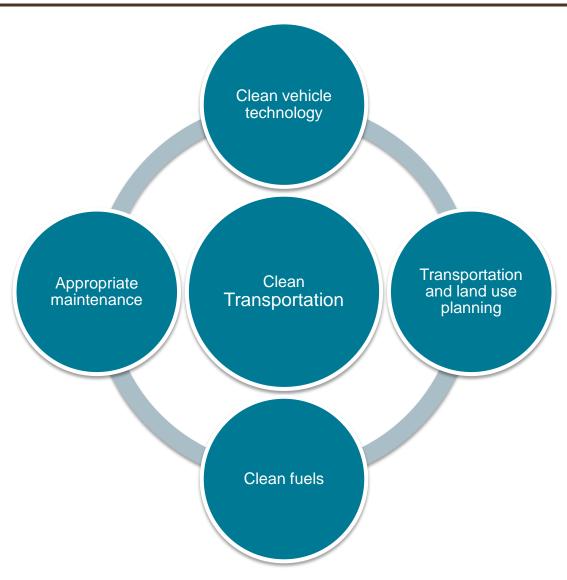
# Best Practices for Diesel BC Control

## Ray Minjares

US EPA Region 9 San Francisco, CA 14 Nov 2012

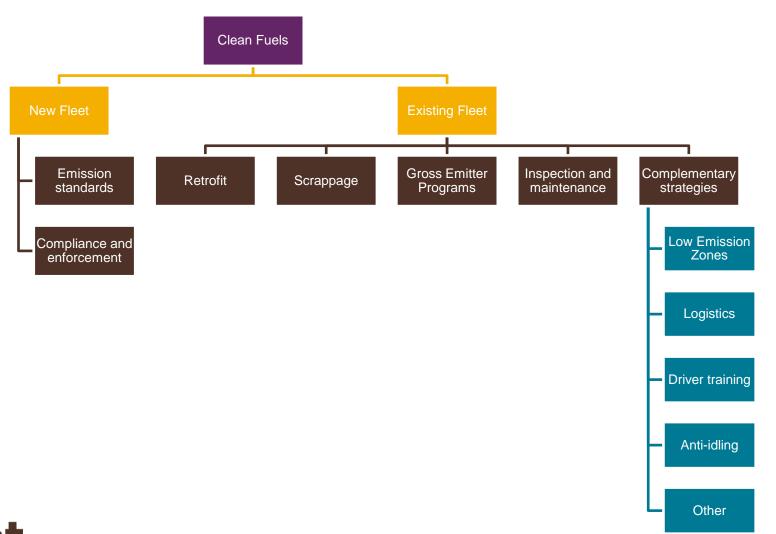


# Elements of a comprehensive vehicle pollution control strategy



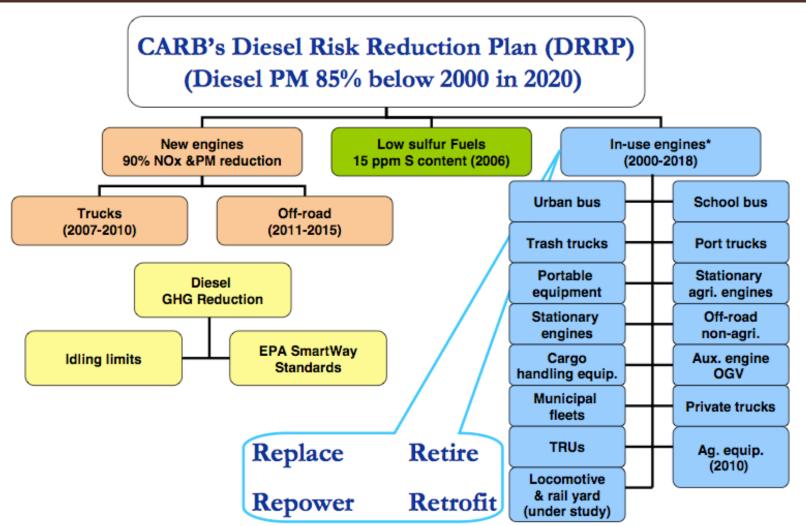


# Framework for a BC Control Program





#### The California Model



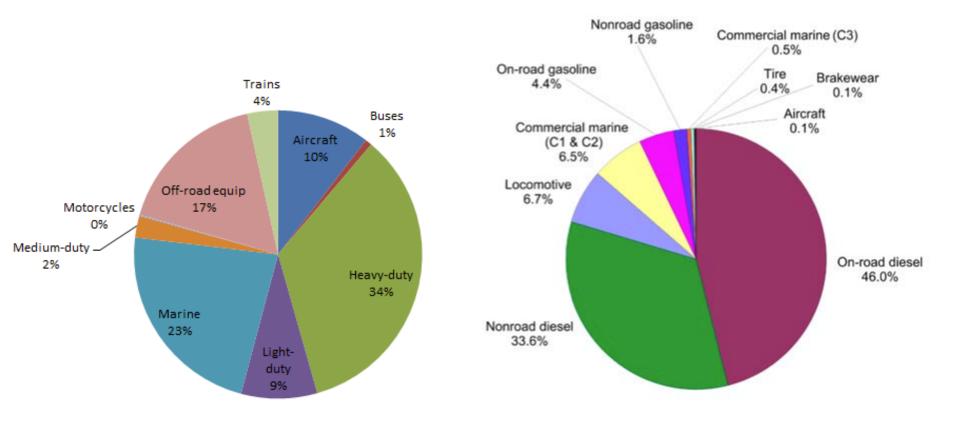


Source: Ayala, A. (2009) Black carbon controls in California: emissions, abatement and knowledge gaps. 2009 International Workshop on Black Carbon in Latin America, 19 October, Mexico City, Mexico.

# Major mobile BC emission sources in California and United States

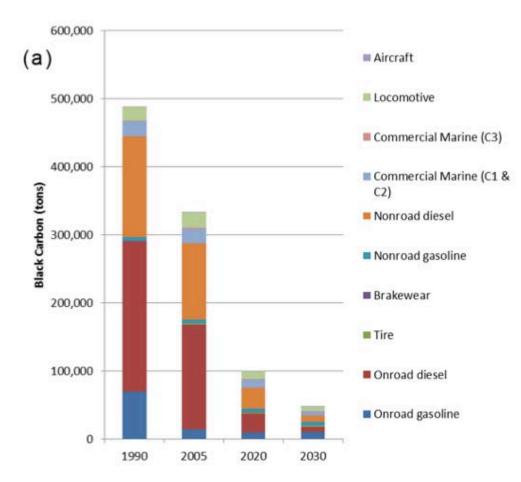
California, 2006

United States, 2005





#### **US Mobile Source BC Control**



- 15ppm ULSD
- US 2007 & 2010 on-road diesel rule
- US 2004 Nonroad diesel rule
- 2008 locomotive/marine rule
- National Clean Diesel Campaign
- SmartWay Partnership



### Final Thoughts

- Best practices are here in CA and US
- Explore synergies between CA and US approaches to in-use fleet
- Focus attention on marine BC, especially large vessels
- Consider more regular reporting of BC emissions



## Thank you

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