

Table 11. Statistics for comparison of annual fuel consumption by region between MFLEI and FINN v1.5, GFED v4.1s, and WFEIS v0.5. Regions are as defined in Fig. 14a.

	Region						
	CONUS	NW	CA	SW	NO	SC	SE
MFLEI versus FINN v1.5 (2003–2015)							
Mean							
RD <sup>a</sup>	-17%	6%	50%	103%	-35%	-65%	-75%
Min RD	-71%	-94%	-25%	61%	-103%	-131%	-135%
Max RD	41%	81%	115%	131%	68%	21%	-31%
r <sup>b</sup>	0.62	0.90	0.87	0.92	0.57	0.24	0.70
MFLEI versus GFED 4.1s (2003–2015)							
Mean RD	29%	14%	3%	75%	16%	35%	43%
Min RD	0%	-4%	-27%	41%	-83%	-45%	-1%
Max RD	60%	40%	52%	105%	90%	91%	76%
r	0.90	0.97	0.96	0.97	0.62	0.79	0.76
MFLEI versus WFEIS v0.5 (2003–2013)							
Mean RD	-2%	30%	-26%	130%	-99%	-51%	40%
Min RD	-41%	-110%	-177%	35%	-161%	-175%	-104%
Max RD	56%	137%	112%	196%	-17%	121%	181%
r	0.95	0.43	-0.20	0.88	0.20	-0.34	0.06

<sup>a</sup>

$$RD = 100 \times \frac{X(t)_{MFLEI} - Y(t)_i}{0.5 * (X(t)_{MFLEI} + Y(t)_i)}$$

X(t)<sub>MFLEI</sub> = MFLEI fuel consumed in year = t

Y(t)<sub>i</sub> = i fuel consumed in year = t, where i = FINN, GFED, or WFEIS

<sup>b</sup>r = correlation coefficient

Table 12. Statistics for comparison of annual PM<sub>2.5</sub> emitted consumption by region between MFLEI and FINN v1.5, GFED v4.1s, and WFEIS v0.5. Regions are as defined in Fig. 14a.

Region							
	CONUS	NW	CA	SW	NO	SC	SE
MFLEI versus FINN v1.5 (2003–2015)							
Mean							
RD <sup>a</sup>	98%	56%	85%	136%	24%	-55%	-70%
Min RD	-70%	-43%	15%	-55%	-44%	-123%	-136%
Max RD	86%	123%	147%	157%	125%	35%	-27%
r <sup>b</sup>	0.61	0.90	0.88	0.94	0.52	0.20	0.71
MFLEI versus GFED 4.1s (2003–2015)							
Mean RD	76%	76%	61%	137%	71%	59%	60%
Min RD	50%	58%	29%	104%	-24%	-29%	18%
Max RD	99%	98%	106%	158%	136%	119%	94%
r	0.94	0.97	0.98	0.97	0.65	0.70	0.73
MFLEI versus WFEIS v0.5 (2003–2013)							
Mean RD	49%	98%	96%	151%	66%	103%	82%
Min RD	19%	-59%	-154%	63%	-118%	-174%	-86%
Max RD	104%	167%	161%	198%	59%	122%	183%
r	0.98	0.42	-0.15	0.90	0.23	-0.33	0.11

<sup>a</sup>

$$RD = 100 \times \frac{X(t)_{MFLEI} - Y(t)_i}{0.5 * (X(t)_{MFLEI} + Y(t)_i)}$$

X(t)<sub>MFLEI</sub> = MFLEI PM<sub>2.5</sub> emitted in year = t

Y(t)<sub>i</sub> = i PM<sub>2.5</sub> emitted in year = t, where i = FINN, GFED, or WFEIS

<sup>b</sup>r = correlation coefficient

