

Table 39. Light-Duty Vehicle Sales by Technology Type  
(thousands)

West North Central	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>New Car Sales 1/</b>														
<b>Conventional Vehicles</b>														
Gasoline ICE Vehicles	502.3	504.9	519.4	543.1	540.9	529.3	520.5	505.0	504.0	499.1	491.5	483.4	477.3	474.5
TDI Diesel ICE	3.2	1.9	2.3	2.3	2.6	2.6	2.5	2.4	2.5	2.5	2.6	2.7	2.8	3.0
Total Conventional	505.5	506.8	521.6	545.4	543.6	531.9	523.0	507.4	506.5	501.6	494.1	486.1	480.1	477.5
<b>Alternative-Fuel Vehicles</b>														
Methanol-Flex Fuel ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Methanol ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ethanol-Flex Fuel ICE	26.4	26.6	27.8	28.7	32.9	33.3	32.6	32.1	32.2	31.8	31.2	30.5	30.0	29.7
Ethanol ICE	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electric Vehicle	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Electric-Diesel Hybrid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.4	0.5	0.5	0.5
Electric-Gasoline Hybrid	3.3	6.2	8.1	13.6	11.8	16.5	16.7	19.9	22.1	23.2	24.1	25.0	26.8	28.2
Compressed Natural Gas ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compressed Natural Gas Bi-fuel	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Liquefied Petroleum Gas ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liquefied Petroleum Gas Bi-fuel	3.0	3.1	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.0	3.0
Fuel Cell Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Alternatives	33.8	36.9	40.2	46.8	49.2	54.2	53.7	56.3	58.6	59.6	60.0	60.2	61.4	62.5
Percent Alternative Car Sales	6.26	6.79	7.16	7.90	8.30	9.25	9.32	9.99	10.38	10.62	10.82	11.02	11.34	11.58
Total New Car Sales	539.2	543.7	561.9	592.2	592.7	586.0	576.7	563.7	565.1	561.3	554.1	546.3	541.5	540.0
<b>New Light Truck Sales 2/</b>														
<b>Conventional Vehicles</b>														
Gasoline ICE Vehicles	459.0	463.9	440.2	391.3	402.9	409.1	425.6	441.6	445.0	449.4	451.2	454.1	451.6	451.0
TDI Diesel ICE	28.8	27.8	25.2	25.0	24.3	25.9	27.5	29.0	30.8	32.0	33.2	35.0	35.7	38.5
Total Conventional	487.8	491.6	465.4	416.3	427.1	435.0	453.1	470.6	475.8	481.4	484.4	489.0	487.3	489.5

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	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Alternative-Fuel Vehicles														
Methanol-Flex Fuel ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Methanol ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ethanol-Flex Fuel ICE	25.5	25.9	27.9	25.0	42.4	43.3	45.5	47.4	47.7	48.1	48.3	48.5	48.1	48.0
Ethanol ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electric Vehicle	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Electric-Diesel Hybrid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electric-Gasoline Hybrid	0.0	0.0	4.7	7.2	7.5	14.5	14.9	15.5	17.1	18.2	19.4	20.7	25.8	28.2
Compressed Natural Gas ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compressed Natural Gas Bi-fuel	2.0	2.1	2.0	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2
Liquefied Petroleum Gas ICE	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liquefied Petroleum Gas Bi-fuel	6.7	6.8	6.5	5.9	6.3	6.5	6.7	7.0	7.1	7.2	7.2	7.3	7.4	7.4
Fuel Cell Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Alternatives	34.6	35.1	41.4	40.2	58.4	66.5	69.5	72.4	74.2	76.0	77.3	79.0	83.8	86.1
Percent Alternative Light Truck Sales	6.62	6.66	8.17	8.80	12.03	13.26	13.30	13.33	13.49	13.63	13.77	13.91	14.68	14.96
Total New Truck Sales	522.3	526.7	506.7	456.5	485.6	501.4	522.6	543.0	550.0	557.4	561.7	568.0	571.2	575.6
Percent Total Alternative Sales	6.44	6.72	7.64	8.29	9.98	11.09	11.21	11.63	11.92	12.12	12.31	12.49	13.05	13.33
EPACT Legislative Alternative Sales	17.45	17.60	17.27	16.32	17.03	17.36	17.79	18.17	18.35	18.50	18.54	18.62	18.65	18.75
ZEVP Legislative Alternative Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Vehicles Sales	1061.6	1070.4	1068.6	1048.7	1078.3	1087.5	1099.3	1106.6	1115.2	1118.7	1115.8	1114.3	1112.6	1115.7

Table 39. Light-Duty Vehicle Sales by Technology Type  
(thousands)

West North Central	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2004-2030
<b>New Car Sales 1/</b>															
<b>Conventional Vehicles</b>															
Gasoline ICE Vehicles	472.0	470.4	468.3	467.7	467.6	467.9	468.4	468.5	468.1	468.5	467.9	466.7	465.8	465.1	-0.3%
TDI Diesel ICE	3.1	3.4	3.6	3.9	4.2	4.6	4.8	5.2	5.7	6.0	6.4	6.7	7.3	7.7	5.5%
Total Conventional	475.2	473.8	471.9	471.6	471.8	472.5	473.2	473.7	473.8	474.6	474.3	473.5	473.1	472.8	-0.3%
<b>Alternative-Fuel Vehicles</b>															
Methanol-Flex Fuel ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1%
Methanol ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Ethanol-Flex Fuel ICE	29.5	29.3	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.1	29.1	29.0	0.3%
Ethanol ICE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3.9%
Electric Vehicle	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1%
Electric-Diesel Hybrid	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	N/A
Electric-Gasoline Hybrid	29.7	31.4	33.0	34.5	36.0	37.6	39.3	41.0	42.7	44.5	46.3	48.2	50.1	52.1	8.5%
Compressed Natural Gas ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9%
Compressed Natural Gas Bi-fuel	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.2%
Liquefied Petroleum Gas ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Liquefied Petroleum Gas Bi-fuel	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	0.1%
Fuel Cell Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Fuel Cell Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Fuel Cell Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Total Alternatives	63.7	65.2	66.7	68.1	69.6	71.2	72.9	74.6	76.3	78.2	80.0	81.8	83.6	85.7	3.3%
Percent Alternative Car Sales	11.83	12.10	12.38	12.62	12.85	13.10	13.35	13.61	13.87	14.15	14.44	14.73	15.02	15.34	3.2%
Total New Car Sales	538.9	539.0	538.5	539.7	541.3	543.7	546.1	548.3	550.1	552.8	554.3	555.2	556.7	558.4	0.1%
<b>New Light Truck Sales 2/</b>															
<b>Conventional Vehicles</b>															
Gasoline ICE Vehicles	454.4	457.3	458.9	457.8	460.2	462.5	466.3	469.4	470.3	473.7	476.7	477.7	476.5	477.3	0.1%
TDI Diesel ICE	40.8	44.3	46.8	51.0	54.5	58.7	61.9	66.1	72.2	76.0	79.8	83.5	91.0	95.2	4.9%
Total Conventional	495.2	501.6	505.7	508.7	514.7	521.2	528.3	535.5	542.4	549.6	556.6	561.2	567.5	572.5	0.6%

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	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2004-2030
Alternative-Fuel Vehicles															
Methanol-Flex Fuel ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1%
Methanol ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Ethanol-Flex Fuel ICE	48.3	48.7	48.8	48.7	49.0	49.3	49.7	50.2	50.4	50.9	51.4	51.5	51.5	51.7	2.7%
Ethanol ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Electric Vehicle	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1%
Electric-Diesel Hybrid	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	N/A
Electric-Gasoline Hybrid	29.7	31.5	33.3	35.1	37.0	39.0	41.2	43.5	45.8	48.3	50.9	53.4	56.0	58.7	N/A
Compressed Natural Gas ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0%
Compressed Natural Gas Bi-fuel	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	1.1%
Liquefied Petroleum Gas ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.3%
Liquefied Petroleum Gas Bi-fuel	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.3	8.4	8.5	8.7	8.7	8.9	9.0	1.1%
Fuel Cell Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Fuel Cell Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Fuel Cell Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Total Alternatives	88.2	90.5	92.5	94.4	96.8	99.2	102.0	104.9	107.6	110.8	114.0	116.8	119.5	122.6	4.9%
Percent Alternative Light Truck Sales	15.12	15.29	15.46	15.66	15.83	15.99	16.19	16.38	16.55	16.77	17.00	17.23	17.39	17.63	3.8%
Total New Truck Sales	583.4	592.1	598.2	603.1	611.5	620.4	630.3	640.5	650.0	660.4	670.6	678.0	687.0	695.1	1.1%
Percent Total Alternative Sales	13.54	13.77	14.00	14.22	14.43	14.64	14.87	15.11	15.32	15.58	15.84	16.10	16.33	16.61	3.5%
EPACT Legislative Alternative Sales	18.93	19.14	19.28	19.41	19.63	19.87	20.13	20.40	20.64	20.92	21.18	21.37	21.60	21.81	0.8%
ZEVP Legislative Alternative Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
Total Vehicles Sales	1122.3	1131.2	1136.8	1142.8	1152.8	1164.2	1176.4	1188.8	1200.1	1213.2	1224.9	1233.2	1243.7	1253.5	0.6%

Table 39. Light-Duty Vehicle Sales by Technology Type  
(thousands)  
West North Central

1/ Includes personal and fleet light-duty cars.

2/ Includes personal and fleet light-duty trucks.

ICE = Internal combustion engine.

EPACT = Energy Policy Act of 1992.

ZEVP = Zero emission vehicles from the low emission vehicle program.

N/A = Not applicable.

Sources: 2003 and 2004 derived using: California Air Resources Board (CARB), "Proposed Regulations for Low-Emission Vehicles and Clean Fuels, Staff Report"; CARB, "Proposed Amendments to California Exhaust and Evaporative Emission Standards and Test Procedures for Passenger, Light-Duty Trucks and Medium-Duty Vehicles - LEVII and Proposed Amendments to California Motor Vehicle Certification: Assembly-Line and In-Use Test Requirements - CAP 2000," (El Monte, CA, September 1998); Energy Information Administration (EIA), Describing Current and Potential Markets for Alternative-Fuel Vehicles, DOE/EIA-0604(96) (Washington, DC, March 1996); EIA, Alternatives to Traditional Transportation Fuels 2004, <http://www.eia.doe.gov/fuelrenewable.html>; and EIA, AEO2006 National Energy Modeling System run aeo2006.d111905a. Projections: EIA, AEO2006 National Energy Modeling System run aeo2006.d111905a.