

TLU-7.1 Fuel Efficient Replacement Tires Program

Policy Description:

Improve the fuel economy of the LDV fleet by setting minimum energy efficiency standards for replacement tires and requiring that greater information about low-rolling resistance (LRR) replacement tires, including all season/all weather LRR tires, be made available to consumers at the point of sale. Snow and mud LRR tires are currently available, and tire manufacturers, such as Michelin, are currently researching and developing fuel efficient all weather replacement tires.

Vehicle manufacturers currently use LRR tires on some new vehicles, but they are not easily available to consumers as replacement tires. When installing original equipment tires, carmakers sometimes use LRR tires to meet federal corporate automobile fuel economy standards (CAFE). When replacing the original equipment tires, consumers often purchase less fuel-efficient tires and potentially more costly tires (depending on annual vehicle miles traveled [VMT]). Currently, tire manufacturers and tire retailers are not required to provide information about the fuel efficiency of replacement tires.

An appropriate state agency would initiate a fuel efficient tire replacement program. The program would include consumer education, product labeling, and minimum standards elements.

These programs would be developed under a rule development process. All programs would incorporate the best scientific information, including the test results of tires conducted by the tire manufacturers, the Tire Industry Association, and the National Academy of Sciences and others.

Policy Design:

This policy is designed to encourage consumer choice and example by state government.

Goal Levels: Establish voluntary energy efficiency standards that achieve an average % gain in fuel economy.

Timing: By , the state or appropriate agency would initiate a fuel efficient tire replacement program for the state fleet if all season/all weather tires are available and are incorporated into legislatively approved rental rates, establish voluntary energy efficiency standards for replacement tires, and develop a marketing program for fuel efficient replacement tires.

By , the state or appropriate agency would ensure that a proportion of tires replaced on state-owned and -leased vehicles will be LRR tires (if they are available for the vehicle type and are rated for all season/all weather service) and would consider legislation or administrative regulation to set LRR standards for tires with mandatory manufacture labeling.

Parties Involved: Iowa Department of Transportation, Iowa Department of Natural Resources, Iowa Energy Center, LRR manufacturers, tire distributors.

Implementation Mechanisms

The program would include consideration of the technical feasibility and cost of such a program, the relationship between tire fuel efficiency and tire safety, potential effects upon tire life, and impacts on the potential for tire recycling. In addition, the program would exempt certain classes of tires that sell in low volumes, including specialty and high performance tires.

The minimum standard is likely to be less stringent than the energy efficiency of original tires provided by the automobile manufacturers on new purchase vehicles. Such a regulation would improve the fuel efficiency of the overall LDV fleet, but not necessarily the fuel efficiency of all tires since consumers would still make choices in the marketplace. The replacement tires in the future would be on average more fuel efficient than those historically purchased, but are likely to be, on average, not as fuel efficient as the tires included as original equipment by the automobile manufacturers.

Information and Education: Provide information to general public and commercial businesses (i.e. taxi and food delivery services) that use light-duty vehicles for daily business that the improved fuel efficiency is directly related to decreased rolling resistance. Information on the potential annual costs savings using LRR tires would also be provided. For example, a car averaging 15,000 miles per year would have fuel savings of over \$80 (at \$2.25 per gallon). A chart of recommended tire models would be included with information on product labeling and minimum standards elements. Best scientific information including the results from tests of tires conducted by the tire manufacturers, the California Energy Commission, and the National Academy of Sciences would be reviewed and incorporated.

The manufacturers of the LRR tires would be contacted to encourage promotion of their relevant products through regional newspaper and television advertising. The producers of LRRs may freely provide promotional materials.

Promotion and Marketing: The state will lead by example by initiating a fuel efficient tire replacement program. This would include all weather fuel efficient tires and would require legislative approval for rental rates for vehicles, both owned and leased.

Over time, all state fleet tires in need of replacement will be changed to LRR tires, if available for the vehicle type and season.

Other leadership actions include:

- Establish voluntary LRR standards that achieve an average 4.5% gain in fuel economy.
- Encourage local/county governments to act consistently with and support state procurement on their behalf.

- Encourage federal agencies located within the state to act accordingly with and support state actions.
- Encourage businesses that depend upon vehicles to conduct daily business to act accordingly with and support state actions.
- Develop a marketing program with tire dealers and consumers to encourage the purchase of LRR tires. This effort might include a voluntary labeling program for tire fuel efficiency.
- Encourage the Iowa university system to conduct research on alternative noncombustible applications for used tires.
- All state-supported programs would have dedicated detailed web sites. In addition to information and materials, program participation by the various governmental agencies and individual businesses (i.e., success stories) would also be documented and extolled.
- **Technical Assistance:** Contact the LRR manufacturers and tire distributors to coordinate objectives and obtain technical support for outreach materials.
- **Funding Mechanisms and/or Incentives:** Replacement of tires on state fleet vehicles is already budgeted through the MDT annual funding processes.
- **Voluntary and or Negotiated Agreements:** Work with the manufactures and affected parties to achieve objectives with flexibility of the timelines.

Codes and Standards: The state of California has developed substantial information pertaining to LRR tires due to legislative actions that require tires to be replaced with more efficient ones. Associated documentation identifies testing methods and LRR standards. The appropriate state agency can review the information and establish suitable Iowa standards.

Pilots and Demonstrations: Coordinate with product developers to help them promote their technologies.

Reporting: The state will develop a system for tracking purposes so that the state can eventually determine the turnover to LRR tires and the benefits achieved from the conversion. A simple tracking system would be established relatively easily by contacting the primary tire distributors of the major Iowa cities on an annual basis and estimates can be gathered from their inventories.

Enforcement: No enforcement actions are necessary initially since this is a voluntary program. After the mandatory labeling becomes in effect, spot checks at the primary tire distributors in the main Iowa cities would be annually conducted by the county health departments and the state staffs.

Related Policies/Programs in place:

In October of 2003, the state of California adopted the world's first fuel-efficient replacement tire law (AB 844). This law directed the California Energy Commission to develop a State Efficient Tire Program that includes the following issues: (1) develop a consumer education program, (2) require that retailers provide labeling information to consumers at the point of sale, and (3) promulgate through a rule development process a minimum standard for the fuel

efficiency of replacement tires sold. The California rule development process began January 2007.

Although the climate in California is significantly more moderate than Iowa, “All Season/All Weather” LRR Tires may be made available. Michelin tire manufacturers are currently researching and developing “all-weather tires.”

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD