

## D-II.1 Passenger Cars (Cont.)

Parameter	GI SIDI HEV: FRFG2, ETBE	GI SIDI HEV: FRFG2, EtOH	GI SI HEV: CNG	GI SI HEV: LNG	GI SI HEV: LPG, crude	GI SI HEV: LPG, NG	GI SIDI HEV: M90, NG	GI SIDI HEV: M90, FG	GI SIDI HEV: M90 LFG	GI SIDI HEV: E90, corn	GI SIDI HEV: E90, WB
Total energy	-47.4%	-47.4%	-43.5%	-41.7%	-46.2%	-46.7%	-37.0%	-34.1%	-43.2%	-36.3%	-8.7%
Fossil fuels	-47.4%	-47.4%	-44.1%	-41.4%	-46.2%	-46.6%	-36.7%	-68.4%	-77.4%	-71.1%	-89.7%
Petroleum	-47.4%	-47.4%	-99.6%	-97.5%	-36.1%	-98.8%	-87.3%	-87.3%	-87.7%	-89.3%	-88.0%
VOC: Total	-30.2%	-26.3%	-65.5%	-61.3%	-55.2%	-60.1%	-35.0%	-116.2%	-46.7%	16.3%	-24.0%
VOC: Urban	-32.3%	-23.6%	-56.2%	-57.2%	-50.7%	-48.3%	-25.7%	-25.7%	-28.0%	-24.3%	-24.3%
CO: Total	-2.5%	-2.1%	-21.5%	-20.4%	-21.8%	-22.2%	-1.2%	-2.7%	-10.7%	-0.7%	4.9%
CO: Urban	-0.2%	-0.1%	-19.7%	-20.1%	-20.0%	-20.0%	-0.2%	-0.2%	-3.4%	-0.1%	-0.1%
NOx: Total	-40.8%	-39.5%	-15.4%	10.1%	-50.0%	-55.1%	-37.8%	-78.0%	-49.2%	50.0%	94.1%
NOx: Urban	-14.7%	-12.5%	53.5%	-17.1%	-11.1%	-11.7%	-21.0%	-21.0%	-39.1%	-4.9%	-7.6%
PM10: Total	-27.2%	-21.8%	-34.5%	-32.1%	-32.0%	-37.1%	-27.5%	-34.1%	-166.8%	216.1%	13.6%
PM10: Urban	4.4%	4.8%	-16.5%	-17.4%	-16.8%	-16.8%	-7.1%	-7.1%	-113.2%	-5.6%	-5.7%
SOx: Total	-47.4%	-47.4%	-59.3%	-85.6%	-66.6%	-81.7%	-76.8%	-77.1%	-12.7%	27.4%	-94.3%
SOx: Urban	-47.4%	-47.4%	-88.0%	-98.9%	-94.4%	-94.5%	-87.2%	-87.2%	-177.7%	-90.1%	-90.6%
CH4	-42.7%	-41.7%	33.0%	32.8%	-50.1%	-45.8%	-52.8%	-55.6%	-276.8%	-45.7%	-69.8%
N2O	-16.9%	-11.2%	-50.0%	-49.4%	-3.0%	-3.0%	-2.1%	-3.4%	-1.6%	168.3%	42.9%
CO2	-47.4%	-47.2%	-55.0%	-55.0%	-49.1%	-50.1%	-48.8%	-86.9%	-127.1%	-70.3%	-103.8%
GHGs	-46.4%	-46.2%	-52.1%	-52.1%	-48.3%	-49.1%	-48.1%	-84.3%	-129.4%	-63.9%	-99.3%



D-II.1 Passenger Cars (Cont.)

Parameter	GI SIDI HEV: E90, HB	GC SIDI HEV: FRFG2, MTBE, US mix	GC SIDI HEV: FRFG2, ETBE, US mix	GC SIDI HEV: FRFG2, EtOH, US mix	GC SIDI HEV: FRFG2, MTBE, CA mix	GC SIDI HEV: FRFG2, ETBE, CA mix	GC SIDI HEV: FRFG2, EtOH, CA mix	GC SI HEV: CNG, US mix	GC SI HEV: CNG, CA mix	GC SI HEV: LNG, US mix	GC SI HEV: LNG, CA mix
Total energy	-16.4%	-43.7%	-43.8%	-43.7%	-43.9%	-44.0%	-43.9%	-40.8%	-41.0%	-39.5%	-39.7%
Fossil fuels	-87.4%	-48.2%	-47.1%	-47.3%	-55.5%	-54.8%	-54.9%	-45.7%	-53.0%	-43.8%	-51.1%
Petroleum	-89.1%	-60.7%	-60.4%	-61.4%	-61.0%	-60.7%	-61.7%	-99.4%	-99.6%	-97.8%	-98.1%
VOC: Total	-26.9%	-46.1%	-47.9%	-45.0%	-48.2%	-49.8%	-47.0%	-72.6%	-74.8%	-69.6%	-71.7%
VOC: Urban	-24.4%	-43.8%	-43.9%	-40.8%	-43.8%	-43.9%	-40.8%	-69.2%	-69.2%	-70.0%	-70.0%
CO: Total	3.6%	-30.9%	-31.0%	-30.7%	-31.2%	-31.3%	-31.0%	-44.3%	-44.5%	-43.5%	-43.8%
CO: Urban	-0.1%	-30.1%	-30.1%	-30.1%	-30.1%	-30.1%	-30.0%	-43.8%	-43.7%	-44.1%	-44.1%
NOx: Total	97.1%	4.4%	-7.7%	2.9%	-37.8%	-42.2%	-38.3%	21.7%	-20.4%	40.1%	-2.0%
NOx: Urban	-6.8%	-32.7%	-34.6%	-32.7%	-31.1%	-33.1%	-31.1%	14.9%	16.5%	-36.0%	-34.5%
PM10: Total	6.3%	-2.9%	-28.2%	-19.1%	-19.2%	-37.6%	-31.0%	-18.6%	-34.9%	-16.9%	-33.2%
PM10: Urban	-5.7%	-6.3%	-6.8%	-6.3%	-6.2%	-6.7%	-6.2%	-21.2%	-21.1%	-21.9%	-21.7%
SOx: Total	-82.6%	81.0%	53.4%	68.0%	-40.0%	-44.3%	-42.1%	72.6%	-48.5%	53.6%	-67.5%
SOx: Urban	-90.4%	-59.2%	-59.2%	-59.2%	-61.3%	-61.4%	-61.4%	-88.1%	-90.3%	-96.0%	-98.2%
CH4	-65.9%	-43.6%	-43.7%	-39.7%	-49.9%	-50.0%	-47.3%	10.2%	3.9%	10.1%	3.8%
N2O	185.5%	-28.2%	-39.4%	-35.0%	-29.9%	-40.5%	-36.4%	-61.7%	-63.4%	-61.3%	-63.0%
CO2	-93.1%	-46.1%	-46.5%	-45.8%	-56.0%	-56.2%	-55.8%	-51.4%	-61.3%	-51.4%	-61.4%
GHGs	-85.6%	-45.6%	-46.3%	-45.4%	-55.3%	-55.6%	-55.1%	-49.6%	-59.3%	-49.7%	-59.3%



## D-II.1 Passenger Cars (Cont.)

Parameter	GC SI HEV: LPG, crude, US mix	GC SI HEV: LPG, NG, US mix	GC SI HEV: LPG, crude, CA mix	GC SI HEV: LPG, NG, CA mix	GC SIDI HEV: M90, NG, US mix	GC SIDI HEV: M90, FG, US mix	GC SIDI HEV: M90, LFG, US mix	GC SIDI HEV: M90, NG, CA mix	GC SIDI HEV: M90, FG, CA mix	GC SIDI HEV: M90, LFG, CA mix	GC SIDI HEV: E90, corn, US mix
Total energy	-42.7%	-43.1%	-42.9%	-43.3%	-36.2%	-34.1%	-40.6%	-36.4%	-34.3%	-40.8%	-35.8%
Fossil fuels	-47.2%	-47.5%	-54.6%	-54.8%	-40.5%	-63.3%	-69.8%	-47.8%	-70.7%	-77.1%	-64.7%
Petroleum	-53.6%	-98.8%	-53.8%	-99.0%	-90.5%	-90.5%	-90.7%	-90.8%	-90.8%	-91.0%	-91.9%
VOC: Total	-65.9%	-68.8%	-67.4%	-70.9%	-51.1%	-109.5%	-59.5%	-53.3%	-111.6%	-61.7%	-14.4%
VOC: Urban	-66.3%	-63.6%	-65.3%	-63.6%	-47.9%	-47.9%	-49.5%	-47.8%	-47.8%	-49.5%	-46.9%
CO: Total	-44.7%	-44.8%	-44.8%	-45.1%	-30.1%	-31.1%	-36.9%	-30.3%	-31.4%	-37.2%	-29.7%
CO: Urban	-44.0%	-44.0%	-44.0%	-44.0%	-30.1%	-30.1%	-32.4%	-30.1%	-30.1%	-32.4%	-30.0%
NOx: Total	-2.1%	-6.9%	-45.4%	-49.0%	5.5%	-23.4%	-2.7%	-36.6%	-65.5%	-44.9%	67.5%
NOx: Urban	-32.0%	-32.1%	-30.1%	-30.5%	-38.8%	-38.8%	-51.9%	-37.3%	-37.3%	-50.3%	-27.2%
PM10: Total	-16.0%	-20.5%	-33.1%	-36.8%	-13.8%	-18.5%	-113.9%	-30.1%	-34.8%	-130.2%	152.1%
PM10: Urban	-21.6%	-21.4%	-21.3%	-21.3%	-14.7%	-14.7%	-91.0%	-14.6%	-14.6%	-90.9%	-13.6%
SOx: Total	67.3%	56.4%	-53.8%	-64.7%	59.9%	59.7%	106.0%	-61.2%	-61.4%	-15.1%	121.8%
SOx: Urban	-92.7%	-92.8%	-94.9%	-95.0%	-87.6%	-87.6%	-152.6%	-89.8%	-89.8%	-154.8%	-89.6%
CH4	-49.5%	-45.8%	-55.2%	-52.1%	-50.8%	-52.8%	-211.8%	-57.1%	-59.1%	-218.1%	-42.8%
N2O	-28.5%	-28.9%	-30.5%	-30.5%	-28.3%	-29.2%	-27.9%	-29.9%	-30.9%	-29.5%	40.5%
CO2	-47.2%	-47.9%	-57.1%	-57.8%	-47.1%	-74.4%	-103.4%	-57.1%	-84.4%	-113.3%	-62.4%
GHGs	-47.0%	-47.5%	-56.6%	-57.1%	-46.9%	-72.9%	-105.3%	-56.5%	-82.6%	-115.0%	-59.4%



**D-II.1 Passenger Cars (Cont.)**

<b>Parameter</b>	<b>GC SIDI HEV: E90, WB, US mix</b>	<b>GC SIDI HEV: E90, HB, US mix</b>	<b>GC SIDI HEV: E90, corn, CA mix</b>	<b>GC SIDI HEV: E90, WB, CA mix</b>	<b>GC SIDI HEV: E90, HB, CA mix</b>	<b>CIDI: RFD</b>	<b>CIDI: DME, NG</b>	<b>CIDI: DME, FG</b>	<b>CIDI: FT50, NG</b>	<b>CIDI: FT50, FG</b>	<b>CIDI: BD20</b>
Total energy	-15.9%	-21.5%	-36.0%	-16.1%	-21.7%	-35.1%	-17.7%	-14.4%	-21.3%	-13.2%	-31.4%
Fossil fuels	-78.1%	-76.4%	-72.3%	-85.7%	-84.0%	-35.0%	-17.2%	-67.4%	-21.1%	-38.6%	-31.6%
Petroleum	-91.0%	-91.8%	-92.2%	-91.3%	-92.0%	-25.0%	-97.9%	-97.9%	-59.9%	-59.9%	-36.7%
VOC: Total	-43.3%	-45.4%	-16.4%	-45.3%	-47.4%	-61.9%	-74.3%	-192.5%	-67.4%	-135.9%	-38.0%
VOC: Urban	-46.9%	-46.9%	-46.8%	-46.9%	-46.9%	-63.4%	-76.0%	-76.0%	-65.0%	-65.0%	-61.3%
CO: Total	-25.6%	-26.6%	-29.9%	-25.9%	-26.8%	-2.4%	-0.5%	-3.1%	-2.1%	-3.1%	-0.2%
CO: Urban	-30.0%	-30.0%	-30.0%	-30.0%	-30.0%	-0.1%	-0.3%	-0.3%	-0.2%	-0.2%	0.5%
NOx: Total	99.2%	101.4%	26.1%	57.8%	60.0%	-24.4%	-23.2%	-90.0%	-32.7%	-64.7%	17.7%
NOx: Urban	-29.1%	-28.5%	-25.5%	-27.4%	-26.9%	43.1%	32.6%	32.6%	38.2%	38.2%	78.5%
PM10: Total	6.5%	1.2%	140.2%	-5.4%	-10.6%	-13.7%	-36.0%	-47.9%	-28.6%	-33.0%	-7.0%
PM10: Urban	-13.6%	-13.6%	-13.4%	-13.5%	-13.5%	-1.4%	-12.0%	-12.0%	-8.3%	-8.3%	-0.8%
SOx: Total	34.3%	42.7%	11.7%	-75.8%	-67.4%	-34.1%	-82.2%	-83.3%	-58.4%	-58.0%	-32.6%
SOx: Urban	-90.0%	-89.8%	-91.8%	-92.2%	-92.0%	6.8%	-95.7%	-95.7%	-42.2%	-42.2%	-9.6%
CH4	-60.1%	-57.3%	-50.4%	-67.7%	-64.9%	-51.9%	-50.0%	-49.9%	-52.1%	-51.6%	-53.9%
N2O	-49.6%	52.9%	39.2%	-51.0%	51.5%	-42.7%	-44.6%	-47.4%	-44.9%	-45.4%	-35.4%
CO2	-86.5%	-78.8%	-72.5%	-96.5%	-88.8%	-32.3%	-35.7%	-94.6%	-31.6%	-61.2%	-40.1%
GHGs	-84.9%	-75.1%	-69.2%	-94.6%	-84.8%	-33.1%	-36.3%	-92.3%	-32.5%	-60.6%	-40.5%



## D-II.1 Passenger Cars (Cont.)

Parameter	GI CIDI HEV: RFD	GI CIDI HEV: DME, NG	GI CIDI HEV: DME, FG	GI CIDI HEV: FT50, NG	GI CIDI HEV: FT50, FG	GI CIDI HEV: BD20	GC CIDI HEV: RFD, US mix	GC CIDI HEV: RFD CA mix	GC CIDI HEV: DME, NG, US mix	GC CIDI HEV: DME, FG, US mix	GC CIDI HEV: DME, NG, CA mix
Total energy	-57.7%	-46.3%	-44.2%	-43.3%	-48.7%	-55.3%	-53.5%	-53.3%	-42.2%	-40.7%	-42.4%
Fossil fuels	-57.6%	-46.0%	-78.7%	-43.1%	-57.6%	-55.4%	-65.2%	-57.8%	-46.5%	-70.5%	-53.9%
Petroleum	-51.1%	-98.6%	-98.6%	-73.8%	-73.8%	-58.7%	-67.3%	-67.1%	-98.6%	-98.6%	-98.9%
VOC: Total	-67.0%	-77.5%	-154.6%	-115.3%	-70.6%	-51.4%	-76.2%	-74.1%	-80.9%	-137.4%	-83.1%
VOC: Urban	-41.2%	-48.6%	-48.6%	-65.6%	-65.6%	-63.2%	-75.2%	-75.2%	-83.3%	-83.3%	-83.3%
CO: Total	-3.3%	-2.1%	-3.8%	-3.8%	-3.1%	-1.9%	-31.9%	-31.7%	-30.6%	-31.9%	-30.9%
CO: Urban	-0.1%	-0.1%	-0.1%	-0.2%	-0.2%	0.2%	-30.2%	-30.2%	-30.2%	-30.2%	-30.1%
NOx: Total	-40.4%	-39.6%	-83.1%	-66.7%	-45.8%	-12.9%	-40.3%	1.8%	4.4%	-27.5%	-37.8%
NOx: Urban	6.5%	5.3%	5.3%	35.1%	35.1%	61.3%	-2.1%	-3.7%	-2.2%	-2.2%	-0.6%
PM10: Total	-21.0%	-37.7%	-45.5%	-35.0%	-32.2%	-17.3%	-26.2%	-9.9%	-21.0%	-26.7%	-37.3%
PM10: Urban	-1.9%	-11.4%	-11.4%	-8.6%	-8.6%	-2.7%	-11.7%	-11.8%	-18.2%	-18.2%	-18.1%
SOx: Total	-57.0%	-88.4%	-89.1%	-72.6%	-72.9%	-56.1%	-49.3%	71.8%	51.7%	51.2%	-69.4%
SOx: Urban	-4.7%	-14.9%	-14.9%	-62.3%	-62.3%	-41.1%	-54.9%	-52.7%	-94.7%	-94.7%	-96.9%
CH4	-68.1%	-66.3%	-66.3%	-67.9%	-68.2%	-69.4%	-69.6%	-63.3%	-60.1%	-60.1%	-66.4%
N2O	-43.5%	-44.8%	-46.6%	-45.3%	-45.0%	-38.8%	-59.0%	-57.3%	-58.1%	-59.5%	-59.8%
CO2	-55.8%	-58.1%	-96.5%	-74.7%	-55.4%	-60.9%	-64.5%	-54.5%	-53.2%	-81.3%	-63.2%
GHGs	-56.0%	-58.1%	-94.6%	-74.0%	-55.6%	-60.7%	-64.5%	-54.8%	-53.5%	-80.2%	-63.2%



D-II.1 Passenger Cars (Cont.)

Parameter	GC CIDI HEV: DME, FG, CA mix	GC CIDI HEV: FT50, NG, US mix	GC CIDI HEV: FT50, FG, US mix	GC CIDI HEV: FT50, NG, CA mix	GC CIDI HEV: FT50, FG, CA mix	GC CIDI HEV: BD20, US mix	GC CIDI HEV: BD20, CA mix	EV: US mix	EV: NE US mix	EV: CA mix	H2 FCV: NG, C. gaseous
Total energy	-40.9%	-43.9%	-40.1%	-44.1%	-40.3%	-48.8%	-49.0%	-38.4%	-39.7%	-39.0%	-59.7%
Fossil fuels	-77.8%	-48.3%	-56.7%	-55.7%	-64.0%	-53.4%	-60.7%	-53.4%	-57.2%	-77.9%	-60.3%
Petroleum	-98.9%	-80.5%	-80.5%	-80.7%	-80.7%	-69.4%	-69.7%	-98.7%	-98.2%	-99.6%	-99.7%
VOC: Total	-139.5%	-76.1%	-108.8%	-78.2%	-111.0%	-62.0%	-64.2%	-89.6%	-92.5%	-96.7%	-95.8%
VOC: Urban	-83.3%	-75.8%	-75.8%	-75.8%	-75.8%	-74.1%	-74.0%	-99.7%	-99.5%	-99.7%	-98.3%
CO: Total	-32.1%	-31.4%	-31.9%	-31.7%	-32.1%	-30.5%	-30.8%	-97.5%	-97.3%	-98.5%	-97.1%
CO: Urban	-30.1%	-30.1%	-30.1%	-30.1%	-30.1%	-29.8%	-29.8%	-99.9%	-99.8%	-99.9%	-99.5%
NOx: Total	-69.6%	-0.2%	-15.5%	-42.3%	-57.6%	23.9%	-18.3%	103.6%	44.7%	-36.8%	-41.5%
NOx: Urban	-0.6%	0.5%	0.5%	2.1%	2.1%	19.7%	21.3%	-80.8%	-60.2%	-75.5%	-23.4%
PM10: Total	-43.0%	-17.0%	-19.1%	-33.3%	-35.4%	-6.2%	-22.5%	17.7%	-8.2%	-36.7%	-47.4%
PM10: Urban	-18.1%	-15.7%	-15.7%	-15.6%	-15.6%	-11.5%	-11.3%	-32.4%	-30.5%	-32.0%	-32.2%
SOx: Total	-69.9%	63.1%	63.3%	-58.0%	-57.8%	75.4%	-45.7%	377.4%	147.0%	-26.2%	-66.0%
SOx: Urban	-96.9%	-69.2%	-69.2%	-71.4%	-71.4%	-53.6%	-55.8%	-89.3%	-78.7%	-96.5%	-99.0%
CH4	-66.3%	-61.4%	-61.2%	-67.7%	-67.5%	-62.3%	-68.6%	-48.8%	-45.9%	-69.7%	-62.6%
N2O	-61.1%	-58.3%	-58.5%	-59.9%	-60.2%	-53.7%	-55.4%	-89.3%	-90.2%	-94.9%	-98.2%
CO2	-91.3%	-51.2%	-65.4%	-61.2%	-75.4%	-55.3%	-65.2%	-46.3%	-56.7%	-79.4%	-68.6%
GHGs	-89.9%	-51.7%	-65.1%	-61.4%	-74.8%	-55.5%	-65.1%	-47.2%	-57.0%	-79.4%	-69.0%



## D-II.1 Passenger Cars (Cont.)

Parameter	H2 FCV: NG, station gaseous	H2 FCV: solar, gas	H2 FCV: solar, liquid	H2 FCV: NG, liquid	FCV: MeOH, NG	FCV: MeOH, FG
Total energy	-53.2%	-65.5%	-71.8%	-58.8%	-52.3%	-49.7%
Fossil fuels	-52.9%	-93.1%	-98.3%	-58.5%	-52.0%	-80.3%
Petroleum	-99.7%	-99.9%	-98.1%	-97.8%	-98.6%	-98.6%
VOC: Total	-94.5%	-95.8%	-92.3%	-89.8%	-72.8%	-145.1%
VOC: Urban	-94.9%	-97.6%	-97.8%	-97.7%	-73.6%	-73.6%
CO: Total	-95.9%	-98.4%	-98.8%	-96.7%	-78.0%	-79.3%
CO: Urban	-97.1%	-99.3%	-99.8%	-99.8%	-80.0%	-80.0%
NOx: Total	-30.8%	-35.8%	-71.0%	-44.6%	-63.3%	-99.1%
NOx: Urban	93.3%	7.2%	-75.4%	-73.0%	-82.8%	-82.8%
PM10: Total	-46.4%	-46.4%	-43.6%	-38.8%	-49.5%	-55.4%
PM10: Urban	-25.6%	-31.4%	-30.8%	-30.6%	-34.0%	-34.0%
SOx: Total	-91.7%	-63.5%	-97.5%	-90.6%	-87.8%	-88.0%
SOx: Urban	-99.4%	-98.8%	-97.2%	-97.1%	-97.0%	-97.0%
CH4	-47.1%	-86.9%	-98.8%	-63.3%	-68.0%	-70.5%
N2O	-96.7%	-98.1%	-99.4%	-97.8%	-79.2%	-80.4%
CO2	-63.7%	-93.4%	-98.3%	-67.7%	-62.8%	-96.7%
GHGs	-63.8%	-93.3%	-98.3%	-68.1%	-63.3%	-95.6%



**D-II.1 Passenger Cars (Cont.)**

<b>Parameter</b>	<b>FCV: MeOH, LFG</b>	<b>FCV: RFG</b>	<b>EtOH FCV: corn</b>	<b>EtOH FCV: WB</b>	<b>EtOH FCV: HB</b>	<b>NG FCV: CNG</b>
Total energy	-57.8%	-50.0%	-37.7%	-7.1%	-15.6%	-52.0%
Fossil fuels	-88.3%	-50.0%	-77.4%	-97.3%	-94.8%	-52.5%
Petroleum	-98.9%	-50.0%	-96.5%	-94.9%	-96.2%	-99.7%
VOC: Total	-83.2%	-52.9%	-5.8%	-53.0%	-56.4%	-88.5%
VOC: Urban	-75.6%	-54.1%	-72.0%	-72.0%	-72.1%	-87.9%
CO: Total	-86.5%	-78.5%	-77.2%	-71.1%	-72.5%	-78.9%
CO: Urban	-82.8%	-79.9%	-79.8%	-79.9%	-79.8%	-79.6%
NOx: Total	-73.5%	-55.1%	46.7%	96.4%	99.8%	-39.1%
NOx: Urban	-98.9%	-72.1%	-55.1%	-59.5%	-58.2%	-17.5%
PM10: Total	-173.5%	-38.4%	349.9%	42.2%	31.1%	-46.7%
PM10: Urban	-128.6%	-32.8%	-31.6%	-31.8%	-31.7%	-32.5%
SOx: Total	-30.6%	-54.1%	45.9%	-102.1%	-87.9%	-66.2%
SOx: Urban	-177.6%	-94.9%	-95.8%	-96.6%	-96.1%	-99.1%
CH4	-267.5%	-53.0%	-70.7%	-92.8%	-89.3%	-9.4%
N2O	-78.7%	-78.7%	182.0%	8.6%	205.8%	-79.0%
CO2	-132.5%	-50.0%	-76.4%	-113.1%	-101.4%	-61.6%
GHGs	-135.8%	-50.6%	-71.2%	-110.1%	-95.1%	-60.3%



## D-II Long-Term Technologies

### D-II.2 Light-Duty Truck 1

Parameter	Dedi. CNGV	Dedi. LNGV	Dedi. LPGV: crude	Dedi. LPGV: NG	Dedi. MeOHV: M90, NG	Dedi. MeOHV: M90, FG	Dedi. MeOHV: M90, LFG	Dedi. EtOHV: E90, corn	Dedi. EtOHV: E90, WB	Dedi. EtOHV: E90, HB	SIDI: FRFG2, MTBE
Total energy	-8.6%	-5.7%	-16.8%	-17.7%	8.8%	13.8%	-1.8%	10.0%	57.8%	44.5%	-20.0%
Fossil fuels	-9.5%	-5.1%	-16.9%	-17.4%	9.4%	-45.4%	-61.0%	-52.1%	-83.1%	-79.2%	-20.0%
Petroleum	-99.4%	-96.0%	-1.3%	-98.2%	-78.1%	-78.1%	-78.7%	-80.1%	-77.7%	-79.6%	-20.0%
VOC: Total	-64.7%	-56.8%	-49.2%	-58.1%	-18.5%	-183.5%	-42.2%	98.5%	11.9%	5.7%	-12.1%
VOC: Urban	-56.3%	-58.5%	-49.9%	-45.3%	-14.0%	-14.0%	-19.0%	-12.0%	-12.1%	-12.2%	-8.0%
CO: Total	-19.9%	-17.6%	-20.8%	-21.7%	2.0%	-1.2%	-19.5%	1.8%	14.4%	11.5%	-1.3%
CO: Urban	-19.2%	-20.1%	-19.9%	-19.9%	-0.3%	-0.3%	-7.5%	-0.1%	-0.1%	-0.1%	-0.1%
NOx: Total	27.6%	70.7%	-33.5%	-41.7%	-5.1%	-77.6%	-25.7%	154.3%	235.4%	240.9%	-17.3%
NOx: Urban	126.1%	-14.1%	-3.5%	-4.5%	-21.1%	-21.1%	-59.5%	5.3%	-0.1%	1.5%	-6.4%
PM10: Total	-35.9%	-31.2%	-32.1%	-41.6%	-27.8%	-41.4%	-315.3%	713.4%	138.8%	118.1%	-0.7%
PM10: Urban	-24.2%	-26.0%	-24.9%	-25.0%	-15.1%	-15.1%	-257.0%	-12.4%	-12.6%	-12.5%	11.6%
SOx: Total	-34.1%	-76.7%	-48.4%	-71.8%	-60.0%	-60.4%	50.8%	140.7%	-90.6%	-68.3%	-20.0%
SOx: Urban	-80.6%	-98.3%	-91.3%	-91.5%	-77.9%	-77.9%	-234.2%	-83.0%	-83.8%	-83.3%	-20.0%
CH4	76.3%	76.1%	-29.9%	-23.1%	-21.5%	-26.4%	-418.2%	-33.6%	-69.0%	-63.3%	-18.5%
N2O	-48.1%	-47.0%	-2.9%	-2.9%	-0.6%	-3.6%	0.6%	534.4%	178.5%	583.1%	-1.2%
CO2	-26.9%	-26.9%	-21.3%	-22.9%	-11.6%	-77.3%	-146.8%	-50.1%	-107.4%	-89.1%	-20.0%
GHGs	-24.0%	-24.0%	-21.3%	-22.6%	-11.8%	-74.6%	-153.0%	-41.0%	-102.0%	-78.4%	-19.7%

