



Setting the Standards for Home Energy Efficiency

**Interpretation:** Prorating Shared Commercial Kitchen Appliances for Sleeping Units

**Designation:** IR 301-2019-034

**Approved:** October 17, 2023, by RESNET SDC 300

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**Reference:**

Standard ANSI/RESNET/ICC 301-2019  
Page Number(s): 63  
Sections(s): \_\_\_\_\_  
Table(s): Table 4.5.2(1) 17. & 18.  
Relating to: Shared commercial kitchen equipment

**Background Statement:** *Provided by person requesting the interpretation.*

Project in question is an adaptive reuse of a historic building which is being converted into transitional housing. Most units meet the RESNET definition of dwelling units but a smaller grouping do not contain kitchenettes and instead will be serviced by a small on-site commercial kitchen operated for the residents. ANSI RESNET Standard 301-2019 would appear to lack detail in how to most accurately capture and model kitchen appliances for the sleeping units:

1.) Bullet 17 within table 4.5.2(1) states, “for all refrigerators located within the Rated Home **and any refrigerators outside the**



*Rated Home for daily use by the Rated Home occupants as determined from either the refrigerator Energy Guide label or from age-based defaults as defined in Section 4.2.2.5.2.5.”*

There was some disagreement between our organization and our Provider/MRO as to whether commercial kitchen equipment that may be operated by staff would meet the above listed definition. The phrase “for daily use by” creates confusion as to whether the appliances in question must be operated by the residents themselves or if their sole use is *for* the residents then that would also suffice. The implications for the modeled HERS score are significant when examining the difference between HERs reference equipment and any high-performance commercial equipment that may be installed.

2.) Relatedly, it is unclear whether the energy usage of a shared appliance should be apportioned between the # of residents or # of sleeping units served by the appliance in question. It would seem that the modeling approach could conceivably differ here between a shared commercial refrigerator and a shared commercial dishwasher due the nature of their usage. Dishwasher energy usage would be proportional to the amount of soiled dishware created by each resident whereas shared a refrigerator would use same energy regardless of the number of residents whose food is stored within it. 301-2019 provides guidelines for apportioning the energy usage of other central systems it is unclear if a similar process would be appropriate for a shared appliance such as a refrigerator. As a corollary, inputting total Kwh consumption for a large commercial refrigerator for each of the twenty sleeping units it serves would be an inaccurate and a punitive way to model the project as a whole.

**Proposed Interpretation:** *Provided by person requesting the interpretation.*

Shared commercial kitchen such as refrigerators and dishwashers operated for the sole benefit of residents meets the definition and intent set forth in Section 4.5.2.1.

Additionally, where appliances are shared, annual energy consumption should be apportioned based on the # of residents served and # of residents/ sleeping unit.

**SDC Response:**

Is the proposed interpretation correct?       Yes       No

**SDC Comments:**



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Standard 301 does not presently accommodate either commercial kitchen equipment or prorated consumption by shared kitchen appliances. As a result, there is no current Standard provision that can be interpreted with respect to the conditions your request addresses. However, Section 4.2.2.5.2 of Standard 301-2019 does specify how to treat dwelling and sleeping units that do not contain a refrigerator or dishwasher, stating the following:

“ . . . For a Rated Home without a refrigerator, dishwasher, range/oven, clothes washer or clothes dryer, the values from Table 4.2.2.5(1) shall be assumed for both the Energy Rating Reference Home and Rated Home.”

Table 4.2.2.5(1) specifies the values used in the Energy Rating Reference Home. Thus, the above Section 4.2.2.5.2 specification is simply stating that the Rated Home is to have the exact same as appliance as the Energy Rating Reference Home when that appliance does not exist in the unit being rated.

If you believe that the standard should address shared dwelling and sleeping unit appliances, you may propose a standards change to that affect. Proposed amendments are submitted per the instructions found at <https://www.resnet.us/about/standards/resnet-ansi/>