

October 6, 2021

Mr. Alan Walker
Chair, Specifications and Tolerances Committee
Southern Weights and Measures Association

RE: Item EVF-21.1 D. A-1 General and Item EVF-21.5 Load Test Tolerances – Developing Status – Proposal Update

Dear Chair Walker and Members of the Specifications and Tolerances Committee:

On behalf of ABB, Electrify America, EVgo, Greenlots, Rivian, Siemens, Tesla, and Tritium (the Joint EV Submitters), we are providing the Southern Weights and Measures Association (SWMA) Specifications and Tolerances (S&T) Committee with *an update regarding the status of EVF-21.1 D.A-1 General and EVF-21.5 Load Test Tolerances which were designated with Developing Status by the National Conference on Weights and Measures (NCWM) S&T Committee during its July 2021 Annual Meeting. The Joint EV Submitters respectfully request that Item EVF 21.1 and EVF 21.5 maintain developing status per the S&T Committee recommendation and direction provided at the 2021 Annual Meeting.*

Item EVF 21.1 and EVF-21.5 are two important items under consideration for potential modification to the tentative code for electric vehicle (EV) fueling systems in Handbook 44, Section 3.4. The Joint EV Submitters initially submitted these proposals in August 2020 for consideration at the 2020 Regional meetings of the National Conference on Weights and Measures (NCWM). After recommendations provided during the Regional meetings that there is merit in considering the two proposals, there was discussion of these items during the 2021 Interim and Annual Meetings of the S&T Committee as reflected in the Committee Report. The Committee recommended that these items have Developing Status, and it gave direction to the submitters to continue to develop these items with stakeholders and jurisdictions.

Given the Joint EV Submitters are currently working on incorporating the feedback received during the 2020 Regional meetings, the January 2021 Interim Meeting, and the July 2021 Annual Meeting, we respectfully request the two proposals are maintained as Developing Status as was recommended by the S&T Committee during the Annual Meeting. Below, we provide brief comments regarding the items raised for modification during the previous meetings and how we plan to address these issues.

EVF 21.1 – D.A-1 General – In Development Status Update

The purpose of item EVF 21.1 is to provide clarity on how Handbook 44, Sec. 3.4 tentative code will apply to existing electric vehicle supply equipment (EVSE) that are in the ground before the tentative code becomes effective by identifying which elements are non-retroactive. During the Regional meetings as well as the Interim and Annual Meetings the discussion included questions regarding whether or not it is most appropriate to provide an exemption from all provisions of Section 3.4 for existing stations or whether a more targeted exemption for certain sub-sections of Section 3.4 would be most appropriate. Furthermore, there was discussion whether a 10-year phase in period is most appropriate.

In the Form 15 justifications provided by the Joint EV submitters, the potential impact for compliance of existing stations was articulated in detail. During the Interim Meeting, the Joint EV submitters indicated that a pathway for providing more specific exemption language targeting specific areas of Section 3.4 may be appropriate and that there is a willingness to evaluate what the correct timeframe, whether 10 years or sooner, for implementation for existing stations should be. The Joint EV Submitters are currently

incorporating this feedback from the Committee meeting and NIST Office of Weights and Measures (OWM) into modifying the proposal and look forward to providing an updated proposal to the Committee.

EVF 21.5 – Load Test Tolerances – In Development Status Update

The purpose of item EV21.5 is to recommend the creation of separate metering requirements for DC electric vehicle supply equipment (EVSE) due to significant technology differences and challenges between AC and DC metering systems. Feedback received during the Regional meetings and the Interim and Annual Meetings included better understanding the appropriate timeline for distinguishing between AC and DC system tolerance levels as well as providing additional supporting data. The Joint EV Submitters have been made aware of a draft study by Argonne National Lab, and which was originally requested by several EV charging providers and manufacturers, that focuses on the accuracy of DC metering technology being developed as well as gaps regarding certification and traceability. While the final study has not been released, initial assessments indicate that DC meters that can meet more stringent tolerance levels, are starting to become available today. As indicated in the draft study, however, commercial availability and scalability of these meters is still being developed. Further, significant challenges remain with testing these devices and accessing field testing devices, in particular outside a lab environment. The draft study is certainly a helpful data point to evaluate when analyzing load test tolerances in the tentative code, but it needs to be further contextualized to identify remaining gaps, including for existing equipment that is in the ground today and cannot achieve the more stringent tolerance levels.

During the Interim Meeting, the Joint EV Submitters agreed it would be helpful to further discuss the timeline associated with this proposal and a willingness to provide further underlying data to support the distinction between the technology available for AC and DC metering systems. The Joint EV Submitters are currently incorporating this feedback into modifying the proposal and look forward to providing an updated proposal to the Committee that incorporates its initial feedback.

Next Steps and Maintaining Developing Status

Given the Developing Status and the direction to continue to modify these proposals as they each have merit, the Joint EV Submitters have started working with stakeholders and jurisdictions to further modify the two items. We take seriously the feedback from the national S&T committee and commenters at the previous meetings, and we are working diligently to refine both the substance of our proposals and the justifications for them. The Joint EV Submitters do not have specific revised language to share with the SWMA Committee yet, precisely because we want to provide a revision only once it is fully ready for consideration. As a next step, the Joint EV Submitters plan to share revised language with the NIST electric vehicle supply equipment (EVSE) subcommittee for consideration and discussion. Once the NIST EVSE subcommittee has had an opportunity to provide input, the Joint EV Submitters plan to work with NIST OWM staff to circulate the revised proposals with the NCWM S&T Committee and the regional associations for additional feedback.

At the same time, the Joint EV Submitters greatly appreciate the continued status of these items as “developing,” so that further work in these areas can build on the progress thus far rather than restarting the process with brand-new proposal submissions. The Committee did not, of course, consider the proposals to be currently ready for NCWM approval, but that is exactly why the Committee recommended that they go forward for more development. We ask that SWMA allow that development to continue, within the existing framework.

Therefore, the Joint EV Submitters respectfully request that the Item EVF 21.1 and EVF 21.5 maintain developing status per the S&T Committee recommendation and direction provided at the 2021 Annual Meeting. In addition to these items, there remain other critical issues requiring resolution in the tentative code.

The Joint EV Submitters would be happy to provide further comment on the status of further modifying the two proposals after the SWMA Annual Meeting if the Committee has questions it would like to see addressed.

Sincerely,

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