

## Proposed New SIP Measures and Schedule

Proposed Measure	Agency	Action	Implementation Begins
<b>On-Road Light-Duty</b>			
Advanced Clean Cars 2	ARB	2020 – 2021	2026
Lower In-Use Emission Performance	ARB / BAR	n/a	ongoing
Assessment Further Deployment of Cleaner	ARB / SCAQMD / U.S. EPA	ongoing	2016
<b>On-Road Heavy-Duty</b>			
Lower In-Use Emission Performance Level	ARB	2017 – 2020	2018 +
Low-NOx Engine Standard – California Action	ARB	2019	2023
Low-NOx Engine Standard – Federal Action	U.S. EPA	2019	2024
Medium and Heavy-Duty GHG Phase 2	ARB / U.S. EPA	2017 – 2019	2018 +
Innovative Clean Transit	ARB	2017	2018
Last Mile Delivery	ARB	2018	2020
Innovative Technology Certification Flexibility	ARB	2016	2017
Zero-Emission Airport Shuttle Buses	ARB	2018	2023
Incentive Funding to Achieve Further Emission Reductions from On-Road Heavy-Duty Vehicles	ARB / SCAQMD	ongoing	2016
Further Deployment of Cleaner Technologies	ARB / SCAQMD / U.S. EPA	ongoing	2016
<b>Off-Road Federal and International Sources</b>			
More Stringent National Locomotive Emission Standards	U.S. EPA	2017	2023
Tier 4 Vessel Standards	ARB / IMO	2016 – 2018	2025
Incentivize Low Emission Efficient Ship Visits	ARB	2018 – 2020	2018 +
At-Berth Regulation Amendments	ARB	2017 – 2018	2023
Further Deployment of Cleaner Technologies	ARB / SCAQMD / U.S. EPA	ongoing	2016
<b>Off-Road Equipment</b>			
Zero-Emission Off-Road Forklift Regulation Phase 1	ARB	2020	2023
Zero-Emission Off-Road Emission Reduction Assessment	ARB	2025 +	--
Zero-Emission Off-Road Worksite Emission Reduction Assessment	ARB	tbd	--
Zero-Emission Airport Ground Support Equipment	ARB	2018	2023
Small Off-Road Engines	ARB	2018 – 2020	2022
Transport Refrigeration Units Used for Cold Storage	ARB	2018 – 2019	2020 +
Low-Emission Diesel Requirement	ARB	by 2020	2023
Further Deployment of Cleaner Technologies	ARB / SCAQMD / U.S. EPA	ongoing	2016
<b>Consumer Products</b>			
Consumer Products Program	ARB	2019 – 2021	2020 +

## Proposed San Joaquin Valley Expected Emission Reductions from State SIP Measures

All emission reductions in tons per day (tpd)

Proposed Measure	2025		2031
	NOx	PM2.5	NOx
<b>On-Road Light-Duty</b>			
Advanced Clean Cars 2	--	--	0.2
<b>Total Category Reductions</b>	<b>--</b>	<b>--</b>	<b>0.2</b>
<b>On-Road Heavy-Duty</b>			
Lower In-Use Emission Performance Level	NYQ	<0.1	NYQ
Low-NOx Engine Standard – California Action	2	--	7
Low-NOx Engine Standard – Federal Action	2	--	8
Innovative Clean Transit	<0.1	<0.1	<0.1
Last Mile Delivery	<0.1	<0.1	0.2
Zero-Emission Airport Shuttle Buses	--	--	<0.1
<b>Total Category Reductions</b>	<b>4</b>	<b>&lt;0.1</b>	<b>15</b>
<b>Off-Road Federal and International Sources</b>			
More Stringent National Locomotive Emission Standards	0.3	<0.1	1
<b>Total Category Reductions</b>	<b>0.3</b>	<b>&lt;0.1</b>	<b>1</b>
<b>Off-Road Equipment</b>			
Zero-Emission Off-Road Forklift Regulation Phase 1	--	<0.1	<0.1
Zero-Emission Airport Ground Support Equipment	<0.1	<0.1	<0.1
Small Off-Road Engines	0.2	<0.1	0.3
Transport Refrigeration Units Used for Cold Storage	NYQ	NYQ	NYQ
Low-Emission Diesel Requirement	1	0.1	0.5
<b>Total Category Reductions</b>	<b>1</b>	<b>0.1</b>	<b>0.8</b>
<b>Aggregate Emission Reductions</b>	<b>6</b>	<b>0.1</b>	<b>17</b>

"NYQ" denotes emission reductions are Not Yet Quantified

"--" denotes no anticipated reductions