



**PROGRESS REPORT FOR REDUCING OR
DISPLACING THE CONSUMPTION OF
PETROLEUM PRODUCTS BY THE STATE
FLEET**

FINAL AB 236 REPORT

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April 2019

EXECUTIVE SUMMARY

Progress to Date

In 2007, Assembly Bill (AB) 236 (Lieu, Chapter 593, Statutes of 2007) added Public Resources Code §25722.8 (a),¹ which established aggressive goals of reducing or displacing the consumption of petroleum products by the state fleet when compared to the fleet's 2003 consumption levels. AB 236 mandated that, by January 1, 2012, the state fleet reduce or displace its petroleum consumption by 10 percent and that, by January 1, 2020, the state fleet increase that reduction to 20 percent.

In previous Progress Reports, it was reported that the state fleet had achieved a 14.9 percent reduction by 2012, which met and exceeded the first petroleum fuel reduction target of 10 percent by 2012. However, as a result of new gasoline consumption data provided by one of the state's largest fleet operating agencies, the Department of General Services (DGS) has updated the report to reflect increased gasoline consumptions totals for years 2012 through 2016. As a result, it was determined that the state fleet did not meet the 2012 petroleum fuel reduction goal of 10 percent. Based on the updated data, in 2012 the state fleet had reduced petroleum fuel consumption by 6.2 percent from the 2003 baseline.

However, as of January 1, 2017, the state fleet had not only surpassed the 10 percent petroleum reduction goal, but also surpassed the 20 percent petroleum reduction goal three years before the 2020 requirement.

As of January 1, 2017, the state fleet had reduced its petroleum fuel consumption by 22.3 percent, which exceeds the 20 percent by 2020 reduction requirement of AB 236. This 22.3 percent reduction in petroleum fuel consumption represents the elimination or offset of 8.6 million gallons in annual state fleet petroleum fuel consumption from its 2003 baseline. In addition to this drop in petroleum fuel use, the state increased its use of environmentally friendly alternative fuels by 2,685.1 percent, or 4.4 million gallons, in 2016, when compared to the 2003 baseline.

Key Points

- *State fleet has met and exceeded AB 236's petroleum reduction mandate of 20 percent.*
- *Compliance with AB 236 was achieved three years prior to the January 1, 2020 deadline.*
- *Reduction of 22.3 percent in fuel usage, when compared to the 2003 baseline.*
- *Reduction of 8.6 million gallons of annual petroleum fuel being used.*
- *Increase of 2685.1 percent in alternative fuel usage since 2003.*
- *More than 4 million gallons of additional petroleum reduction in 2016 through the use of renewable diesel.*
- *New state fleet petroleum reduction goal of 50 percent by 2030 established.*

¹https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=15.&title=&part=&chapter=8.3.&article=

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These reductions have been accomplished through a combination of efforts, including:

- **Fleet vehicle reductions:** Reducing fleet vehicles, per Executive Orders S-14-09 and B-2-11, significantly lowered the amount of fuel that was consumed annually by the state fleet. Having fewer state fleet vehicles was a key factor in the fuel consumption reduction from 2003 to 2012.
- **New fuel consumption reporting requirements:** Increased fuel reporting requirements have allowed DGS to accurately track and report on departmental petroleum fuel consumption. Through the Green Fleet website², statewide and department-level fuel consumption is tracked and publicly displayed to provide a transparent view of the state fleet's fuel and greenhouse gas (GHG) emissions reduction progress.
- **Departmental education initiatives/outreach:** Through the quarterly State Equipment Council and public outreach events, DGS introduces new fuel-efficient technology to state fleet managers and state employees.
- **Implementation of efficient vehicle adoption and fuel usage policies:** DGS has implemented an aggressive renewable diesel purchasing mandate and has pushed the adoption of zero-emission vehicles (ZEVs) and hybrid vehicles through strong compliance review and by incentivizing non-internal combustion engine vehicles through the DGS leased fleet's rate structure. These policies have increased the number of ZEV and hybrid vehicles in the state fleet from 665 in 2012 to 2,051 in 2016.

Petroleum Consumption Data Revisions

To develop the annual Progress Report for Reducing or Displacing the Consumption of Petroleum Products by the State Fleet, DGS collects, aggregates, and validates fuel consumption data that is submitted to DGS by fleet owning and operating state agencies. After collecting and aggregating the data, DGS identifies possible discrepancies or anomalies by reviewing multiyear trend data and by cross-referencing the reported consumption data with purchasing data received by the DGS Procurement Division and the state's contracted retail fuel payment provider. If discrepancies or anomalies are identified, DGS requests re-review and validation of all submitted data from reporting agencies. For significant discrepancies or unexplainable deviations from the trend, DGS will request the reporting agency conduct a thorough review of the data submitted and either correct the data, if necessary, or provide a detailed explanation for the deviation.

During the data validation process for this Progress Report, DGS identified a significant discrepancy between the amount of fuel one large fleet-owning agency reported as consumed versus the amount of fuel DGS' Procurement Division reported as purchased by the agency. As a result, DGS requested a thorough review of the discrepancy by the reporting agency. Upon review, the reporting agency determined that multiple remote locations had failed to properly report their fuel consumption and, as such, their fuel consumption was significantly underreported to DGS in 2016. Additionally, it was

² <http://www.green.ca.gov/fleet>

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determined that the agency had significantly underreported its fuel consumption data for this report in every calendar year since the reporting went into effect in 2008.

All data was subsequently collected and reported to DGS by the reporting agency and DGS has updated the state fleet's petroleum fuel consumption totals for years 2012 through 2016. As a result of the update, the state fleet's petroleum consumption totals increased by approximately 3 million gallons each year, which has also lowered the state fleet's overall petroleum reduction progress. However, despite the increase as a result of underreporting of data, the state fleet was still able to reach the 20 percent reduction goal in 2016, three years ahead of schedule.

Looking Ahead

While the state fleet has met and exceeded the 20 percent petroleum reduction goal of AB 236, DGS is committed to continuing its efforts to reduce the state fleet's petroleum consumption and GHG emissions. Looking ahead, DGS will focus on developing and implementing policy, administrative, and operational actions that will assist the state in meeting the 40 percent GHG emissions reduction goals set forth in Executive Order (EO) B-30-15³ and enacted into law in Senate Bill (SB) 32 (Pavley, Chapter 249, Statutes of 2016).⁴ Building upon the state fleet's success in meeting the requirements of AB 236, DGS is establishing a new state fleet petroleum reduction target of 50 percent by 2030. To provide transparent and continuous updates on DGS' progress toward meeting this goal, DGS will begin tracking and displaying progress toward meeting this goal on the state's Green Fleet website⁵ in lieu of providing annual reports. Some examples of actions DGS is taking to accomplish this goal are:

- **Renewable diesel mandate:** Through policy issued in 2015, DGS intends to eliminate the state fleet's use of bulk petroleum-based diesel and convert all bulk diesel usage to renewable diesel. In 2016, more than 4 million gallons of petroleum diesel were converted to renewable diesel used by the state fleet, representing 45 percent of total fleet diesel fuel usage in 2016.
- **ZEV/Hybrid First policy:** Through policy issued in 2016, California has become the first state government in the nation to adopt a ZEV and hybrid vehicle first purchasing policy. This policy mandates that a ZEV or hybrid vehicle must be purchased if there is one available that can meet operational needs.
- **New life cycle replacement thresholds:** In 2017, DGS set optimum age and mileage replacement thresholds that are significantly lower than the current mileage thresholds for the state fleet's vehicles. Not only will these thresholds result in cost savings, they will also allow the state fleet to cycle out fuel-inefficient petroleum-based vehicles and cycle in hybrids and ZEVs at a faster rate.
- **Infrastructure deployment:** To support the increased adoption of plug-in vehicles, the DGS Office of Sustainability has formed a dedicated team to work with state departments and lead the state's efforts on electric vehicle (EV) charging infrastructure

³ <https://www.ca.gov/archive/gov39/2015/04/29/news18938/>

⁴ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

⁵ <http://www.green.ca.gov/fleet>

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installation. This team – in coordination with department stakeholders – is planning, designing, and deploying hundreds of EV charging stations throughout the state to support both fleet and workplace charging.

- **Data collection/reporting technology adoption:** While data collection and reporting technology does not have a direct impact on petroleum consumption, DGS will use the adoption of data reporting technology to track and ensure compliance with the state fleet’s “green” policies. Additionally, DGS intends to issue statewide policy mandating the installation and use of a vehicle telematics system. Vehicle telematics systems track and provide, via Wi-Fi or cellular data system, real-time reports on vehicle location, usage, and diagnostic information. DGS will use this data to ensure that ZEVs are being used and charged properly to ensure the state fleet maximizes the environmental and fuel savings benefits of these vehicles.
- **Medium- and heavy-duty ZEV policy:** DGS intends to develop and issue statewide policy that would add ZEV purchasing requirements on medium- and heavy-duty vehicle classes. Currently all ZEV and hybrid vehicle purchasing requirements for the state fleet apply only to light-duty vehicles; however, medium- and heavy-duty vehicles typically achieve much lower fuel efficiency than light-duty vehicles and consume considerable amounts of fuel. By expanding the state’s ZEV purchasing policies into the medium- and heavy-duty classes, DGS hopes to begin to address an area with huge potential for future petroleum fuel and GHG emissions reductions.

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Path to 20 Percent Petroleum Reduction

Assembly Bill (AB) 236 (Lieu, Chapter 593, Statutes of 2007) added Public Resources Code §25722.8 (a)⁶ establishing the goal of reducing or displacing the consumption of petroleum products by the state fleet when compared to the 2003 consumption levels based on the following schedule:

1. By January 1, 2012, a 10 percent reduction or displacement.
2. By January 1, 2020, a 20 percent reduction or displacement.

From 2003 to 2012 the state fleet achieved a 6.2 percent petroleum reduction, falling short of the first reduction target of 10 percent. However, as of January 1, 2016, the state fleet had achieved a petroleum fuel reduction of 22.34 percent, which exceeds both the 10 percent and the 20 percent reduction requirements of AB 236.

As previously noted in the 2016 Progress Report, DGS has taken many policy, administrative and operational actions that have led to the petroleum reductions detailed in this report. Since the release of the 2016 Progress Report, DGS has continued its efforts to reduce petroleum fuel consumption and promote alternative fuel adoption. The renewable diesel purchasing mandate in particular, which took effect on January 1, 2016, had a considerable impact on the success of DGS' petroleum reduction efforts in 2016.

In preparation for AB 692 (Quirk, Chapter 588, Statutes of 2015), which mandated at least 3 percent of the aggregate amount of bulk transportation fuel purchased by the state government be procured from low carbon transportation fuel sources, DGS executed contracts for renewable diesel, a fuel with low carbon intensity⁷. In December 2015, DGS issued State Administrative Manual (SAM) Section 3627,⁸ which mandates the use of renewable diesel in lieu of conventional diesel and biodiesel fuel for bulk fuel purchases. As a result of the bulk renewable diesel purchasing mandate, DGS reduced the purchase of petroleum-based diesel fuel by over 4 million gallons in 2016. As DGS continues to strengthen compliance measures, DGS anticipates the increased use of renewable diesel and further reduction of petroleum-based diesel fuel consumption.

Renewable diesel is biomass-based diesel fuel that has the same chemical properties as petroleum-based diesel, with less than half the carbon intensity (CI). While renewable diesel and biodiesel have similar CI reduction properties, because renewable diesel is chemically similar to conventional diesel and meets industry certification standards (ASTM D975) for diesel fuels, it can be used as a "drop-in" fuel, without a need to blend it with conventional diesel. Thus, switching over to renewable diesel provides the state fleet 20 times the petroleum reduction benefit compared to the state's traditionally used biodiesel fuel (B5), and reduces GHG emissions by up to 60 percent compared to conventional diesel fuel.

⁶https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=15.&title=&part=&chapter=8.3.&article=

⁷ <https://www.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm>

⁸ www.documents.dgs.ca.gov/sam/SamPrint/new/sam_master/sam_master_file/chap3600/3627.pdf

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Petroleum Consumption Data Revisions

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While conducting the final review of 2016 fuel consumption data, DGS identified a significant discrepancy in the amount of fuel from a large, fleet-owning agency (approximately 5,000 fleet assets comprising 10 percent of the state fleet) reported when compared against the amount of fuel the agency was reported to have purchased by DGS' Procurement Division. As a result, DGS requested a thorough review of the discrepancy by the reporting agency. Upon review, the reporting agency determined that multiple remote locations had failed to properly report their fuel consumption and, as such, their fuel consumption was significantly underreported to DGS. Additionally, DGS determined that the underreporting occurred in each of the years that state agencies were required to provide fuel consumption data for the purposes of this report.

To address the discrepancies, DGS had the reporting agency collect and report on fuel consumption data from all locations statewide and has updated the agency's fuel consumption data for years 2012 through 2016. As a result of the update, the state fleet's gasoline consumption totals increased by approximately 3 million gallons each year, with the exception of 2013, where the consumption total only increased by 497,618 gallons. Figure 1 below compares the previously reported consumption totals for years 2012 through 2015 with the recently corrected totals.

Figure 1: Data Revision Comparison – Years 2012 through 2015

Fuel Type	2012		2013		2014		2015	
	Old	New	Old	New	Old	New	Old	New
Gasoline	24,143,121	27,488,368	23,850,483	24,353,879	23,170,952	25,945,606	23,532,603	26,233,418
Diesel	8,683,081	8,683,081	8,566,168	8,566,168	7,927,722	7,927,722	7,640,748	7,640,748
Total Petroleum	32,826,202	36,171,449	32,416,651	32,920,047	31,098,674	33,873,328	31,173,351	33,874,166
Percentage Petroleum Reduction from 2003 Level	14.9%	6.2%	15.9%	14.6%	19.4%	12.2%	19.2%	12.2%

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AB 236: Petroleum Reduction Progress

Annual Comparisons 2003-2016

Figure 2 below illustrates the progress made in the state fleet petroleum fuel reduction for 2014, 2015 and 2016 when compared to 2003 petroleum fuel consumption totals. Over this three-year period the state fleet reduced its petroleum fuel consumption by 11.6 percent and increased its alternative fuel consumption by 668.5 percent. The majority of the drop in petroleum consumption happened in 2016 when, as a result of the state's Renewable Diesel purchasing mandate, the state fleet's petroleum fuel consumption decreased by 3.9 million gallons. This decrease has helped lead the state fleet to an overall 22.3 percent reduction in 2016, exceeding the 20 percent goal three years before it is required by AB 236.

Figure 2: Petroleum Reduction Overview

Petroleum Reduction (by year)					
2014		2015		2016	
2003 Petroleum Consumption (Baseline)	38,559,715	2003 Petroleum Consumption (Baseline)	38,559,715	2003 Petroleum Consumption (Baseline)	38,559,715
2014 Petroleum Consumption	33,873,328	2015 Petroleum Consumption	33,874,165	2016 Petroleum Consumption	29,946,488
Difference (Gallons)	4,686,387	Difference (Gallons)	4,685,550	Difference (Gallons)	8,613,227
% Reduction	12.2%	% Reduction	12.2%	% Reduction	22.3%

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Figure 3 below illustrates four years of state fleet petroleum and alternative fuel consumption.

Figure 3: Fuel Consumption by Fuel Type

Fuel Type	2003	2014	2015	2016
Gasoline*	30,017,477	25,945,606	26,233,418	25,035,144
Diesel	8,542,238	7,927,722	7,640,748	4,911,344
Total Petroleum	38,559,715	33,873,328	33,874,166	29,946,488
Petroleum Percentage of Total Consumption	99.6%	98.3%	98.4%	87.1%
Percent Difference from Previous Year	N/A	2.9%	0.0%	-11.6%
Percentage Petroleum Reduction from 2003 Level	N/A	-12.2%	-12.2%	-22.3%
Alternative Fuels	2003	2014	2015	2016
Compressed Natural Gas	159,304	182,743	181,742	179,493
LPG/Propane	0	51,559	45,380	36,173
E85 Ethanol	0	203,876	144,964	101,511
Electricity	0	5,419	6,314	12,787
Biodiesel**	0	132,743	139,912	40,279
Liquid Natural Gas	0	991	0	22
Renewable Diesel	0	0	19,609	4,066,491
Total Alternative Fuels	159,304	577,332	537,922	4,436,756
Alternative Fuel Percentage of Total Consumption	0.4%	1.7%	1.6%	12.9%
Percentage Change from 2003	N/A	262.4%	237.7%	2685.1%

Source: Voyager and state agencies bulk fuel as reported to DGS.

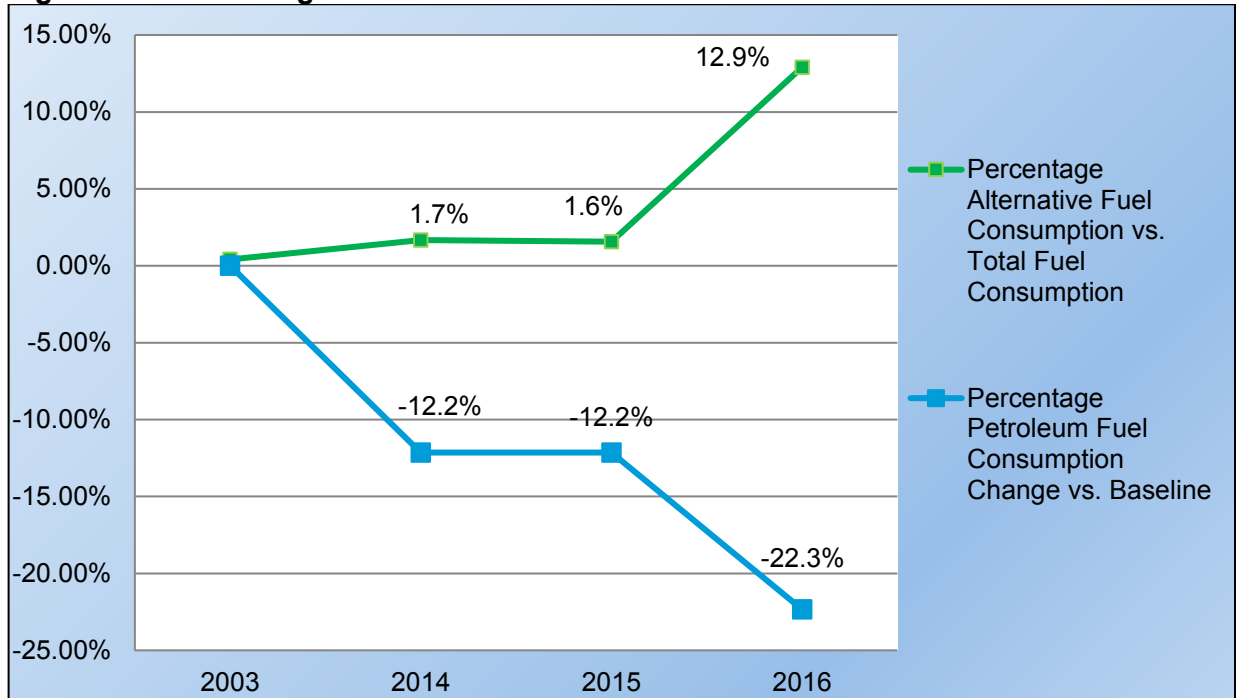
* Gasoline measured in gallons, all other fuels measured in gasoline gallon equivalents (GGE).

** Biodiesel fuel numbers consist of both B5 and B20 biodiesel; however, B20 represents 0.123 percent of the total biodiesel purchases.

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Figure 4 illustrates petroleum fuel reduction and alternative fuel adoption progress.

Figure 4: AB 236 Progress



Fifty Percent Petroleum Reduction by 2030

While the state fleet has met and exceeded the 20 percent petroleum fuel reduction goal established in AB 236, DGS is committed to continuing its efforts to reduce the state fleet's petroleum fuel consumption and GHG emissions. To fulfill our responsibility of reducing GHG emissions (within our jurisdiction), and to build upon DGS' successes in meeting the requirements of AB 236, moving forward DGS will focus on developing and implementing policy, administrative, and operational actions that will reduce petroleum use in cars and trucks by up to 50 percent. In measuring progress toward this goal, DGS will use fuel consumption numbers from 2015 as the baseline, which is consistent with the baseline year established by EO B-30-15 and SB 32 (Pavley, Chapter 249, Statutes of 2016). In addition, to better track and show progress in a timely, transparent, and efficient manner, DGS will now report all petroleum reduction and compliance progress for the state fleet via the state's Green Fleet website,⁹ in lieu of an annual report.

⁹ <http://www.green.ca.gov/fleet>

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Annual Comparisons 2015-2016

Figure 5 below illustrates the progress made toward the state fleet’s new petroleum fuel reduction goal of 50 percent by 2030. Figure 5 sets the 2015 baseline and compares the consumption numbers for 2016, the first year of data for the new goal. From 2015 to 2016, the state fleet reduced its petroleum fuel consumption by 11.6 percent and increased its alternative fuel consumption by 724.8 percent. The majority of the reduction in petroleum consumption happened as a result of the state’s Renewable Diesel purchasing mandate. In future years, DGS expects the offset of petroleum-based diesel with Renewable Diesel to increase by another 3 to 4 million gallons, further decreasing the state fleet’s petroleum consumption and moving the state fleet closer to the 50 percent goal. In addition, as the state’s ZEV purchasing policies gradually increase, it is expected that there will be corresponding reductions in petroleum fuel consumption.

Figure 5: Fuel Consumption by Fuel Type

Fuel Type	2015 (Baseline)	2016
Gasoline*	26,233,418	25,035,144
Diesel	7,640,748	4,911,344
Total Petroleum	33,874,165	29,946,488
Petroleum Percentage of Total Consumption	98.4%	87.1%
Percent Difference from Previous Year	N/A	11.6%
Percentage Petroleum Reduction from 2015	N/A	11.6%
Alternative Fuels	2015 (Baseline)	2016
Compressed Natural Gas	181,742	179,493
LPG/Propane	45,380	36,173
E85 Ethanol	144,964	101,511
Electricity	6,314	12,787
Biodiesel**	139,912	40,279
Hydrogen	0	0
Liquid Natural Gas	0	22
P-Series	0	0
Renewable Diesel	19,609	4,066,491
Total Alternative Fuels	537,922	4,436,756
Alternative Fuel Percentage of Total Consumption	1.7%	12.9%
Percentage Alt Fuel Use Change from 2015	N/A	724.8%

Source: Voyager and state agencies bulk fuel as reported to DGS.

* Gasoline measured in gallons, all other fuels measured in gasoline gallon equivalents (GGE).

** Biodiesel fuel numbers consist of both B5 and B20 biodiesel; however, B20 represents 0.123 percent of the total biodiesel purchases.

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Future Initiatives

To meet the new goal of 50 percent reduction by 2030, DGS will continue to pursue initiatives that promote cleaner vehicle technologies, lower carbon fuels, and the reduction of vehicle miles traveled. Below are some examples of actions that DGS is currently taking, or will be taking soon, to meet the expanded petroleum and GHG reduction goals:

1. **Adopt medium- and heavy-duty ZEV purchasing policies:** Currently all ZEV and hybrid vehicle purchasing requirements for the state fleet apply only to light-duty vehicles with a gross vehicle weight rating (GVWR) of 8,500 pounds or less. DGS intends to develop and issue statewide policy that would implement ZEV purchasing requirements on vehicle classes with a GVWR of over 8,500 pounds. Due to their weight, medium- and heavy-duty vehicles typically achieve much lower fuel efficiency than light-duty vehicles and consume considerable amounts of fuel. By expanding the state's ZEV purchasing policies into the medium- and heavy-duty classes, DGS hopes to begin to address an area with huge potential for fuel reduction and to demonstrate to the vehicle manufacturing industry that if viable ZEV products are made in the medium- and heavy-duty classes, there are interested consumers.
2. **Promote ZEV technology:** In May 2018, DGS partnered with AltCar¹⁰ to host the third annual Alternative Transportation Expo and Ride and Drive at the State Capitol in Sacramento. This event showcased zero-emission vehicles, while promoting and exposing the public and members of the Legislature to the benefits of cleaner transportation technologies. DGS will continue to cohost this annual event, which promotes awareness of the negative impacts of petroleum use on the environment while also educating the public on affordable, cleaner transportation alternatives.
3. **Find new "green" vehicles:** Due to the diversity of the state's fleet and the unique operational demands that these vehicles must meet, many vehicle classes lack commercially available ZEVs and hybrids that would be viable options for state departments to use. In the most recent statewide vehicle contracting effort, DGS was able to add plug-in hybrid versions in the minivan and small SUV classes on contract, which significantly expands state department's operational ability to adopt ZEVs. In addition, DGS' Procurement Division implemented a new and innovative procurement strategy that removes the restrictions of rank awards, resulting in a significantly expanded variety of "green" vehicles in each respective vehicle class that state agencies can choose to procure. DGS promotes the availability of these "green" vehicles in its annual "Drive Green California" brochure, which can be found on the state's Green Fleet website.¹¹
4. **Increase use of renewable diesel:** As a result of the bulk renewable diesel purchasing mandate, as outlined in SAM Section 3627, over 4 million gallons of petroleum-based diesel fuel were converted to non-petroleum-based renewable

¹⁰ <https://www.altcarexposac.com/>

¹¹ <https://green.ca.gov/fleet/drivegreen>

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diesel. Renewable diesel purchases in 2016 represent 45 percent of the 9 million gallons of the year's total bulk diesel fuel purchases (petroleum diesel, biodiesel, renewable diesel). To transition the remaining 55 percent of bulk diesel fuel purchases to renewable diesel, DGS will strengthen compliance measures and ensure that the renewable diesel offered on statewide contract meets each agency's operational need. To increase compliance measures, DGS is developing a reporting dashboard that will show agency level compliance with the bulk renewable diesel purchasing mandate. The dashboard will be viewable by all state agencies and will be used to validate that state agencies are complying with the mandate. In addition, DGS will be revising the specifications on the statewide renewable diesel contract to ensure that the fuel meets each agency's operational need. Specifically, DGS will be contracting for renewable diesel that has better cold weather properties and increased lubricity to prevent the waxing of fuel and damage to fuel system parts. It is anticipated that with these efforts the consumption of petroleum-based diesel fuel will continue to decrease year-over-year, further reducing the remaining 4.9 million gallons of bulk petroleum diesel fuel purchases.

5. **Enforcement of ZEV/hybrid first policy:** On July 1, 2017, DGS' ZEV/hybrid first purchasing policy took effect. The new policy requires that when state departments are purchasing a light-duty vehicle in a class where there is a viable ZEV option for purchase, the department purchases the ZEV option. Due to limited light-duty ZEV options, this requirement initially only pertained to sedan vehicle classes. However, due to the recent addition of minivan and small SUV ZEV options to the state's vehicle contract, DGS has expanded its ZEV/hybrid first purchasing policy to include these new vehicle categories. As more light-duty ZEV options become available, especially in the large SUV and pickup truck categories, DGS will continue to expand the ZEV/hybrid first purchasing policy to match the market availability of light-duty ZEV options.
6. **Promote the installation of EV charging infrastructure:** To support the increase in plug-in electric vehicles, DGS continues to aggressively promote the installation of EV charging infrastructure. Departments are now required to develop comprehensive plans for the installation of EV charging infrastructure needed to support the fleet vehicles they are requesting on annual fleet acquisition plans. Consequently, departments are putting considerable effort into developing strategic EV charging infrastructure deployment plans and are aggressively pursuing innovative technologies, such as the solar-powered EV Arc charger, to satisfy their fleet charging needs.

Conclusion

Since the enactment of AB 236 in 2007, DGS and state agency fleets have worked diligently to meet the petroleum reduction goals established in Public Resources Code §25722.8 (a). Following the *California Action Plan for Reducing or Displacing the Consumption of Petroleum Products by the State Fleet*, DGS has implemented numerous policies and procedures that, with significant cooperation from state agencies, have helped reduce petroleum consumption by 22.3 percent when compared to the 2003 baseline. Not only did the state fleet exceed the

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20 percent petroleum reduction target, it did so by January 1, 2017 – three years prior to AB 236's target deadline.

The initial reduction in petroleum consumption from 2003-2013 was primarily the result of two fleet reduction executive orders, which were issued by Governor Arnold Schwarzenegger and Governor Edmund G. Brown Jr. Executive order (EO) S-14-09, issued in 2009, reduced the state's vehicle assets by over 3,000 and EO B-2-11, issued in 2011, further reduced the state fleet by almost 7,000 assets. Together the two fleet reduction EOs resulted in a 15-20 percent overall reduction in the size of the state fleet which, in turn, significantly reduced the amount of fuel the state fleet used. Since 2013, DGS has taken numerous policy, administrative and operational actions to increase the fuel efficiency of the state fleet; limit unnecessary vehicle additions; and increase the use of alternative fuels. In 2014, 2015 and 2016, through the issuance of fleet purchasing policies and increased operational oversight, the state added 315 ZEVs and 673 hybrid electric vehicles (hybrid). These new vehicles, combined with previous ZEV and hybrid purchases, brought the total to 379 ZEVs and 1,672 hybrids in 2016. DGS also furthered petroleum reduction efforts by implementing better fleet management practices. These practices focused on identifying and disposing of older fleet assets that were not cost-effective; strengthening fleet reporting requirements; and implementing new fleet vehicle fuel efficiency standards. As a result of these initiatives and increased ZEV/hybrid vehicle adoption during 2014 and 2015, petroleum consumption was reduced by 12.2 percent when compared to the 2003 baseline.

In 2016, petroleum consumption in the state fleet was reduced significantly as a result of the renewable diesel purchasing mandate, as outlined in SAM Section 3627. Not only did the state fleet meet the 20 percent reduction target, it surpassed the total with a reduction of 22.3 percent. Despite the state's success in meeting these petroleum reduction goals three years prior to the statutory deadline, DGS believes that there is far more that can be done and will continue in these efforts by setting new goals for the state fleet; specifically, goals that would require the state fleet to reduce its petroleum consumption by 50 percent (from 2015 levels) by 2030 and reduced its GHG emissions by 40 percent (from 1990 levels).

As of 2016, the state is already making progress toward meeting the 2030 goal, with a year one petroleum reduction of 11.6 percent; however, meeting the 50 percent reduction goal will not be easy. Significant efforts by state agencies and DGS to ensure compliance, address ZEV adoption in medium- and heavy-duty classes, and implement technology that maximizes efficiency will be required for success. While the state fleet makes up only a small portion of the vehicles on California's roadways, it plays an important role in the state's efforts by leading the charge as an early adopter of zero-emission vehicle technology and as an aggressive implementer of fleet sustainability policies. The state of California's aggressive GHG reduction goals underscore the importance of the state fleet's leadership role and highlight the need for more to be done, with significant focus on increased penetration of ZEVs in all vehicle classes of the state fleet and further adoption of alternative fuel policies.