

APPENDIX G

ALTERNATIVE FUEL VEHICLES' EMISSIONS COMPARISON

Table G1 – AFV emissions comparison*

	GHG Emissions (Operations)				Criteria Air Pollutants (Operations)					
	CO ₂ (kg/mi)	CH ₄ (g/mile)	N ₂ O (mg/mi)	VOCs (mg/mi)	CO (mg/mi)	NO _x (g/mi)	PM ₁₀ (mg/mi)	PM _{2.5} (mg/mi)	SO _x (mg/mi)	
Light-Duty Car	B20	0.28	0.12	0.65	0.11	2.79	0.13	5.51	5.06	1.57
	CNG	0.24	79.04	4.89	0.12	2.57	0.11	5.29	4.68	1.12
	E10 (Gasoline)	0.32	7.90	4.89	0.12	2.57	0.11	5.29	4.68	4.97
	E85	0.30	7.90	4.89	0.12	2.57	0.11	5.29	4.68	1.30
	Electricity (plug-in hybrid)	0.12	1.91	2.51	32.53	1.32	47.70	2.72	2.40	1.88
	Electricity (all-electric)	0	0	0	0	0	0	0	0	0
	Hydrogen	0	0	0	0	0	0	0	0	0
	LPG	0.27	7.90	4.89	0.12	2.57	0.11	5.29	4.68	
	Low-sulfur diesel	0.28	0.12	0.65	0.11	2.79	0.13	5.51	5.06	1.94
Heavy-Duty Pickup Truck/Van	B20	0.49	85.88	3.17	79.68	0.37	0.94	11.84	10.89	2.76
	CNG	0.38	0.20	11.98	0.17	7.49	0.46	11.48	10.16	1.78
	E10 (Gasoline)	0.47	16.61	11.98	0.17	7.49	0.46	11.48	10.16	7.30
	E85	0.46	16.61	11.98	0.17	7.49	0.46	11.48	10.16	2.04
	Electricity (all-electric)	0	0	0	0	0	0	0	0	0
	Hydrogen	0	0	0	0	0	0	0	0	0
	LPG	0.42	16.61	11.98	0.17	7.49	0.46	11.48	10.16	0
	Low-sulfur diesel	0.49	85.88	3.17	79.68	0.37	0.94	11.84	10.89	3.39
Transit Bus	B20	2.50	51.91	2.38	48.17	0.52	1.17	23.14	21.29	13.98
	CNG	2.14	10.00	0.59	48.17	23.00	0.59	23.14	21.29	9.98

Electricity (all-electric)	0	0	0	0	0	0	0	0	0
Hydrogen	0	0	0	0	0	0	0	0	0
LNG	2.15	10.00	0.59	48.17	23.00	0.59	23.14	21.29	0
RD	1.73	51.91	2.38	48.17	0.26	1.17	23.14	21.29	0
Low-sulfur diesel	2.50	51.91	2.38	48.17	0.52	1.17	23.14	21.29	17.20

Source: Adapted from Argonne National Laboratory's GREET Model (ANL 2017)

**The estimates presented in the table reflect the emissions associated only with vehicle operation.*