Errata and Additional Explanations for the DEER2020 Update Documentation

Updated February 2, 2023
(Original January 18, 2019)

In the process of implementing the Resolution E-4952 changes, the DEER team identified errors and a need for additional explanations in the DEER 2020 Update documentation. This document details those items.

Section 3.2. Consolidation of Building Vintage Definition[1]

Table 3. Updated Vintage Definitions

When compared with Table 4, Table 3 appears to misstate the date ranges for the "Median" and "Recent" mobile home building vintages.

Vintage	Non-Mobile Homes	Mobile Homes
Old	Before 2002	before 1995
Median	2002 - 2016	~~1995 – 2005~~ 1995 - 2014
Recent	2017 - current	~~2006 – present~~ 2015 - current
New	New Construction	New Construction

Table 4. Previous and Updated DEER Vintages

The lower portion of Table 4 has also introduced confusion by suggesting that the previous building vintages beginning with "MH" only applied to double-wide mobile home building type ("DMo" in DEER). According to the DEER database, the single-wide mobile home building type ("SMo" in DEER) is referred to as "DMo" and uses the "DMo" building prototype to establish the unit energy savings values. Accordingly, we hereby remove the "Double-wide" expression from Table 4 (rows for all other building types have been excluded for clarity).

Previous Code	DEER Vintages Description	New DEER Vintage
~~*Double-wide Mobile Homes only:*~~ *Mobile Homes only:*		
MH72	before 1976	Old
MH85	1976 - 1994	Old
MH00	1995 - 2005	Median (Ex)
MH06	2006 - 2014	Median (Ex)
MH15	after 2014	Recent

[1] Added 2023-02-02

Section 5.1. Net-to-Gross Ratio for HVAC Measures (p. A-35)[2]

Although not mentioned in the Resolution, new NTG values are documented in the DEER NTG 2020 Support Table and will take effect 2020-01-01. There are some issues in the resolution section, however, as follows.

Table 7. DEER2020 HVAC NTG Revisions

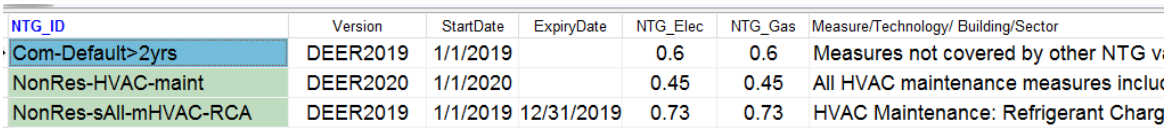
Several errors appear in Table 7 as described in the sub-sections that follow.

Table 7 - DEER2020 HVAC NTG Revisions

Measure	Current Values		DEER2020 Values	
	NTG	Reference	NTG	Reference
Commercial Refrigerant Charge	0.73	NonRes-sAll-mHVAC-RCA	0.45	HVAC3
All Other Commercial HVAC maintenance	0.60	Com-Default>2yrs	0.45	HVAC3

Commercial refrigerant charge

A new NTG ID value was created "NonRes-HVAC-maint" to replace the existing NTG ID "NonRes-sAll-mHVAC-RCA" as shown in the image that follows.



NTG_ID	Version	StartDate	ExpiryDate	NTG_Elec	NTG_Gas	Measure/Technology/ Building/Sector
Com-Default>2yrs	DEER2019	1/1/2019		0.6	0.6	Measures not covered by other NTG v
NonRes-HVAC-maint	DEER2020	1/1/2020		0.45	0.45	All HVAC maintenance measures inclu
NonRes-sAll-mHVAC-RCA	DEER2019	1/1/2019	12/31/2019	0.73	0.73	HVAC Maintenance: Refrigerant Charg

Table 7 in the resolution incorrectly shows the NTG_ID of "Com-Default>2yrs" as the default for "All Other Commercial HVAC maintenance" measures. This is incorrect since the value in the Support Table was not changed in DEER, as shown in the preceding image.

All other commercial HVAC maintenance

In the first paragraph, the 0.42 value cited in the text is inconsistent with the 0.45 value shown in Table 7, HVAC3 reports an overall NTG for commercial HVAC maintenance measures of 0.42 as shown in the image. Further, an incorrect value of 0.42 had been entered into PEAR. While the cited EM&V study reported an electric NTG value of 0.42, values are to be rounded to the nearest 0.05 for use in DEER. The same report also reported a gas NTG value of 0.25, but because quality maintenance (QM) is primarily an electric measure activity, the electric NTG value is used for both.

Section 5.2 Effective Useful Life Updates[3]

Table 8 lists the EULs and RULs for BRO Measure Application Types (MATs) but fails to show the EUL/RUL values for the BRO-Bhv MAT. Per Resolution E-4818, Section 1.3.1.2 on page 7, "Only

[2] Original document 2019-01-18
[3] Added 2019-02-13

residential behavior programs have an effective useful life of one year, per D. 16-08-019." Hence, the following record was added to the costeff.EUL_basis tables in PEAR and DEER:

EUL_ID	Description	Version	EUL_Yrs	RUL_Yrs	StartDate	ExpiryDate
Res-Behavioral	Behavioral programs in residential settings	DEER2017	1		1/1/2017	

Section 5.4 Net-to-Gross for Accelerated Replacement Measure[2]

Although the section lists several previously-considered below-code NTG adjustment factors, the following text from the resolution best summarizes the resulting requirement:

> "We thus establish an adjustment factor of 0.75 for accelerated replacement to be applied to all NTG values for the below-code portion of savings. This is a default value, and alternative values may be proposed as part of a workpaper or for a custom project if that project is undergoing an ex ante review by Commission staff.
>
> In both these cases an explicit disposition issued by Commission staff must be provided that accepts the proposed alternate. A proposed alternate is not allowed unless explicitly review and approved by Commission staff. In other words, passed thought [sic] workpaper and custom project alternative values are not allowed."

Section 5.6. Net-to-Gross for Expanded Measure Application Types (p. A-46)[2]

Table 13: Measure Application Types

2nd row: Capacity Expansion (CE) should not have been included in Table 13 containing the new Measure Application Types (MAT) as shown in the table that follows. Capacity expansion is considered a normal replacement MAT as explained in Resolution E-4818, on pg. 41, by stating that "Capacity expansions and the addition of new load mandate equipment upgrades and changes, and for these reasons we consider them a normal replacement [italics added] installation type…."

Table 1: Measure Application Types

Measure Application Type	**Abbreviation**
New construction	NC
~~Capacity Expansion~~	~~CE~~
Normal Replacement (includes Replace on Burnout)	NR
Accelerated Replacement	AR
Add-On Equipment	AOE
Building Weatherization (building shell and related components)	BW
BRO-Behavioral	BRO-Bhv
BRO-Retro-commissioning	BRO-RCx
BRO-Operational	BRO-Op

Furthermore, Capacity Expansion is not shown in E-4818 Table 1 (below) from which the new MATs were derived.

Table 1. Adopted Default Baseline Policy for All Sectors

Alteration Type	Delivery	Savings Determination	Shell & Bldg System and Add-On Equipment	Behavioral, Retro-commissioning, and Operational	Normal replacement	Accelerated replacement and repair eligible
New construction, expansions, added load	Any	Any	Code	N/A	Code	N/A
Existing buildings, including major alterations	Upstream & Midstream	Any	Code	N/A	Code	N/A
	Downstream	Calculated	Existing	Existing	Code	Dual
		Deemed	Existing	Existing	Code	Dual
		NMEC	Existing	Existing	Existing, Program Design	Existing
		RCT/ experimental	Existing	Existing	Existing	Existing
Non-building projects, including industrial and agricultural processes	Any	Any	N/A	Existing	Standard Practice	Dual

Table 14: Measure Savings Calculation Types

This table should have been labeled as "Measure Impact Types" (DEER/READI Support Table name = "MeasImpactType"). While there is no DEER Support Table that is labeled Measure Savings Calculation Type, there is a related DEER Support Table labeled "Impact Calculation Type" (table name= "MeasImpactCalcType"). While this is a minor error, it has caused confusion among some users.