Dear Residential Energy Code TAG Members,

Please find the attached comments from Trane Technologies surrounding the importance of early alignment of federal and Washington State specific energy requirements during the discussions of the code proposals (such as 21-GP2-023, 21-GP2-024, 21-GP2-025) for the 2021 code revision cycle, and included below for your convenience. Please notify me if you should have any questions or comments and would like to discuss further.

On January 1, 2023, the U.S. Department of Energy will enact new minimum energy efficiency requirements for residential and commercial HVAC equipment. The 2018 Washington State Residential Energy Code (WSEC_R) and Commercial Energy Code (WSEC_C) reference DOE efficiency requirements for central air-conditioners and heat pumps that will change significantly on January 1, 2023, and the new revisions to the codes will not be effective until July 1, 2023. Because measured values are not comparable between the prior and amended test procedures, a manufacturer cannot use the amended test procedure to demonstrate compliance with the current standards.

Early adoption and alignment of efficiency levels will help to prepare the industry for the transition to this more stringent test procedure and new efficiency nomenclature, and we offer the following considerations:

1. The [final draft version](#) of the 2021 WSEC_C code references the new metrics, but WSEC_R is still at the stage of reviewing proposals, some of which reference current metrics which will be outdated at the time of its effective date, including [21-GP2-064](#), [21-GP2-023](#), [21-GP2-024](#), [21-GP2-025](#). Due to the nature of this change, there is no mathematical conversion to cross over to the new efficiency minimums. **We encourage the TAG to consider all proposals using the new federal metrics to provide industry certainty and avoid market confusion.**
2. The effective date of the WSEC_C and WSEC_R will, at the earliest, be July 1, 2023, six months after the federal standards are effective (Jan 1, 2023.) **How will the state address Minimum Efficiency Requirements during the 6-month gap between the new federal requirements and the effective date of the WSEC_C and WSEC_R?**

Brief overview of upcoming DOE Testing Standard changes:
- *Increase in the external static test pressure effectively reducing the rated efficiency of equipment for both heating and cooling.*
- *The heating load line has also been redefined. This new load line will favor variable speed systems and will therefore have a larger negative impact on 1-stage and 2-stage HSPF ratings.*
- *The ratings created by the new M1 Standard will be published using new ratings nomenclatures: $SEER_2$, EER_2, and $HSPF_2$.*
- *In Northern regions, including Washington State, the standard is based on a manufactured date, meaning one may sell through using 'M' ratings (including 'discontinued' ratings <15 SEER)*

Product	Region	Current (M)	2023 Requirement (M1)	
SPLIT AC (Including Ductless)	NORTH	13 SEER	13.4 $SEER_2$ *(14 SEER)*	
	SOUTHEAST	14 SEER	< 45k BTU	≥ 45k BTU
			14.3 $SEER_2$ *(15 SEER)*	13.8 $SEER_2$ *(14.5 SEER)*
	SOUTHWEST	14 SEER | 12.2 EER	14.3 $SEER_2$ | 11.7* EER_2 *(15 SEER | 12.2 EER)*	13.8 $SEER_2$ | 11.2* EER_2 *(14.5 SEER | 11.7 EER)*
SPLIT HP (Including Ductless)	NATIONAL	14 SEER | 8.2 HSPF	14.3 $SEER_2$ | 7.5 $HSPF_2$ *(15 SEER | 8.8 HSPF)*	
PACKAGED AC	NATIONAL	14 SEER | 11 EER	13.4 $SEER_2$ | 10.6 EER_2 *(14 SEER | 11 EER)*	
PACKAGED HP	NATIONAL	14 SEER | 8 HSPF	13.4 $SEER_2$ | 6.7 $HSPF_2$ *(14 SEER | 8 HSPF)*	

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Best regards,

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What Is A Gigaton Commitment?