



# Fuel Efficient Tires

September 2009

For government purchasers

Publication No. 09-07-037

## Responsible Purchasing Considerations

- ⊖ Air Quality
- ⊖ Climate Change
- ⊖ Energy Efficiency

## Benefits of Purchasing

- ⊖ Reduces climate change impacts.
- ⊖ Fleets save on fuel costs.

## How to Buy

Washington State contract #[00108](#) Tires, tubes & services. Michelin, Goodyear & Bridgestone/Firestone.

According to the master contract, Michelin produces LRR passenger and light truck tires, which are comparable across Michelin's product line.

Michelin also produces LRR truck tires that are comparable to competitors' truck tires. Call the vendor for more details.

## Goal: State fleets to purchase fuel efficient tires.

In 2007, the Washington State Legislature required that replacement tires for the state motor vehicle fleet must have the same or better rolling resistance than the original tires. State Patrol vehicles are exempt.

Tires with lower rolling resistance allow vehicles to roll more easily on the road, which creates better fuel efficiency.

Since the average life of a set of tires is four years, significant fuel savings and reductions in greenhouse gases can result. A one-to-two percent change in miles per gallon (MPG) occurs for every 10 percent change in rolling resistance, according to tests performed by the National Renewable Energy Laboratory ([NREL](#)) and Ecos Consulting.

This means that fuel efficient tires can result in a two to six percent reduction in fuel use per vehicle, according to the Responsible Purchasing Network.

Tires that come with new cars are often fuel-efficient. This helps car manufacturers satisfy the federal [Corporate Average Fuel Economy \(CAFE\)](#) standards.



Credit: Photospin

## Standards

Currently, no federal, state or industry standards exist that establish a minimum level of fuel efficiency for tires.

Large volume purchasers can require that vendors provide test data on rolling resistance in bid specifications. Several test protocols exist which measure the rolling resistance of tires. However, it isn't easy to understand the resulting tire grades, no actual tests are required, and manufacturers self-certify.

California [Assembly Bill 844](#) required the California Energy Commission (CEC) to develop tire energy efficiency standards. The standards must meet the following conditions:

- Be technically and financially feasible.
- Not adversely affect tire safety or average tire life.
- Not adversely affect state efforts to manage and recycle scrap tires.

After lengthy tire tests, the California Energy Commission staff has recommended use of the [ISO Standard](#) 28580 for rolling resistance.

The CEC will also require tire manufacturers to report data on rolling resistance and energy efficiency of tires purchased by the state.

The U.S. Department of Transportation has proposed a consumer information program that would implement a national efficiency rating system for replacement tires. See [Notice of Proposed Rulemaking](#).

**Environmentally Preferable Purchasing**

The Department of Ecology offers tools and resources to make environmentally preferable purchasing easier.

Find out about environmentally preferable products, standards and certifications, law and directives, and more at our website:

[www.ecy.wa.gov/beyondwaste/epp.html](http://www.ecy.wa.gov/beyondwaste/epp.html)

**Contact:**

Tina Simcich  
[tisi461@ecy.wa.gov](mailto:tisi461@ecy.wa.gov)

**Resources**

Responsible Purchasing Network  
[Purchasing Guides](#)

[Tires and Passenger Vehicle Fuel Economy](#)

California Transportation Research Board

[Low-Rolling-Resistance Tires](#)  
 Department of Energy (EERE)

California Energy Commission  
[Fuel Efficient Tire Program](#)

[Waste Tires in WA State](#)  
 Department of Ecology

**Product Performance**

Tire purchases should be based primarily on performance and safety factors, such as handling, traction, and resistance to hydroplaning. Tires must also perform well for existing road conditions and the desired application.

Look for fuel efficient tires that meet these performance and safety criteria. The Uniform Tire Quality Grading System (UTQGS) is a method for determining ratings for tread wear, traction, and high temperature resistance.

The US Department of Transportation, National Highway Traffic Safety Administration runs the UTQGS. However, UTQGS is a voluntary system and includes minimal auditing of manufacturer’s claims.

Full tread depth tires have lower rolling resistance than worn tires. Of course, correct tire air pressure can dramatically affect fuel economy. So good fleet maintenance is critical for fuel efficiency.

**End of Life**

As with any passenger vehicle tires, fuel efficient tires should be properly recycled at the end of their life.

Don’t send tires to the landfill. Tire piles can create a breeding ground for mosquitoes, which may carry diseases such as the West Nile virus and encephalitis.

Never burn tires. Burning tires release toxins, which can pollute the air, water, and soil. The tire’s ashy byproducts are also contaminants. Burning tires are extremely difficult to extinguish. They can be a serious safety concern for fire personnel and for surrounding communities.

Please see [Waste Tires](#) to learn about waste tire reuse and recycling in Washington state.



**Laws and Directives**

[RCW 43.19.648](#)

Publicly-owned vehicles, vessels, and construction equipment

In 2007, Washington State clean energy legislation required that, “...when tires on vehicles in the state’s motor vehicle fleet are replaced, they must be replaced with tires that have the same or better rolling resistance as the original tires.” Cars owned by the Washington State Patrol are exempt from this legislation.

*To ask about available formats for the visually impaired please call the Waste 2 Resources Program at 360-407-6900. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*