

Railroads: Part of the Solution

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Association of American Railroads

Freight Rail Works.



Emissions Standards

- ◆ 1998 manufacturing standards: Tiers 0,1,2
- ◆ 1998 remanufacturing standards: post-1972 locomotives
- ◆ 2008 remanufacturing standards: previous standards made tighter
- ◆ 2008 manufacturing standards: Tiers 3,4
- ◆ 2015: the beginning of the aftertreatment era

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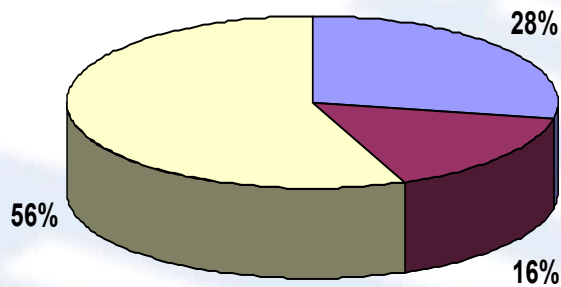
Innovative Locomotive Technologies



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Vehicle Resistive Forces

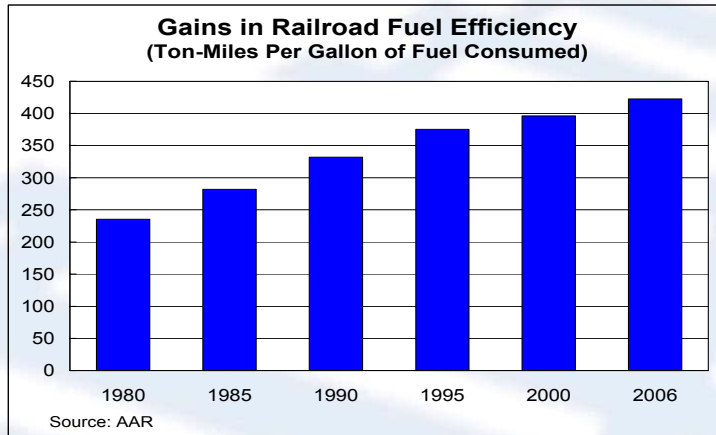


Aerodynamic Resistance Bearing Resistance Wheel Rolling Resistance

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The Railroads Are Improving



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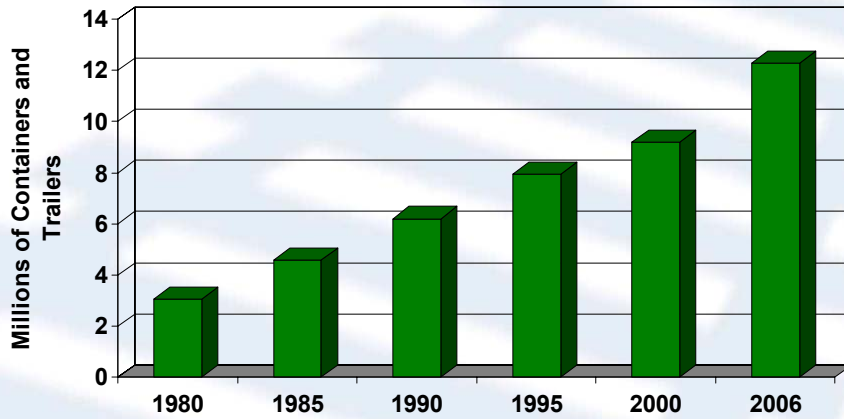
The Railroad Advantage

- ◆ 3x more fuel efficient than trucks
- ◆ 35% more fuel efficient than marine
- ◆ RRs reduce congestion: a single train can take 280 trucks off the highway

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Working With Our Partners: Intermodal

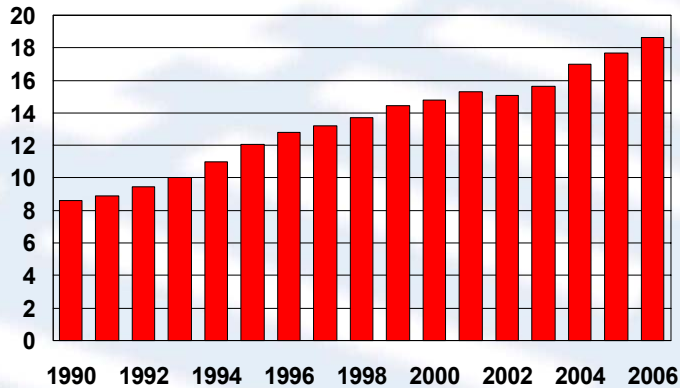


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Tight Capacity

Millions of Class I Ton-Miles Per Mile of Road
Owned

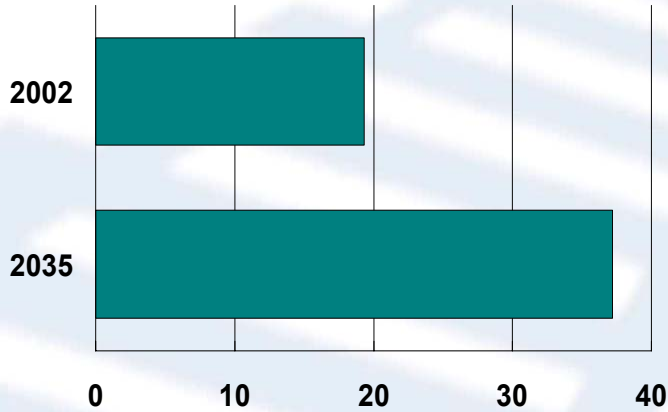


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Future Transportation Growth

Billions of Tons of Freight Transported in the U.S.

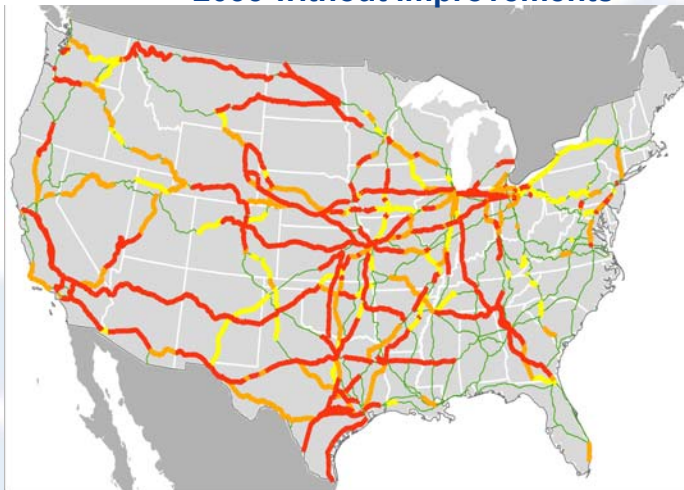


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Corridor Capacity Projection

2035 without improvements



- Below capacity
- Near capacity
- At capacity
- Above capacity

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