

# California Locomotive Carbon Emissions Compliance

## Prepare Your Organization

### California's In-Use Locomotive Regulations Are a Game Changer

The California Air Resources Board approved new regulations for locomotive emissions in April 2023. The regulations present an aggressive timeline to reach 100% Zero-Emission (ZE) locomotives by 2047, with many interim milestones. Compliance costs will be high and immediate. Emissions created in 2025 determine whether railroads and industrial switch operations need to set aside funds in 2026 for upgrades.

### Potential Impacts Beyond California

Thirteen states follow California's lead in air emissions policies. While litigation could influence the timeline and a possible chain reaction of regulations, the push to decarbonize rail has begun.





## Fleet Strategy

PLG's industry experts help you determine the best way to adjust your fleet to meet the upcoming mandates. Our mechanical, operating, and fuel consumption experts give unbiased advice not wedded to any fuel platform or OEM. It's driven only by your organization's goals and long-range vision.



## Total Cost of Ownership

The fleet cost doesn't stop with the acquisition. Our experts help you analyze the ongoing costs. How do the different platforms stack up from a maintenance standpoint? What infrastructure costs need to be considered? What are the diesel gallon equivalent fuel costs?



## Timing and Specifications

How do the new regulations fit into your ongoing plans to acquire and retire locomotives? Should you speed up or slow down those plans in the face of the new mandates? Is upgrading to Tier IV a valid interim solution if ZEs are the ultimate requirement?



## Fuel Efficiency

Regardless of whether you operate in a state pursuing locomotive decarbonization, there are substantial potential savings and environmental benefits to implementing fuel efficiency programs. PLC experts have real-world experience implementing these initiatives for leading railroads.

## STATES LIKELY TO FOLLOW CALIFORNIA'S LEAD

- |                 |                  |
|-----------------|------------------|
| 1. Pennsylvania | 8. Massachusetts |
| 2. New York     | 9. Maryland      |
| 3. Washington   | 10. Vermont      |
| 4. Oregon       | 11. Connecticut  |
| 5. New Mexico   | 12. Delaware     |
| 6. New Jersey   | 13. Rhode Island |
| 7. Maine        |                  |

*(ranked by rail miles)*



### **Locomotive Fact Sheet**

#### **FACT SHEET ON CARB IN-USE LOCOMOTIVE REGULATIONS**

# 2026

#### **TIER IV REQUIREMENTS**

Based on the previous year's fleet, companies start placing funds in a 'spending account' for future upgrades for each Tier III or lower locomotive. However, companies are exempt if over half their fleet is Tier IV. Owners of Tier III locomotives will have to put \$370,000 in the spending account for each locomotive.

# 2030 + 2035

#### **NEWLY MANUFACTURED ZE LOCOMOTIVES**

Newly manufactured Switcher, Industrial, and Passenger locomotives must be ZE in 2030. In 2035, the same standard applies to Freight Line Haul.

# 2042 + 2047

#### **50% AND 100% ZE FLEETS**

50% of an operator's annual fleet usage in California must be ZE by 2042, and 100% of an operator's annual fleet usage must be ZE by 2047.