Connecticut Department of Energy and Environmental Protection

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Board Agenda

1:00 pm	**Chair Commissioner Dykes Call to Order**	
I	Introductions and Roll Call	
	Purpose of today's meeting	
	Approval of August meeting minutes	
1:15 pm	**Review of Existing E-bicycle Incentive Programs**	
1:30 pm	**Overview of CHEAPR Budget**	
2:00 pm	**Overview of Program Design Scenarios**	
2:15 pm	**Discussion**	
2:45 pm	**Public Comments**	
3:00 pm	**Next Steps for Board Action**	

Previous Minutes

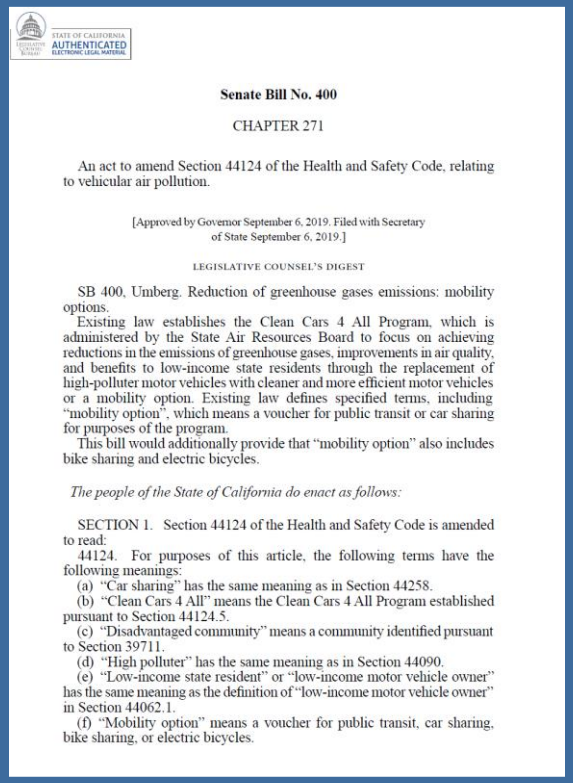
Approval of the August 19th Minutes

Previous Minutes

E-Bikes Best Practices from Other States

CA – Regulatory Amendment Includes E-Bike Voucher

California LEGISLATIVE INFORMATION



STATE OF CALIFORNIA AUTHENTICATED ELECTRONIC LEGAL MATERIAL

Senate Bill No. 400

CHAPTER 271

An act to amend Section 44124 of the Health and Safety Code, relating to vehicular air pollution.

[Approved by Governor September 6, 2019. Filed with Secretary of State September 6, 2019.]

LEGISLATIVE COUNSEL'S DIGEST

SB 400, Umberg. Reduction of greenhouse gases emissions: mobility options.

Existing law establishes the Clean Cars 4 All Program, which is administered by the State Air Resources Board to focus on achieving reductions in the emissions of greenhouse gases, improvements in air quality, and benefits to low-income state residents through the replacement of high-polluter motor vehicles with cleaner and more efficient motor vehicles or a mobility option. Existing law defines specified terms, including "mobility option", which means a voucher for public transit or car sharing for purposes of the program.

This bill would additionally provide that "mobility option" also includes bike sharing and electric bicycles.

The people of the State of California do enact as follows:

SECTION 1. Section 44124 of the Health and Safety Code is amended to read:

44124. For purposes of this article, the following terms have the following meanings:

(a) "Car sharing" has the same meaning as in Section 44258.

(b) "Clean Cars 4 All" means the Clean Cars 4 All Program established pursuant to Section 44124.5.

(c) "Disadvantaged community" means a community identified pursuant to Section 39711.

(d) "High polluter" has the same meaning as in Section 44090.

(e) "Low-income state resident" or "low-income motor vehicle owner" has the same meaning as the definition of "low-income motor vehicle owner" in Section 44062.1.

(f) "Mobility option" means a voucher for public transit, car sharing, bike sharing, or electric bicycles.

- CA has adopted Legislation enacted a "Mobility Option" = voucher for public transit, car sharing, bike sharing, or *electric bicycles*.
- Redwood Coast Energy Authority, CA has an e-bike program.
- Rebates up to 50% of the purchase price to $500.
- State hasn't launched an e-bike program but various cities including Roseville and San Gabriel, CA have offered e-bikes incentive.

Sources: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB400
Transportation Research And Education Center – White Paper:
https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2019/05/E-bike-Incentives-Paper-05_15_19-Final.pdf

Neighboring E-Bike Programs… MA & VT

Massachusetts

- No incentive currently offered
  - Preliminary discussions surrounding e-bike incentives ongoing
- E-bikes treated as motor vehicles and require license to operate
  - Bill currently before legislature to change that (HD 1596)
- Will monitor for outcome

Vermont

- GMP customers can save up to $200 on a new e-bike
  - Utility funded
  - $52k earmarked for program
  - E-bikes priced ≥ $500 eligible
  - Purchase from participating Vermont bike shops required
  - Must provide retailer w/GMP account information to show eligibility

Source: https://greenmountainpower.com/product/ebike-rebate/

E-Bike Programs Across U.S.

Location	Funding Source	Type of Funding	Max Funding	Total Earmark	Time Period
Burlington, VT	Municipally Owned Utilities	Partial purchase subsidy flat rate	$200	$52,000	May 2018 - Present
Roseville, CA	Municipal Government	Partial purchase subsidy	$200	$3,000	2018
San Gabriel Valley, CA	Municipal Govt/ Highway tolls	Partial purchase subsidy flat rate	$700	$70,000	2017
Boulder County, CO	Select private businesses	Public/private agree. - discounts	ND	ND	2013 - 2018
Austin, TX	Municipal Utilities Company	Partial purchase subsidy flat rate	$300 ind., $400 com. fleets	ND	2007 - Present
California	State Government	Partial purchase subsidy with cap	$500: bikes $1000: E-bikes	$10 Million *proposed	Proposed
Utah	Select private businesses	Com./priv. agree.- discounts	ND	ND	2018

Transportation Research And Education Center – White Paper:
https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2019/05/E-bike-Incentives-Paper-05_15_19-Final.pdf

E-Bike Best Practices

- Most used incentive structures
  - Partial purchase subsidies
    - most popular program type in use.
  - Vendor funded discounts
    - Pro: minimizes the use of tax dollars
    - Con: vendors may lose motivation to continue once sales plateau
- Limiting program to local pre-approved vendors minimizes fraud and ensures product quality and safety.
- Equity considerations should be incorporated into program.

Image Source: https://greenmountainpower.com/product/ebike-rebate/
Source: Transportation Research And Education Center – White Paper:
https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2019/05/E-bike-Incentives-Paper-05_15_19-Final.pdf

E-Bike Best Practices

- Experience-based education and strategic partnerships boost program participation.
  - E-bikes loan programs, test ride events, etc.
  - Partners: state and local government, utilities, vendors, advocacy groups
- Incorporating reporting requirements which include mileage, usage, and lessons learned.-useful for pilot projects such as the Plug In Austin Program
- Identifying untapped sources of funding is advantageous.
- British Columbia program includes a scrappage requirement

Image Source: https://greenmountainpower.com/product/ebike-rebate/
Source: Transportation Research And Education Center – White Paper:
https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2019/05/E-bike-Incentives-Paper-05_15_19-Final.pdf

CHEAPR Budget

CHEAPR Budget

CHEAPR Board Meeting September 10, 2020
Budget Update
Jan. 1 2020 through July 31, 2020

	Rebate Funds	Admin Funds(1)	Total Funds
Contract Funding Summary:			
Bridge Funding (Previous CHEAPR2 Rebates)(2)	$ 260,000.00	$ 65,000.00	$ 325,000.00
Cal Year 2020 Funding	$ 2,625,016.00	$ 374,984.00	$ 3,000,000.00
Subtotal 2020 Program Funding	$ 2,885,016.00	$ 439,984.00	$ 3,325,000.00
CHEAPR2 Rebates (Vehicle) Paid (3)	$ (246,500.00)		$ (246,500.00)
CHEAPR2 Rebates (Dealer) Paid (3)	$ (13,400.00)		$ (13,400.00)
Subtotal CHEAPR2 Incentives Paid	$ (259,900.00)		$ (259,900.00)
CHEAPR3 Rebates (Vehicle) Paid (4)	$ (33,000.00)		$ (33,000.00)
CHEAPR3 Rebates (Dealer) Paid (4)	$ (2,300.00)		$ (2,300.00)
Subtotal CHEAPR3 Incentives Paid	$ (35,300.00)		$ (35,300.00)
CHEAPR3 Pipeline (5):			
Rebates Approved for Pmt	$ (80,125.00)		$ (80,125.00)
Rebate in Process	$ (62,550.00)		$ (62,550.00)
Jan-June Admin Costs - CHEAPR2 Bridge Funding		$ (65,000.00)	$ (65,000.00)
June Admin Costs - Est'd (6)		$ (25,598.86)	$ (25,598.86)
July Admin Costs - Est'd (6)		$ (23,790.00)	$ (23,790.00)
Total Funds Utilized through 7/30/2020	$ (437,875.00)	$ (114,388.86)	$ (552,263.86)
Estimated Remaining 2020 Funding	$ 2,447,141.00	$ 325,595.14	$ 2,772,736.14
Funds Held by DEEP/DMV	$ 1,625,116.00	$ 249,984.00	$ 1,875,100.00
Funds Held by CSE	$ 822,025.00	$ 75,611.14	$ 897,636.14
Total	$ 2,447,141.00	$ 325,595.14	$ 2,772,736.14

Notes

(1) Admin cap of 11.5% for CHEPAR 2.0 and 12.5% for CHEAPR 3.0
(2) Bridge funding added to program May 6, 2020.
(3) CHEAPR 2 Funding for rebates approved 1/27/20-6/12/20 (226 vehicle rebates).
(4) CHEAPR 3 Funding for Rebates approved 6/15/20 through 7/17/20 (32 vehicle rebates).
(5) Vehicle/Dealer Rebate Split not finalized.
(6) Labor report review not yet completed.
(7) Program funds held by CSE to provide consumer rebates within 15 days of approval.

CHEAPR Budget

Overview of Program Design Scenarios

Connecticut Department of Energy and Environmental Protection

Proposed Program Incentives

- CHEAPR Proposal for public comment

New Vehicle Program Design		
Type	Base Rebate	Supplemental LMI Rebate
Fuel Cell EVs (FCEV)	$5,000	$2,000
All-Battery EVs >200 e-miles (BEV)	$1,500	$2,000
All-Battery EVs <200 e-miles (BEV)	$500	$1,500
Plug-in Hybrid EVs (PHEV)	$500	$1,500
MSRP Cap: $42,000		

Used Vehicle Program Design	
Type	**LMI Rebate**
Fuel Cell EVs (FCEV)	**$5,000**
All-Battery EVs (BEV)	**$2,000**
Plug-in Hybrid EVs (PHEV)	**$750**
MSRP Cap: None	

CHEAPR Program Design

Models that could become eligible by changing the cap from $42,000 to $50,000.

Make	Model	Model Year	MSRP	Vehicle Type	Number Sold*
Tesla	Model Y Long Range	2020	$49,990	BEV	31
BMW	X3 xDrive30e	2020	$48,550	PHEV	6
BMW	i3 with Range Extender	2020	$48,300	PHEV	--
BMW	i3s	2020	$47,650	BEV	3
Tesla	Model 3 Long Range Performance AWD (18in)	2020	$46,990	BEV	75
Tesla	Model 3 Long Range AWD	2020	$46,990	BEV	--**
BMW	330e xDrive	2021	$46,550	PHEV	1
BMW	i4	2021	$45,000	BEV	0
Byton[c]	M-Byte	2021	$45,000	BEV	--
Audi[c]	Q4 e-tron	2021	$45,000	BEV	--
BMW	330e	2021	$44,550	PHEV	26
BMW	i3	2020	$44,450	BEV	30
Ford[***]	Mustang Mach-E	2021	$43,895	BEV	--

* Number sold of each make/model (regardless of model year) in CT in 2019.
** Not available in registration data.
*** MSRP values for these vehicles are more speculative and subject to change.

CHEAPR Program Design

Incentive designs evaluated in analyses that follow

Input Variable	Current	Proposed	Pre-October 2019	BEV Consolidated
New BEV (Long Range) Rebate	1500	1500	2000	1500
New BEV (Short Range) Rebate	500	500	1000	1500
New PHEV Rebate	500	500	500	500
New FCEV Rebate	5000	5000	5000	5000
Used BEV (Short Range) Rebate	0	2000	2000	2000
Used PHEV Rebate	0	750	750	750
Used BEV (Long Range) Rebate	0	2000	2000	2000
Used FCEV Rebate	0	5000	5000	5000
New BEV (Long Range) LMI Supplement	0	2000	1500	2000
New BEV (Short Range) LMI Supplement	0	1500	1000	1500
New PHEV LMI Supplement	0	1500	1000	1500
New FCEV LMI Supplement	0	2000	2000	2000
Dealer Incentive (Used)	0	75	75	75
Dealer Incentive (New & <$1,500 consumer rebate)	75	75	75	75
Dealer Incentive (New & >$1,500 consumer rebate)	125	125	125	125

CHEAPR Program Design

Demand scenarios evaluated in analyses that follow

Scenarios	Low Demand	Baseline Demand	High Demand
LMI Proportion of Participants	0.06	0.08	0.10
Used Vehicle Proportion[d]	0.07	0.07	0.07
Proportion New BEV (Long Range)	0.64	0.64	0.64
Proportion New BEV (Short Range)	0.07	0.07	0.07
Proportion New PHEV	0.29	0.29	0.29
Proportion New FCEV	0	0	0
Total Number of Rebates	550	1650	2050

CHEAPR Program Design

Annual costs by incentive design and scenario

Scenarios	Low Demand	Baseline Demand	High Demand
Current	$1.1M	$2.2M	$2.9M
Proposed	$1.2M	$2.8M	$3.5M
Pre-October 2019	$1.4M	$3.4M	$4.2M
BEV Consolidated	$1.2M	$3.0M	$3.7M

CHEAPR Program Design

Annual costs by incentive design and scenario with 50% stimulus increase for January-June of 2021

Scenarios	Low Demand	Baseline Demand	High Demand
Current	$1.3M	$2.8M	$3.4M
Proposed	$1.4M	$3.4M	$4.2M
Pre-October 2019	$1.6M	$4.0M	$5.0M
BEV Consolidated	$1.5M	$3.5M	$4.4M

CSE estimated the carry over to be $1.9M which can be factored into this scenario

CHEAPR Program Design

Annual costs by incentive design and scenario with 50% stimulus increase for January-December of 2021.

Scenarios	Low Demand	Baseline Demand	High Demand
Current	$1.5M	$3.4M	$4.1M
Proposed	$1.7M	$4.1M	$5.0M
Pre-October 2019	$2.0M	$4.8M	$6.0M
BEV Consolidated	$1.8M	$4.2M	$5.2M

CSE estimated the carry over to be $1.9M which can be factored into this scenario

CHEAPR Program Design

Costs to achieve adoption goal of 150,000 vehicles

	EVs in Fleet*	Percent Rebated**	Rebates Required	Average Rebate Amount	Annual Administration Cost	Total Cost
Current	15,379	52.8%	71,079	$1,190	$0.375M	$87M
Proposed	15,379	52.8%	71,079	$1,526	$0.375M	$107M
Pre-October 2019	15,379	52.8%	71,079	$1,566	$0.375M	$129M
BEV Consolidated	15,379	52.8%	71,079	$1,868	$0.375M	$112M

CHEAPR Program Design

Public Comment

Next Steps

CHEAPR Program Design

	California Clean Vehicle Rebate Project	MOR-EV	CHEAPR	New York State	Oregon DEQ
Fuel-Cell EVs	$4,500	$2,500	$5,000	e-miles: ≥ 120 $2,000; ≥ 40 $1,700; ≥ 20 $1,100; < 20 $500	$2,500 battery capacity > 10 kWh, additional $2,500 or low income households for BEVs only
All-Battery EVs	$2,000	$2,500	e-miles: ≥ 200 $1,500; ≤ 200 $500		$1,500 battery capacity less than 10 kWh
Plug-in Hybrid EVs	$1,000	$1,500	$500		
Zero-Emission Motorcycles	$750				$750
	e-miles ≥ 35 – Urban Dynamometer Driving Schedule; Consumer Income cap; increased rebates for low incomes	MSRP ≤ $50k, no fleet rebates	MSRP ≤ $42k (PHEV & BEVs), MSRP ≤ $60k (FCEVs); dealer assignment; $75 dealer incentive on $500 rebate level; $125 dealer incentive on $1500-$5000 rebate level	MSRP > $60k = $500 max.; point-of-sale via dealer	MSRP less than $50k, Point-of-sale via dealer voucher, pre-qualification for Charge Ahead rebate, Fleet rebates available