JW INPUT 2021 S&T EVF 3.40-20.1 SMEST d-20.2 DEFN SUBMTR-21.1 NEW EFFECTIVE DATES-21.2 NEW EXEMPTIONS-21.3 REDEFN PRIMARY INDICATIONS-21.4 CAT 2&3-21.5 DC ERROR-21.6 DEFN MMQ

- **NUMBERING:** BE AWARE THERE MAY HAVE BEEN SOME RESHUFFLING OF ITEMS, THESE ARE MY LAST ITEM NUMBERS.
- **INPUT PER YOUR REQUEST:** BELOW IS THE INPUT YOU REQUESTED (01SEP2020) ON ELECTRIC VEHICLE FUELING SYSTEM PROPOSALS f/HB44 3.40.
- **OTHER EVF ITEMS:** PLEASE REMEMBER THERE ARE TWO OTHER ITEMS ON THE AGENDA RELEVANT TO THE EVF CODE, THEY ARE:
    - EVF-19.1 V S.3.5. Temperature Range for System Components. and S.5.2. EVSE Identification and Marking Requirements. (SOURCE: NIST OWM)
    - TIM-20.1 V S.1.1.3. Value of Smallest Unit. (SOURCE: NIST OWM)
- **USNWG SUBGROUP SUBROUP STATUS:** ALL ITEMS NOTED IN THIS INPUT UPDATE AND NOTED IN THE BULLET ABOVE HAVE BEEN DELIBERATED ON IN THE USNWG F/ELECTRIC VEHICLE FUELING & SUBMETERING (EVF&S) – ELECTRIC VEHICLE FUELING EQUIPMENT (EVFE) SUBGROUP (SG); HOWEVER, THAT GROUP COULD ONLY REACH A CONSENSUS TO SUPPORT <u>FOR VOTING</u>: **EVF**-19.1-TEMP, 20.2-DEFN SUBMTR, 21.4 CAT 2&3, and 21.6 DEFN MMQ; **TIM**-20.1 SMEST d

ST ITEM	SOURCE	INPUT
EVF-20.1 D S.1.3.2. EVSE Value of the Smallest Unit	NIST OWM	**NIST OWM SUGGESTS:** DEVELOPING **EVFE SUBGROUP:** DEVELOPING • Since January 2020 there is ongoing work by the EVFE Subgroup to address the appropriate "d" and MMQ as it relates to the time necessary to perform the light load test and the appropriate increment size for a delivery of electrical energy. • On July 7, 2020 the Subgroup assigned the proposal to a new subcommittee Chaired by Dr. William Hardy (Power Measurements, LLC) to fully address the effect of the EVSE's display resolution and MMQ Size on the testing time for AC and DC systems. • The EVFE Subgroup will continue to discuss this proposal, but asks input from all sectors (OEMs, Regulators, Consumer Associations, Operators) on their perspective from an ease of testing standpoint, transaction transparency, rounding accuracy, and for easy comparison to other traditional and alternative vehicle fueling applications (i.e., what should the maximum or fixed increment size be for sales of electrical energy vehicle fuel [in the XXXX.X kWh])?

		PROPOSAL SEEKS TO: Specify values of "d" and other relevant parameters such as MMQ, size of the test load to arrive at a suitable test time. Values set for these parameters should not be outside of the OEM's design and correspond to typical operating conditions for energy deliveries by an EVSE at its rated voltage and 10% of the MDA.
EVF-20.2 V Definitions: submeter (Previously numbered OTH-20.1)	USNWG EVF&S Watt-hour Type Electric Meter (WHE) Subgroup	**NIST OWM SUGGESTS:** VOTING • NIST OWM agrees with the renumbering, renaming and removal of this proposal from the Other Items section of the agenda, and placement of the proposal in the EVFS Tentative Code section of the agenda. The definition of "submeter" is located only in the EVFS Code and nowhere else in the handbook. As presented and edited in the agenda the reader may get the impression that this is a brand-new definition. This definition is being modified and is applicable only to devices addressed in HB 44 3.40 EVFS Tentative Code definitions until such time as the code becomes permanent and then the term will be moved into Appendix D in the latter portion of the handbook. • OWM continues to note there are other instances where what are generally referred to as "submeters" are in use to supply and bill end users for utility-type commodities other than electricity; for example, commercial equipment addressed in NIST Handbook 44 Section 3.33 Hydrocarbon Gas Vapor-Measuring Devices and Section 3.36 Water Meters. • The proposal should correctly reflect changes to the definition of submeters that is currently in NIST HB 44 Section 3.40 as follows: **submeter.** – A meter or meter system downstream of ~~furnished, owned, installed, and maintained by the customer who is served through a utility owned~~ the master meter. [3.40] • Questions have been asked about the use of the term "master meter" in connection with electrical energy metering and Block 1 items which address test apparatus standards and terminology. The term "master meter" is also applicable to utility (gas, electric, and water) meter applications and the term is used in the utility industry and

		in utility regulatory language. The term also appears in the definitions in HB 44 3.40 EVFS Code but in reference to a *watthour-type electric meter* being used to measure billable electrical energy provided by a power company. This metering is a separate measurement from "submetering" by a landlord or similar entities that takes place downstream of the master meter. **EVFE SUBGROUP:** VOTING At the January 7, 2020 meeting of the EVFE Subgroup voted and agreed to the modification of the definition of "submeter" and recommended the NCWM S&T Committee that this item be designated as a Voting Item and the proposed changes shown in the Item Under Consideration be recommended for adoption at the July 2020 NCWM Annual Meeting. **PROPOSAL SEEKS TO:** Clearly distinguish where the responsibility for such equipment begins and ends is essential. Being able to make this distinction may also be useful to ensure installations are not interfaced with other equipment that might have a detrimental effect on the normal operation of an EVSE or it's metrological integrity.
EVF-21.1 A.1. General	INDUSTRY[1]	**NIST OWM SUGGESTS:** • As worded the proposal is: (1) unclear on the exact type of use that entitles an EVSE to exemption from all code requirements and (2) in conflict with General Code paragraph G-A.6. Nonretroactive Requirements. The proposal wording states "EVSE used for commercial purposes and put into service" on or before January 1, 2022 (AC systems) and January 1, 2023 (DC systems). The commerce and service use aspects of a device are one in the same. Does the submitter mean to use the word "or" rather than "and." The General Code specifies nonretroactive requirements are enforceable on or after the effective date for devices used in noncommercial applications which are then placed into commercial use after the effective date. • The proposal, if adopted, would also permit exemption from the entire code for up to 10 years from the date the EVSE is placed into service. It is conceivable that a device (AC system) installed December 31, 2021 will be permitted to operate without having to comply with HB 44 3.40 requirements for its indications, receipts, accuracy, security for metrological features, markings, etc., until December

		31, 2031 should a jurisdiction elect to inspect and test these devices in order to approve them for commercial use. • Some "phasing in" might be palatable. We anticipate opposition to no limits on the "phasing in" process. At some point, the requirements need to be made retroactive. What concrete issues can be cited to counter opposing arguments for a 10-year window for these systems? Perhaps this is because all other traditional and alternative vehicle fueling applications comply with requirements. • To suggest a blanket exemption without care or thought to specific requirements is inappropriate because it means an entire generation of devices would be operating with no legal metrology requirements, including accuracy for the lifetime of those devices, to do so does a disservice to the electric vehicle refueling industry. • At least one company has stated their equipment is able to comply with the existing requirements; delaying the effective date of the entire code may negatively impact that company's ability to request approval by a weights and measures jurisdiction for equipment that is currently installed. • OWM continues to believe that, should individual requirements in the code be creating compliance issues, that these requirements should be addressed by adding nonretroactive/retroactive dates to those specific requirements individually rather than apply such dates to the code in its entirety. There is less reluctance to adopting a phase in date that includes an accompanying sunset date. Providing the stats on the population of devices that will exist with no requirements will be important. • The submitter needs to consider that, even if an effective date is added to an entire device-specific code, Section 1.10 General Code requirements will still apply. • To counter opposing arguments the community typically asks for updated stats, in this case what is the ratio of AC and DC EVSEs and average costs to retrofit them; however, the combined effect of all five proposals will result in multiple new designations and classes of EVSEs permitted exemption from handbook requirements. It may be difficult to determine how large the population of

		exempted devices will be compared to those that must comply. • Having no requirements is not an appropriate course of action. This would exempt an entire class of devices while imposing requirements on competing equipment. Proposing a non-retroactive status for select requirements that pose challenges is a more viable option. • Are the "existing installed devices" representative of multiple generations of equipment and remanufactured EVSEs in commercial service? • There will be concerns particularly with there being no notice to consumers that purchasing electricity from one site does not provide the same accuracy assurance that is provided from another site. Multiple tolerance tiers frustrate value comparisons. Consequently, what provisions will be in place to identify a system's accuracy? • An additional concern is that companies are spending money to comply yet competing with a population of existing equipment. • The description of the marketplace as having "existing stations that often do not include an integrated meter" might be an indication that available EVSEs placed into commercial use before the enforcement date will have limited to no legal metrology components. • If the number of stations is growing that are outfitted with EVSEs never designed to requirements published in 2015 and that number will continue to grow up to and by the enforcement date then today's estimated numbers of EVSEs will not reflect the size of that generation of equipment in commercial use in the marketplace. • The States' legislative process for adoption of NIST Handbook 44 vary so for some it will be later than January 1, 2023. Which generations of equipment will be installed those states? • If there are concerns about specific provisions in the code, these need to be addressed by making specific sections "nonretroactive," not by exempting the device in entirety. This paragraph should then reference specific enforcement dates. The EVFS codes have been available for five years

		(and was under development by regulators and industry for three years prior to that) and that should be factored into any timeline and justification for enforcement dates. • The potential impact of allowing some devices to operate with no checks and balances (and thereby, creating an unlevel playing field) could have a significant impact on the acceptance of consumers for this type of alternative fuel. • The USNWG EVF&S has been widely advertised and all stakeholders (including EVFS OEMs) encouraged to join. Many companies have been an integral part of the development of these requirements and have expended considerable funds to bring their equipment into compliance; these companies would be placed at a competitive disadvantage if a large group of competing devices were to be exempted from the requirements. Inconsistent marketing practices can frustrate value comparisons among competing devices, creating confusion on the part of consumers and affecting their acceptance of products/services offered through those devices. **EVFE SUBGROUP:** UNDER DISCUSSION IN 2020 WITH NO RECOMMENDATION AT THIS TIME **PROPOSAL SEEKS TO:** Include two new subparagraphs in the application section of the EVFS Code to specify all code requirements do not to apply for a period of 10 years from the date an EVSE *used for commercial purposes and put into service*. This exemption applies to EVSEs before the dates of: (1) January 1, 2022 for AC systems and (2) January 1, 2023 for DC systems.
EVF-21.2 A.2. Exceptions	INDUSTRY[1]	**NIST OWM SUGGESTS:** • All commercial measurement transactions are subject to weights and measures regulations. • That is, if a charge is being assessed for goods or service, the devices used to determine that charge are considered "commercial" in most states and are not exempt from weights and measures regulations. This applies whether the station is open to the general public or only available to certain customers. The key is whether there is money changing hands for the measured product or services.

		• If there are no charges assessed for goods or services, for example, a company uses an EVSE to fuel its own fleet of vehicles, then these devices do not fall under the scope of NIST Handbook 44. This is already addressed in the Application section of Section 1.10. General Code and in the weights and measures laws or regulations of most states; thus, the proposal to exempt devices which are not used to make a measurement on which a charge will be based, the language is unnecessary. • The USNWG that developed the EVFS code was asked, at the time the current tentative code was proposed for adoption, to consider whether or not there was a need to propose exemptions for specific provisions in the code for "contract" sales such as fleet sales. However, exempting commercial applications from the entire the code is inappropriate. Note also that no suggestions were made for exceptions at that time. • Jurisdictions that adopt NIST Handbook 130 require kWh as the method of sale. • Even exceptions to select paragraphs in NIST HB 44 for applications such as "contract sales" or "fleet sales" must still comply with method-of-sale requirements. ▪ "Contract" sales or sales between two parties are still commercial transactions and, in most W&M jurisdictions, are subject to W&M regulation. ▪ Some misconstrue the reference to "contract sales" as allowing a blanket exemption from weights and measures requirements. ▪ Most states would require a contract (even if just between two people and even if it's just one time) to comply with legal requirements; and this is the case, whether or not the regulatory agency chooses to routinely regulate the individual device or application. Thus, a contract can't be used to avoid compliance with legal metrology requirements (such as method of sale, device requirements, transaction and pricing transparency and accuracy, etc.). Sometimes this is stated as "a contract can't be used to circumvent the law." While this sounds a little austere, it's designed to ensure that not only are both the buyer and the seller

		protected, but also that companies are given a level playing field and can fairly compete. • Rather than proposing a blanket exemption to an entire code, it is preferable to identify specific paragraphs for which an exception is needed. Justification will still be needed to support the argument for why a specific exception or phase-in period is needed, particularly given the statements made by at least one company (at the July 7, 2020 EVFE Subgroup meeting) indicating being able to meet the existing requirements. ▪ Note when "exceptions" have been permitted for categories of devices such as "contract sales" or "fleet sales," those exceptions preserve the requirement for providing full and transparent information to buyer and seller, but allow for the requirement to be met in an alternate way. ▪ To help illustrate how these kind of exceptions might typically appear, in paragraph UR.3.3. Computing Device in Section 3.30 the Liquid-Measuring Devices Code includes multiple exceptions and conditions. There are a number of other paragraphs with "exceptions" in that code which are simple "exceptions" for fleet and contract sales, but this one provides an example of how exceptions are sometimes accompanied by conditions which help ensure transparency in the transaction. ▪ To summarize, there can be exceptions provided which allow for alternatives such as display of information, invoicing practices, etc. for "contract" sales. However, these exceptions simply allow the information required in a legal metrology transaction to be provided in a different fashion; the overall transaction still has to be transparent and accurate and ensure equity to buyer and seller. And these exclusions need to be added to specific sections of the code and the argument made for satisfying the requirements of the measurement transaction in an alternate way. ▪ It's important to keep in mind that these requirements are designed to help ensure a level playing field and create an environment for fair competition. While the companies "at the table" discussing these requirements are striving to ensure accurate and equitable transactions, these provisions have to ensure that those not at the table or

		devices yet to be developed are held to the same standard and provide the same accurate and transparent transaction. **EVFE SUBGROUP:** UNDER DISCUSSION IN 2020 WITH NO RECOMMENDATION AT THIS TIME **PROPOSAL SEEKS TO:** Establish additional exceptions to the requirements in HB 44 3.40 EVFS Tentative Code specifically EVSEs: (1) available for "private use" at a place of residence to include the inhabitants of multiunit dwellings; (2) installations at worksites used by employees; (3) operating in locations not open to public access; and (4) used exclusively in fleet sale and other price contract applications.
EVF-21.3 S.1.2. EVSE Indicating Elements, S.2.4.1. Unit Price, S.2.5. EVSE Money-Value Computations., S.2.7. Indication of Delivery	INDUSTRY[1]	**NIST OWM SUGGESTS:** ▪ The proposal includes text that reads "Examples of these devices would be, *but are not limited to*, smartphones, tablets, or laptop computer equipped with digital display" which is a concern since laundry lists are not the norm in code requirements. The proposal could be interpreted as recognizing an endless list of auxiliary devices for use as the primary indications. Currently there are vehicles with laptops (monitor size) mounted to the dashboard (aka VUI vehicle user interface) that perform a multitude of software-based functions to include communicating with the EVSE during charging. ▪ Concern with measuring devices and other vehicle technology that erroneously provided the official with data not within compliance. ▪ When the term "face" was defined the developers of the code were regulating dispensers installed on an island with two fueling nozzles where the customer could drive up and park on either the front or back side of the dispenser. In other stations multiple dispensers might share a single overhead display that automatically provided an indication for the dispenser in use. It is better not to strikeout features that do not apply to new technology but still serve a purpose. A better option is to fully address the new technology at hand and cast a wide net to comprehensively address the latest compatible, appropriate, and suitable technology.

		▪ For those that take a longer period of time to charge, providing for a customer display that can be viewed remotely from the device is a definite benefit. However, that doesn't argue for eliminating the primary display from the device or an adjacent display terminal. ▪ The fact that these displays become the primary displays means their accuracy and clarity become even more critical to the measurement transaction. ▪ "Mobile display apps" may provide the best opportunity for allowing the referenced desire for innovation since there is a mechanism for reviewing the display provided by the app and ensuring its operation provides the necessary information. The vehicle user interface, on the other hand, is problematic. They can vary from manufacturer to manufacturer and will undoubtedly change from year to year. They are not included in type evaluations nor are they realistic for regulatory officials to control to ensure clarity, accuracy, and transparency in the measurement transaction. The vehicle interface should not be provided as an option to satisfy the requirements for the primary display. ▪ The EVSE must be capable of properly communicating the information to these alternative mechanisms. ▪ If transaction information is provided in more than one location be aware that there are General Code requirements that specify that indications of like value must agree. (see paragraph G S.5.2.2.) ▪ OWM notes that, for the proposed changes under this proposal there is not a reference to including a provision for displaying quantities and charges for "time" (for those devices in which a charge is assessed for parking time in addition to the charge for electrical energy). *OWM Comments on Proposed Changes to S.1.2. EVSE Indicating Elements:* ▪ California DMS considered and rejected the possibility of exempting EVSEs from having a primary indicating element in a November 2019 "Final Statement of Reasons." Among other points made, CA noted "it is impractical, unfeasible, and uneconomical for EVSE manufacturers or owners/operators to require the purchaser to provide the primary indicating element to initiate a transaction and view the required indicating information." CA also noted

		the manufacturer would be required to submit on-dash displays for type evaluation, which OWM believes would be impractical. ▪ OWM agrees with the CA assessment and conclusion, including the point that this would not preclude the consideration of other options in the future. ▪ Other options such as those noted in the proposed "exception" are already permitted as "supplemental" displays. ▪ If the laptop option would include the "vehicle user interface" display on the dashboard of the vehicle being fueled? OWM has the following concerns regarding this proposed approach: • If no primary display is provided on or adjacent to the EVSE, what means will officials use to conduct inspections? For example, if the dashboard of a vehicle is used to display transaction information. • How will the visibility and clarity of the primary display be verified since this can vary from vehicle manufacturer to vehicle manufacturer? • How would the overall provisions of the General Code regarding legibility, clarity, appropriateness of indications be applied when there is no display unique to a given EVSE on-site? • While "mobile display applications" have been permitted in the Transportation Network Measuring Systems Code as equivalent to the primary display, in that application, the measurement is not taking place in a device on site. In this case, the measuring device, the EVSE, is on site and there needs to be a primary display that will provide clear, legible, and verifiable transaction information in an appropriate format. Additionally, how would a customer verify that the measurement information shown in a mobile display represents the specific EVSE being used to fuel the vehicle? *OWM Comments on Proposed Changes to S.2.4.1. Unit Price:* • Also see OWM's comments under the proposed changes to S.1.2. EVSE Indicating Elements regarding concerns over the

		use of electronic remote displays such as vehicle user interface or mobile display application. • OWM questions if the submitters might be attempting to address concerns about the need to display a single unit price in the case of fleet or contract sales which may set the pricing conditions as part of the contract. If this is the source of the concern, an alternative might be to propose an exemption for "dispensers used exclusively for fleet sales, other price contract sales…" where requirements would be met in an alternate way. *OWM Comments on Proposed Changes to S.2.5. EVSE Money-Value Computations:* • Also see OWM's comments under the proposed changes to S.1.2. EVSE Indicating Elements regarding concerns over the use of electronic remote displays such as vehicle user interface or mobile display application. *OWM Comments on S.2.7. Indication of Delivery:* • Also see OWM's comments under the proposed changes to S.1.2. EVSE Indicating Elements regarding concerns over the use of electronic remote displays such as vehicle user interface or mobile display application. • CA DMS suggested changing the term "show" to "display." Should the Subgroup determine this is an suitable change, OWM believes this is an appropriate change. • If clarifying language is needed, OWM would propose the following: S.2.7. Indication of Delivery. - The EVSE shall automatically ~~show~~ <u>display</u> on its face the initial zero condition and the quantity delivered (up to the capacity of the indicating elements). **EVFE SUBGROUP:** UNDER DISCUSSION IN 2020 WITH NO RECOMMENDATION AT THIS TIME **PROPOSAL SEEKS TO:** Codify a list of new options that can be recognized as primary indicating elements which are not necessarily located on the face of the EVSE nor an integral part of the device; specifically "devices equipped with a means to establish a wired or wireless secure connection to a personal remote/mobile device for display purposes." Examples of these devices would be, *but are not limited to*, smartphones, tablets, or laptop computer with digital display.

EVF-21.4 S.3.3. Provision for Sealing; CAT 2 & CAT 3	NIST OWM (USNWG EVF&S-EVFE SG)	**NIST OWM SUGGESTS:** VOTING • To date, these discussions (as recently as Fall 2019) have been met with resistance from officials who have limited or no access to reliably being able to obtain electronic forms of audit trail information. However, this proposal may have addressed past concerns expressed by officials since the modification to the sealing requirement specify both the printed and/or electronic audit trail record(s) will be easily accessible and in a usable format at the time of inspection. • There are already requirements in place that require the audit trail has to be decipherable and readable and readily understandable, so that information is usable by the inspector. These current requirements also apply to the size of the display, accessibility, and readability of electronic versions of an audit trail record provided through a device. **EVFE SUBGROUP:** VOTING At the conclusion of its August 10, 2020 meeting deliberations the Subgroup agreed to a reworked new industry proposal that modifies Table S.3.3. sealing requirements for Category 2 and Category 3 EVFSs to recognize the required audit trail record for these systems may be provided electronically in lieu (place) of or in addition to a hard copy at the time of the official's inspection. The Subgroup agreed the proposed modifications to Table S.3.3. should be part of the EVFS Code and recommends that the U.S. Regional and NCWM S&T Committees support this proposal move forward as a Voting Item for adoption at the July 2021 NCWM Annual Meeting. **PROPOSAL SEEKS TO:** In lieu of an electric vehicle fueling system providing a printed copy of its audit trail event records, it should be permissible for those systems that feature either a Category 2 or Category 3 method of sealing metrological features to provide that information in an electronic format during an inspection by weights and measures officials.
EVF-21.5 T.2. Load Test Tolerances	INDUSTRY[1]	**NIST OWM SUGGESTS:** • Are there existing devices that can meet the current requirements? If so, what are the justifications for

		proposing the relaxing of the tolerances, particularly without a sunset date? • There is less reluctance to adopting a phase-in date that includes an accompanying sunset date (i.e., a retroactive). Again, providing the stats on the population of devices that will exist with no requirements will be important. • Having no requirements is a bit alarming vs. having non-retroactive status for select requirements. • Are the "existing installed devices" representative of multiple generations of equipment and remanufactured EVSEs in commercial service? • How many devices are out there that would be put into use and competing with AC devices, thus creating a competitive advantage for DC devices? • There will be concerns about a dual tolerance structure. Particularly with no notice to consumers that purchasing electricity from one site does not provide the same accuracy assurance that it does from another site. Multiple tolerance tiers frustrate value comparisons. Consequently, what provisions will be in place to identify a system's accuracy? • If these proposed changes are to be pursued, an accompanying proposal requiring the marking of accuracy level must be included to alert consumers to the difference in accuracy levels. • Some phasing in might be palatable. However, OWM anticipates opposition to no limits on the phasing in process. At some point, the requirements need to be made retroactive. What concrete issues can be cited to counter opposing arguments for a window for phasing in DC systems? • An additional concern is that companies are spending money to comply yet competing with a population of existing equipment. Having said that, how big is that population exactly? • This is not a typical practice to be done on an unlimited basis. This would be more palatable from both a competitive and enforcement standpoint If there are

		specific technical issues, etc. that necessitate this on an industrywide basis. What would a reasonable compromise to address strong opposition to the proposal? **EVFE SUBGROUP:** UNDER DISCUSSION IN 2020 WITH NO RECOMMENDATION AT THIS TIME **PROPOSAL SEEKS TO:** For devices installed prior to January 1, 2033 increase the acceptance and maintenance tolerances for the no load, starting load, light load, and full load tests of EVSE DC systems 250 % (2.5 % and 5.0 %, respectively). For EVSE DC systems installed after January 1, 2033 the applicable tolerances will be the same as the current code 1.0 % acceptance and 2.0% maintenance.
EVF-21.6 Definitions: minimum measured quantity (MMQ)	NIST OWM (USNWG EVF&S-EVFE SG)	**NIST OWM SUGGESTS:** VOTING • In 2014 the USNWG on EVF&S developing HB 44 Section 3.40 EVFS-Tentative Code inadvertently omitted the term MMQ from the code's Definitions. The term is applicable to these systems because it is a unique marking requirement and its value is used in the determination of test loads and tolerances. • In an anticipation of upcoming EVSE type evaluations and field enforcement action by U.S. officials the term MMQ needs to be defined since it is currently cited in the EVFS design, test notes, and tolerance requirements in NIST Handbook 44 Section 3.40 EVFS Tentative Code. • NIST OWM concludes the omission could best be remedied by a vote at the July 2021 NCWM Annual Meeting to adopt the proposal for including the term MMQ in the Definitions of NIST HB 44 3.40 EVFS - Tentative Code. **EVFE SUBGROUP:** VOTING At the conclusion of its August 10, 2020 meeting the Subgroup acknowledged the oversight on omitting the definition of "minimum measured quantity (MMQ)" from the EVFS Code. The Subgroup agreed the definition should be part of the EVFS Code and recommends the U.S. Regional and NCWM S&T Committees that this item be designated as a Voting Item for adoption at the July 2021 NCWM Annual Meeting. **PROPOSAL SEEKS TO:** Define the term "minimum measured quantity (MMQ)" inadvertently omitted from the handbook in 2014. The term has special meaning for electric vehicle fueling

		systems and is missing from the NIST HB 44 3.40 EVFS - Tentative Code's appendix of definitions.

[1]ABB, BTCPower, Electrify America, Edison Electric Institute, EVConnect, EVgo, Greenlots, Rivian, Siemens, Tesla, Tritium