Pay-As-You-Drive Insurance Product Rating System

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Pay-As-You-Drive (PAYD) vehicle insurance bases premiums directly on the amount a vehicle is driven during the policy term, so motorists save money when they drive less.[1] Other rating factors such as driving record and vehicle type are incorporated in addition to mileage. Research shows that this price structure causes motorists to reduce their annual mileage. As a result:

- Consumers save money. A typical motorist saves about $100 annually.
- Roads are safer due to reduced traffic. Higher-risk motorists have the greatest incentive to reduce mileage.
- Roads are less congested and cost less to maintain.
- Energy is saved and pollution emissions reduced.

Several insurance companies now offer PAYD products,[2] but some of these policies offer relatively small savings (often less than 1¢ per reduced mile) which provides minimal benefits. To encourage more effective and beneficial PAYD products a coalition is developing a PAYD rating system similar to the *LEED Green Building Rating System*™ and *ENERGY STAR*® appliance standards. Four factors are included in these ratings:

1. Mileage band size (number of vehicle-miles that must be reduced to achieve savings). Smaller is better.[3]
2. Minimum number of miles motorists must purchase.[4] Smaller is better.
3. Percentage reduction in total premiums provided by a 50% reduction in annual mileage. Larger is better.[5]
4. If unit prices vary between mileage bands, maximum percentage difference between the most expensive mileage band and least expensive mileage band.[6]

The ratings are:

Gold

Premiums are priced by the vehicle-mile, incorporating all existing rating factors. A 50% mileage reduction provides at least a 50% premium reduction. Insurers may require the purchase of up to 2,000 annual miles. Unit prices may not vary by more than a factor of 2.

Silver

Maximum bands of 250 miles of driving. A 50% mileage reduction provides at least a 40% premium reduction. Insurers may require the purchase of up to 3,000 annual miles. Unit prices may not vary by more than 2.5.

Bronze

Maximum bands of 500 miles of driving. A 50% mileage reduction provides a 25% premium reduction. Insurers may require the purchase of up to 4,000 annual miles. Unit prices may not vary by more than 3.

Rating Summary

Rating Factors	Gold	Silver	Bronze
Maximum mileage bands used for pricing	1	250	500
Maximum annual miles that must be purchased	2,000	3,000	4,000
Percentage premium reduction from a 50% mileage reduction	50%	40%	25%
Maximum difference between lowest to highest price unit	2	2.5	3

This table summarizes minimal performance requirements for PAYD ratings.

Pay-As-You-Drive Insurance Product Ratings

This proposed rating system is currently under review and development. We welcome feedback. For questions and comments contact:

Todd Litman
Executive Director
Victoria Transport Policy Institute
litman@vtpi.org
250-350-1560

Sharlene Leurig
Senior Manager
Insurance Program, Ceres
leurig@ceres.org
617-247-0700 x127

Justin Horner
Transportation Policy Analyst
Natural Resources Defense Council
jhorner@nrdc.org
415-875-6166

Endnotes

[1] Todd Litman (2009), *Pay-As-You-Drive Insurance Product Rating System Technical Report*, Ceres (www.ceres.org).

Jason E. Bordoff and Pascal J. Noel (2008), *Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity*, The Brookings Institution (www.brookings.edu); at www.brookings.edu/papers/2008/07_payd_bordoffnoel.aspx.

Todd Litman (1997), "Distance-Based Vehicle Insurance as a TDM Strategy," *Transportation Quarterly*, Vol. 51, No. 3, Summer, pp. 119-138; newer version at www.vtpi.org/dbvi.pdf.

[2] Exigen (2008), *Pay-Only-As-You-Drive Survey*, Exigen Insurance Solutions; at www.exigeninsurance.com/fsp/enews/Exigen_PAYD_Survey_Report.pdf.

Evan Mills (2009), *From Risk to Opportunity: Insurer Responses to Climate Change*, Ceres, Investors and Environmentalists for Sustainable Prosperity (www.ceres.org); at www.ceres.org/Document.Doc?id=417. Also see, *Insurance in a Climate of Change – Resources \ Publications* (http://insurance.lbl.gov/bibliography.html).

[3] The smallest mileage band is a single vehicle-mile, in which case existing premiums are divided by average annual mileage for that rate class. For example, for vehicles in a rate class that averages 12,000 annual miles, a $600 annual premium becomes approximately 5¢ per mile and a $1,200 annual premium becomes approximately 10¢ per mile. Many policies use larger mileage bands, such as each additional 100 miles, 500 miles, or 1,000 miles traveled during the policy term.

[4] Minimal annual purchases insure that policy transaction costs are repaid even for vehicles driven very low annual miles. For example, at 10¢ per mile, the premium for a vehicle driven 400 annual miles is just $40, which may be insufficient to cover the cost to brokers and insurance companies for administrating the policy. A 1,000 mile minimum insures that the minimum premium is at least $100.

[5] This is based on the percentage reduction in total annual premiums (including optional "comprehensive" coverages such as fire and theft) provided by a reduction from 12,000 to 6,000 annual miles (from 6,000 to 3,000 annual miles for a six-month policy).

[6] For example, for a particular policy the first 5,000 annual miles could be priced at 10¢ per vehicle-mile, the second 5,000 at 8¢ per vehicle-mile, the third 5,000 miles at 6¢ per vehicle miles, and miles over 15,000 annual miles at 5¢ per vehicle-mile. For gold rating the lowest rate per vehicle-mile must be at least half the highest rate. For silver the lowest rate must be at least a third of the highest rate. For bronze the lowest rate must be at least a quarter of the highest rate.