

Attachment 3

Appendix B: California Phase 2 Credit Tracking Template

Possible cases	Description	California tracking required
1	Differences A to C do not apply to manufacturer	None required-using federal volumes, credits are sufficient
2	Difference A applies to manufacturer	In addition to federal report, CA-specific credit tracking is required – Credits generated from CA difference to be used for averaging, banking and trading (ABT) in CA only
3	Difference B applies to manufacturer	In addition to federal report, CA-specific credit tracking is required-Deficit due to CA difference could be compensated by use of ABT of CA credits or ABT of federal credits (federal credits could be impacted by CA deficit resolution)
4	Difference C applies to manufacturer	

Potential CA Differences

A-Low GWP refrigerant extra credit available

B-Custom chassis option not available for transit buses

C-Additional requirement to get hybrid advanced tech credits (no NOx increase, meet AER)

Note: Because there are no mandatory requirements currently in place for manufacturers to make heavy-duty zero-emission vehicles, the proposed credit tracking template does not include quantification for the Advanced Technology Credit Amendment to address potential future rulemaking requiring the use of advanced technologies (such as a potential future Advanced Clean Local Truck measure).

The cases below are sample calculations for CA credit tracking documents for Model Year 2023 CA ABT Summary

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Case 2 - Low GWP Refrigerant Extra Credit

Each manufacturer enters a row for each family/subfamily produced for sale in CA, where the credits are generated

** "Subfamily" is a group of vehicle configurations that have the same FEL

Vehicle Family	Subfamily	Ave Set	MY	Subcategory	CA Projected Sale Volume (Units)	Useful life (years)	Low GWP Refrigerant Credit (Mg)	CREDIT BALANCE FAMILY (Mg)
ABC1000000001	A00001	HHDV	2023	Cl. Vocational HHD (Class 8) URBAN	10	10	56	140
	A00005	HHDV	2023	Cl. Vocational HHD (Class 8) URBAN	15	10	84	

2022 CA CREDIT BALANCE			
Averaging Set	2021 CA Banked Credits	2022 CA Banked Credits	2023 CA Credit Balance
HHDV	100	200	140

NET BALANCE OF CALIFORNIA EMISSION CREDITS

FINAL CA CREDIT BALANCE (2023)			
Averaging Set	2021 CA BANKED CREDITS	2022 CA BANKED CREDITS	2023 CA BANKED CREDITS
HHDV	100	200	140

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Case 3 - Custom Chassis Option not Available for Transit Buses. Each manufacturer enters a row for each family/subfamily produced for sale in CA affected by this CA difference (i.e., CA-sold transit bus families that are certified to federal custom chassis provisions)

**Emission credits(Mg)=(Std-FEL)x(Payload)x(volume)x(UL)/(1x10^6)

***"Subfamily" is a group of vehicle configurations that have the same FEL

Vehicle Family	Subfamily	Ave Set	MY	Subcategory	Primary Vocational Standard (full GEM) (g/ton-mile)	CO2 FEL (full GEM) (g/ton-mile)	CA Projected Sale Volume (Units)	Useful Life (miles)	Conventional Credit / Deficit (Mg)	CA CREDIT BALANCE FAMILY (Mg)
ABC1000000002	A0003	HHDV	2023	Cl. Vocational HHD (Class 8) URBAN	308	325	150	435,000	-8,319	-11,745
	A0004	HHDV	2023	Cl. Vocational HHD (Class 8) URBAN	308	315	150	435,000	-3,426	

CA BANKED CREDIT (Pre-CA Deficit Resolution)

Averaging Set	2021 MY CA BANKED	2022 MY CA BANKED CREDITS	2023 MY BANKED CREDITS	2023 CA TRANSIT BUS DEFICIT
HHDV	0	200	140	-11,745

CA BANKED CREDIT (Pre-CA Deficit Resolution)

Averaging Set	2022 MY	2023 MY
	6000	5500

CA Transit Bus Deficit Resolution

Averaging Set	Credit Transfer	Source of Credits	2023 MY Transit Bus Deficit
		2022 MY Credits	

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HHDV	200	CA credits earned from low-GWP provisions	-5,545
HHDV	6,000	federal credits	
Total	6,200		
2023 my Credits			
HHDV	140	CA credits earned from low-GWP provisions	0
HHDV	5,405	federal credits	
Total	5,545		

FINAL CA CREDIT BALANCE (2023)			
Averaging Set	2021 CA BANKED CREDITS	2022 CA BANKED CREDITS	2023 CA BANKED CREDITS
HHDV	0	0	0

MANUFACTURER CREDIT BALANCE WITH U.S. EPA: FINAL FEDERAL CREDIT BALANCE (2023)		
Averaging Set	2022 FED BANKED CREDITS	2023 FED BANKED CREDITS
HHDV	0	95

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Case 4 - Additional requirement to get hybrid advanced tech credits (no NOx increase, etc.)

Each manufacturer enters a row for each family/subfamily produced in CA affected by this CA difference (i.e., PHEV families that have NOx increase, and/or do not meet AER/HVIP ePTO)

**Emission credits(Mg)=(Std-FEL)x(Payload)x(volume)x(UL)/(1x10^6)

**"Subfamily" is a group of vehicle configurations that have the same FEL

Vehicle Family	Subfamily	Ave Set	MY	Subcategory	Standard (g/ton-mile)	CO2 FEL (g/ton-mile)	CA Projected Sale Volume (units)	Useful Life (miles)	Conventional Credit (Mg)	NOx Increase? (Yes or No)	Meet AER? (Yes or No)	CA PHEV Multiplier=3.5 (if no NOx increase and meet AER), =1 (if NOx increase), =1.5 (if no NOx increase but do not meet AER)	AT Credit under CA Program (Mg)	AT Credit under Federal Program (Mg)	CA CREDIT BALANCE FAMILY (Mg)
ABC1000000003	A0005	HHDV	2023	Cl. Vocational HHD (Class 8) URBAN	308	150	5	435,000	2,577	Yes	Yes	1.0			
	A0006	HHDV	2023	Cl. Vocational HHD (Class 8) URBAN	308	200	5	435,000	1,762	No	No	1.5	8,597	23,066	-14,469
	A0007	HHDV	2023	Cl. Vocational HHD (Class 8) URBAN	308	170	5	435,000	2,251	No	No	1.5			

CA BANKED CREDIT (Pre-CA Deficit Resolution)

Averaging Set	2021 CA BANKED CREDITS	2022 CA BANKED CREDITS	2023 CA BANKED CREDITS	2023 CA PHEV CREDIT DEFICIT DUE TO CA DIFFERENCE
HHDV	0	200	140	-14,469

Federal Credit (Pre-CA Deficit Resolution) – National Sales

Averaging Set	2022 MY	2023 MY
HHDV	6000	16000

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OPTION1 – Use CA credits or federal credits to make up for the deficit

Credit Transfer Record

Averaging Set	CA PHEV Deficit Resolution		2023 MY PHEV Deficit
	Credit Transfer	Source of Credits	
	2022 MY Credits		
HHDV	200	CA credits earned from low-GWP provisions	-8,269
HHDV	6,000	federal credits	
Total	6,200		
	2023 MY Credits		
HHDV	140	CA credits earned from low-GWP provisions	0
HHDV	8,129	federal credits	
Total	8,269		

FINAL CA CREDIT BALANCE (2023)			
Averaging Set	2021 CA BANKED CREDITS	2022 CA BANKED CREDITS	2023 CA BANKED CREDITS
HHDV	0	0	0

MANUFACTURER CREDIT BALANCE WITH U.S. EPA: FINAL FEDERAL CREDIT BALANCE (2023)		
Averaging Set	2022 FED BANKED CREDITS	2023 FED BANKED CREDITS
HHDV	0	0

OPTION 2 – Retire CA PHEV credit deficit in the federal report

FINAL CA CREDIT BALANCE (2023)			
Averaging Set	2021 FED BANKED CREDITS	2022 FED BANKED CREDITS	2023 FED BANKED CREDITS
HHDV	0	200	140

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MANUFACTURER CREDIT BALANCE WITH U.S. EPA: FINAL FEDERAL CREDIT BALANCE (2023)		
Averaging Set	2022 FED BANKED CREDITS	2023 FED BANKED CREDITS
HHDV	6,000	1,531