

# Public Review Draft

Proposed Addendum aa to Standard 189.1-2017

# Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

Second Public Review Draft (August 2019)  
(Draft Shows Proposed Independent Substantive  
Changes to Previous Public Review Draft)

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## **Foreword**

In response to comments on the first public review of this addendum, modifications to the new Table 7.5.3B are proposed in this second PPR. These changes will make editorial revisions to some of the labeling in the table, but we are adding a new row to the “Fuels used directly in the building” portion of the table for “Other fuels not specified in this table” which uses the emissions factors for coal.

Note that similar changes are also being proposed for a second public review ISC for addendum z on source energy factors.

*[Note to Reviewers: This addendum makes proposed independent substantive changes to the previous public review draft. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the previous public review draft are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]*

## **Addendum aa to 189.1-2017**

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*Modify new Table 7.5.3B CO<sub>2</sub>e Emissions Factors as shown below*

**TABLE 7.5.3B CO<sub>2</sub>e Emissions Factors**

Energy Form	CO <sub>2</sub> e Emission Factor	
	lb/MWh	kg/MWh
<b>Fossil Fuels Used Directly in Building</b>		
Natural gas	681	309
LPG or propane	651	295
Fuel oil (residual)	738	335
Fuel oil (distillate)	715	324
Coal	892	405
Gasoline	744	337
<u>Other fuels not specified in this table</u>	<u>892</u>	<u>405</u>
<b>Imported Electricity and Exported Renewable Electricity</b>		
AKGD - ASCC Alaska Grid	1,580	717
AKMS - ASCC Miscellaneous	738	335
AZNM - WECC Southwest	1,496	679
CAMX - WECC California	957	434
ERCT - ERCOT All	1,529	694
FRCC - FRCC All	1,601	726
HIMS - HICC Miscellaneous	1,717	779
HIOA - HICC Oahu	2,460	1,116
MROE - MRO East	2,337	1,060
MROW - MRO West	1,686	765
NEWE - NPCC New England	1,024	464
NWPP - WECC Northwest	936	425
NYCW - NPCC NYC/Westchester	1,034	469
NYLI - NPCC Long Island	1,600	726
NYUP - NPCC Upstate NY	540	245
RFCE - RFC East	1,156	524
RFCM - RFC Michigan	1,806	819
RFCW - RFC West	1,757	797
RMPA - WECC Rockies	1,829	830
SPNO - SPP North	1,851	840
SPSO - SPP South	1,737	788
SRMV - SERC Mississippi Valley	1,421	645
SRMW - SERC Midwest	2,234	1,014
SRSO - SERC South	1,651	749
SRTV - SERC Tennessee Valley	1,677	761
SRVC - SERC Virginia/Carolina	1,255	569
<u>All other electricity and other fuels not specified in this table</u>	<u>1,418</u>	<u>643</u>
<b>District Thermal Energy</b>		
Chilled water	339	154
Steam	1,145	519
Hot water	1,081	491

*Informative Note:* Values in this table represent averages for the United States and include both direct and indirect emissions.