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June 15, 2015

Ms. Brenda Edwards
U.S. Department of Energy
Building Technologies Office, MS EE-5B
1000 Independence Avenue, SW
Washington, DC 20585-0121

Re: NOPR for the Conversion Factor for Test Procedures for Consumer and Certain Commercial Water Heaters
Docket number: EERE-2015-BT-TP-0007; RIN1904-AC91

Dear Ms. Edwards:

These comments are submitted by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) in response to the U.S. Department of Energy's (DOE) notice of proposed rulemaking (NOPR) on the Conversion Factor for Test Procedures for Consumer and Certain Commercial Water Heaters appearing in the *Federal Register* on April 14, 2015 (80 Fed. Reg. 20,116). These comments supplement the comments submitted by AHRI on May 14, 2015 and June 12, 2015.

The NOPR setting forth the proposed conversion factor is part of DOE's fulfillment of the requirements of the American Energy Manufacturing and Technical Corrections Act (AEMTCA) Pub. L. 112-210, which amended the Energy Policy and Conservation Act (EPCA) and required that DOE publish a final rule establishing a uniform efficiency descriptor (UED) and accompanying test methods for covered water heaters in order to replace the energy factor descriptor and thermal efficiency and standby loss descriptors with a uniform efficiency descriptor.[1] It also required that DOE develop a mathematical conversion factor to convert the previous descriptors to the new energy descriptor to be established by DOE. Because the Congressional intent was to merely replace the previous descriptor with the new uniform efficiency descriptor, the statute specifically requires[2]:

> (iii) EFFECT ON EFFICIENCY REQUIREMENTS. – The conversion factor shall not affect the minimum efficiency requirements for covered water heaters otherwise established under this section.

As is clear from the statutory text, the very purpose of the conversion factor is to provide an equal transition from the old descriptors to the new, with no effect on the stringency of the efficiency standards. This transition has two parts. First, to provide a method for converting

[1] 42 U.S.C. § 6295(e)(5).
[2] 42 U.S.C. § 6295(e)(5)(E)(iii).

existing ratings, and second to convert the April 2015 water heater standards equations to the new metric. Because the converted standard is based upon the conversion factor, both parts of the transition must meet the statutory requirement of no effect on the existing energy standards.

AHRI fully appreciates the difficult and complex task that Congress assigned to DOE and the limited timeline provided by the statutory requirements. However, the statutory timeline cannot override the substantive statutory protections that Congress also provided. Those protections take on heightened importance given that the industry just experienced an enormous change due to the efficiency standards that became effective on April 16, 2015.[3] Because of those changes, and the statutory requirement to develop a conversion factor that does not affect those standards, it is imperative that DOE take the time and effort to conduct the testing and analysis necessary to ensure that those statutory requirements are met.[4] AHRI acknowledges that due to the complex nature of this task, DOE did not meet the statutory deadline of December 18, 2013, for publication of the test procedure final rule. As that rule was published six months[5] after the statutory deadline, it is understandable that the other statutory deadlines may be similarly delayed.[6] What is of primary importance is that the substantive requirements are met as DOE moves forward in an adjusted timeframe. The initial delay in meeting the specified dates cannot be the basis for failure to meet EPCA's substantive provisions.

In addition to timing, a second complicating factor that requires DOE to recognize substantive concerns vs. timing is the conflicting requirements and timeframes for compliance with the new test procedure via the conversion factor and the Federal Trade Commission (FTC)'s existing requirements regarding EnergyGuide labels and manufacturer representations. The NOPR's proposed resolution of the identified conflict between FTC labeling requirements and EPCA Section 6293(c) will not adequately resolve manufacturers' concerns. DOE is requiring certification reports for new models filed post July 13, 2015 to include ratings based upon the UED test procedure. However, FTC has not yet amended the EnergyGuide requirements. Thus, to comply with EnergyGuide, manufacturers also must have EF based information. For existing models updated certification reports containing UEF ratings will not be required until May 1, 2016. But to comply with the information requirements of EPCA under section 6293(c), manufacturers must provide the market with UEF based information. FTC enforces both the EnergyGuide information and general manufacturer claims regarding their product under the unfair and deceptive trade practices provisions pursuant to section 6303(c). If manufacturers display information not in conformance with federally mandated test procedures, this may be considered a deceptive trade practice.

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[3] 75 Fed. Reg. 20,112.

[4] For example, DOE notes that "DOE agrees in principle with the HTP comment that the most exact approach would be an empirical analysis using a curve-fitting method and actual test data" but concludes that the approach could not be feasible tested and implemented within the time constraints set forth by AEMTCA. 80 Fed. Reg. 20,122. AHRI notes that DOE did not find the time constraints compelling in issuing the test procedure final rule, which was issued six months after AEMTCA's required timeframe.

[5] Uniform Efficiency Descriptor Final Rule (79 Fed. Reg. 40,541) (July 11, 2014).

[6] AHRI also wishes to express its appreciation that despite these timing concerns, DOE has responded to our requests for additional meetings to discuss Federal Trade Commission (FTC) labeling issues, our request for an extension of the initial NOPR comment deadline, and our request to hold a public meeting to discuss the NOPR and review additional testing information.

This rulemaking on proposed conversion factors for translating current energy factor and capacity ratings (first hour or maximum gallons per minute) to equivalent values reflecting the uniform efficiency descriptor test procedure must also be considered in the proper context. The purpose of this conversion factor rule is to allow manufacturers more time to manage the burden of retesting all their models of covered water heaters while transitioning to the new metrics determined by the UED test procedure. This entire effort is only changing the scale of comparison. Per the statutory requirements, the conversion factor rule will not make water heater models more or less efficient. It will not result in any energy savings for the nation and it is a temporary measure with a useful life of one year.

As AHRI noted in our May 14, 2015 comments, which were further discussed at the May 28, 2015, public meeting, the conversion factors which will provide correct calculations that satisfy the key requirement of having no effect on the existing efficiency standard cannot be finalized by July 13, 2015. To proceed with implementing the UED test procedure on July 13, 2015, without the existence of appropriate conversion factors would violate the statute and serve no purpose except to further confuse an already complex situation. For example, new models introduced after July 15, 2015 must be tested in terms of UEF. However, since the conversion factor is the basis for the calculation of the UEF standards, until the conversion factor is final, there will be no standard to test to, and manufactures of such products will have no idea whether their tested products are compliant with DOE requirements. We believe that it is in the best interests of all stakeholders, and in line with the statutory intent, for DOE to recognize the current dilemma and take action to officially postpone the effective date of the UED test procedure. Since other deadlines involving this rulemaking have already been missed and delayed, fundamental fairness warrants similar flexibility regarding the test procedure effective date.

To some extent, DOE acknowledged these issues at the public meeting, during which DOE noted that manufacturers would not have to "re-certify" equipment prior to the May 2016 certification date, and that even after that date, until July 11, 2016, both EF and UEF may be provided in the certification. Given that position, there is no justification for any rush to complete the conversion factor before it is fully tested and verified to result in no change to the existing April 16, 2015, water heater standards. It is therefore AHRI's recommendation that the UED test procedure effective date be postponed and coordinated with the process to revise the FTC labeling regulations to incorporate the ratings determined by the UED test procedure, and that DOE provide enforcement guidance to that effect.

Conversion Factor Requirements

The key parameters governing the determination of the conversion factors are:

- The conversion factor cannot reclassify as "non-complying," those models complying with the current DOE minimum efficiency standards.
- The conversion factor should maintain the relative difference of "better-than-maximum" models to the minimum efficiency standard level.
- The conversion factor should approximate the actual values that will be determined when the model is tested to the UED test procedure.

As mentioned above, AHRI's water heater manufacturer members have just gone through the process of redesigning and restructuring their residential water heater lines to comply with the revised minimum standards that went into effect in April. Due to the significant time, effort, and cost of this redesign and retooling, AHRI members are vitally interested in having conversion factors that fit these parameters to the greatest extent possible.

Testing

The conversion factors proposed in the NOPR do not meet the necessary requirements, in part because the testing that DOE conducted does not cover the range of models that need to be tested in order to determine a proper conversion. In some cases, there are also errors in the test results.

In comments submitted to DOE on January 21, 2014, AHRI provided a preliminary matrix of the different types of water heaters that should be tested to determine proper conversion factor(s). We noted that the matrix was a work in progress. Furthermore, it was developed without the knowledge of the final version of the UED test procedure. The testing done by DOE did not cover all the types nor adequate samples for some types identified in the matrix. Before the conversion factor rulemaking is finalized, AHRI should have the opportunity to reconsider that matrix in view of the testing already done by DOE, AHRI and its members. It is essential that the proper representation of currently available water heaters be tested to support the determination of correct conversion factors.

In several places in the NOPR DOE states its intent that the conversion factor rule will not change products currently complying with the applicable minimum efficiency standard to products not complying with the standard after the conversion factor has been applied. This is as required by Section 323(e)(3) of EPCA. For example, on page 20119 of the NOPR DOE states, "The proposed standards based on UEF are neither more nor less stringent than the existing standards for consuming water heaters based on energy factor (as amended by the April 2010 final rule."[7] However, DOE provides no analysis of its own testing data to support this conclusory statement. The data AHRI has presented to DOE, as well as DOE's own test data, shows that in some cases the proposed converted minimum UEF standards are more stringent and will render current complying models non-compliant. This violates the "shall not affect the minimum efficiency requirements" language of section 6295(e)(5)((E)(iii), and the grandfathering provisions of section 6293(e).

While the proposed UEF conversion allows almost all current models to comply with proposed UEF minimums, *tested* UEF values do not align with those converted values. Thus, at the point in time when manufacturers certify via testing, or at the point of DOE enforcement, some products will fail to comply that are currently in compliance, and some will be able to comply although they currently would fail. Since all models eventually will be rerated to an UEF based on testing to the UED test procedure, the accuracy of the converted UEF rating relative to the tested UEF rating is critical. When the converted UEF is used manufacturers must be confident

[7] 80 Fed. Reg. at 20,119. There are similar statements at pages 20,138 and 20,139 of the NOPR, but those statements fail to account for the effect of the conversion factor compared to the actual tested UEF values, which clearly do show a change in required efficiency levels.

that it approximates the result which will be obtained from testing. Also, consumers who make a purchase decision based on a converted UEF rating should have some confidence in the accuracy of that estimate. In conjunction with this we note that the analysis of the testing presented in the NOPR considered only the resulting values of the various metrics. We believe that it is more important to look at the difference in the measurements between the EF and UED test procedures. This may be most significant for examining the conversion of the existing minimum EF standards to minimum UEF standards. Although it is not the sole criterion, DOE should look at the difference in EF and UEF measurements for models rated at the current applicable minimum EF value. This information should help to check the validity of the proposed converted minimum standards.

Testing Errors

In addition to the overall issue of tested values resulting in more and less stringent standards relative to application of the conversion factor, some of the errors and anomalies we have noted in the DOE test data are:

- The measured UEFs for all the low input (<10,000 Btu/h) heat pump water heaters were higher than the measured EF. For the one higher input unit, the measured UEF was lower than the measured EF. Yet, with the exception of unit CS-3, the calculated conversion factor using the Regression UEF model exhibits the opposite results.

- Only three short models of electric resistance water heaters were tested. This is an insufficient sample.

- For most of the electric resistance water heater samples, the calculated conversion factor using the WHAM-regression UEF model does not track with the tested UEF. That is, some values are higher than the test result, other lower. Also, only two non-table top units in the low usage category were tested.

- More information on the derivation of the co-efficient for WHAM-based UEF conversion factors is needed in order to assess that calculation.

- In the case of ultra-low NO_x gas water heaters, the measured UEF for the short models was less than the measured EF and the measured UEF for the tall models was greater than the measured EF. This suggests a trend that requires further test data. Furthermore, the calculated converted UEF using the WHAM-regression exhibits the opposite relationship.

- The tested UEF values for units CS-30 and CS-42 are so low that it suggests an error in the conduct of the test.

- The input rate values for the gas water heaters listed in Table III.13 calls into question whether the units were tested with the input rate within ±2% of the

nameplate input rating. If that is not the case, then the test procedure was not conducted properly and the test results are invalid.

- In the case of the gas instantaneous water heaters tested by DOE, most of the condensing units had measured UEFs that were greater than the EF. Yet, the calculated converted UEF for these units in all cases was less than the tested UEF.

- The sample of residential duty commercial gas storage water heater models is too small. The upper input limit for this subcategory is 105,000 Btu/h, yet DOE did not test any units with an input above 80,000 Btu/h. Models in this subcategory should have input rates greater than 75,000. Three of the test units have input rates well below that threshold. Either those units were not tested on-rate and the results are invalid or the units were mis-categorized.

- DOE did not test any residential duty commercial electric water heaters. There are some electric instantaneous models which fall into this category as defined in the UED test procedure. Also there are models of electric storage water heaters with inputs less than 12kW which had not been considered residential water heaters because they were designed to deliver water temperatures of 180F. Since DOE has redefined these as residential models, some units should have been tested to determine an appropriate conversion factor.

Additional Test Data

On May 14, 2015, AHRI submitted comparative test data for units tested either in our efficiency certification program or by our members. On June 12, 2015, we supplemented that data with additional information as requested by DOE at the May 26, 2015, public meeting. By the end of this week, AHRI will provide DOE with the results of additional comparative testing that has been conducted since the May 14 data was compiled.

Our May 14, 2015, letter also described the issues and concerns that arose from our analysis of that data. In order to develop correct conversion factors, DOE must incorporate this data into the rule development and revise its analysis along with a critical assessment of the units that have been tested to assure that the proper cross section of models has been tested to cover the range of models on the market today.

The major change being implemented by the UED test procedure is to test each model with a daily hot water usage that is related to the model's capability to deliver hot water. Any model tested to the low or medium draw pattern will be tested to a daily usage less than the current 64.3 gallons used to determine an Energy Factor. Even though the outlet water temperature specification in the UED test procedure results in a lower mean tank temperature, the expectation is that UEF values for storage models tested to the low or medium draw pattern will usually be lower than the EF value. Since high usage models will be tested to a daily usage greater than 64.3 gallons, the expectation is that the UEF will usually be higher than the EF. The draw bin to which a model will be tested is critical, yet the information presented in the NOPR provides no indication as to how DOE analyzed models within the same draw bin.

Such analysis of units in the same draw bin should be a fundamental step in determining an appropriate conversion factor and converted minimum UEF standard for that set of models. The effect of these new draw patterns in the analysis done for the NOPR is encapsulated in the coefficients for WHAM –based UEF Conversion Factor shown in Table III.4. However, no further information is provided on the derivation of coefficients a, b, c, and d, either in the NOPR or in the docket website. Without such additional information, we cannot fully analyze the proposed conversion factors nor provide suggestions to resolve the issues that we have noted. For example, why is coefficient "a" the same value for each bin, yet coefficients b, c, and d reflect the same relationship for the low, medium, and high draw bins as that of the total draws of each bin, i.e., the medium draw is 1.45 times greater than the low draw and the high draw is 2.21 times greater than the low draw?

These coefficients and the UEF WHAM equation seem to imply that only the recovering efficiency is an influential factor. During the May 28, 2015 public meeting, we expressed our concern that the equation for Q at the top of page 20126 of the *Federal Register* is incorrect insofar as gas and oil fired water heaters are concerned. In particular, UA losses do not occur for 24 hours. Rather, that loss occurs only when the burner is not firing. Therefore, the 24 hours should be reduced by the total burner on time over the simulated day. We suspect that this may influence the determination of the coefficients, but we cannot confirm that since the background on the derivation of the coefficients is not provided.

The NOPR notes that a major assumption in developing the mathematical formulation done for the analysis is that the average tank temperature is approximately equal to the delivered water temperature. This assumption needs to be reconsidered. One of the potentially influential changes in the UED test procedure is the switch to setting up storage water heaters to produce a specified outlet water temperature as opposed to the mean tank temperature specification of the EF test procedure. Data from the EF test clearly shows that the outlet water temperature measured during the six draws is different, usually higher, than the mean tank temperature. We believe that difference is large enough to invalidate this assumption.

Rated Storage Volume

The improper determination of the converted minimum UEF standards is compounded by the provisions in the NOPR regarding the determination of rated storage volume to residential duty commercial water heaters. The same provisions, applicable to residential water heaters, are part of the UED test procedure final rule. As clearly explained in our Petition for Repeal submitted to DOE in September 2014[8], this new requirement will change the rated volume of every storage water heater covered by the NOPR. Almost eight months later, DOE has yet to respond to AHRI's petition. In addition , at the May 28, 2015, public meeting DOE informed stakeholders that the proposed conversion factors and converted minimum UEF standards are based on the rated volumes (V_r) as presently shown on the products nameplate.[9] We agree that is the proper

[8] AHRI *Petition for Repeal of Certain Provisions of DOE Rule on Test Procedures for Residential Water Heaters and Certain Commercial Water Heaters*, submitted September 29, 2014.
[9] This confirmed what was stated in the NOPR "**Vs is the 'Rated Storage Volume' which equals the water storage capacity of a water heater (in gallons) as specified by the manufacturer." 80 Fed. Reg. 20,117.

decision. However, that is not in compliance with the currently adopted DOE test procedure. Unless DOE acts on our petition and deletes the provisions covering the determination of the rated volume, the conversion factor will be based on a test method that is not in compliance with the adopted DOE test procedure.

If DOE rejects AHRI's petition, despite overwhelming public comment in support of the petition, then, each of the DOE converted UEF minimums will be more stringent than proposed in the NOPR and as would be calculated under the applicable test procedure, resulting in converted metrics that are likely more stringent than the current minimum EF standards. As a result, on another level, the conversion factor would violate the statutory requirement that the test procedure and conversion factor "not affect" the existing standard, as well as EPCA's grandfathering provisions.

AHRI's petition must be acted upon and the "rated volume" issue resolved before both the UED test procedure goes into effect and this rule is finalized. Stakeholders cannot effectively comment on the proposed rule until it is clear whether DOE will move forward with the test procedure as adopted (in which case DOE's own testing was not done in accordance with that test procedure), or whether the test procedure will be revised to remove the new definition of rated volume.

Grandfathering Existing Compliant Models

In a similar vein, the industry requires a clear and documented answer to the question posed in AHRI's November 2014 inquiry[10] to DOE and as reiterated at the May 28, 2015, public meeting: Are units of a model that complies with the existing minimum EF standard, manufactured after July 13, 2015, considered to comply with the converted UEF Standard (i.e., grandfathered)? We know that the converted minimum UEF standards will not have perfect one-to-one correlation with every currently complying model. Therefore, it is essential that DOE establish how grandfathering will be applied so that manufacturers can properly assess the validity of the converted minimum UEF standards.

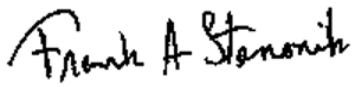
As noted at the May 28, 2015 public meeting, , in several places in the NOPR DOE confirms that products currently complying with minimum efficiency standards will not fail to comply with the standard after the conversion factor has been applied. However, DOE refers to "units" complying with the minimum standards (as opposed to "models" or "basic models"). AHRI believes that units of a model complying with the existing minimum EF standard that are manufactured after July 13, 2015 also must be considered to comply with converted UEF Standards pursuant to EPCA section 6293(e). DOE has provided no analysis that the conversion factor and standard established do not lead to a more stringent standard, and in fact DOE's own data proves otherwise. As a result, the provisions of section 6293(e) apply, and any such models should be deemed to comply with the new UEF standard.

[10] AHRI letter to Ms. Ashley Armstrong re: Universal Efficiency Descriptor Test Procedure, November 17, 2014, and as attached to this comment letter.

Conclusion

AHRI fully appreciates DOE's efforts to provide AEMTCA's statutorily required rulemakings in a timely manner. However, given the complexity of the issue, the additional testing necessary to meet those statutory obligations, and the open items regarding rated storage volume and grandfathering provisions, AHRI believes that the statutory requirements will only be met through a concerted effort by DOE, the FTC, and stakeholders. This goal will best be met by delaying compliance with the test procedure until these open issues are adequately resolved, and an supplemental notice of proposed rulemaking regarding the conversion factor is issued that fully reflects the additional testing that has been conducted. AHRI will continue to work with all parties to enable a resolution that fully effects the congressional intent behind AEMTCA while meeting all the existing statutory requirements for DOE rulemakings under EPCA.

Respectfully submitted,



Frank A. Stanonik
Chief Technical Advisor

Attachment:

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November 17, 2014

Ms. Ashley Armstrong
U.S. Department of Energy
Office of Energy Efficiency and
Renewable Energy
Building Technologies Office, Mailstop EE-5B
1000 Independence Avenue SW
Washington, DC 20585 - 0121

RE: Universal Efficiency Descriptor Test Procedure

Dear Ashley,

As a result of the final rule on the Universal Efficiency Descriptor (UED) test procedure published in the July 11, 2014 Federal Register, some of our members have raised a question regarding the relationship between the implementation of this revised test procedure and compliance with the revised minimum efficiency standards coming into effect on April 16, 2015. Therefore, we seek DOE's confirmation that the grandfathering provision, as established by the National Appliance Energy Conservation Act (NAECA) of 1987, will apply to all models which have established compliance with the April 16, 2015 minimum standards using the current DOE residential water heater efficiency test procedures, which will be the applicable test procedure until July 13, 2015.

Section 323(e) of NAECA established that a test procedure change cannot change the stringency of a federal minimum efficiency standard. Section 323 (e)(3) specifically noted that a model which complied with an efficiency standard could not be made noncompliant by any such revised test procedures. In other words, a compliant model whose rating, when re-measured using the revised test procedure, did not comply with the minimum efficiency standard, which had been rewritten to reflect the revised test procedure, was still a compliant model. Such a model may continue to be manufactured until either the minimum efficiency standard was revised or the model was redesigned.

For residential water heaters, this situation has occurred once before in 1990 when the simulated use test procedure first was adopted by DOE. The October 17, 1990 Federal Register included a final rule which covered that revised efficiency test procedure and a rewritten minimum efficiency standard based on that test procedure. The following was specifically noted on page 42168 of that Federal Register notice "It should be noted that any basic model that was manufactured before the effective date of today's final rule, regardless of when the individual unit was in fact manufactured, and which was certified as meeting the standard using the old test procedure, is grandfathered under NAECA as complying with today's standard."

All the changes to the Energy Policy and Conservation Act made by American Energy Manufacturing Technical Corrections Act (AEMTCA), which directed DOE to develop the UED test procedure, were made in Section 325 (e) also identified as 42 U.S.C 6295 (e). This section addresses standards for water heaters, yet all the AEMTCA changes relate to the development and implementation of the UED test procedure, including specific requirements regarding the determination of a conversion factor to be

applied temporarily to existing water heater efficiency ratings. AEMTCA made no changes to Section 323(e)(3), which addresses grandfathering of existing, compliant models. At some fixed date, all residential water heater models in commerce will have to be rerated based on the testing requirements of the UED test procedure. That is precisely the situation addressed by Section 323(e)(3) of NAECA. If a model, which has established compliance with the efficiency standards going into effect on April 16, 2015 using the current test procedure, is rerated based on the requirement of the UED test procedure and such rerating is less than the minimum rating specified by the rewritten, UED-based efficiency standard, that model is grandfathered and recognized as complying with the amended standard.

This question has been raised because of some information that our members have seen that seems inconsistent with the "grandfathering" principle. This information includes:

> Subsection "325(e)(5)(K) Existing covered water heaters," which is part of the AEMTCA changes. That subsection states "A covered water heater shall be considered to comply with the final rule on and after the effective date of the final rule and with any revised labeling requirements established by the Federal Trade Commission to carry out the final rule if the covered water heater (i) was manufactured prior to the effective date of the final rule; and (ii) complied with the efficiency standards and labeling requirements in effect prior to the final rule." AEMTCA specifically notes that "final rule" within its context, meant the final rule on the revised test procedure. Thus, the phrase "A covered water heater shall be considered to comply with the final rule," in the context of AEMTCA is referring to the revised test procedure. As such, it has no relevance or effect on the status of a model relative to its compliance with an efficiency standard. It is a fundamental principal that models comply with federal efficiency standards. Consistent with this, it is acknowledged that any single production unit of the basic model may have a test result that is less than the model's efficiency rating. To interpret 325(e)(5)(K) such that compliance is restricted only to units of a complying water heater basic model that are manufactured prior to the effective date of the final rule is contrary to this fundamental principle and inappropriate when considering the section of EPCA in which these changes were made.
>
> At the ACEEE Hot Water Forum in November 2013 DOE made a presentation providing an overview of AEMTCA. In that presentation there was a slide regarding the use of the conversion factor to rerate current water heater models to reflect the UED test procedure. That slide noted that manufacturers can rerate existing models using the conversion factor for one year after DOE issues the conversion factor or December 31, 2015, whichever is later. That same slide noted "Rerated units must be in existence prior to the effective date of the final rule." The use of the term "units" creates some confusion since units normally refer to individual water heaters of a basic model. It is absolutely clear that only basic models in existence and having an EF rating before July 13, 2015, i.e. the effective date of the UED test procedure final rule, can be rerated (temporarily) using the conversion factor. In that case, the individual units of that basic model can be rated using the conversion factor regardless of whether they were manufactured before or after July 13, 2015. The text of the slide presents an implication that only units of the basic model manufactured prior to July 13, 2015 can be rerated using the conversion factor. This is

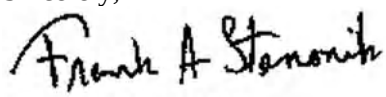
incorrect since it directly contradicts and renders meaningless the unambiguous provision of AEMTCA which allows manufacturers to use the conversion factor for one year after DOE issues the conversion factor or December 31, 2015, whichever is later.

On page 40561 of the July 11, 2014 Federal Register notice, under the subheading M. Compliance With Other EPCA Requirements, it states "As mentioned above, in amending a test procedure, EPCA directs DOE to determine to what extent, if any, the test procedure would alter the measured energy efficiency or measured energy use of a covered product. (42 U.S.C. 6293(e)(1)) If the amended test procedure alters the measured energy efficiency or measured energy use, the Secretary must amend the applicable energy conservation standard to the extent the amended test procedure changes the energy efficiency of products that minimally comply with the existing standard. (42 U.S.C. 6293(e)(2)) The current energy conservation standards for residential water heaters are based on energy factor, and the energy conservation standards for commercial water heaters are based on thermal efficiency and standby loss. DOE believes that the conversion factor (or factors) required by AEMTCA (as discussed in section III.I) and developed in a subsequent rulemaking will ensure that there is no change in measured energy efficiency." The UED test procedure is very different than the current DOE residential water heater efficiency test procedure. The Uniform Energy Factor (UEF) ratings resulting from that test procedure are very different than the current Energy Factor ratings. The need for the conversion factor is an acknowledgment that the rating will change. The conclusion that the conversion factor(s) "will ensure that there is no change in measured energy efficiency" seems to be a misstatement which inadvertently addressed the measure of energy efficiency rather than the stringency of the efficiency standard. Unfortunately, some may interpret this statement as an indication that the efficiency standard will not be changed because of the UED test procedure and, thus grandfathering will not be applied to existing models that comply with the April 2015 standards based on the current test procedure.

To address the confusion that has already occurred and avoid unnecessary future problems, we request DOE to affirm that if a basic model is determined to comply with the revised minimum efficiency standard going into effect on April16, 2015 based on testing to the current DOE water heater efficiency test procedure, that model will be grandfathered insofar as its compliance with the minimum efficiency standard which has been rewritten to reflect the UED test procedure. Furthermore, this grandfathered compliance status applies to all units of that model, regardless of their date of manufacture.

We request that DOE consider this matter immediately and provide a response as quickly as possible.

Sincerely,



Frank A. Stanonik
Chief Technical Advisor

Cc: E. Stas, DOE