

# CHAPTER TWO

# ZERO EMISSION

# VEHICLES

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## Chapter 2: ZERO EMISSION VEHICLES

### Department Mission and Fleet

This ZEV Report and Plan demonstrates to the Governor and the public the progress the Department has made toward meeting the Governor's sustainability goals related to Zero Emission Vehicles. This report identifies successful accomplishments, ongoing efforts, outstanding challenges and future efforts.

CDCR is one of the largest departments in State government and over the past decade has been a leader in meeting or exceeding the Administration's energy and sustainability goals and objectives. CDCR also has one of the largest State fleets with over 9,870 total assets, including leased vehicles and mobile equipment.

#### 700+ HYBRID AND ZERO EMISSION VEHICLES

These fleet assets serve a number of operational needs, from large inmate transport buses that traverse the entire State to high-pursuit vehicles, to high-pursuit vehicles used by parole agents and fugitive apprehension teams, to more standard sedans and trucks serving localized areas, just to name a few. Well over a decade ago, CDCR purchased hundreds of electric mobile vehicles to be used within prison property, reducing the number of gas-fueled cars serving this purpose. However, since 2014, CDCR has been incorporating low-emission vehicles into its statewide fleet and has worked aggressively to explore funding opportunities for grants and incentive/rebate programs offered by the IOUs for Zero Emission Vehicles (ZEV) infrastructure and charging station equipment. However, CDCR's main challenge in incorporating ZEV assets has been the limited availability on the State vehicle contract, their limited driving range, and higher initial purchase costs. In the last two fiscal years (FYs) the number and variety of ZEVs available on the State contract has increased. Although CDCR has been able to identify program areas which can utilize the progressive vehicle models added to the State Contract, the variety is still not sufficient to meet all the Department's wide-ranging operational needs. CDCR will continue to work closely with DGS in increasing its ZEV procurement in an effort to reach the target of 50 percent of light duty vehicles by 2025.

To accommodate a future green fleet, CDCR modified its design guidelines to require ZEV stations at new facilities, adding ZEV stations at its newest facility in Stockton in 2013 and at two facilities that were completing construction and one at a large leased correctional facility in 2016. These policies will remain in effect for all future expansion projects. From 2017 through June of 2019, CDCR worked with NRG Energy Inc. (an integrated American power company engaged in producing, selling, and delivering electricity, related products, and services) to install "no-cost" infrastructure for up to 10 Level 2 charging stations at 10 institutions within the IOU territories. This was as a result of a settlement between NRG and the

California Public Utilities Commission. In FY 16/17, CDCR began requiring proprietors of its leased facilities to include ZEV charging stations during lease negotiations resulting in the installation of several charging stations and more planned at its Sacramento office locations. In February 2019, CDCR completed the department's annual update to the Department of General Services (DGS) Five-Year ZEV Readiness Survey, which is used for the planning and implementation of ZEV fleet integration and the Governor's 2016 ZEV Action Plan for at least 5 percent workplace charging spaces at State-owned facilities. CDCR anticipates working with the DGS over the next two to five years to install ZEV infrastructure and charging stations statewide. CDCR also focuses on strategies to encourage more ZEV purchases by employees, such as locating the charging in more optimal locations and shading them with solar parking canopies.

## **Fleet Vehicles**

CDCR operates adult correctional institutions and juvenile facilities throughout the State of California, as well as other divisional programs aimed at public safety and service operations. The Department's mission to "enhance public safety through safe and secure incarceration of offenders, effective parole supervision, and rehabilitative strategies" is accomplished with critical fleet assets necessary for such operations.

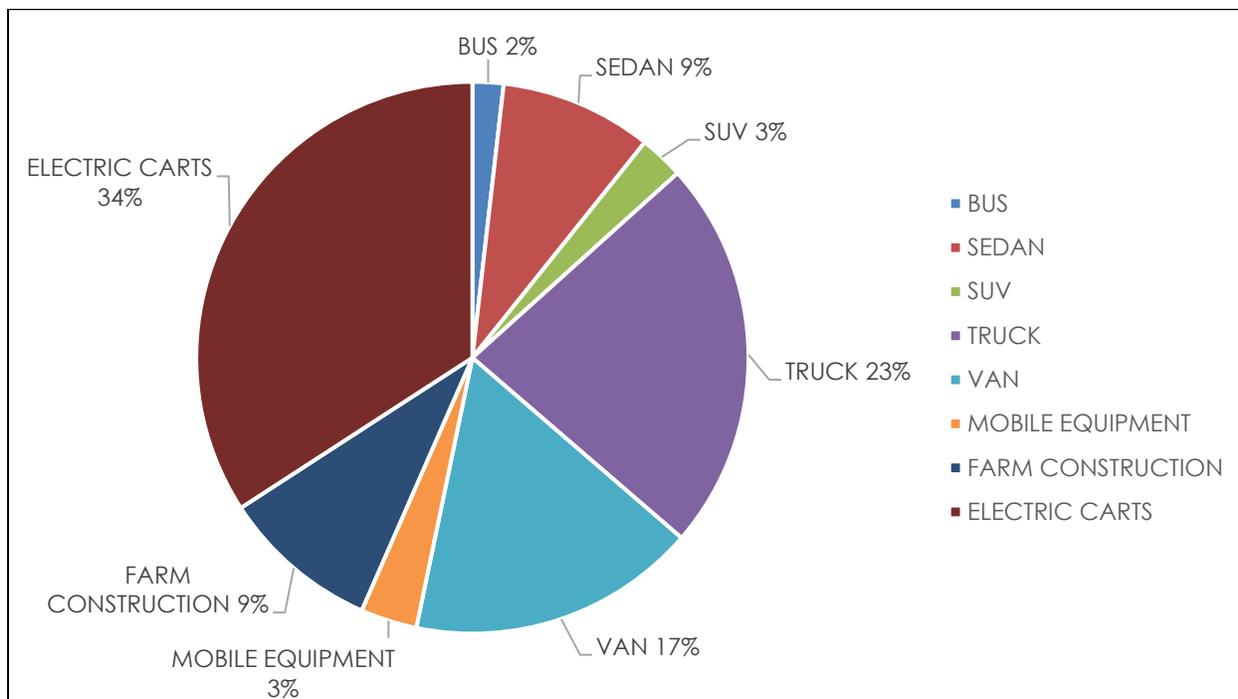
CDCR has 7,837 State-owned fleet assets and 2,037 leased vehicles, as identified in the Department of General Services (DGS) Fleet Asset Management database as of August 2019. The increase to the CDCR fleet from last year's report is attributed to better fleet reporting from all statewide CDCR programs based on enhanced oversight and field education. This fleet total includes heavy- and light-duty vehicles. Included in this total, CDCR's fleet also has 3,511 mobile equipment assets, such as electric carts and forklifts. CDCR fleet vehicles are used to perform a variety of functions, including inmate/parolee and staff transport, plant operations, construction, correctional education, food and pharmacy delivery, hazardous materials handling, information technology operations, materials and supplies transport, perimeter security, and waste management. At the adult institution and juvenile facility level, there is a wide variety of vehicles as these assets are in turn used by a number of different functional programs within a facility.

1. Sedan-type vehicles – These are most often used for administrative service functions such as staff transport or pool vehicles, inmate transport services to courts or medical appointments, high security transport and mutual aid support services, as well as custody and law enforcement services for either inmates or parolees. These vehicles may require "high-speed pursuit" capabilities and/or be heavily modified with radio and security improvements to meet the unique needs of a correctional facility. They

may also be required to be utilized at a moment's notice to deal with emergency situations.

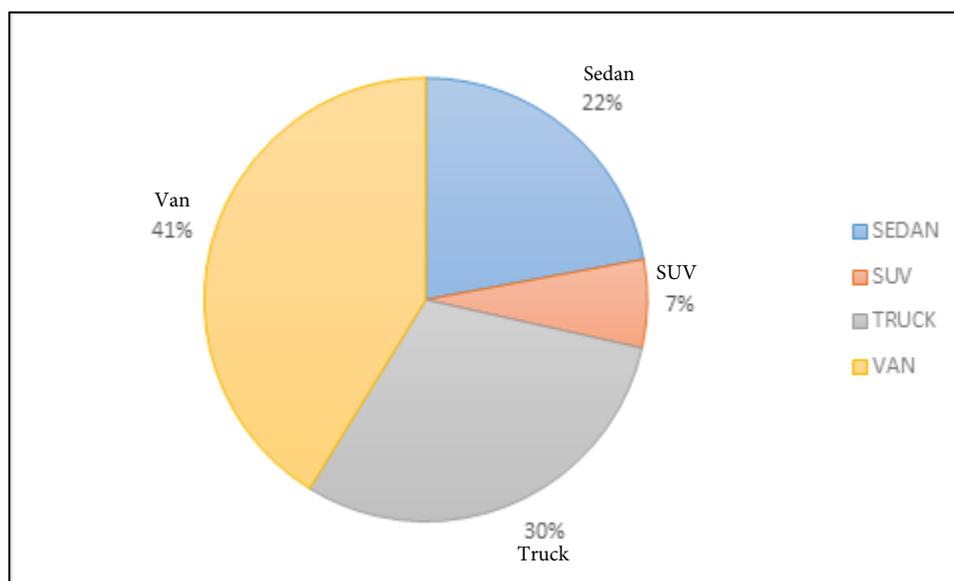
2. Sport Utility Vehicles (SUVs) – These are used to perform site security and plant operation functions, staff training, perimeter patrol and pursuit, as well as inmate and medical transport services. CDCR programs require the use of SUVs to house inmate security transportation cells for security and transport purposes. As a result, these vehicles also require modifications. The additional interior capacity space within SUVs provides the ability to transport multiple inmates, as well as the necessary tactical gear and equipment required by custody staff.
3. Vans and trucks – These vehicle types prove to be highly versatile for CDCR operations. Vans are used for inmate, staff, or visitor transport both on and off facility grounds. They are also used as paratransit and ambulance vehicles. Some of these vehicles will include modifications to meet correctional needs. Trucks are used for several different operations on CDCR facility grounds, including grounds maintenance and warehouse services, supply transports, food delivery services, and security patrol.
4. Buses – CDCR currently operates 30 buses servicing all institutions for the transportation of inmates to mission critical assignments and work projects.
5. Fire Engines – CDCR currently operates approximately 60 fire engines that serve institutions and are used in mutual aid agreements with local entities and other State agencies for emergency response services.
6. Farm and Construction Vehicles – CDCR operates several different types of farm and construction vehicle assets to carry out these services, including tractors, excavators, front loaders, outdoor forklifts, and utility carts to maintain surroundings, buildings, and perform minor and major construction or renovation at all facilities.
7. Electric Carts – CDCR uses electric carts daily to transport inmates, supplies, and medications within an institution.
8. Mobile Equipment – CDCR uses a variety of mobile equipment assets for grounds maintenance and plant operation services to transport materials, supplies, and equipment across facility grounds.

**Figure 3 – CDCR's Fleet Vehicle Type Breakdown**



Divisional headquarter programs use vehicles in other capacities. The Office of Correctional Safety, Office of Internal Affairs, Division of Adult Parole Operations, and Board of Parole Hearings, among others, routinely travel throughout the State to monitor field operations and conduct other important work. These programs typically utilize sedan-type assets due to the amount of travel involved with their operations; however, some of these programs also use other vehicle types to aid in covert operations and criminal apprehension services.

**Figure 4 – Composition of Department's Light-Duty Fleet**



As CDCR operates programs throughout the entire State of California, vehicles are used in all types of environments and road conditions. CDCR facilities are often located in rural and/or remote parts of the State, some in desert locations. CDCR's fire camp program may require travel across difficult terrain and non-paved roads. Additionally, because of the significant distances between facilities, some vehicles will have to travel hundreds of miles on isolated roadways to reach their destination. Conversely, a few prisons are located in urban areas with high-congestion traffic that can benefit from the high-occupancy vehicle exemption for commute purposes.

As of 2018, DGS reported the average Miles Per Gallon (MPG) of the CDCR light-duty fleet was 21.08 MPG compared to 19.58 MPG in 2012 ([www.green.ca.gov/fleet](http://www.green.ca.gov/fleet)). This average MPG increased 7 percent based on CDCR's owned and leased inventory identified in the DGS Fleet Asset Management System database due to the adoption of hybrid electric and ZEVs into the CDCR fleet. Many of CDCR's divisional headquarter programs have shifted their vehicle models from the standard full-size sedan vehicle to mid-size hybrid vehicles. This shift has allowed CDCR to not only comply with green fleet measures and State and federal mandates, but to also achieve greater fuel efficiency, enhance operational efficiency, and realize substantial cost savings to the State.

**Table 11- Total Purchased Fuel in 2018**

<b>Purchased Utility</b>	<b>Quantity* Gallons</b>	<b>Cost*</b>
Gasoline	1,515,674	\$4,372,479
Diesel	178,990	\$604,292
Renewable Diesel	505,706	\$1,549,334
<b>Total GGE</b>	<b>2,200,371</b>	<b>\$6,526,106</b>

\*Totals include bulk fuel purchases only.

Previously, CDCR's Environmental and Regulatory Compliance Section issued a statewide advisory notice outlining requirements to change from conventional diesel to renewable diesel in aboveground and underground storage tank systems. CDCR has 23 correctional facilities currently using renewable diesel, making all programs who require the purchase of such fuel, to be in compliance with the DGS MM 15-07.

### **Incorporating ZEVs into the State Fleet**

A widespread shift to ZEVs is essential for California to meet its GHGe goals. State departments are now required to incorporate larger numbers of ZEVs in their vehicle fleets. Beginning in FY 17/18, the percentage of new light-duty vehicles that must be ZEV increases by 5 percent each year, reaching 25 percent in FY 19/20 and 50 percent in FY 24/25. CDCR has integrated 16 State-owned and 42

leased ZEVs into its fleet assets. Below is a description of the various vehicle models and potential operations. CDCR will continue to convert all fleet that are eligible for replacement to ZEVs where the opportunity and ability is available to place and utilize a ZEV-type vehicle. There are operational services within CDCR that are unable to accommodate the use of a ZEV vehicle. However, CDCR will continue to place ZEVs in all applications that are conducive to their use and will remain within compliance of the annual ZEV mandate requirement.

**Battery-Electric Vehicle (BEV)**

Potential roles that could be filled within CDCR through the use of BEVs could be on-grounds service operations. BEV-type vehicles could be used in an institutional setting to transport staff, supplies, or equipment across institutional grounds. Facility deliveries, visitor transport services, non-emergency perimeter check evaluations, or minor maintenance and repair duties could be services provided with these vehicle types.

**Plug-In Hybrid Electric Vehicle (PHEV)**

Potential roles that could be filled within CDCR through the use of PHEVs could be staff transport and pool service vehicles. As these vehicles are not as limited by range through the use of both fuel and electricity, these vehicles are more viable in staff transport operations.

**Fuel Cell Vehicle**

Potential roles that could be filled within CDCR through the use of Fuel Cell vehicles could also be staff transport and pool service vehicles. As these vehicles are not as limited by range through the use of both fuel and electricity, these vehicles are more viable in staff transport operations.

Vehicles that meet or exceed specified mileage and age thresholds are eligible for replacement. Currently, ZEVs are available on statewide commodity contracts in the sub-compact, compact, mid-size sedan, and mini-van vehicle classes. As of August 2019, there are 875 vehicles in CDCR's fleet that are eligible for replacement in vehicle classes for which ZEVs are available on contract. CDCR will continue to purchase ZEV vehicles where operationally feasible.

**Table 12- Vehicles in Department Fleet Currently Eligible for Replacement  
Facility Data Workbook Table 2.2**

	<b>Sub-Compact Sedan</b>	<b>Compact Sedan</b>	<b>Mid-Size Sedan</b>	<b>Full-Size Sedan</b>	<b>Mini Van</b>	<b>5 Passenger SUV</b>	<b>Total</b>
Vehicles eligible for replacement	0	51	182	404	43	195	875

\*Data signifies vehicles with a reported odometer reading or age that meets the applicable updated replacement thresholds, based on type, according to the DGS Replacement Standards set forth in MM 17-05.

The table below shows the estimated number of ZEVs that have been or are anticipated to be, added to the Department fleet in coming years.

**Table 13- ZEV Additions to the Department Fleet**

<b>Vehicle Type</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>	<b>17/18<sup>1</sup></b>	<b>18/19<sup>2</sup></b>	<b>19/20<sup>3</sup></b>	<b>20/21<sup>4</sup></b>	<b>21/22<sup>4</sup></b>	<b>22/23<sup>4</sup></b>
Battery Electric Vehicle	3	2	2	2	1	9	9	10	11
Plug-in Hybrid Vehicle	1	1	4	0	0	45	8	9	9
Fuel Cell Vehicle	0	0	0	0	0	0	0	0	0
<b>Percent of total purchases<sup>5</sup></b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>15%</b>	<b>20%</b>	<b>25%</b>	<b>30%</b>	<b>35%</b>	<b>40%</b>
<b>Required ZEV Percentage</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>15%</b>	<b>20%</b>	<b>25%</b>	<b>30%</b>	<b>35%</b>	<b>40%</b>
<b>Total number of ZEVs in Fleet</b>	<b>4</b>	<b>7</b>	<b>13</b>	<b>15</b>	<b>16</b>	<b>70</b>	<b>87</b>	<b>106</b>	<b>126</b>

<sup>1</sup>In FY 17/18 CDCR used previously earned ZEV credits to reduce the total number of required ZEV purchases (and still meet the 15 percent requirement)

<sup>2</sup>In FY 18/19 CDCR submitted a Fleet Acquisition Plan for all "Health Care Access" vehicle purchases based on appropriated funding, all of which were exempt from the ZEV purchasing mandate, resulting in a reduced ZEV purchase.

<sup>3</sup>FY 19/20 figures represent anticipated purchases and compliance requirement based on the proposed FY Fleet Acquisition Plan that has been submitted to DGS. The significant increase in identified ZEV vehicle replacement is due to CDCR obtaining \$32M in funding for fleet replacement for this fiscal year only.

<sup>4</sup>These figures are based on anticipated average purchases of respective vehicle type, and the available ZEV class vehicles available on state contract that meet CDCR's operational needs. These anticipated purchases take into consideration the impact of MM 16-07 and the "ZEV/Hybrid First" Policy implemented by DGS.

<sup>5</sup>Total ZEV fleet purchases represents required percentage of Light-Duty, non-exempt vehicle purchases only, not all fleet purchases.

## Telematics Plan

Telematics is a method for monitoring vehicle use. Using GPS and on-board diagnostics, telematics provides valuable information that often results in fuel savings and improved vehicle utilization. Telematics is especially important for verifying that PHEVs are maximizing the use of electric fuel rather than gasoline. The rule requiring 50 percent of ZEVs purchased to be BEVs is not in place for fleets making use of telematics for all ZEVs.

CDCR's Division of Adult Institutions' Statewide Transportation Unit (STU) has undertaken a pilot program to investigate the operative benefits of utilizing telematics which has included the installation of GPS telematics devices on approximately 100 fleet vehicles. Having operated these vehicles with the equipped devices for the past year, STU has found many advantages to the use

of such equipment. In addition, DGS has worked to solidify a statewide vendor that can provide the services required by all State Departments and has tentatively awarded a telematics contract to the vendor, GeoTab. However, in order to achieve final award of the contract, GeoTab must first demonstrate in a "Proof of Concept" period that they can perform what was committed to in the solicitation. DGS is currently working with CalTrans and GeoTab on the Proof of Concept and will update state departments on the progress. Pending the conclusion of this process, CDCR will determine its goals and plans for using telematics based on the findings.

### **Public Safety Exemption**

As CDCR employs sworn peace officers, the updated rules for public safety vehicles will, in fact, affect the number of ZEVs that can be incorporated into the fleet due to the nature of the Department's operations. ZEVs cannot be consistently used in the course of CDCR peace officer duties. Such vehicles are required to be able to house peace officer equipment, weaponry, and provide enough capability to serve in pursuit and apprehension operations. Vehicles that are limited in size, range, and efficiency are not capable to serve in such capacities. Further, such vehicles often require security modifications and radio outfitting for law enforcement duties, which further prohibits the use of ZEVs in such operations. CDCR will be actively seeking all opportunities to place available ZEV vehicle types within its operations, where applications and cost may allow for such acquisitions. CDCR will need to continue to review and determine if ZEV medium-duty fleet options will be capable of supporting peace officer needs, and if such type vehicles are able to accommodate the after-market security modifications that are required for most peace officer operations.

### **CDCR Parking Facilities**

CDCR's State-owned facilities include over 49 million square feet of building space on over 24,000 acres of land statewide. CDCR leases approximately 1.8 million square feet and contracts for an additional 489,000 square feet for a private correctional facility. All of these properties have associated surface-level parking of varying sizes, in addition to the listed square feet used for employees, contractors, inmate visitors, and other members of the public. The parking is primarily located outside the secured perimeter fence. The total number of parking spaces at juvenile facilities ranges from 150 to 300, while at adult prisons the parking spaces range from 500 to 2,500. There are also a minimal number of parking spaces located inside the secured fence adjacent to some of the facilities essential buildings. All parking spaces inside and outside of the perimeter fence are included in the total parking space calculations. A detailed breakdown of parking space type and subtotals for each specific type are identified in the Five-Year ZEV Infrastructure Readiness Survey.

CDCR has 83 leased facilities located throughout the State. The parking spaces at CDCR leased facilities are also surface-level. The total number of parking spaces ranges from one to 600; however, most of the parking spaces at CDCR's leased locations are less than 100.

Based on extensive operational needs, as described earlier in this Chapter, fleet vehicles are located at nearly all CDCR State-owned correctional facilities and leased facilities. Fleet parking locations are determined by the parking layout at each facility. Fleet parking is typically located adjacent to or to the rear of workplace parking and is secured. Employee and public spaces are usually in the same lot, but separately designated through signage. Accessible (i.e., Americans with Disabilities Act compliant) spaces are typically not distinguished between employee and public.

Based on CDCR estimates of future ZEV fleet purchases and a count of workplace parking spaces, it has been determined the Department will need 70 EVSE for fleet vehicles and 1,350 EVSE for workplace parking based on the goals established in the ZEV Action Plan.

CDCR has determined a need for a total of 70 electric vehicle chargers statewide based on the projected phased purchase of 70 fleet ZEV's through FY 22/23.

Based on estimates of future ZEV fleet purchases and a count of workplace parking spaces determine EV charging ports needed to adequately serve fleet vehicles and employee parking to achieve the goals established in the ZEV Action Plan.

The facilities with the most urgent need for EV charging are listed in **Table 14** on the following page.

**Figure 5 – Electrical Wiring for EV Charging Station at CIW**



**Table 14- EV Charging Ports Needed  
Facility Data Workbook Table 2.4**

<b>Facility Name</b>	<b>Total Employee &amp; Fleet Parking Spaces</b>	<b>Employee EV Charging Ports Needed (5% of Total Employee Spaces)</b>	<b>Existing Employee L2 EV Charging Ports</b>	<b>Fleet ZEV's at Site (Through 2025)</b>	<b>Existing Fleet EV Charging Ports</b>	<b>Additional EV Charging Ports Needed</b>
SAC	955	32	-	4	-	36
SATF	1,572	49	-	6	-	55
ASP	1,154	33	-	9	-	42
CAL	1,274	40	-	6	-	46
CCC	550	21	-	11	-	32
CCI	1,343	42	-	5	-	47
CCWF	1,057	33	-	6	-	39
CEN	1,109	35	-	9	-	44
CIM	1,788	53	-	8	-	61
CMC	1,527	63	-	10	-	73
CMF	1,411	67	-	7	-	74
CRC	886	36	-	8	-	44
CTF	1,245	50	-	9	-	59
DVI	981	25	-	3	-	28
HDSP	1,011	44	-	10	-	54
PBSP	1,656	70	-	5	-	75
PVSP	1,047	24	-	13	-	37
SCC	700	31	-	10	-	41
SVSP	984	38	-	6	-	44
VSP	1,076	33	-	5	-	38
VYCF	260	11	8	1	-	4
WSP	976	42	-	10	-	52
<b>Total</b>	<b>24,562</b>	<b>872</b>	<b>-</b>	<b>161</b>	<b>-</b>	<b>1,033</b>

CDCR prioritized the facilities in **Table 14** based on existing ZEV fleet inventory, projected electric vehicle purchasing, and funding opportunities for the installation of EVSE. CDCR's owned ZEVs consist of:

- Four Full Battery Electric Vehicles (BEV, Chevy Bolt, Nissan Leaf)
  - 1 – MCSP
  - 2 – SATF
  - 1 – SAC
  - 1 – SOL
  - 1 – COR (IWL)
  - 1-CAC
- Seven Plug-In Hybrid Electric Vehicles (PHEV, Chevrolet Volt)
  - 1 – CAC
  - 1 – CIW
  - 1 – NCYCC
  - 1 – VYCF
  - 3 – MCSP\*
  - 1 – RJD\*

CAC, CHCF, LAC, MCSP and RJD currently have ZEV charging stations on-site; these facilities are not included in CDCR's priority list. CDCR's requirement is projected at 70 for FY 22/23 (locations to be determined).

### **Outside Funding Sources for EV Infrastructure**

CDCR has established a formal partnership with the IOUs to help identify and implement a number of CDCR's sustainability initiatives over the last decade. The CDCR/IOU partnership facilitates ongoing communications on funding opportunities for grants and incentive/rebate programs offered for ZEV infrastructure and charging station equipment. CDCR is researching the IOU and municipal programs offered below to determine the program qualifications, additional funding, easement requirements, etc. This is an ongoing process based on availability as the funding opportunities and programs open or close.

Southern California Edison (SCE), Charge Ready Transport Program:

This program provides the infrastructure to support the installation of EV charging equipment at no cost to the Participant. This presents a unique opportunity for fleet operators that choose to buy EVs because the infrastructure required to support the installation of EV charging equipment is typically a sizable investment.

SCE will design, construct, and install the necessary infrastructure on both the utility-side and customer-side of the electric meter. Participants are, however, responsible for the selection, purchase, and installation of the EV charging equipment.

Sacramento Municipal Utility District (SMUD) Workplace Charger Incentive:

SMUD is partnering with the Center for Sustainable Energy and the California Energy Commission to offer charging incentives for the purchase and installation of electric vehicle charging infrastructure. Incentives range from up to \$6,500 per connector for a Level 2 charger and up to \$80,000 per DC Fast Charger.

#### **Level 2 chargers**

- Up to \$6,500 per connector in disadvantaged communities
- Up to \$6,000 per connector outside disadvantaged communities

#### **DC fast chargers**

- Up to \$80,000 per charger or 80% of total project cost, whichever is less, in disadvantaged communities
- Up to \$70,000 per charger or 75% of total project cost, whichever is less, outside disadvantaged communities

San Diego Gas & Electric (SDG&E) Power Your Drive:

This is a pilot program to install 3,500 Level 2 EVSEs. The application process is open at the time of this report. Locations must be in SDG&E territory, (RJD is located in San Diego), and DACs are 10 percent of the total funding over the entire program. There is a participation payment of \$630/port for workplaces, and \$0 for DACs. The EVSE would be owned, operated, and maintained by SDG&E at no cost to the site host. Easements are also required by this IOU. Stations are metered separately from the site host's electric service and account.

Pacific Gas & Electric (PG&E) EV Charge Network:

This program is fully subscribed, and PG&E is not accepting new participants. CDCR monitors the PG&E website, as well through the departments Customer Account Manager any new EV charging programs. CDCR is working with EVgo for ZEV infrastructure for up to 10 Level 2 charging stations within the IOU territories for make-ready installation of up to \$30,000. The scope of work includes electrical

subpanel, transformer, conduit, wiring, concrete pad, and pedestal or wall receptacle. Site assessments, cost development and design are in process at 23 of CDCR's State-owned facilities for this potential "free" infrastructure (not including the scope of work and costs to install the EV charging station equipment and on-going maintenance).

### **Hydrogen Fueling Infrastructure**

CDCR does not have any hydrogen fueling infrastructure and has no plans to install at this time. CDCR does not have any hydrogen vehicles within its Fleet.

### **Comprehensive Facility Site and Infrastructure Assessments**

Site Assessments are performed to establish the cost and feasibility of installing needed EV infrastructure. CDCR has compiled detailed site assessment surveys for statewide facilities. The site assessment surveys include existing information including: parking layout, electrical, photos, maps, and proposed electric vehicle charging station locations. CDCR utilizes the site assessments to develop cost estimates, feasibility, and planning for incorporating ZEVs into the Departments Fleet and for meeting the target requirements for 5 percent workplace charging spaces. CDCR prioritizes EVSE projects based on Fleet purchasing, funding opportunities and the ZEV Action Plan.

### **Electric Vehicle Supply Equipment Construction Plan**

Over the past five years, CDCR has successfully integrated the installation of ZEV infrastructure and charging stations into new construction and renovation projects when feasible.

California Health Care Facility (CHCF) – During the construction of this facility, three Level 2 dual port charging stations were installed to support workplace charging (activated 2014).

**Figure 6- Workplace Electric Vehicle Charging – CHCF**



California State Prison, Lancaster (LAC) – During the construction of the Enhanced Outpatient Program Office and Treatment building, one Level 2 dual port charging station was installed to support workplace charging (activated 2014).

**Figure 7- Workplace Electric Vehicle Charging – LAC**



Mule Creek State Prison (MCSP) – During the infill project at this site, two Level 2 single port charging stations and 1 Level two Single Port ADA station (activated 2016).

**Figure 8- Workplace Electric Vehicle Charging – MCSP**



Richard J. Donovan Correctional Facility (RJD) – During the infill project at this site, five Level 2 dual-port charging stations were installed to support workplace and fleet charging (activated 2017).

**Figure 9- Workplace Electric Vehicle Charging – RJD**



California City Correctional Facility (CAC) – During the renovation of this lease facility, two Level 2 dual-port charging stations were installed to support workplace charging (activated 2017).

**Figure 10 – Workplace Electric Vehicle Charging – CAC**



As well as incorporating these efforts into new construction projects when feasible, CDCR continues to seek and explore opportunities offered by the IOUs, city and county offices, and local nonprofits to fund electric vehicle infrastructure and charging equipment. To date, the programs offered by the utilities have quickly filled to capacity and CDCR has not had the opportunity to utilize this funding method for EVSE. In 2017, CDCR began working with DGS for Phase 1 of

the FY 17/18 Electric Vehicle Charging Infrastructure Program. This program is funded through a DGS Budget Change Proposal to support electric vehicle fleet and workplace infrastructure projects. Through this partnership, CDCR has multiple EVSE projects at various stages of development. DGS/CDCR anticipates completing many of these projects prior to the next reporting cycle.

In addition, through the NRG claims settlement CDCR completed electrical infrastructure to support EVSE at the following 10 facilities: California State Prison Solano, California State Prison-Los Angeles County, Kern Valley State Prison, North Kern State Prison, California State Prison Corcoran, Chuckawalla Valley State Prison, Ironwood State Prison, and Ventura Youth Correctional Facility. The DGS program is funding the purchase and installation of the charging station equipment to make these sites fully operational.

## **Electric Vehicle Supply Equipment Operation**

There are several divisions within CDCR with overlapping roles and responsibilities for the installation of ZEV infrastructure, installation, and operation of charging station equipment and ZEV purchasing such as the Energy and Sustainability Section, Office of Business Services, Human Resources, Labor Relations, and the Division of Adult Institutions. CDCR established a task force to develop a statewide ZEV parking policy and Electric Vehicle Parking Request/Cancellation form to standardize the use of electric vehicle charging stations. CDCR is planning to designate Electric Vehicle Parking Coordinators at each institution to process Electric Vehicle Parking Request/Cancellation forms and to ensure compliance with the departments proposed Electric Vehicle Parking Policy. In accordance with Government Code Section 14678, agencies have discretion as to whether to charge employees for use of electric vehicle charging stations agency-maintained vehicle parking facilities. CDCR does not plan to charge departmental employees a fee for the use of electric vehicle charging stations at State owned/maintained parking facilities at this time.

California leads the way in electric vehicle adoption, accounting for about half of national EV sales. In 2018 Governor Brown issued Executive Order B-48-2018 establishing the goal of 5 million zero-emission vehicles (ZEV) in California by 2030. This builds on Governor Brown's 2012 Executive Order B-16-2012 which set the goal of 1.5 million ZEVs in California by 2025. These ZEV goals include battery and plug-in hybrid electric vehicles as well as hydrogen fuel cell vehicles, although the ZEV car sales in California are dominated by electric vehicles with a large lithium-ion battery.

As the State transitions to a cleaner energy and transportation sector, California must also prepare for the eventual end-of-life management of solar panels and lithium-ion batteries. To get ahead of what could become a serious waste management problem, CalRecycle along with CA Public Utilities Commission, Air Resources Board, CA Energy Commission and the Department of Toxic Substance

Control is working together to come up with consistent approaches for end of life management in California for electric vehicle batteries.