Pay As You Drive Vehicle Insurance in British Columbia

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30 January 2018

Honorable David Eby
BC Attorney General

Current Pricing

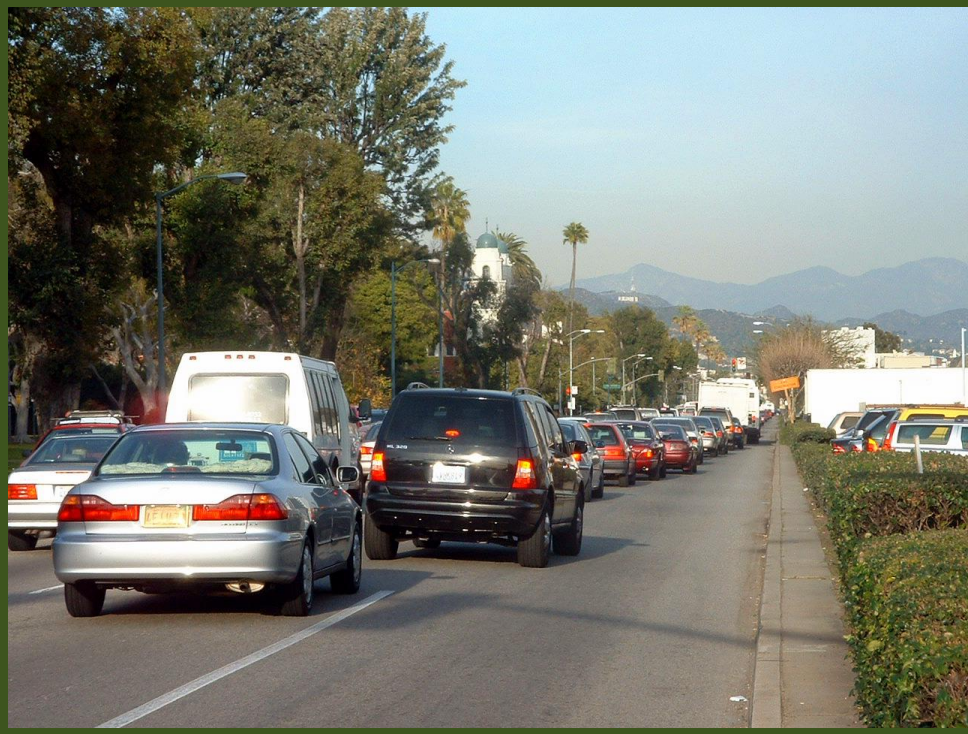
Vehicle insurance is a fixed vehicle cost.

Pay-As-You-Drive (PAYD) pricing converts insurance to a variable cost, so premiums are directly related to annual venicle kilometers.

“Pay-As-You-Drive”

Also called

- “Usage-Based”
- “Distance-Based”
- “Per-Mile”
- “Mileage-Based”
- “Cent-Per-Mile”



PAYD Premiums

Changes the unit of exposure from the vehicle-year to the vehicle-mile.

All existing rating factors are included so for a rate class that averages 20,000 annual vehicle-kilometers, motorists who currently pay $400 annual premiums would pay 2¢ per kilometer, and those who pay $1,600 annual premium would pay 8¢ per kilometer.

How it works

- Odometer readings are recorded by the insurance broker or digital photo.
- Motorist prepays for expected mileage. At the end of the term, pays balance or receives rebate.
- Insurance companies could charge a lower rate for pre-paid than for post-paid vehicle-miles.
- Minimum annual mileage purchase (e.g., 3,000 miles) guarantees recovery of basic costs.

Can be optional

Motorists could choose whether to pay premiums by the vehicle-year or by the vehicle-mile, just as consumers can choose telephone or Internet rate packages.

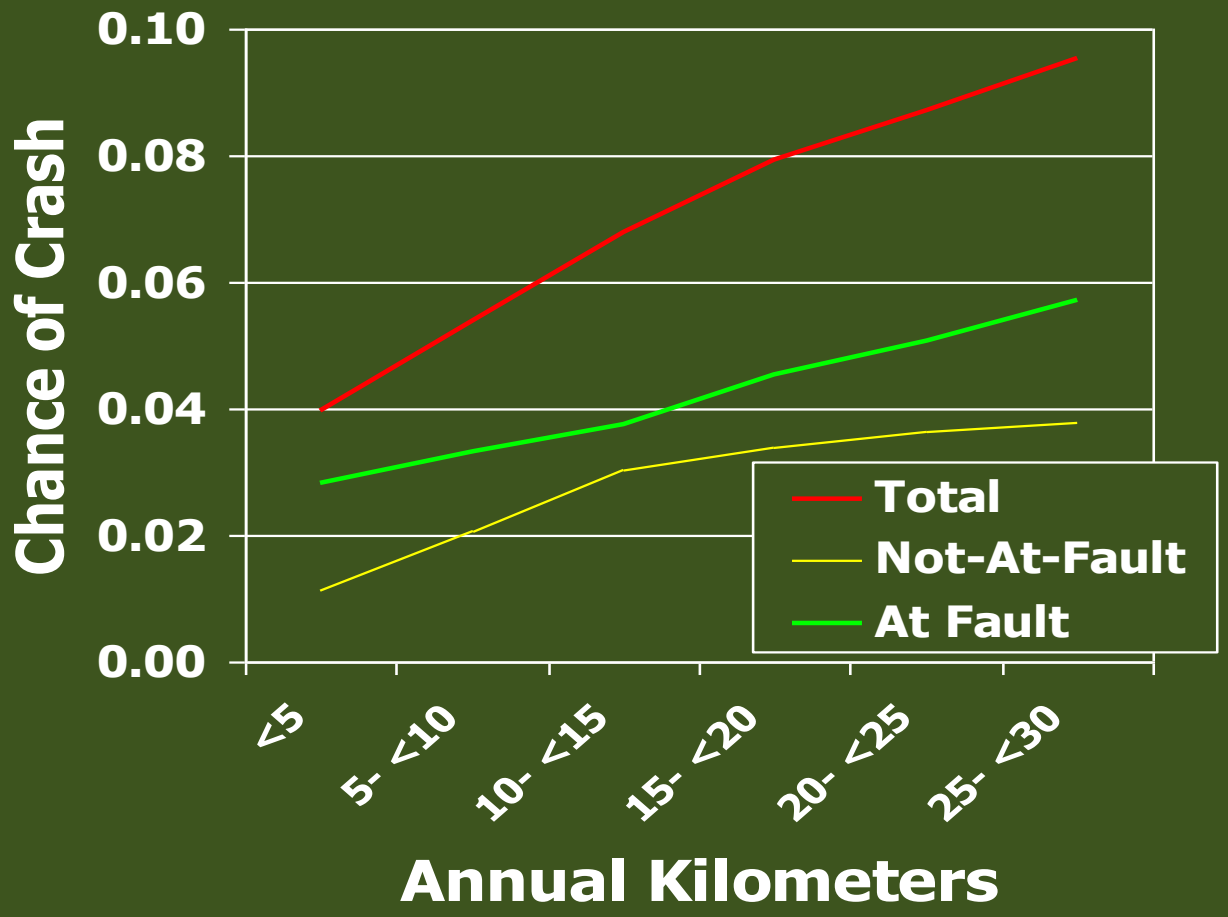
PAYD Reduces Risk

A vehicle has a small chance of being in a crash when driven

PAYD Reduces Risk

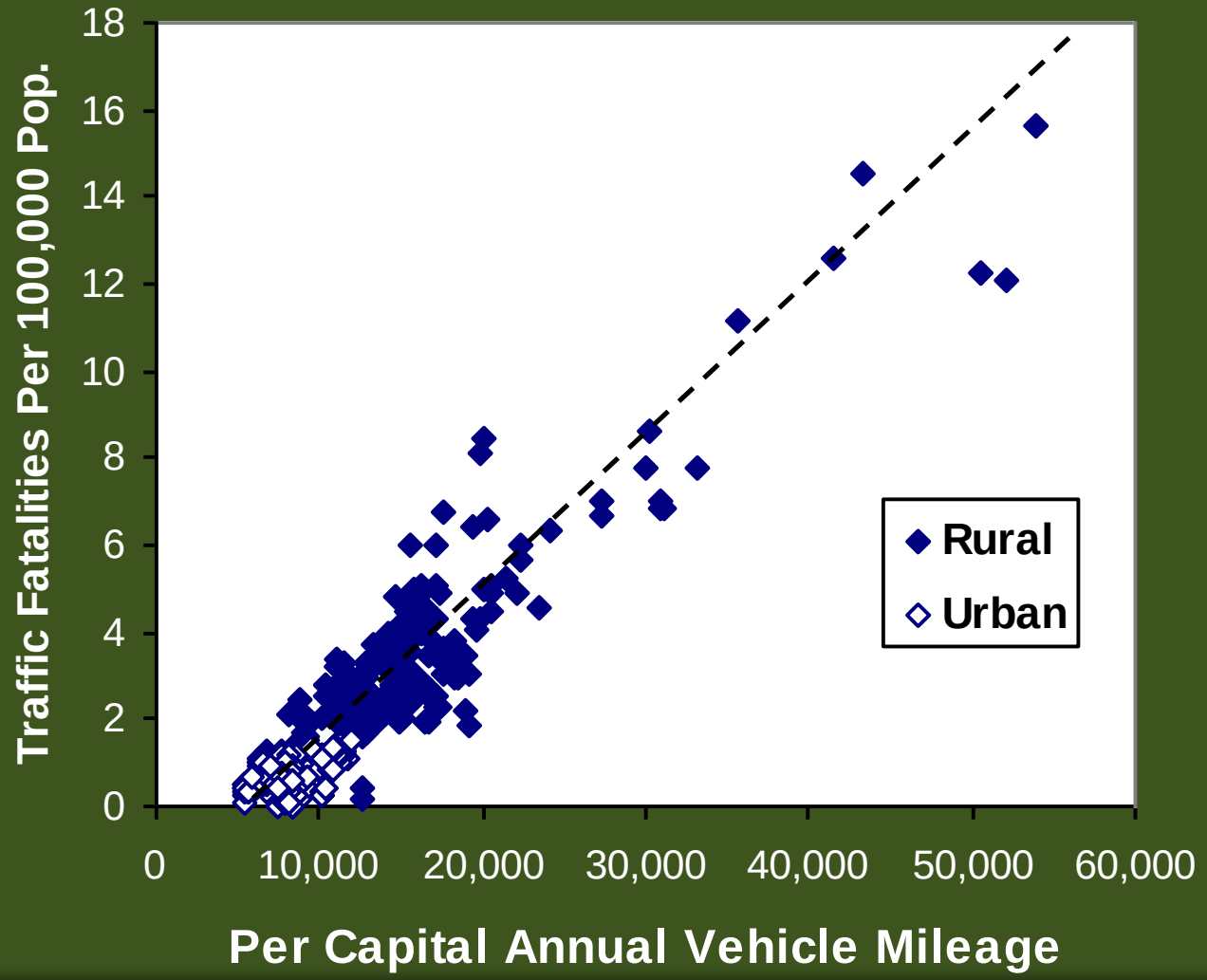
And virtually no chance of causing a crash when parked

Mileage and Crashes



Litman 1997

U.S. Crash Rates



FHWA
"Highway Statistics"
Various years

Mileage As A Rating Factor

Mileage cannot be used *instead* of other rating factors by charging all motorists the same per-mile fee, but accuracy improves significantly if annual mileage is incorporated *in addition* to existing factors. Any other price structure overcharges low-mileage motorists and undercharges high-mileage motorists.

PAYD Returns Savings To Motorists

PAYD reduces total crashes and claim costs. PAYD discounts pay for themselves: motorists who drive less save because of less exposure.

Motorist Reduces Mileage

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Reduced Crashes

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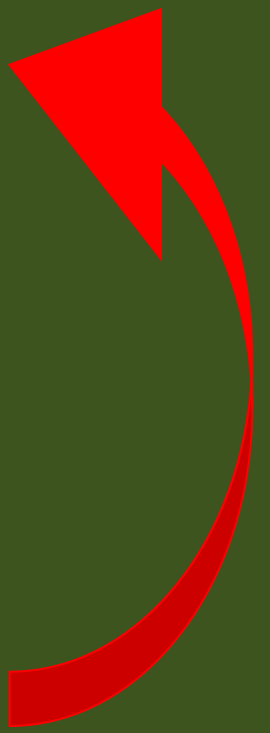
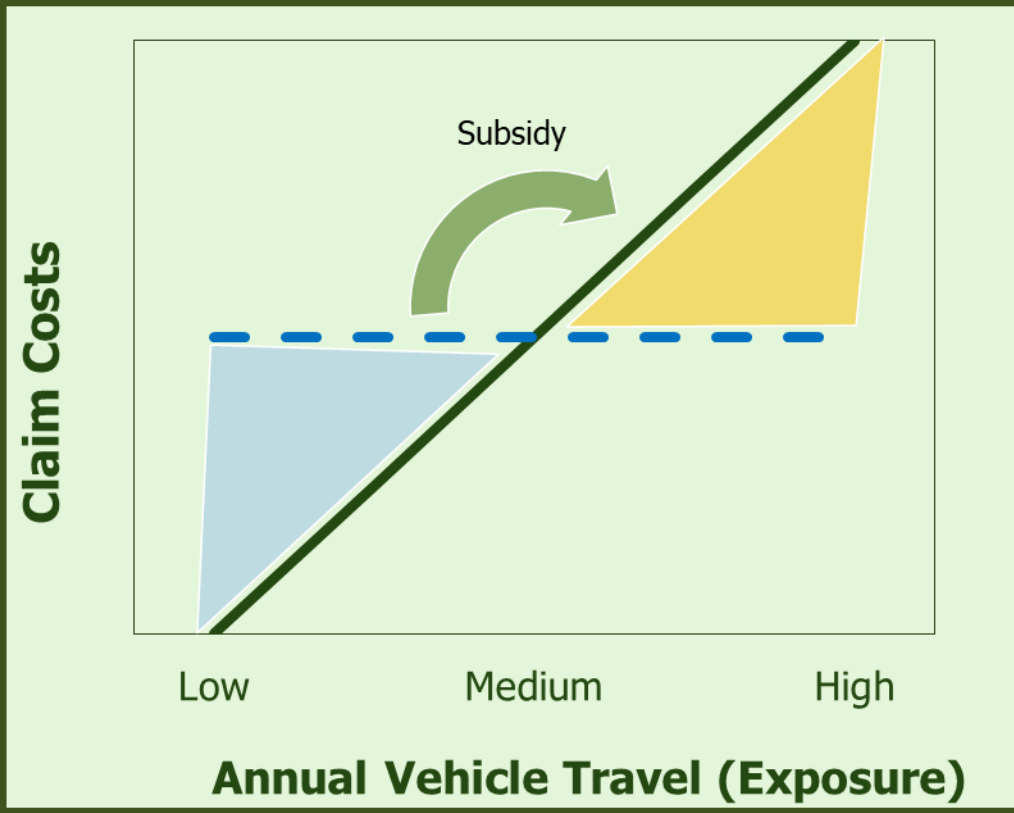
Insurance Cost Savings



Current Insurance Pricing is Unfair

Because, within a rate class (motorists with similar risk profiles), crash rates and claim costs tend to increase with annual vehicle-travel, motorists who drive less than average subsidize the claim costs of those who drive more than average, often by hundreds of dollars annually.

This is unfair, and because lower-income motorists tend to drive less than average, it is also regressive.



Price Impacts

PAYD is equivalent to a 40-80% fuel price increase, yet it is not a new fee at all, just a different way of paying an existing fee.

Travel Impacts

Standard measures of consumer responses to vehicle operating costs (elasticity of demand) indicates PAYD would reduce average annual mileage 10-15% per participating vehicle.

Bordoff 2008
Edlin 2003

Benefits

- **Consumer savings and affordability**. A typical motorist could save $100-150 annually, representing the claim cost savings from reduced exposure. It allows households to keep a seldom-used vehicle, such as an old truck for errands or recreation. Since lower-income motorists tend to drive their vehicles less than average, they tend to save most.

- **Increased fairness.** Current insurance pricing overcharges motorists who drive less than average and undercharge those who drive more than average.

- **Traffic safety**. Vehicle crashes should decline more than mileage (a 10% mileage reduction should reduce crashes 12-15%) because higher-risk motorists, who pay higher premiums, have the greatest incentive to reduce their driving.

- **Reduced Traffic congestion and roadway costs**. Even higher-annual-kilometer motorists can benefit from PAYD pricing that reduces vehicle travel by other road users.

- **Reduced pollution emissions**. The predicted 10-15% travel reduction should provide comparable reductions in energy consumption and pollution emissions.

- **Useful data collection.** Odometer audits provide important vehicle travel information.

Consumer Impacts

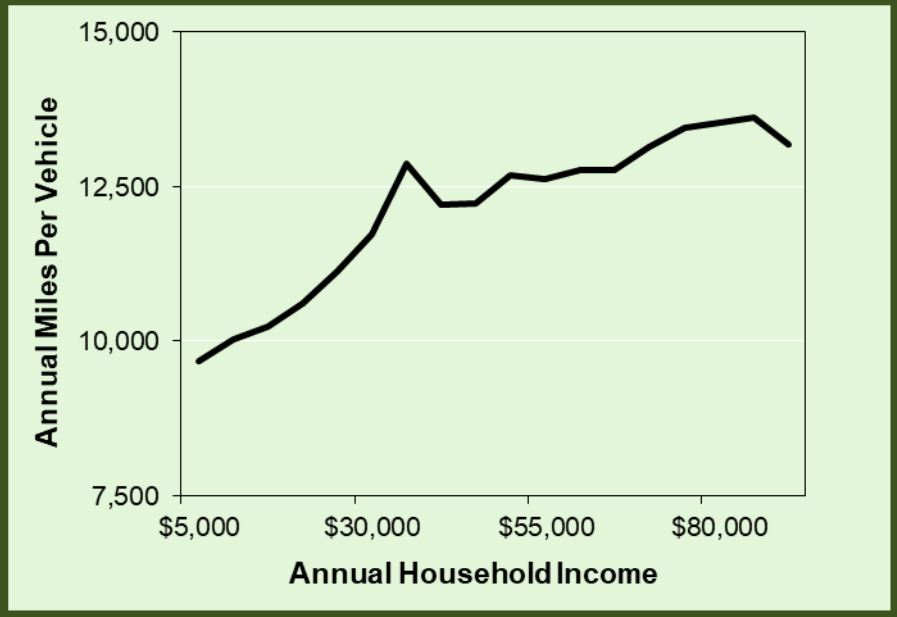
- Provides consumer savings.
- Increase affordability (savings to lower-income motorists).
- Helps households own an old truck or recreational vehicle for occasional use.
- Considerable consumer demand for mileage-based insurance.

Redefines Insurance Affordability

PAYD offers consumers a new opportunity to save money when they reduce their annual mileage.

It redefines "insurance affordability" to mean that motorists choose the risk exposure they can afford.

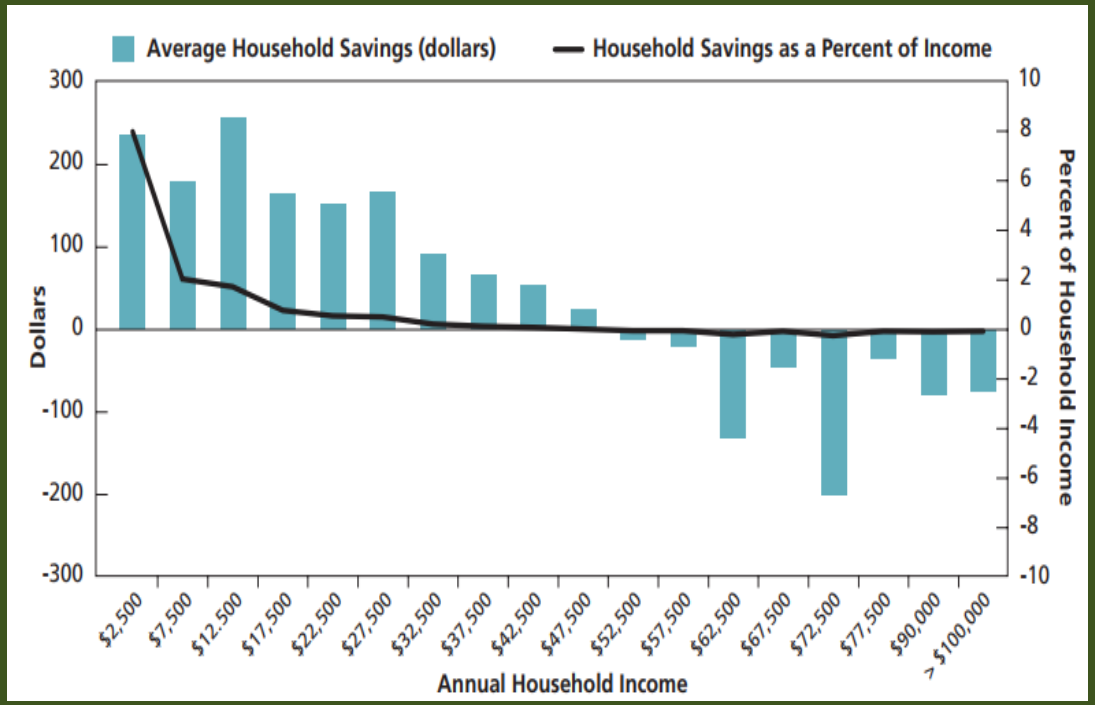
Since lower income households tend to drive less than average and value opportunities to save money, it tends to be progressive.



Redefines Insurance Affordability

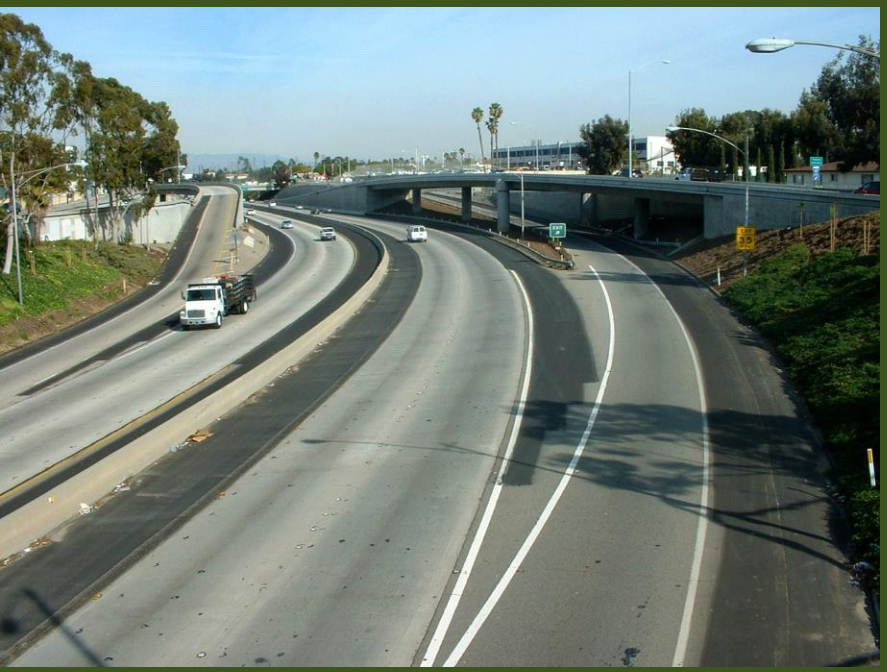
According to a major Brookings Institution study, 63.5% of all households, and almost 80% of low-income households, would save money with PAYD insurance, averaging $496 annually per household that saves.

Estimated PAYD Savings by Household Income



Bordoff and Noel 2008

Positive Safety Impacts



Bordoff 2008
Edlin 2003

Can provide significant safety benefits by giving motorists an incentive to reduce their vehicle mileage, reducing total traffic volumes.

Higher-risk-per-mile motorists have a greater incentive to reduce their mileage, which should lead to an extra increase in road safety.

Consumer Demand

- Motorists who drive a vehicle less than about 18,000 annual kilometers can expect significant savings and so should choose PAYD. This represents nearly half of all vehicles.
- Market for instrumented pricing is smaller than the market for odometer-based pricing due to lower cost and privacy concerns.

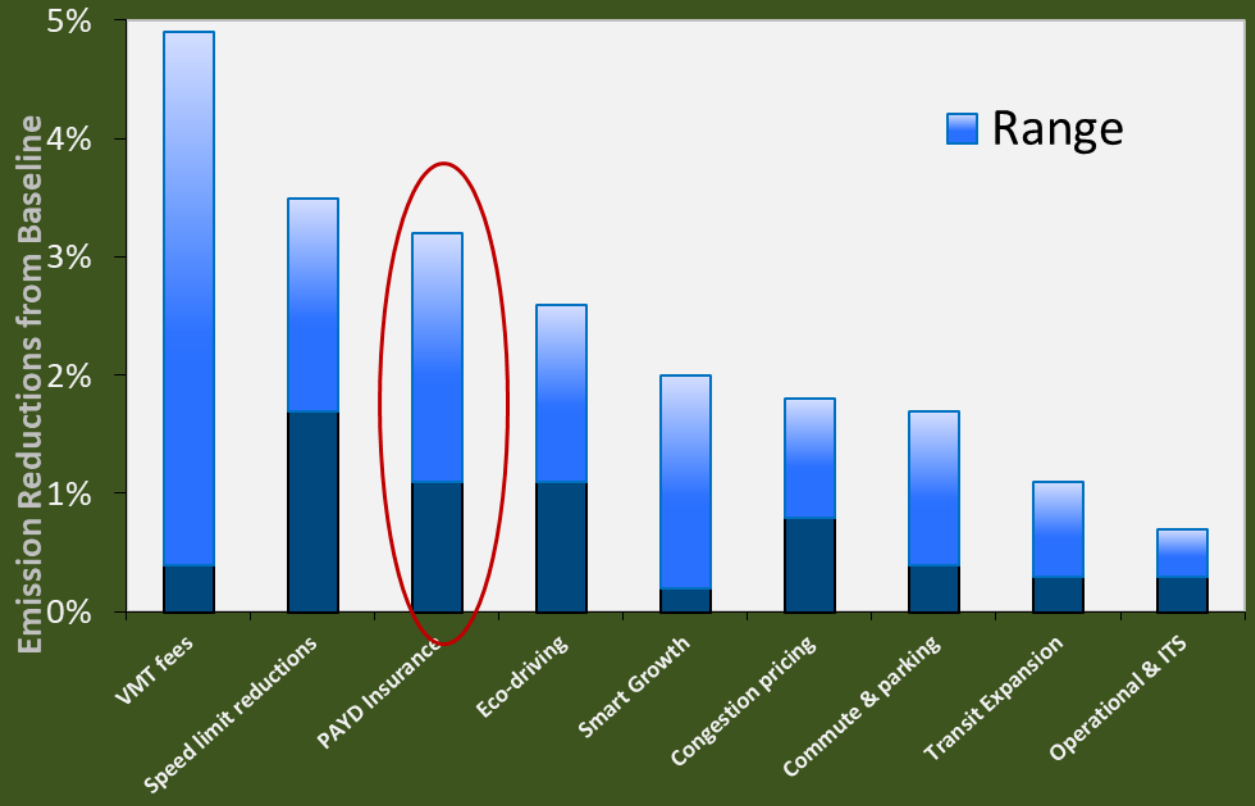
Insurance Regulatory Objectives

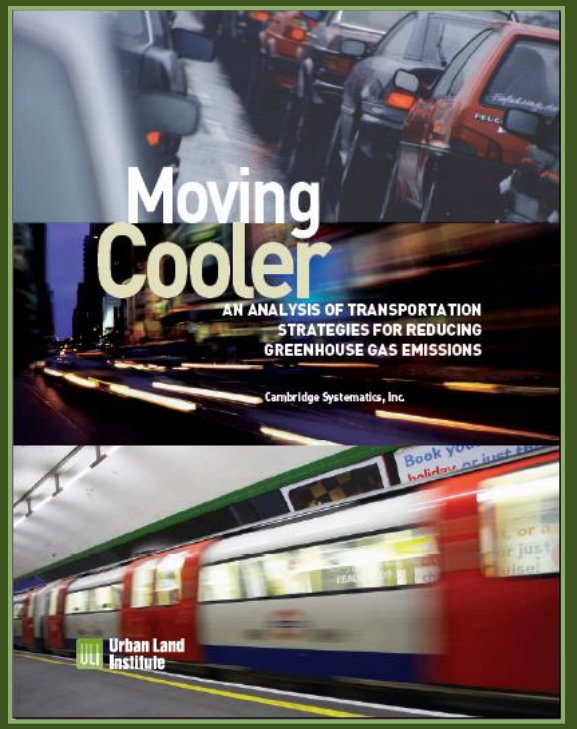
- Increases actuarial accuracy and fairness
- Increases insurance affordability
- Increases road safety
- Consumer savings and options

Litman 2005

Moving Cooler (2009)

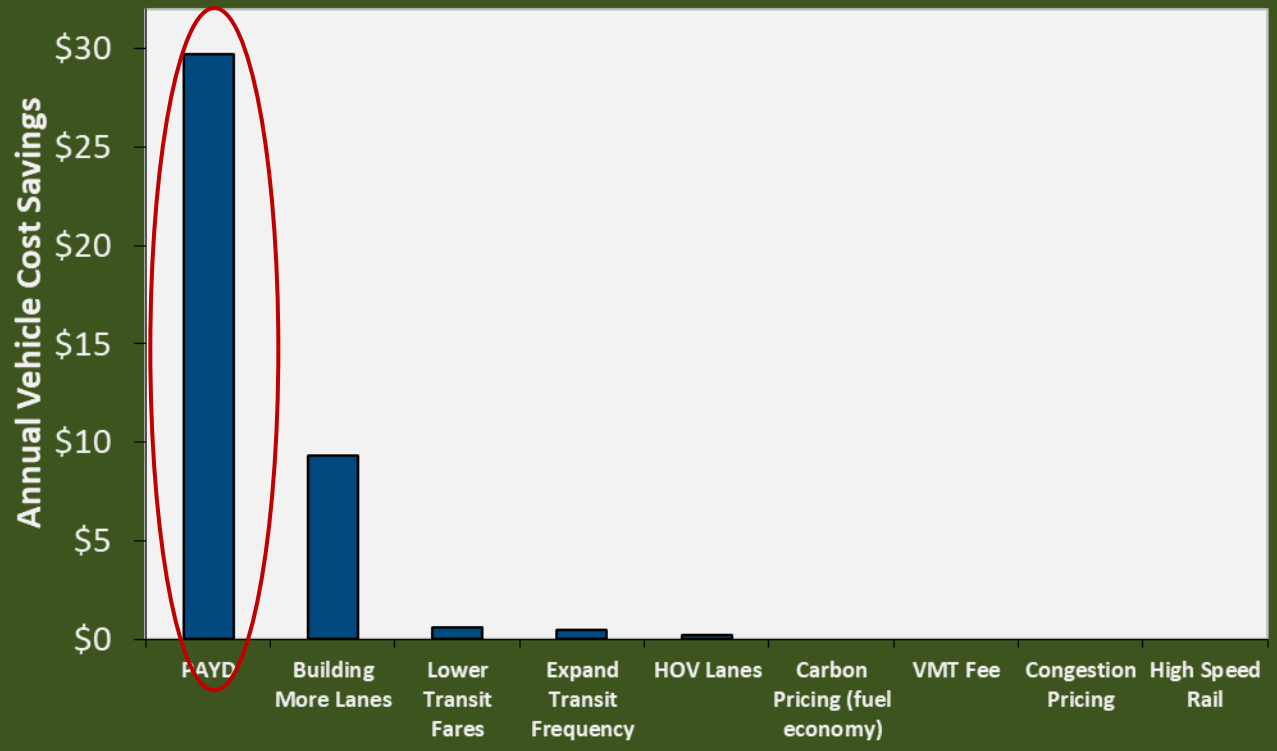
Of **nearly 50** transportation strategies analyzed, PAYD ranked 3rd most effective in reducing transportation GHG emissions, and…

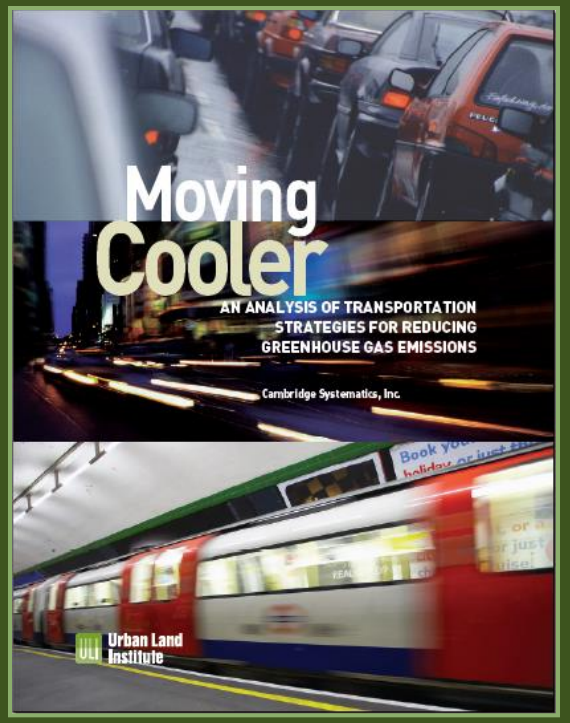




Moving Cooler Benefits

provides by far the greatest vehicle cost savings of all strategies: **nearly $30 billion annually***





* **Only** fuel and operating savings. Does *not* include collision cost savings.

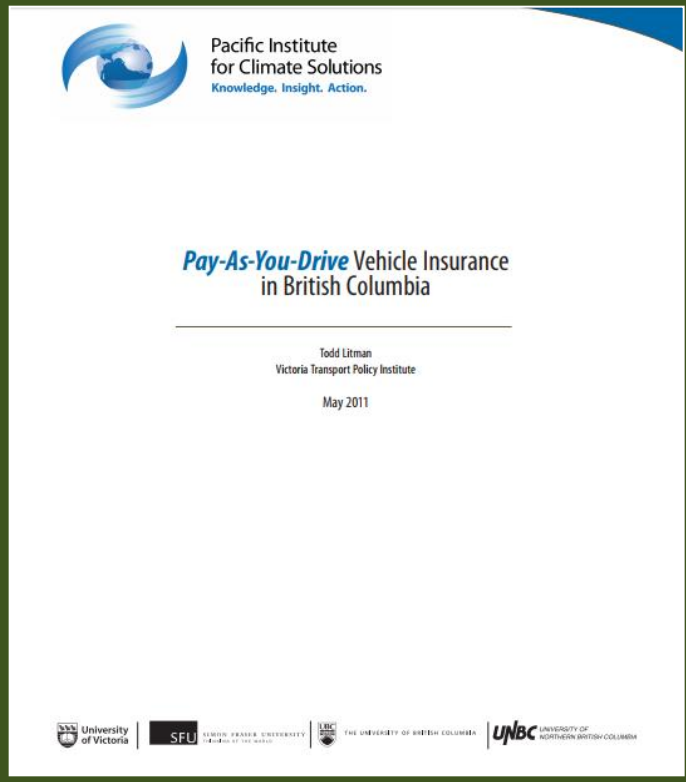
Endorsements

Cambridge Systematics (2009), *Moving Cooler: Transportation Strategies to Reduce Greenhouse Gas Emissions*, US FHWA and other organizations.

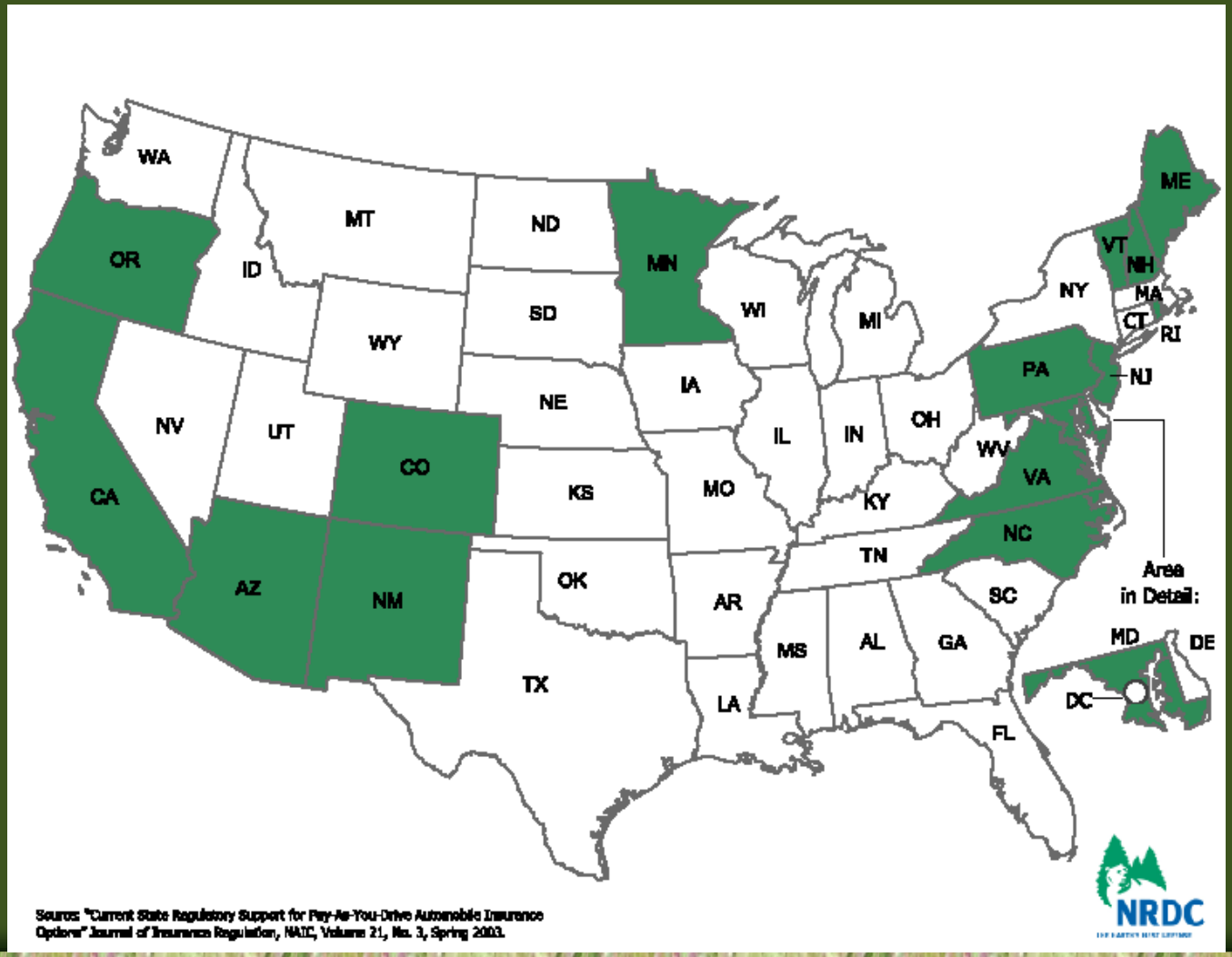
Ernst & Young (2017), *ICBC Affordable and Effective Auto Insurance – A New Road Forward for British Columbia*, Insurance Corporation of British Columbia.

Perry Kendall (2016), *Where the Rubber Meets the Road: Reducing the Impact of Motor Vehicle Crashes on Health and Well-being in BC*, Provincial Health Officer's Annual Report, BC Ministry of Health.

Todd Litman (2011), *Pay-As-You-Drive Vehicle Insurance in British Columbia*, Pacific Institute for Climate Solutions.



PAYD in State Climate Action Plans



Source: "Current State Regulatory Support for Pay-As-You-Drive Automobile Insurance Options" Journal of Insurance Regulation, NAIC, Volume 21, No. 3, Spring 2003.

Correct Common Misconceptions

- No, it does not harm rural motorists (only those who drive more than average for rural motorists would pay more; most would save money).
- No, it is not regressive (annual kilometers per vehicle tend to increase with income, so it is progressive).
- No, it is not costly to implement (Basic PAYD only requires one annual odometer audit; all other insurance transactions stay as they are now).
- No, it does not compromise privacy (it only requires one annual odometer reading, information that is already collected during other vehicle transactions).

For More Information

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- Todd Litman (2011), *Pay-As-You-Drive Vehicle Insurance in British Columbia*, Pacific Institute for Climate Solutions (www.vtpi.org/paydbc.pdf).