

October 2, 2024

## Michigan Could Increase Road Funding with a Truck Weight-Distance Fee

### In a Nutshell

- A truck weight-distance fee is used in several states as a source of road funding. These fees help ensure that heavy trucks more fully pay for the damage they impose on pavements and typically provide three to six percent of transportation fund revenue in the states that have adopted them.
- A modest weight distance fee in Michigan could generate over \$100 million annually. This revenue could then be rationally distributed to routes subject to the most damage from heavy trucks.
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Michigan has long struggled to adequately fund the repair and maintenance of roads and bridges. Michigan ranks 30th nationally in road funding, below the median state. Meanwhile, road revenue from fuel taxes is expected to decrease in coming years as drivers of electric vehicles, hybrids, and increasingly fuel-efficient vehicles purchase less fuel, decreasing the revenue available from fuel taxes. Complicating the issue, unprecedented construction cost inflation has reduced the expected purchasing power of Michigan’s road funding budget by over \$700 million each year.

In anticipation of ongoing and future revenue shortfalls, Michigan has been exploring ways to maintain or increase road funding without raising fuel taxes. The legislature has directed studies exploring instituting a highway tolling program and adopting a Road Usage Charge (RUC) on light vehicles.

An additional option that Michigan should consider is a road use fee on heavy trucks. A few states have imposed such a fee for several decades under various names. For our purposes, we will refer to them collectively as weight-distance fees.

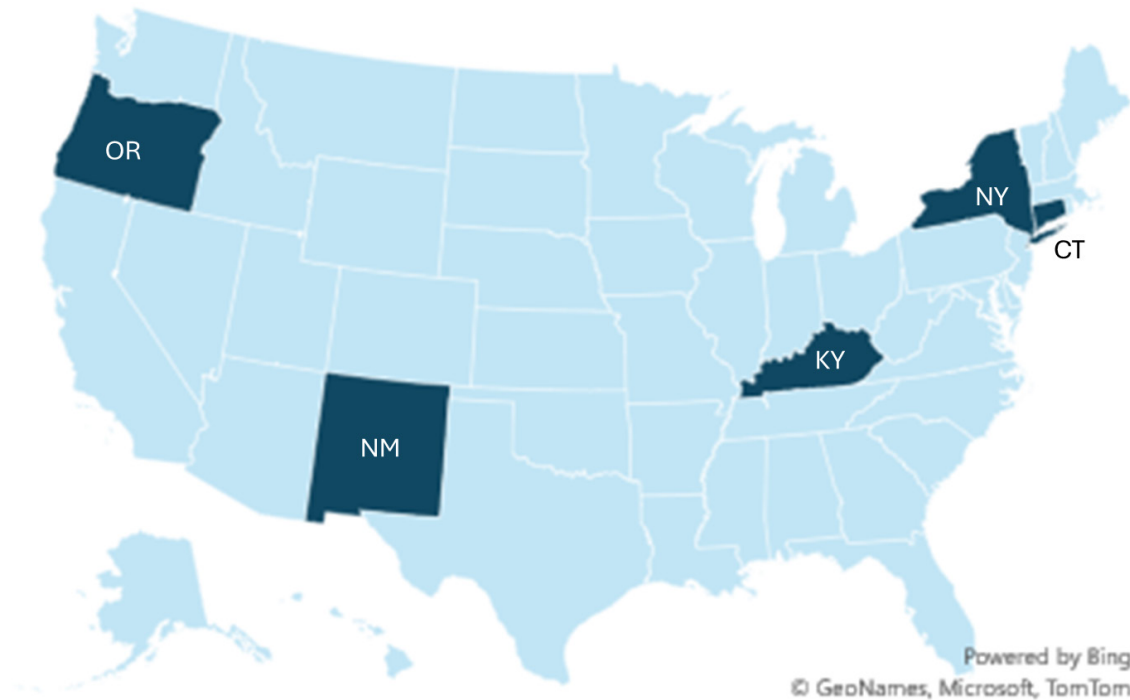
Implementation of a modest weight-distance fee in Michigan could generate over \$100 million in new revenue each year. Such fees promote the principle of road users paying their ‘fair share’ into the system; heavy trucks typically do not generate enough revenue to fund the damage done to pavements. Michigan could improve its road funding situation and pavement conditions by adopting a truck weight-distance fee that derives and distributes revenue in proportion to the damage imposed by trucks on the public road network.

## Existing Weight-Distance Fees

States with an active weight-distance fee include Connecticut, Kentucky, Oregon, New Mexico, and New York. Some details of each program are provided below.

## Map 1

### States with Existing Weight-Distance Fee (2024)



### Connecticut Highway Use Fee

Connecticut adopted a weight-distance fee in 2023. Described in statute as a highway use fee, Connecticut requires trucking companies that operate heavy tractor-trailer combinations (vehicle class 8 and greater) within the state to register with the state Department of Revenue Services and pay the fee on a quarterly basis.

The fee is determined by the loaded weight and mileage that each truck travels within the state. The per-mile rate ranges from 2.5 cents per mile to 17.5 cents per mile, depending on the loaded weight during each trip.

Connecticut's Highway Use Fee is projected to provide \$65 million in 2024, increasing the state transportation fund by about three percent.

### Kentucky Weight Distance Tax

Kentucky has had a weight-distance fee since 1996. Kentucky's fee schedule is relatively simple; any truck with a "combined licensed weight" of greater than 60,000 pounds must pay 2.85 cents per mile, regardless of the loaded weight of those miles.

Trucking companies that operate trucks licensed to carry more than 60,000 pounds must register with the state and submit the per-mile fee quarterly to the state Department of Revenue. Kentucky's truck weight-mileage fee provided about \$90 million in revenue in 2023, about five percent of the state road fund.

### Oregon Weight-Mile Tax

Oregon has had some form of truck weight-distance fee since 1933. Currently, all trucks with a maximum operating weight of over 26,000 pounds must submit fees based on the potential maximum operating weight of the truck and miles traveled in the state. For trucks with a maximum operating weight of greater than 80,000 pounds the per-mile fee is based on both the maximum operating weight and the number of axles.

Oregon's weight-distance fee ranges from 7.64 cents per mile to 24.11 cents per mile. While this is much higher than the per-mile rate in other states, trucks that are subject to Oregon's weight-mile tax are exempt from state fuel taxes. Oregon adopted this approach both to derive revenue relative to the road damage that trucks impose, and to incentivize trucking companies to adopt weight-axle combinations that impose less pavement damage.

The weight-mile tax contributed about \$470 million in revenue in 2023, about 18 percent of the state transportation fund.

In addition to the weight-distance fee paid to the state, trucking companies that operate within the city of Portland must pay a "heavy vehicle use tax" annually to the city equal to at least \$100 or 1.3 percent of the state weight-mile tax (whichever is greater), regardless of miles traveled within the city limits. Carriers whose mileage traveled within Portland is greater than one percent of the total mileage traveled within the state must pay a use tax to the city which is 2.6 percent of the state weight-mile tax. This tax provides about \$2.6 million per year in road funding to Portland.

### **New Mexico Weight Distance Tax**

New Mexico adopted a weight-distance fee in 1988 and last updated the fee schedule in 2004. Trucks with a gross vehicle weight greater than 26,000 pounds pay a per-mile fee ranging from 1.101 cents to 2.919 cents. Trucks that operate without a load for at least 45 percent of miles traveled within the state are eligible for a 33 percent rate reduction. Trucks that operate exclusively within 10 miles of the border with Mexico are exempt.

New Mexico's weight-distance fee provided about \$110 million in revenue in 2023, about five percent of the state road fund.

### **New York Highway Use Tax**

New York State adopted a truck weight-distance fee in 1951. The current incarnation of New York's Highway Use tax is relatively complicated. Payment of the fee is generally required for all trucks with a gross vehicle weight of 18,000 pounds or more. Truckers have multiple options for how to calculate and submit their fees, which range from 0.56 cents per mile for an unloaded tractor to 5.74 cents per mile for an 80,000-pound combination truck (with additional fees for trucks weighing more than 80,000 pounds). Miles traveled on New York's tolled highways are exempt from the fee.

New York's weight-distance fee provided about \$144 million in 2023. This is about six percent of the state's road funding revenue.

## **Potential for a Truck Weight-Distance Fee in Michigan**

A review of existing state weight-distance fees shows many differences between approaches. While state weight-distance fees remain relatively rare, a few states have successfully used them to derive road revenue for decades. Oregon, for example, has had some form of weight-distance fee since 1933 and currently derives about 18 percent of its state road revenue from the fee. Oregon is unique because trucks that pay the weight-distance fee are exempt from fuel taxes. States that impose the fee, in addition to fuel taxes, derive about three to six percent of state road funding from the fee.

In 2022, trucks drove about 6.45 billion miles in Michigan. Not all of these miles would necessarily be driven by vehicles subject to a weight-distance fee. For example, most states exempt certain vehicles, such as lighter trucks, recreational vehicles, buses, etc. Assuming that 80 percent of truck mileage would be subject to a fee (5.16 billion miles), a one-cent fee applied to each mile would derive over \$50 million each year in revenue. An average fee of three cents per mile (similar to Kentucky's flat rate) would raise about \$160 million annually, nearly a four percent increase in state-restricted road funding revenue.

Further, a truck weight-distance fee can improve the extent to which road users pay their 'fair share' of road funding. Trucks are responsible for the majority of pavement damage. It has long been established that revenue derived from heavy trucks typically is not sufficient to cover the costs imposed on the road system.

A weight-distance fee can also be used to understand better the costs that truck traffic imposes to roads on a segment-by-segment basis. Connecticut, for example, requires trucking companies to report loaded weights and routes taken for every trip covered by the weight-distance fee. As previously written, state revenue sharing for road funding could be made more effective by considering factors such as truck traffic. The data collected through a weight-distance fee could be used to rationalize Michigan's road funding distribution formula. Additionally, road agencies, from MDOT to local municipalities, could use this data to design and maintain road segments subject to heavy truck traffic more effectively.

As shown in Map 2, Michigan's truck traffic is not evenly distributed. Map 2 shows commercial average annual daily traffic (CAADT) – the estimated mean daily traffic volume of trucks (vehicle classes 4 through 13) that used a road in 2023.

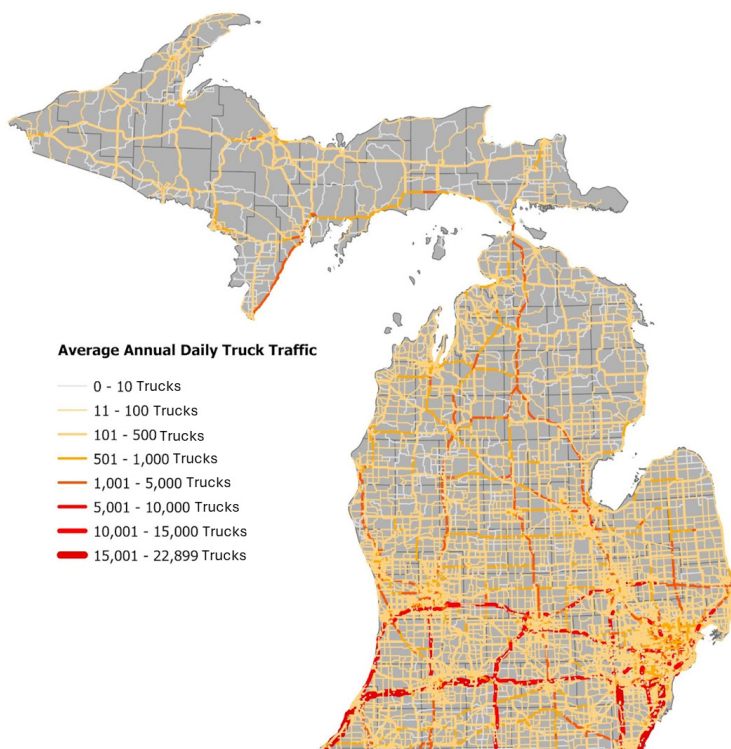
MDOT and other road agencies use data such as average annual daily truck traffic to inform design and investment decisions. However, this data does not include the loaded weights of trucks. Some roads and streets on specific freight routes may be subject to additional costs not captured by any existing data. Adopting a truck weight-distance program that includes reporting such data would allow Michigan not only to increase revenue but also enable the distribution of that revenue equitably based on the costs imposed.

## Map 2

### Commercial Average Annual Daily Traffic (CAADT), 2023

#### (Trucks Class 4 and Higher)

Source: Michigan GIS Open Data Portal, 2023 Traffic Volumes



## Next Step: A State-led Study

Similar to how it has approached studying highway tolling and road usage charges (RUC), the Michigan Legislature should fund a study on the potential of adopting a truck weight-distance fee in Michigan. This revenue option should be considered carefully with sufficient information. A state-funded study should include the following elements:

### Road User Cost Allocation Study

The USDOT and some states (e.g., Indiana, North Carolina, Texas, and Oregon) have assessed the costs imposed on roads and bridges by various vehicle classes. Despite decades-long concerns over the impact of Michigan's unique truck weight laws, the state has never conducted such a study. Any exploration of truck weight-distance fees in Michigan should include such a study as to inform appropriate and equitable setting of fees. Even if the legislature chooses not to pursue weight-distance fees as a revenue option, a road user cost

allocation study would provide valuable data on the statewide public road network that would be valuable for planning, programming, and operation of the transportation system.

## Evaluation of Multiple Fee Structures

A weight-mileage fee may be as simple as a flat per-mile fee, as is the case in Kentucky. However, it is more typical to adopt a graduated fee schedule based on truck weight. The fee schedule may be rather complex – incorporating factors like vehicle class and number of axles. Further, most states have adopted special rates or exemptions for certain vehicles, such as buses, government-owned trucks, alternative-fuel trucks, and trucks used for agriculture. A study on the adoption of a truck weight-distance fee should assess the revenue generating potential and equity of multiple fee structures.

## Economic Impact Assessment

Exploration of a truck weight-distance fee should consider the impacts on the trucking industry and the economic activities that the industry supports. A weight-distance fee would increase the cost of operating many trucks in Michigan. These costs would likely be passed on to the customers of truck operators and, ultimately, Michigan consumers. An economic impact assessment of multiple fee schedules would help ensure that the benefits of the revenue derived from the program justify any costs imposed on industry and consumers.

## Potential Unintended Consequences

A weight-distance fee study should include thoughtful policy analysis to identify potential unintended consequences of a new fee. Certain fee schedules could unfairly impose costs on certain carriers. For example, Connecticut's Highway Use Fee has been applied only to trucks classified as Class 8 or higher; this had the consequence of benefitting companies that use Class 7 vehicles that are of similar weights and used for similar purposes. Michigan must also take care to adopt a fee that is applied fairly as not to violate the dormant commerce clause. Idaho imposed a weight distance fee that was struck down in court, as it was found to unfairly disadvantage interstate carriers. Other concerns include fee evasion; complicated administrative requirements or weak enforcement mechanisms could promote non-payment by some carriers.

## Conclusion

Michigan is continually seeking new revenue to 'fix the damn roads.' A truck weight-distance fee is a proven tool to increase road funding and to do so equitably, as it would promote heavy trucks paying their 'fair share' of costs proportional to the damage done to roadway pavements. The revenue from a truck-weight fee could further be directed to the roads that carry the most loaded truck weight, improving maintenance and asset management of the transportation system.

Michigan's legislature should direct and fund a study to evaluate the potential of a truck weight-distance fee. The study should evaluate multiple fee schedules with subsequent revenue-generating potential, as well as costs and benefits to Michigan's economy and residents. Even if the legislature chooses not to pursue such an option, a road user cost allocation assessment could benefit the legislature and road agencies through better understanding of the costs imposed on the system by heavy trucks.

The successful adoption of a truck weight-distance fee would provide a reliable and equitable source of road funding.

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### ABOUT THE AUTHOR

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Eric joined the Citizens Research Council in 2022 as an expert in civil infrastructure policy. Previous to his position with the Research Council, Eric spent nearly ten years as a transportation systems analyst, focusing on the policy implications of emerging technologies such as autonomous vehicles, connected vehicles, and intelligent transportation systems. Eric has been a Michigan-licensed professional engineer (PE) since 2012. As a practicing engineer, Eric has design and project experience across multiple domains, including highways, airfields, telecommunications, and watershed management. Eric received his Bachelor's degree in civil engineering from Michigan State University in 2006. Eric also holds Masters degrees in environmental engineering and urban/regional planning, both from the University of Michigan.

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