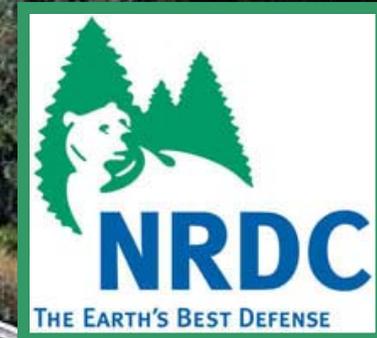


# Moving Forward with California's Tire Efficiency Program



Luke Tonachel  
Natural Resources Defense Council  
[ltonachel@nrdc.org](mailto:ltonachel@nrdc.org)

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# Statutory Obligations and State Targets Compel State Action on Tire Efficiency



- AB 844 (Nation, 2003)
- CA Strategic Objectives
  - Decrease petroleum dependence:
    - CEC AB 2076, 2007 IEPR, AB 1007 Alternative Fuels Plan
  - Reduce emissions of global warming pollutants:
    - AB 32, AB 1007 Alternative Fuels Plan
- National tire efficiency information program
  - CA leadership helps define information program; CA first in standards
- Market is already advancing
  - Michelin Green Meter
  - Yokohama low-rolling resistance model in Japan

➔ *CEC should capitalize on the momentum for improving tire efficiency and provide leadership in program implementation.*

# Significant CA Fuel and GHG Savings in 2020



- Fleet turnover to more efficient models by 2020 is feasible
  - Typical tire life 3-4 years; Replacement tires are 75-80% of the light-duty market
- Tire wear cannot be sacrificed so savings should apply to the life of the tire
- **2020 Benefits Potential: Reductions in Gasoline Use and GHG Emissions**

<b>Tire Fuel Economy Improvement</b>	<b>Gasoline (Million Gallons)</b>	<b>GHG (Million Metric Tonnes CO<sub>2</sub>e)</b>
<b>2%</b>	<b>213</b>	<b>2.5</b>
<b>3%</b>	<b>317</b>	<b>3.7</b>
<b>4%</b>	<b>419</b>	<b>4.9</b>

Assumes 2020 light-duty vehicle population of 30 million with 75% using fuel-efficient replacements. Baseline on-road fuel economy is 24.8 mpg (2007 IEPR), WTW GHG per gallon gasoline is 11.7 kgCO<sub>2</sub>e/gal (AB 1007 Alternative Fuels Plan). Annual VMT is 12,000 miles.

# Tire Efficiency Technical Potential Is Likely Higher than 4%



- NAS Panel: Rolling resistance among tires in today's market with same size, traction and speed ratings can vary by as much as 20%, which could result in fuel economy benefits of 4%.
- Michelin Green Meter Press Kit, October 10, 2007:
  - “Today, further advances are still possible. Researchers at Michelin believe that significant additional reductions in rolling resistance, up to 50 percent, are possible within the next 10 to 15 years—a technical challenge to which Michelin is responding with special research programs.”
  - “Under Michelin's leadership, the entire industry in Europe is working to make this project a reality, reflecting a commitment to inform consumers that tires perform very differently in terms of rolling resistance and, consequently, environmental impact. These differences may be as much as 50 percent for different tire brands produced for the same car. For a car at 40 mpg, a difference of more than 50 percent in rolling resistance can improve fuel consumption by up to 4 mpg and lower CO2 emissions by up to 10 percent.”

# Fuel Savings Are Cost-Effective



- NAS Panel assumed \$1 - \$2 per year incremental cost to consumer
- **Net Savings to Consumer for Using Fuel Efficient Tires**

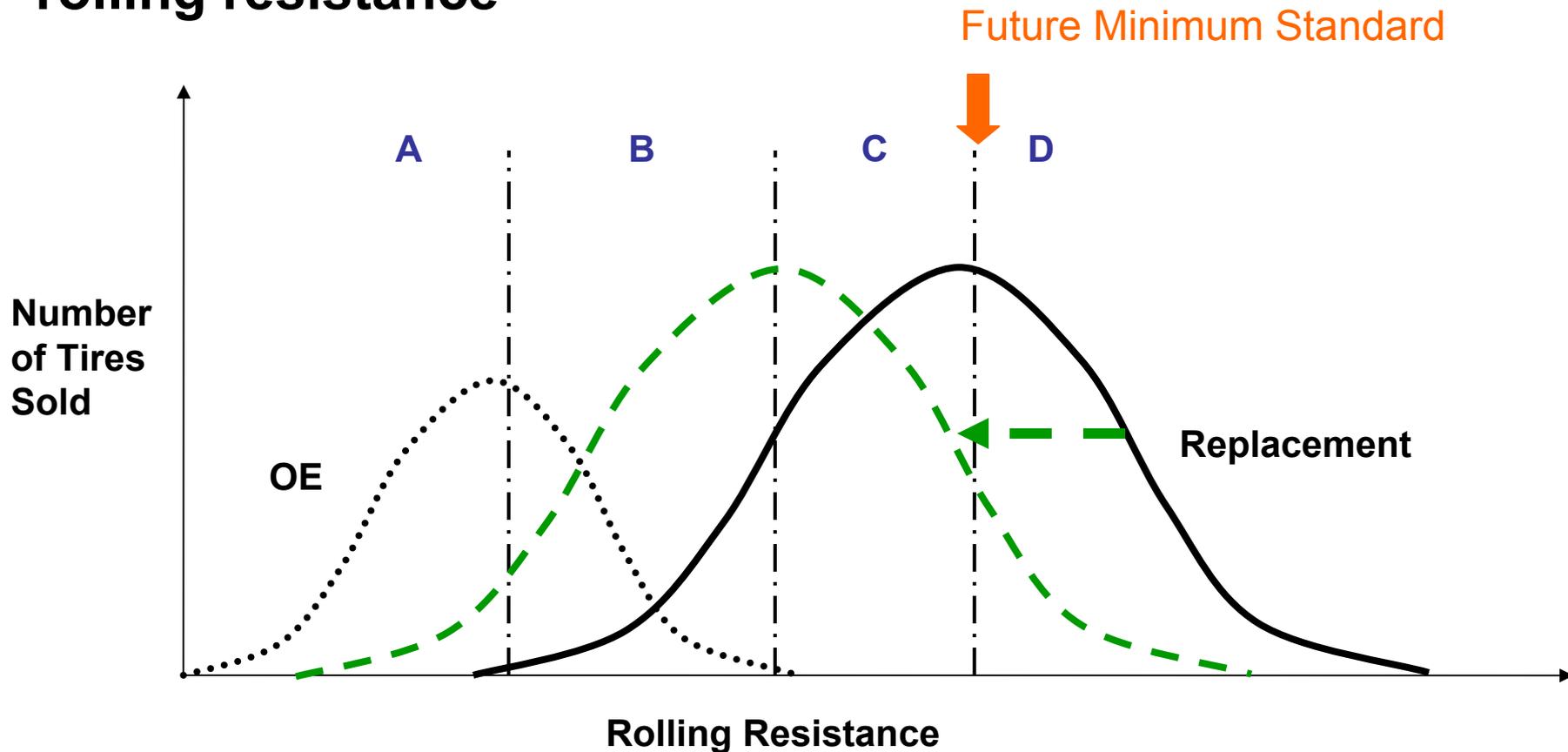
<b>Fuel Economy Improvement</b>	<b>F.E. Tire Incremental Cost (\$/yr)</b>	<b>Fuel Savings (gal/yr)</b>	<b>Fuel Savings (\$/yr)</b>	<b>Net Savings (\$/yr)</b>
<b>2%</b>	<b>\$2.00</b>	<b>9.5</b>	<b>\$23.72</b>	<b>\$21.72</b>
<b>3%</b>	<b>\$2.00</b>	<b>14.1</b>	<b>\$35.23</b>	<b>\$33.23</b>
<b>4%</b>	<b>\$2.00</b>	<b>18.6</b>	<b>\$46.53</b>	<b>\$44.53</b>

Assumes \$2.50/gallon gasoline; baseline on-road fuel economy is 24.8 mpg (2007 IEPR); and annual VMT is 12,000 miles. Significant net benefits to consumers also found in CEC Consultant analysis "California State Fuel-Efficient Tire Report: Volume II," Consultant Report 600-03-001CR Volume II. January 2003.

# Ratings and Standards Transform the Replacement Tire Market



**Illustration: Ratings and standards shift market to lower rolling resistance**



# Tire Efficiency Reporting and Rating Program Design Principles



- Protect industry leaders and assist consumers with data accuracy
- Standardize test procedure to ensure comparison across manufacturers' products
  - Precise and repeatable
  - Third party, independent test facility with proper certification
- Rating and testing system sustainability
  - Fully funded for on-going analysis, data compilation and accuracy checking
  - Master database maintenance
  - Random testing to ensure products continue to meet assigned rating
- Labels: Simple-to-understand and widely available at point of sale and for pre-sales research
- Challenge process between manufacturers to validate efficiency claims
- Tire dealer and state fleet procurement education

# Leverage Existing, Working Models for Testing and Rating Administration



- Cool Roofs Rating Council Product Rating Program ([www.coolroofs.org](http://www.coolroofs.org))
  - 501(c)(3) non-profit organization that maintains a third-party, independent product rating program
  - Public interest oversight (government agency, NGO, other)