Mobile Source Certification and Compliance Fee Workshop

AMP, Component, & Retrofits

February 20, 2020 1 PM



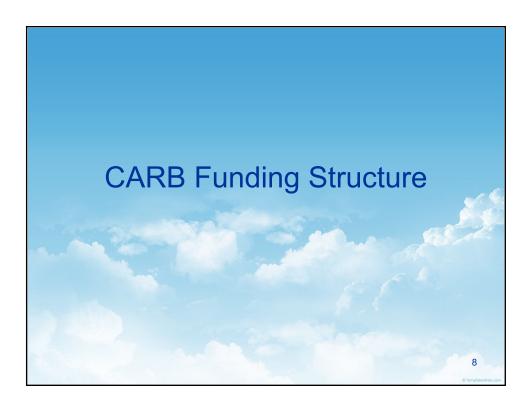


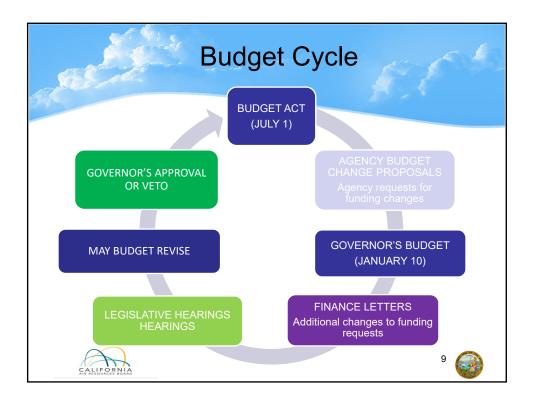


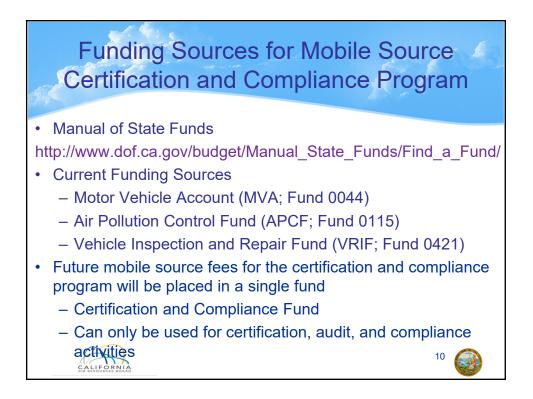










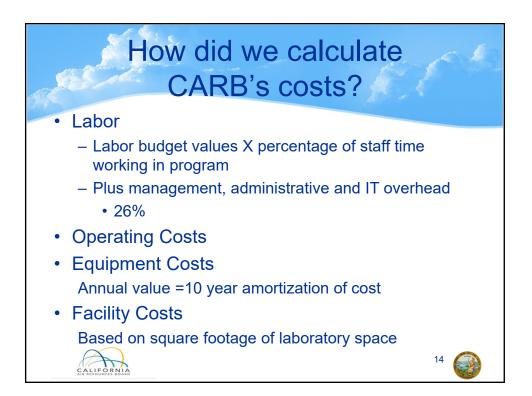




## Mobile Source (MS) Program Executive Order (EO) Categories

	umber ries	Торіс	EO Number Series	Торіс
		On-Road Vehicles and Engines		Off-Road Vehicles and Engines (Cont'd)
,	A	New Cars, Light/Medium/Heavy-Duty Vehicles	U-U	New Small Off-Road Spark - Ignition Engines/Equipment
N	N	New Street-Use Motorcycles	U-W	New Spark - Ignition Marine Engines/Watercraft
r	N	New On-Road Heavy-Duty Exempt Engines		Evaporative Components
F	Р	New Federal AB965 Cars & Light-Duty Trucks	G	Portable Fuel Containers (PFCs) Certified For Use In California
		GHG Phase 2	RM	Evaporative components for Spark-ignited Marine Water Craft
/	A	P2 GHG Vehicle	Q	Small Off-Road Engines - Evaporative Components
А	ΛT	GHG Trailer		Aftermarket Parts
A	D	GHG Aerodynamic Components	В	Alternative Fuel Retrofit Certification
		Off-Road Vehicles and Engines	С	Experimental Permits
U	-G	Electric Golf Carts	D	Aftermarket Part Exemptions
U		New Off-Road Large Spark-Ignition (LSI) Engines/Equipment	к	Aftermarket Critical Emission Control Parts for Highway Motorcycles.
U-		New Emission Compliant ("Green Sticker") Off-Road Motorcycles, All-Terrain/Utility/Sport Vehicles, Sandcars		Retrofits
U		New Emission Non—Compliant ("Red Sticker") Off-Road Motorcycles & All-Terrain Vehicles	DE	Verification of Diesel Emission Control Strategies (On/Off Road, SS, Harbor Craft, TRU, RTG) for In-Use Diesel Engine Regulations
U	-R	New Off-Road Compression - Ignition Engines	AB	Alternative Control Technologies (e.g. Bonnets) verification/approval for At-Berth regulation
		CALIFORNIA AIM RESOURCES BOARD		12





# CARB MS Fee Program Costs (all categories)

Costs	2018*	2022**
Total	\$38.6 M	\$48.5 M
Direct Labor	\$25.8 M	\$29.1 M
Indirect Labor	\$6.7 M	\$7.6 M
Operational Costs	\$3.5 M	\$5.7 M
Equipment Costs	\$1.7 M	\$5.1 M
Facility Costs	\$0.9 M	\$1.1M
PYs	150	163

 \* 2018 labor costs based on 18/19 FY mid range labor costs and does not include additional PYs for program growth received in 18/19 FY through 21/22 FY funding cycles.
\*\* 2021-2022 labor costs based on 19/20 mid range labor costs and includes additional PYs for program growth. In addition, the increase in operational and equipment costs for the expanded services provided by the Riverside laboratory.

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#### Mobile Source (MS) Program Executive Order (EO) Categories

EO Number Series	Торіс	EO Number Series	Торіс
	On-Road Vehicles and Engines		Off-Road Vehicles and Engines (Cont'd)
А	New Cars, Light/Medium/Heavy-Duty Vehicles	U-U	New Small Off-Road Spark - Ignition Engines/Equipment
М	New Street-Use Motorcycles	U-W	New Spark - Ignition Marine Engines/Watercraft
N	New On-Road Heavy-Duty Exempt Engines		Evaporative Components
Р	New Federal AB965 Cars & Light-Duty Trucks	G	Portable Fuel Containers (PFCs) Certified For Use In California
	GHG Phase 2	RM	Evaporative components for Spark-ignited Marine Water Craft
А	P2 GHG Vehicle	Q	Small Off-Road Engines - Evaporative Components
AT	GHG Trailer		Aftermarket Parts
AD	GHG Aerodynamic Components	В	Alternative Fuel Retrofit Certification
	Off-Road Vehicles and Engines	С	Experimental Permits
U-G	Electric Golf Carts	D	Aftermarket Part Exemptions
U-L	New Off-Road Large Spark-Ignition (LSI) Engines/Equipment	к	Aftermarket Critical Emission Control Parts for Highway Motorcycles.
U-M	New Emission Compliant ("Green Sticker") Off-Road Motorcycles, All-Terrain/Utility/Sport Vehicles, Sandcars		Retrofits
U-N	New Emission Non—Compliant ("Red Sticker") Off-Road Motorcycles & All-Terrain Vehicles	DE	Verification of Diesel Emission Control Strategies (On/Off Road, SS, Harbor Craft, TRU, RTG) for In-Use Diesel Engine Regulations
U-R	New Off-Road Compression - Ignition Engines	AB	Alternative Control Technologies (e.g. Bonnets) verification/approval for At-Berth regulation
	CALIFORNIA AIR RESOURCES BOARD		17

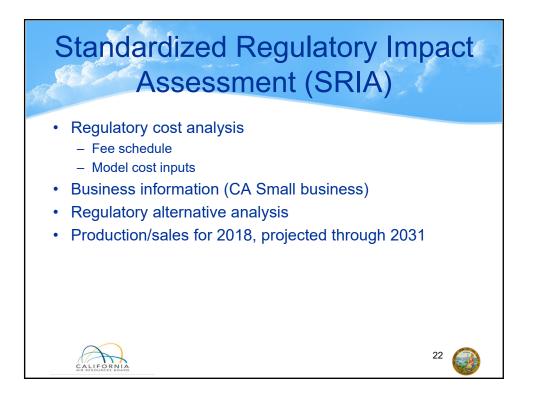
CARB Application Costs Aftermarket Parts							
EO Series Application Small Carryover/ Business (75%) Category 1* (25%)							
B/D <sub>(innovative technology)</sub>	\$22,437	\$16,828	-				
C (experimental permit)	\$195	-	-				
D**	\$23,314	\$17,486	\$5,829				
D (Catalyst/DPF) and K	\$48,111	\$36,083	\$12,028				
D <sub>(fuel tanks)</sub>	\$5,359	\$4,019	\$1,340				
As proposed in draft after *Values based on the tota inder regulatory develop hat process outcome in	al EOs in 2018. T pment. These n	he D series a	pplication process i				

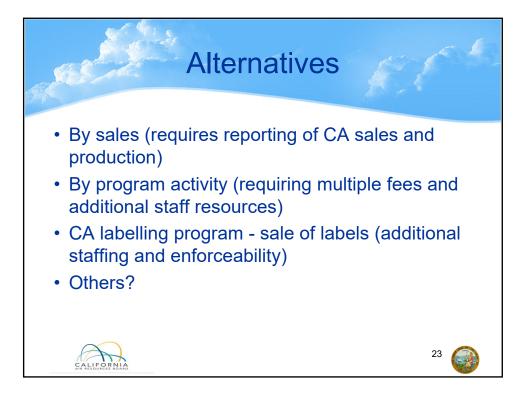
### CARB Application Costs Evaporative Components

G (Portable Fuel Containers-PFC)\$6,827\$1,707\$1,707Q (SORE/LSI Evaporative Components)\$3,771\$943\$943RM (Watercraft Evaporative Components)\$917-\$229	EO Series	New (100%)	Renewal (25%)	Adding models (25%)
	G (Portable Fuel Containers-PFC)	\$6,827	\$1,707	\$1,707
RM (Watercraft Evaporative Components) \$917 - \$229	Q (SORE/LSI Evaporative Components)	\$3,771	\$943	\$943
	RM (Watercraft Evaporative Components)	\$917	-	\$229
	RM (Watercraft Evaporative Components)	\$917	-	\$229

CARB Application Costs Retrofits								
		Costs						
EO Series	Application	EO	In-use	Design change				
DE:on, off, apu, tru, marine, sta.	\$19,918	\$59,754	\$79,600	\$9,959				
Economic Hardship (75%	@1/ 020	\$44,816	\$59,700	\$7,469				
Locomotive	\$18,434	\$73,738	-	-				
	Test Plan	EO	CEMS Review	Design change	Minor Change			
AB: At Berth	\$10,156	\$25,390	\$254	\$10,156	\$2,031			
CALIFORNIA					20			









#### California Production/Sales Trends by Evaporative Component EO Category

EO Number Series	Торіс	Source	2018-2031 Trends
G	Portable Fuel Containers (PFCs) Certified For Use In California	Off-road inventory model	decrease
RM	Evaporative components for Spark-ignited Marine Water Craft	Track marine watercraft sales	increase
Q	Small Off-Road Engines - Evaporative Components	Track SORE sales	increase
			25

51	Ca	alifornia Production Retrofit EO (		nds by	100
	EO Number Series	Торіс	Source	2018-2031 Trends	
	DE	Verification of Diesel Emission Control Strategies (On/Off Road, SS, Harbor Craft, TRU, RTG) for In-Use Diesel Engine Regulations	Implementation of regulation	decrease	
	DE	Verification of Diesel Emission Control Strategies for Locomotives	Implementation of regulation	static	
	AB	Alternative Control Technologies (e.g. Bonnets) verification/approval for At- Berth regulation	Implementation of regulation	increase	
_	CALIFO			20	



