (NIST), Office of Weights and Measures (OWM) formed the U.S. National Work Group on Measuring Systems for Electric Vehicle Fueling and Submetering (USNWG EVF&S) to develop proposed requirements for commercial electricity-measuring devices (including those used in sub-metering electricity at residential and business locations and those used to measure and sell electricity dispensed as a vehicle fuel) and to ensure that the prescribed methodologies and standards facilitate measurements that are traceable to the International System of Units (SI). This work is not intended to address utility metering in the home or business where the metered electricity is consumed by the end purchaser and falls under the authority of entities such as the local utility commission.

On August 29, 2012, the USNWG held its first meeting via web conference. During this meeting, USNWG administrative issues and structure were covered.

In November 2012, OWM prepared and distributed draft proposals for method of sale requirements (for inclusion in NIST Handbook 130, Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality) and a device code (for inclusion in NIST Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices) to USNWG members. Based on comments received, OWM prepared updated drafts of these proposals and distributed them at a second USNWG meeting held January 15 - 17, 2013, at NIST in Gaithersburg, Maryland. Of the 39 total attendees, 21 attended in person, while 18 attended online. Attendees included representatives from:

- vehicle charging equipment and electric meter manufacturers,
- state and local weights and measures jurisdictions,
- energy distribution companies and service providers,
- national laboratories,
- technical committees (e.g., the ANSI C12 Chair),
- standards organizations (i.e., UL and NEMA), and
- NIST, OWM and NIST Smart Grid Interoperability Panel.

After reviewing and revising the method of sale proposal during the meeting, the USNWG voted 12 to 1 to recommend to the National Conference on Weights and Measures (NCWM) Laws and Regulation (L&R) Committee that the proposal be presented for voting. The USNWG recognized that some members need to further vet the revised proposal within their organizations, but expects this process to be complete within the next few weeks. Any changes would be forwarded to the L&R Committee in time for inclusion in the NCWM Publication 16. The USNWG will continue its review of the device code at its next meeting, which will be scheduled via web conference in the near future.

During the meeting, a subcommittee to develop methods and equipment needs for field testing electric vehicle (EV) charging devices was also formed.

The USNWG encourages review and input on the draft MOS proposal as well as the draft device code.

Additional information can be obtained from the Technical Advisor, Mr. Marc Buttler, NIST, OWM telephone: (301) 975-4615; e-mail: [marc.buttler@nist.gov](mailto:marc.buttler@nist.gov), or the work group; or the work group Chair, Ms. Juana Williams, NIST, OWM telephone: (301) 975-3989; e-mail: [juana.williams@nist.gov](mailto:juana.williams@nist.gov).