



California Environmental Protection Agency

2021

State Agency Greenhouse Gas Reduction Report Card

# 2021

## State Agency Greenhouse Gas Reduction Report Card

This Report Card documents (1) the effectiveness of measures to reduce greenhouse gas (GHG) emissions in California and (2) GHG emissions from State agencies' operations. Figure 1 shows the trend in reductions as reported in this year's and previous years' Report Card. This year's Report Card documents reductions of 81.5 million metric tons of carbon dioxide equivalent (MMT $\text{CO}_2\text{e}$ ) that occurred in 2020. Each Report Card shows reductions that happened two years prior to publication.<sup>1</sup>

In 2016, California reached its 2020 GHG emissions target four years early and emissions continue to go down. The goal, set by Assembly Bill 32 (Núñez, Chapter 488, Statutes of 2006), required getting GHG emission back to 1990 levels by 2020. The quantitative target was 431 MMT $\text{CO}_2\text{e}$ . The GHG inventory for 2019 came to 418 MMT $\text{CO}_2\text{e}$ .<sup>2</sup> The GHG reductions documented in the Report Card made this achievement possible.

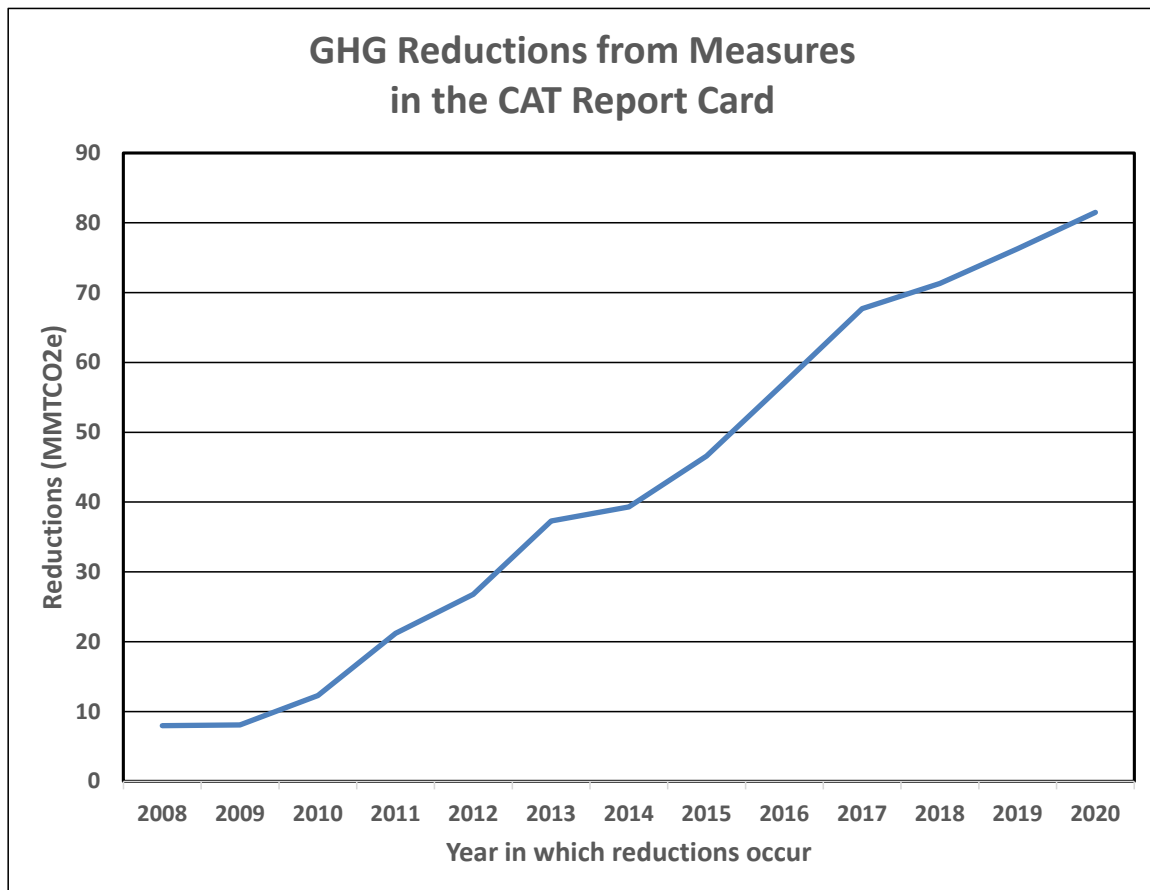


Figure 1

<sup>1</sup> Recent Report Cards are available at

<https://calepa.ca.gov/climate-action/#cat>

<sup>2</sup> California Air Resources Board, *California Greenhouse Gas Emissions for 2000 to 2019*,

[https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_scopingplan\\_sum\\_2000-19.pdf](https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-19.pdf)

## **Background**

Annually, the California Environmental Protection Agency (CalEPA) must prepare a report describing state agency actions to reduce GHG emissions, per [Government Code Section 12892, Title 2, Division 3, Part 2.5](#) (Senate Bill 85, Statutes of 2007, Chapter 178). This law directs CalEPA to compile and organize this information in the form of a “Report Card” and post it on the CalEPA website. The report reflects information gathered in 2021 for actual GHG reductions occurring in 2020.

The statute requires that the Report Card include the following:

- A list of measures adopted and implemented by the state agency with the actual GHG emissions reduced because of these measures.
- An estimate of the GHG emissions from each agency’s own operations and activities.

## **Climate Change Report Card Tables**

CalEPA has organized the required information into three tables as described below:

### **TABLE 1: GHG Emissions Reductions Achieved:**

Table 1 summarizes the reductions shown in Table 2. Reductions shown are those achieved within California during the given year. The annual figures reflect cumulative efforts but not cumulative reductions<sup>3</sup>. In addition, they do not include reductions that might occur out-of-state.

### **TABLE 2: On-going Measures and Reductions in 2020:**

Table 2 looks in detail at 2020, showing GHG emission reductions achieved by Scoping Plan measures in that calendar year, as reported to CalEPA by the responsible agencies.

### **TABLE 3: Climate Action Team (CAT) – GHG Inventory Status:**

Each CAT agency is required to report an estimate of the greenhouse gas emissions from their own operations and activities. Table 3 lists the CAT agencies, boards, departments and commissions, and the status of the greenhouse gas inventory activities for each. The named agency or department provided the information in this Table to CalEPA.

The GHG inventories employ protocols established by The Climate Registry (TCR)<sup>4</sup>. Inventories identified as ‘verified’ have been verified by an approved third party and submitted to the registry. The verified inventory reports are on the registry’s website: <https://www.theclimateregistry.org/our-members/cris-public-reports/>.

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<sup>3</sup> For example, consider the GHG reductions due to building efficiency standards. The GHG reductions that occur in 2019 are a consequence of cumulative installations that occurred over several years, not just in 2019.

<sup>4</sup> Originally chartered by the state of California as the California Climate Action Reserve.

## **Abbreviations**

ACC – Advanced Clean Cars  
AR4 – Fourth Assessment Report  
BAU – Business as Usual  
CAL FIRE – California Department of Forestry & Fire Protection  
CalEPA – California Environmental Protection Agency  
CalRecycle – California Department of Resources, Recycling and Recovery  
CARB – California Air Resources Board  
CAT – Climate Action Team  
CDFA – California Department of Food & Agriculture  
CEC – California Energy Commission  
CFIP – California Forest Improvement Program  
CPUC – California Public Utilities Commission  
CVRP – Clean Vehicle Rebate Program  
DGS – Department of General Services  
DWR – Department of Water Resources  
eGRID - Emissions & Generation Resource Integrated Database  
GHG – Greenhouse Gas  
GVWR – Gross Vehicle Weight Rating  
GWP – Global Warming Potential  
HVIP - Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project  
LCFS – Low Carbon Fuel Standard  
LED – Light-emitting Diode  
LEED – Leadership in Energy and Environmental Design (certification program)  
MMTCO<sub>2e</sub> – Million Metric Tons of CO<sub>2</sub> Equivalent  
OPR – Office of Planning and Research  
PLC – Portland Limestone Cement  
SF<sub>6</sub> – Sulfur Hexafluoride  
SGIP – Self-Generation Incentive Program  
SWEEP - State Water Efficiency and Enhancement Program  
SWRCB – State Water Resources Control Board  
TCR – The Climate Registry  
TTGHG - Tractor-Trailer Greenhouse Gas  
VMP – Vegetation Management Program  
ZEV – Zero-emission Vehicle

## State Greenhouse Gas Report Card

**TABLE 1 - GREENHOUSE GAS (GHG) EMISSION REDUCTIONS**

The following summarizes the totals from Table 2. Reductions shown are Million Metric Tons of CO<sub>2</sub> equivalent (MMTCo<sub>2</sub>e) and are those achieved within California during the given year. The annual figures do not reflect reductions that might occur out-of-state. For many measures, the annual reductions are due to cumulative action over several years since 2008.

<b>TABLE 1: GHG EMISSION REDUCTIONS ACHIEVED</b>			
Agency	GHG Emission Reductions Achieved in 2018 <sup>1</sup>	GHG Emission Reductions Achieved in 2019 <sup>1</sup>	GHG Emission Reductions Achieved in 2020 <sup>1</sup>
CAL FIRE	4.6	4.0	1.9
CalRecycle	3.5	3.5	3.5
Caltrans	<0.1	<0.1	<0.1
CARB	33.2	41.0	47.3
CDFA	0.3	0.3	1.4
CEC	11.2	12.8	13.5
CPUC	17.1	13.3	12.5
DGS <sup>2</sup>	<0.1	<0.1	<0.1
DWR	1.4	1.4	1.4
HCD <sup>3</sup>	0.0	0.0	0.0
OPR <sup>3</sup>	0.0	0.0	0.0
<b>Additional GHG emissions reductions from previous year</b>			<b>5.2</b>

**Notes**

1. The values in this column are taken from the totals in Table 2. The figures may reflect emission reductions from programs implemented before AB 32 was enacted in order to provide a broad picture of all on-going GHG related efforts. Figures for years prior to the most recent two years come from previous year Report Cards.
2. Most of the GHG reductions from DGS measures are captured within the energy sector. The target is for measures that are not counted elsewhere.
3. These agencies have important programmatic responsibilities but do not have emission reduction regulatory authority.

<b>TABLE 2: ONGOING MEASURES AND RELATED GHG EMISSION REDUCTIONS</b>				
MMTCO <sub>2e</sub> - Million Metric Tons of CO <sub>2</sub> Equivalent				
Numbered footnotes appear at the end of each agency's section.				
<b>California Department of Forestry and Fire Protection (CAL FIRE)</b>				
<b>Program Title</b>	<b>Emissions Reductions, MMTCO<sub>2e</sub> 2019</b>	<b>Emissions Reductions, MMTCO<sub>2e</sub> 2020</b>	<b>Notes</b>	<b>Website</b>
<b>Sustainable Forests (various programs)</b>				
<b>Forest Practices</b>	1.9	1.9	1	<a href="https://bof.fire.ca.gov/projects-and-programs/ab-1504/">https://bof.fire.ca.gov/projects-and-programs/ab-1504/</a>
<b>Urban Forestry</b>	<0.1	<0.1		<a href="https://www.fire.ca.gov/grants/urban-and-community-forestry-grant-programs/">https://www.fire.ca.gov/grants/urban-and-community-forestry-grant-programs/</a>
<b>Forest Health</b>	1.6	N/A	2	<a href="https://www.fire.ca.gov/grants/forest-health-grants/">https://www.fire.ca.gov/grants/forest-health-grants/</a>
<b>Forest Legacy</b>	0.5	N/A	3	<a href="https://www.fire.ca.gov/grants/forest-legacy/">https://www.fire.ca.gov/grants/forest-legacy/</a>
<b>Fire Prevention Grant Projects</b>	N/A	N/A		<a href="https://www.fire.ca.gov/grants/fire-prevention-grants/">https://www.fire.ca.gov/grants/fire-prevention-grants/</a>
<b>Priority Projects</b>	<0.1	N/A		<a href="https://www.fire.ca.gov/about-us/45-day-report/">https://www.fire.ca.gov/about-us/45-day-report/</a>

State Agency Greenhouse Gas Reduction Report Card: Table 2

Program Title	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
<b>Sustainable Forests, continued</b>				
<b>Vegetation Management Program (VMP)</b>	N/A	N/A		<a href="https://www.fire.ca.gov/programs/resource-management/resource-protection-improvement/vegetation-management-program/">https://www.fire.ca.gov/programs/resource-management/resource-protection-improvement/vegetation-management-program/</a>
<b>California Forest Improvement Program (CFIP)</b>	0	0		<a href="https://www.fire.ca.gov/grants/california-forest-improvement-program-cfip/">https://www.fire.ca.gov/grants/california-forest-improvement-program-cfip/</a>
<p><b>CAL FIRE NOTES:</b> <sup>1</sup> CAL FIRE, AB 1504 California Forest Ecosystem and Harvested Wood Product Carbon Inventory: 2007 – 2016, p. 15.  <sup>2</sup> Benefits estimated using Quantification Methodology approved by California Air Resources Board for Forest Health.  <sup>3</sup> Benefits estimated using Quantification Methodology approved by California Air Resources Board for Land Conservation.</p>				

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Department of Resources, Recycling and Recovery (CalRecycle)				
Program Title	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
Statewide Recycling	3.5 ± 0.5	3.5 ± 0.5		<a href="https://www2.calrecycle.ca.gov/Publications/Download/1742">https://www2.calrecycle.ca.gov/Publications/Download/1742</a>



State Agency Greenhouse Gas Reduction Report Card: Table 2

California Department of Transportation (Caltrans)				
Program Title	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
Alternative Cement and Concrete Strategies	<0.1	<0.1	1	<a href="https://dot.ca.gov/programs/engineering-services/environmental-product-declarations">https://dot.ca.gov/programs/engineering-services/environmental-product-declarations</a>
Alternative Asphalt Strategies	<0.1	<0.1		<a href="https://dot.ca.gov/programs/maintenance/pavement/asphalt-pavement">https://dot.ca.gov/programs/maintenance/pavement/asphalt-pavement</a>
Alternative Fuel and Fleet Strategies	<0.1	<0.1		<a href="https://dot.ca.gov/programs/equipment/greening-the-fleet">https://dot.ca.gov/programs/equipment/greening-the-fleet</a>
Alternative Employee Commuting Strategies	<0.1	<0.1	2	No Public Website
LED Roadway Lighting	<0.1	<0.1		No Public Website
Facility Efficiency and Energy Conservation	<0.1	<0.1		<a href="https://dot.ca.gov/programs/sustainability/sustainable-caltrans">https://dot.ca.gov/programs/sustainability/sustainable-caltrans</a>
<b>Caltrans NOTES:</b>				<sup>1</sup> No significant changes in actual emissions reductions in 2020. Allowing the use of portland limestone cement (PLC) began Oct 2021 and is expected to increase in 2022. <sup>2</sup> There have been no official changes in Caltrans Alternative Commute Strategies. COVID-19 may have decreased overall commute emissions.

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Air Resources Board				
Program Title <sup>1</sup>	Emissions Reductions, MMTCO <sub>2e</sub> 2019	Emissions Reductions, MMTCO <sub>2e</sub> 2020	Notes	Website
High Global Warming Potential (GWP) Gases	2.2 ± 0.3	2.1 ± 0.2		
Reduction of Refrigerant Emissions from Non-Professional Services (H-1)	0.3	0.1	2	<a href="https://ww2.arb.ca.gov/our-work/programs/small-containers-automotive-refrigerant">https://ww2.arb.ca.gov/our-work/programs/small-containers-automotive-refrigerant</a>
SF <sub>6</sub> Limits in Non-Utility and Non-Semiconductor Applications (H-2)	<0.1	<0.1		<a href="https://ww2.arb.ca.gov/our-work/programs/sulfur-hexafluoride-non-electric-non-semiconductor-sources">https://ww2.arb.ca.gov/our-work/programs/sulfur-hexafluoride-non-electric-non-semiconductor-sources</a>
GHG Emission Reductions from Semiconductor Operations (H-3)	<0.1	<0.1		<a href="https://ww2.arb.ca.gov/our-work/programs/semiconductor">https://ww2.arb.ca.gov/our-work/programs/semiconductor</a>
Global Warming Potential Use in Consumer Products (H-4)	0.2	0.2		<a href="https://ww2.arb.ca.gov/our-work/programs/consumer-products-program">https://ww2.arb.ca.gov/our-work/programs/consumer-products-program</a>
Refrigerant Management Program (H-6)	1.2 ± 0.3	1.2 ± 0.2		<a href="https://ww2.arb.ca.gov/our-work/programs/refrigerant-management-program">https://ww2.arb.ca.gov/our-work/programs/refrigerant-management-program</a>
SF <sub>6</sub> Emission Reductions from Gas Insulated Switchgear (H-6)	<0.1	<0.1		<a href="https://ww2.arb.ca.gov/our-work/programs/elec-tandd">https://ww2.arb.ca.gov/our-work/programs/elec-tandd</a>

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Air Resources Board				
Program Title <sup>1</sup>	Emissions Reductions, MMTCO <sub>2e</sub> 2019	Emissions Reductions, MMTCO <sub>2e</sub> 2020	Notes	Website
<b>High GWP Gases, continued</b>				
With California Energy Commission, California Building Standards Commission Specifications for New Supermarket Refrigeration (H-5)	0.5	0.6		<a href="https://ww2.arb.ca.gov/sites/default/files/classic//research/apr/past/09-306.pdf">https://ww2.arb.ca.gov/sites/default/files/classic//research/apr/past/09-306.pdf</a>
<b>Industrial Sector</b>		1.0		
Oil and Gas Extraction GHG Emission Reduction (I-1)	N/A	0.5	3	<a href="https://ww2.arb.ca.gov/our-work/programs/oil-and-natural-gas-production-processing-and-storage">https://ww2.arb.ca.gov/our-work/programs/oil-and-natural-gas-production-processing-and-storage</a>
GHG Leak Reduction from Natural Gas Transmission and Distribution (I-2)	N/A	0.5	3	<a href="https://ww2.arb.ca.gov/our-work/programs/natural-gas-transmission-and-distribution">https://ww2.arb.ca.gov/our-work/programs/natural-gas-transmission-and-distribution</a>
<b>Recycling and Waste Management</b>	0.3 to 1.7	0.5 to 1.9		
Landfill Methane (RW-1)	0.3 to 1.7	0.5 to 1.9		<a href="https://ww2.arb.ca.gov/our-work/programs/landfill-methane-regulation">https://ww2.arb.ca.gov/our-work/programs/landfill-methane-regulation</a>

Table 2 - 6

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Air Resources Board				
Program Title <sup>1</sup>	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
<b>Transportation Sector</b>	38.5	43.0		
Pavley (AB 1493) (National GHG Standard for 2012-2025 Model Year Light-Duty Vehicles ≤8,500 lbs. GVWR), and Advanced Clean Cars (ACC) (T-1)	17.8	21.0	4	<a href="https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program">https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program</a>
Low Carbon Fuel Standard (LCFS) (T-2)	16.6	17.5	5	<a href="https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard">https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard</a>
Tire Pressure Program (T-4)	0.7	0.6		<a href="https://ww2.arb.ca.gov/resources/documents/tire-inflation-regulation">https://ww2.arb.ca.gov/resources/documents/tire-inflation-regulation</a>
Ship Electrification (T-5)	0.1	0.2		<a href="https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation">https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation</a>
Diesel Anti-Idling (T-6)	0.2	0.1		<a href="https://ww2.arb.ca.gov/capp-resource-center/heavy-duty-diesel-vehicle-idling-information">https://ww2.arb.ca.gov/capp-resource-center/heavy-duty-diesel-vehicle-idling-information</a>
Goods Movement (Drayage Trucks) (T-6)	0.1	0.1		<a href="https://ww2.arb.ca.gov/our-work/programs/drayage-trucks-seaports-railyards">https://ww2.arb.ca.gov/our-work/programs/drayage-trucks-seaports-railyards</a>
Transport Refrigeration Units Cold Storage Prohibition (T-6)	N/A	<0.1	3	<a href="https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit">https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit</a>

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Air Resources Board				
Program Title <sup>1</sup>	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
Transportation Sector, continued				
Heavy-Duty Vehicle GHG Emission Reduction Measure TTGHG (T-7)  + Phase I  + Phase 2 (above 8,500 lbs. GVWR) (T-7)	3.0	3.5		<p><a href="https://ww2.arb.ca.gov/our-work/programs/ttghg">TTGHG: https://ww2.arb.ca.gov/our-work/programs/ttghg</a></p> <p><a href="https://ww2.arb.ca.gov/our-work/programs/greenhouse-gas-standards-medium-and-heavy-duty-engines-and-vehicles/phase1">Phase 1: https://ww2.arb.ca.gov/our-work/programs/greenhouse-gas-standards-medium-and-heavy-duty-engines-and-vehicles/phase1</a></p> <p><a href="https://ww2.arb.ca.gov/our-work/programs/ghg-std-md-hd-eng-veh">Phase 2: https://ww2.arb.ca.gov/our-work/programs/ghg-std-md-hd-eng-veh</a></p>
Medium- and Heavy- Duty Vehicle Hybridization (T-8)	<0.1	<0.1		<a href="https://www.californiahvip.org/">https://www.californiahvip.org/</a>

California Air Resources Board				
Program Title <sup>1</sup>	Emissions Reductions, MMTCO <sub>2e</sub> 2019	Emissions Reductions, MMTCO <sub>2e</sub> 2020	Notes	Website
<p><b>CARB NOTES:</b></p> <p><sup>1</sup> Measures reported within Table 3 in previous years that are not expected to achieve GHG emissions reductions in 2020 are not included in this report and can be viewed in previous Climate Action Team Report Cards accessible at <a href="https://calepa.ca.gov/climate-action">https://calepa.ca.gov/climate-action</a>.</p> <p><sup>2</sup> H-1: BAU is updated with AR4 GWP for HFC-134a.</p> <p><sup>3</sup> In previous years, these measures were reported within Table 3, but are now incorporated in Table 2. As such, the GHG emissions reductions that were not reported for years prior to 2020 are listed as "N/A" here in Table 2. Table 3 information can be viewed in previous Climate Action Team Report Cards accessible at <a href="https://calepa.ca.gov/climate-action">https://calepa.ca.gov/climate-action</a>.</p> <p><sup>4</sup> ACC: In 2019, the federal administration acted to preempt the ACC greenhouse gas emissions and zero-emission vehicle programs. Although California is fighting this action in court and the federal administration has proposed to restore California's authority, those proposals are not yet final and are expected to be challenged in court. Future reductions from this program are uncertain pending restoration of California's authority. In addition, GHG emission reductions from low-GWP refrigerants for new vehicle air conditioning systems (previously H-5 in Table 3 of past years reports) have been covered by this measure (T-1).</p> <p><sup>5</sup> LCFS: Emissions reductions attributable to the LCFS are estimated by taking the difference in life cycle GHG emissions between those low-carbon intensity alternative fuels supported by LCFS and the high carbon intensity fossil fuels that they displace. Alternative fuels supported by the LCFS may also be supported by other State and federal programs including but not limited to electric vehicle incentive/rebate programs, the Renewable Fuel Standard, and the Biodiesel Production and Blending tax credit.</p>				

State Agency Greenhouse Gas Reduction Report Card: Table 2

<b>California Department of Food and Agriculture</b>				
<b>Program Title</b>	<b>Emissions Reductions, MMTCO<sub>2</sub>e 2019</b>	<b>Emissions Reductions, MMTCO<sub>2</sub>e 2020</b>	<b>Notes</b>	<b>Website</b>
<b>State Water Efficiency and Enhancement Program (SWEEP)</b>	0.1	0.1		<a href="https://www.cdfa.ca.gov/oefi/sweep/">https://www.cdfa.ca.gov/oefi/sweep/</a>
<b>Dairy Digester Research and Development Program</b>	0.3	1.1		<a href="https://www.cdfa.ca.gov/oefi/ddrdp/">https://www.cdfa.ca.gov/oefi/ddrdp/</a>
<b>Alternative Manure Management Program</b>	0.1	0.1		<a href="https://www.cdfa.ca.gov/oefi/AMMP/">https://www.cdfa.ca.gov/oefi/AMMP/</a>
<b>Healthy Soils Incentives and Demonstration Programs</b>	<0.1	0.1		<a href="https://www.cdfa.ca.gov/oefi/healthysoils/">https://www.cdfa.ca.gov/oefi/healthysoils/</a>

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Energy Commission				
Program Title	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
Appliance Energy Efficiency Standards	8.3	9.1	1	<a href="https://www.energy.ca.gov/appliances/">https://www.energy.ca.gov/appliances/</a>
Building Energy Efficiency Standards	0.2	0.2	2	<a href="https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards#:~:text=The%20California%20Energy%20Commission%20updates%20the%20Building%20Energy,Energy%20Efficiency%20Standards%20take%20effect%20January%201%2C%202020.">https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards#:~:text=The%20California%20Energy%20Commission%20updates%20the%20Building%20Energy,Energy%20Efficiency%20Standards%20take%20effect%20January%201%2C%202020.</a>
Comprehensive Publicly Owned Utility Customer Energy Efficiency Programs	2.0	2.1		<a href="https://www.energy.ca.gov/programs-and-topics/topics/energy-assessment/energy-efficiency-public-power-sector">https://www.energy.ca.gov/programs-and-topics/topics/energy-assessment/energy-efficiency-public-power-sector</a>
Clean Transportation Program	1.6	1.9	3	<a href="https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program">https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program</a>



State Agency Greenhouse Gas Reduction Report Card: Table 2

Program Title	Emissions Reductions, MMTCO <sub>2e</sub> 2019	Emissions Reductions, MMTCO <sub>2e</sub> 2020	Notes	Website
California Clean Energy Jobs Act: Proposition 39 (K-12) Program	0.2	0.2		<a href="https://www.energy.ca.gov/efficiency/proposition39/">https://www.energy.ca.gov/efficiency/proposition39/</a>
<p><b>CEC Notes:</b></p> <ol style="list-style-type: none"> <li>1. Based upon CEC Energy Assessment Division forecast used in 2020 CAT Report.</li> <li>2. Revised based on final approved rulemaking documents submitted to Department of Finance and Office of Administrative Law.</li> <li>3. The emissions reduced by Clean Transportation Program activities are also the result of other programs/regulations that might be included in this Report Card by other agencies. As a result, some benefits might end up being “double-counted,” particularly if our emission reduction numbers are added on top of emission reductions claimed by CARB’s Low Carbon Fuel Standard, CARB’s ZEV regulation, CARB’s vehicle incentives (e.g., CVRP and HVIP).</li> </ol>				

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Public Utilities Commission				
Program Title	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
California Solar Initiative	3.1	3.1		<a href="https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/california-solar-initiative">https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/california-solar-initiative</a>
California Solar Initiative – Thermal Program (Solar Water Heating)	<0.1	<0.1		<a href="https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/california-solar-initiative/csi-thermal-program-solar-water-heating">https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/california-solar-initiative/csi-thermal-program-solar-water-heating</a>
Self-Generation Incentive Program (SGIP)	-4.2	TBD	1, 2	<a href="https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/self-generation-incentive-program">https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/self-generation-incentive-program</a>
Investor-Owned Utilities Energy Efficiency Programs	4	4.4	3	<a href="http://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/Office_of_Governmental_Affairs/Legislation/2018/13-15%20Energy%20Efficiency%20Report_Final.pdf">http://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/Office_of_Governmental_Affairs/Legislation/2018/13-15%20Energy%20Efficiency%20Report_Final.pdf</a>

State Agency Greenhouse Gas Reduction Report Card: Table 2

Program Title	Emissions Reductions, MMTCO <sub>2e</sub> 2019	Emissions Reductions, MMTCO <sub>2e</sub> 2020	Notes	Website
SB100/Renewables Portfolio Standard	6.1	5.0	4	<a href="https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps">https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps</a>
<p><b>CPUC NOTES:</b> 1 The 2020 SGIP Impact Evaluation will be completed in 2022.</p> <p>2 For the first time since evaluations of SGIP environmental impacts began in 2014, SGIP projects led to a net increase in GHG emissions in 2019. In 2020 CPUC took steps to remedy this breach of SGIP policy. New rules were put in place to ensure SGIP-incented energy storage projects reduce GHG on a net annual basis. Per Public Utilities Code 379.6(m), beginning on January 1, 2020, all generation projects receiving SGIP incentives must use 100% renewable fuel. The SGIP Measurement &amp; Evaluation consultant calculates SGIP's emissions reductions on a biannual basis. Information on SGIP's 2020 GHG profile will be available in 2022.</p> <p>3 Emissions reductions report first year savings for energy efficiency measures, consistent with prior years' reporting.</p> <p>4 RPS emissions reduction values attributable to serving IOU load peaked in 2018. Emissions reductions are now in decline due to departing load, even as their electricity becomes less carbon intensive. The CPUC is developing a method to account for this in future GHG Report Cards.</p>				

State Agency Greenhouse Gas Reduction Report Card: Table 2

<b>Department of General Services (DGS)</b>				
<b>Program Title</b>	<b>Emissions Reductions, MMTCO<sub>2</sub>e 2019</b>	<b>Emissions Reductions, MMTCO<sub>2</sub>e 2020</b>	<b>Notes</b>	<b>Website</b>
<b>Green Buildings - LEED</b>	<0.1	<0.1		<a href="https://www.dgs.ca.gov/OS/Resources/Page-Content/Office-of-Sustainability-Resources-List-Folder/California-LEED-Certified-State-Buildings">https://www.dgs.ca.gov/OS/Resources/Page-Content/Office-of-Sustainability-Resources-List-Folder/California-LEED-Certified-State-Buildings</a>
<b>Green Buildings – Distributed Generation</b>	<0.1	<0.1		<a href="https://www.dgs.ca.gov/OS/Resources/Page-Content/Office-of-Sustainability-Resources-List-Folder/Clean-Energy-Generation">https://www.dgs.ca.gov/OS/Resources/Page-Content/Office-of-Sustainability-Resources-List-Folder/Clean-Energy-Generation</a>
<b>Green Buildings – Existing State Buildings Retro-Commissioning</b>	<0.1	<0.1		<a href="https://www.dgs.ca.gov/OS/Resources/Page-Content/Office-of-Sustainability-Resources-List-Folder/Energy-Efficiency-Retrofits">https://www.dgs.ca.gov/OS/Resources/Page-Content/Office-of-Sustainability-Resources-List-Folder/Energy-Efficiency-Retrofits</a>

State Agency Greenhouse Gas Reduction Report Card: Table 2

California Department of Water Resources (DWR)				
Program Title	Emissions Reductions, MMTCO <sub>2</sub> e 2019	Emissions Reductions, MMTCO <sub>2</sub> e 2020	Notes	Website
End Use Water Conservation & Efficiency	1.4	1.4		<a href="https://water.ca.gov/Programs/Water-Use-And-Efficiency/SB-X7-7">https://water.ca.gov/Programs/Water-Use-And-Efficiency/SB-X7-7</a>

**GHG Inventories of State Agencies**

Starting with the January 2010 report card, CalEPA began compiling GHG inventories prepared by the CAT member agencies. These inventories were each prepared independently using The Climate Registry’s *General Reporting Protocol*. Executive Order B-18-12 required all state agencies under the direct authority of the Governor to take actions to reduce entity-wide greenhouse gas emissions by 10 percent by 2015 and 20 percent by 2020, as measured against a 2010 baseline. In addition, Executive Order N-19-19 requires that every aspect of state government redouble its efforts to reduce greenhouse gas emissions. Currently, over 40 state agencies report their annual GHG emissions to The Climate Registry Information System. Figure 2 shows the total GHG emissions from State agency operations from 2010 to 2020.

From 2010-2020, state agencies have reduced emissions by 69 percent primarily due to the California Department of Water Resources’ (DWR) divestiture of the Reid Gardner Generating Station (coal-fired power plant) in mid-2013. Other State agencies collectively reduced their GHG emissions by 40 percent. Altogether, 37 of 44 agencies surpassed the goal of a 20 percent reduction. The decrease in total emissions in 2019 and 2020 is due almost entirely to DWR emissions, which fluctuates year to year depending on the weather.

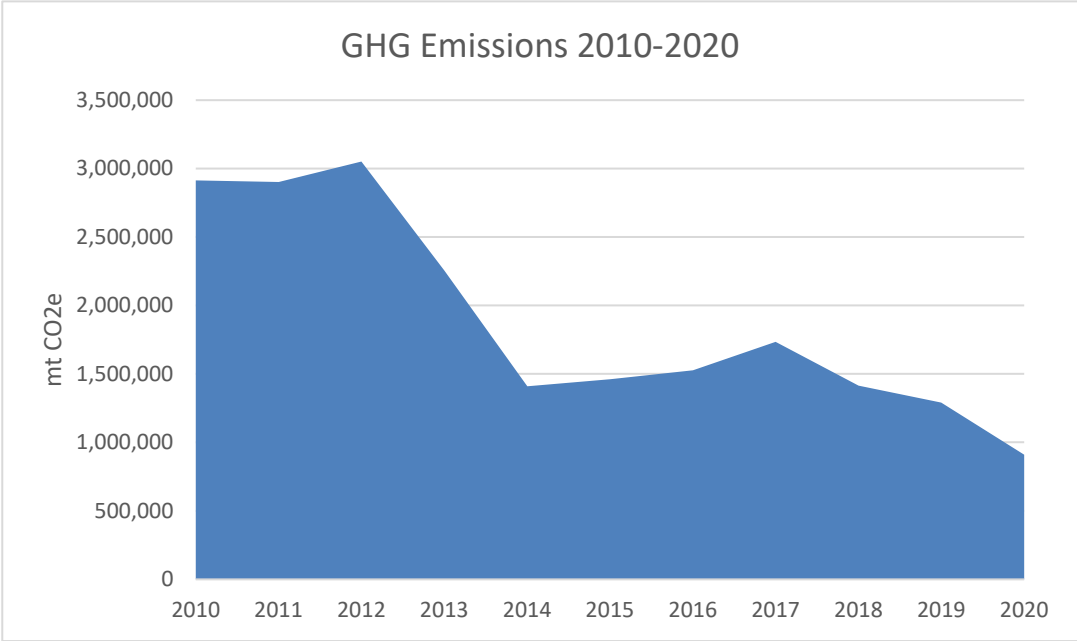


Figure 2

Additional GHG reduction measures that agencies continue to implement include: identifying vehicles for zero emission vehicle/plug-in hybrid replacement, instituting energy conservation principles, increasing use of renewable diesel, pursuing LEED and zero-net-energy at existing

and new facilities, and participating in green energy purchase programs that supply 50% or 100% renewable energy to state facilities.

Starting with 2010 emissions, departments and agencies changed reporting methods for their emissions to avoid double counting in this state-government-wide reporting effort. For example, in the case of departments and agencies occupying DGS-owned buildings, they no longer include emissions from those buildings in their inventories. Instead, DGS reports those emissions in its own inventory. It is important to compare emissions only from calendar year 2010 forward due to these changes in reporting.

Additionally, while changes in year-to-year GHG emissions can result from changes in the way state agencies do business, they also result from elements beyond individual agency control. California utilities rely extensively on hydropower for base-load energy generation. In dry years, more electricity will be generated using natural gas with a resultant substantial increase in GHG emissions. Similarly, weather conditions (cold or hot) can have a significant impact on building energy use. Longer-term, multi-year trends will prove useful for policy makers developing mid-term and long-term climate goals due to the state experiences with weather anomalies.

State Greenhouse Gas Report Card

The data below is organized by Agency though many departments are reporting individually.

<b>Table 3: Climate Action Team - GHG Inventory Status</b>						
<b>INVENTORY STATUS &gt;</b>	<b>Member of The Climate Registry</b>	<b>Reporting Year</b>	<b>Emissions in Metric Tons CO2E for each year calculated</b>	<b>Emissions in Metric Tons CO2E for each year calculated</b>	<b>Emissions in Metric Tons CO2E for each year calculated</b>	<b>NOTES</b>
			<b>Direct</b>	<b>Indirect</b>	<b>Total</b>	<b>Green indicates verified inventory</b>
<b>California State Transportation Agency</b>						
- CalTrans	Yes					
		2007	136,587	93,996	230,583	
		2008	75,546	111,331	186,877	
		2009	98,423	131,227	229,650	
		2010	125,627	89,356	214,983	
		2011	125,342	85,725	211,067	
		2012	118,242	78,373	196,615	
		2013	115,989	80,841	196,830	
		2014	110,074	45,538	155,612	
		2015	116,001	48,172	164,173	
		2016	87,615	40,829	128,444	
		2017	81,725	36,957	118,682	
		2018	100,910	20,158	121,068	
		2019	109,197	35,750	144,947	
		2020	98,013	6,594	104,607	



State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
<b>California Environmental Protection Agency</b>						
-Totals include inventory data for CalRecycle, CARB, OEHHA, DPR, DTSC and SWRCB	Yes					
		2005	2,632	4,914	7,546	
		2006	3,119	4,780	7,899	
		2007	3,050	5,545	8,595	
		2008	3,177	5,478	8,655	
		2010	2,364	4,884	7,248	
		2011	2,120	4,952	7,072	
		2012	1,964	4,704	6,668	
		2013	2,069	4,544	6,613	
		2014	1,882	3,961	5,783	
		2015	1,921	4,474	6,395	
		2016	1,866	3,953	5,819	
		2017	1,969	3,964	5,933	
		2018	1,842	4,336	6,178	
2019	1,943	4,341	6,284			
2020	1,527	3,848	5,375			

Table 3 Summary - 2

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
California Department of Food and Agriculture	Yes					
		2010	8,133	1,974	10,107	
		2011	7,952	1,966	9,918	
		2012	6,740	1,948	8,688	
		2013	6,157	1,603	7,760	
		2014	5,737	2,386	8,124	
		2015	5,895	1,901	7,796	
		2016	5,432	1,688	7,120	
		2017	4,853	786	5,639	
		2018	4,988	1,479	6,467	
		2019	5,023	1,576	6,599	
		2020	4,875	1,347	6,222	

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
California Governor's Office of Emergency Services	Yes					
		2010	107	1,125	1,232	
		2011	320	990	1,310	
		2012	303	904	1,207	
		2013	1,354	1,261	2,615	
		2014	2,109	1,570	3,679	
		2015	2,118	1,564	3,682	
		2016	2,558	1,495	4,053	
		2017	3,163	732	3,895	
		2018	2,475	821	3,296	
		2019	2,397	961	3,358	
		2020	2,986	387	3,373	

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
CA Public Utilities Commission	Yes					
		2004	92	849	941	
		2005	432	1,084	1,516	
		2006	515	1,228	1,743	
		2010	167	892	1,059	
		2011	156	850	1,006	
		2012	149	805	954	
		2013	173	836	1,009	
		2014	152	729	881	
		2015	126	861	987	
		2016	206	680	886	
		2017	187	668	855	
		2018	348	713	1,061	
		2019	435	305	740	
		2020	233	581	814	

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
<b>Health and Human Services Agency</b>						
- <i>Department of Public Health</i>	Yes					
		2010	5,320	5,909	11,229	
		2011	6,244	5,026	11,270	
		2012	5,855	4,768	10,623	
		2013	5,390	2,140	7,530	
		2014	4,514	210	4,723	
		2015	4,785	294	5,079	
		2016	4,572	273	4,845	
		2017	5,295	286	5,581	
		2018	4,997	298	5,295	
		2019	4,953	242	5,195	
		2020	5,350	256	5,606	

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
<b>Natural Resources Agency</b>						
- <i>The following Boards and Departments calculate emissions separately:</i>						
- <i>CalFire</i>	Yes					
		2007	41,882	7,460	49,342	
		2008	37,222	6,044	43,266	
		2009	34,273	5,620	39,893	
		2010	33,832	4,916	38,748	
		2011	32,916	4,587	37,503	
		2012	38,355	4,664	43,019	
		2013	35,536	5,540	41,076	
		2014	37,406	4,298	41,704	
		2015	44,389	5,413	49,802	
		2016	57,623	4,031	61,654	
		2017	64,555	4,610	69,165	
		2018	57,538	4,345	61,883	
2019	43,267	3,881	47,148			
2020	62,082	3,517	65,599			

Table 3 Summary - 7

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
<b>Natural Resources Agency, continued</b>						
- CA Energy Commission	Yes					
		2003	22	576	598	
		2008	14	948	962	
		2009	11	863	874	
		2010	4	903	907	
		2011	3	894	897	
		2012	3	1347	1350	
		2013	1	489	490	
		2014	1	400	401	
		2015	1	424	425	
		2016	1	1	2	
		2017	0	1	1	
		2018	0	1	1	
		2019	0	1	1	
2020	0	1	1			

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
<b>Natural Resources Agency, continued</b>						
- Dept. of Fish & Wildlife	Yes					
		2007	15,716	18,303	34,019	
		2008	15,175	14,597	29,772	
		2009	13,557	9,026	22,583	
		2010	13,223	8,483	21,706	
		2011	13,793	8,490	22,283	
		2012	14,447	8,318	22,765	
		2013	12,060	8,263	20,323	
		2014	14,049	4,962	19,011	
		2015	13,549	7,553	21,102	
		2016	12,773	3,671	16,444	
		2017	12,669	6,050	18,719	
		2018	12,857	5,125	17,982	
2019	12,356	4,999	17,355			
2020	11,435	1,198	12,633			



State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
Natural Resources Agency, continued						DWR has updated and re-verified its 2010-2019 GHG inventories using the TCR default EF (eGRID). DWR's previous inventories used CARB emission factors for net pump load.
- Dept. of Water Resources	Yes					
		2007	14,299	3,226,250	3,240,549	
		2008	9,929	2,400,211	2,410,140	
		2009	11,477	2,025,807	2,037,284	
		2010	863,297	816,447	1,679,744	
		2011	740,566	851,513	1,592,079	
		2012	929,572	935,363	1,864,935	
		2013	470,413	619,543	1,089,956	
		2014	17,719	329,160	346,879	
		2015	14,169	437,681	451,850	
		2016	10,058	575,589	585,647	
		2017	17,651	838,669	856,320	
		2018	13,738	510,597	524,335	
		2019	10,385	405,971	416,356	
		2020	13,903	156,998	170,901	

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
<b>Natural Resources Agency, continued</b>						
- Dept. of Parks and Recreation	Yes					
		2010	15,595	4,696	20,291	
		2011	15,877	5,046	20,923	
		2012	15,800	5,233	21,033	
		2013	15,597	5,793	21,390	
		2014	15,782	4,828	20,609	
		2015	13,218	6,183	19,401	
		2016	13,248	5,080	18,328	
		2017	11,187	4,333	15,520	
		2018	15,587	3,860	19,447	
		2019	15,893	4,384	20,277	
2020	11,450	3,657	15,107			

State Greenhouse Gas Report Card

INVENTORY STATUS >	Member of The Climate Registry	Reporting Year	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	Emissions in Metric Tons CO2E for each year calculated	NOTES
			Direct	Indirect	Total	Green indicates verified inventory
Office of Planning & Research	Yes					
Government Operations Agency						The Department of General Services's inventory includes much of the operations (including buildings and vehicles) of many other agencies.
- Dept. of General Services	Yes					
		2006	56,135	80,434	136,569	
		2007	58,124	90,739	148,863	
		2008	60,256	83,678	143,934	
		2009	55,324	80,009	135,333	
		2010	55,144	70,272	125,416	
		2011	55,342	70,225	125,567	
		2012	50,048	62,340	112,388	
		2013	43,767	65,778	109,545	
		2014	42,398	59,956	102,355	
		2015	42,695	59,870	102,565	
		216	40,456	24,234	64,690	
		2017	39,112	14,559	53,671	
		2018	40,894	4,797	45,691	
		2019	42,374	9,717	52,091	
		2020	36,120	8,939	45,059	

Table 3 Summary - 12