

Turning Oregon’s Bicycle Infrastructure from Good to Great!

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INTRODUCTION

Oregon’s bicycle infrastructure policies are designed to increase bicycle ridership. The state has been a U.S. bicycle trendsetter in infrastructure, policy, laws, and tax funding since the early 1970s. As a result of these policies, Oregon boasts of a robust bicycle infrastructure, one of the highest rates of ridership in the nation,¹ a bike-friendly government, and tax funding dedicated to bicycle

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¹ ALLIANCE FOR BIKING & WALKING, BICYCLING AND WALKING IN THE UNITED STATES 2014 BENCHMARKING REPORT 18 (2014), <https://www.aarp.org/content/dam/aarp/livable-communities/documents-2014/2014-Bike-Walk-Benchmarking-Report.pdf>.

infrastructure construction.² Yet numerous barriers prevent Oregon from creating a world-class infrastructure. Current bicycle infrastructure has gaps that prevent people from using bicycles effectively within the public transit system, and a funding level disproportionately low to the number of riders. Still, for all these drawbacks, Oregon roads are more bicycle-friendly than the national averages for dedicated funding,³ bicycle commuting,⁴ and per capita spending.⁵ To move to a world-class bicycle infrastructure, Oregon must adopt tax policies from other states and countries that would lead to increased ridership, rider safety and confidence, and higher funding. Oregon can continue to grow its bicycle infrastructure from one of the best in the nation to one of the best in the world using existing and modified tax policies.

This first section of this Article will discuss how early laws were drafted in response to historical bicycle interactions. The second section will explain the current policy and funding systems both in the federal system and those specific to the State of Oregon. Finally, the third section will cover tax policy alternatives to increase funding and options to grow the current system to a world-class bicycle infrastructure. Bicycles are a clean, green, economical form of transportation used successfully around the world. With a few changes, little can stand in the way of Oregon's bicycle renaissance.

I

BICYCLE HISTORY, THE LAW, AND POLICIES

A. Pre-automobile Bicycle History

Bicycles have a long history as a form of transportation dating back to the early nineteenth century, well before the invention of the automobile.⁶ One of the earliest bicycles was Baron Karl von Drais's de Sauerbrun's Laufmaschine.⁷ Later sold in Germany and France as the *draisienne* velocipede, it had no pedals or brakes, and the rider

² OR. DEPT. OF TRANSP., OREGON BICYCLE AND PEDESTRIAN PLAN 49 (2016) [hereinafter BICYCLE PLAN], <http://www.oregon.gov/ODOT/Planning/Documents/OBPP.pdf>.

³ *Id.* at 78.

⁴ See ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 43.

⁵ *Id.* at 18.

⁶ Bruce Epperson, *Failed Colossus: Strategic Error at the Pope Manufacturing Company, 1878-1900*, 41 TECH. & CULTURE 300, 301 (2000).

⁷ *Id.*

who walked the bicycle had to straddle it.⁸ Bicycle inventors tried various forms throughout the late nineteenth century until J.K. Starley invented the Rover safety bicycle in the United Kingdom.⁹ The safety bicycle was popular with riders because of improvements, such as pedals, gears, and brakes.¹⁰ In 1878, the United States started manufacturing bicycles similar to those sold in Europe.¹¹

The early years of bicycling in the United States catered to wealthy consumers with new bicycles costing upwards of \$100.¹² To put the price into perspective, the average monthly wage in New York City was \$30.¹³ Even with the steep price tag, people flocked to bicycles. In 1896, there were an estimated 150,000 recreational cyclists in New York City.¹⁴ Eventually, the cheaper utilitarian bicycle used by the working class replaced expensive recreation bicycles.¹⁵ As bicycles rose in popularity, so did legislation and court cases resolving conflicts with other road users, such as horses and pedestrians.¹⁶

B. Pre-automobile Law

Pre-automobile law is important because these laws determined that bicyclists were vehicles and thus had the same rights and duties as other road users.¹⁷ Prior to the invention of the bicycle, road users were limited to horses, carriages, and pedestrians. In some states, the legislature decided whether bicyclists were road users with the same

⁸ TONY HADLAND & HANS-ERHARD LESSING, *BICYCLE DESIGN: AN ILLUSTRATED HISTORY*, 12–16 (2014).

⁹ Coventry Museum, *Rover Safety Bicycle*, BBC, <http://www.bbc.co.uk/ahistoryoftheworld/objects/u76Sy05eSNi0zXeC5vDPmg> (last visited Nov. 19, 2016).

¹⁰ *Id.*

¹¹ Epperson, *supra* note 6, at 303.

¹² BOB MIONSKE, *BICYCLING & THE LAW: YOUR RIGHTS AS A CYCLIST 2* (2007).

¹³ *Id.*

¹⁴ *Id.* at 3.

¹⁵ DAVID V. HERLIHY, *BICYCLE: THE HISTORY* 309 (2004).

¹⁶ See W.W. Thornton, *Bicycle and Velocipede Law*, 33 *CENT. L.J.* 262, 263–65 (1891) (discussing numerous bicycle cases brought before the Bar in the United States and Great Britain).

¹⁷ *Id.* at 265 (explaining that a Rhode Island court held that a bicycle was a vehicle and thus a road user covered by statute to prevent collisions on highways, and in *Holland v. Barch*, 120 *Ind.* 46 (1889), an Indiana court held that bicycles have the same rights as other road users, which in this case, were horse drawn vehicles).

rights and duties to others;¹⁸ in other states, including Oregon, the courts decided whether bicycles were road users.¹⁹

The nineteenth century saw a rise in the number of laws concerning bicycles that paralleled the popular rise of bicycles. These laws were the result of a national campaign by bicyclists and bike manufacturers to gain legal status as road users.²⁰ This early legislation gave bicyclists the right to ride in the streets, but also required them to obey the same duties as other road users.²¹ These early laws helped bicycles become “vehicles” in the eyes of the law.²² This important distinction gave bicyclists certain legal protections and all road users clear rules in traffic interactions.²³ The states that did not pass legislation regarding bicycles left such decisions to the courts.

Early court cases dealt with bicyclists’ rights as road users, their duties, whether bicycles were vehicles,²⁴ rider negligence, and conflicts between bicyclists and other road users.²⁵ In the nineteenth and early twentieth centuries other road users viewed bicyclists as dangerous—a viewpoint not contrary to modern thought.²⁶ These early interactions led to bicyclists being labeled as “scorchers,” “scofflaws,” and “reckless.”²⁷ Bicyclists frequently lived up to their labels by crashing into pedestrians,²⁸ scaring horses,²⁹ and riding on

¹⁸ *Id.*

¹⁹ *Jackman v. Hamersley*, 240 P.2d 829, 832 (1952) (explaining that Illinois, Idaho, and Oregon did not classify bicycles as vehicles).

²⁰ Bob Mionske, *Road Rights—First, There was the Bicycle*, BICYCLE LAW (May 11, 2009), <http://www.bicyclelaw.com/road-rights-first-there-was-the-bicycle/>.

²¹ MIONSKE, *supra* note 12, at 7 (explaining that New York is credited with the first statute).

²² *Id.* at 9.

²³ Ken McLeod, *Bicycle Laws in the United States—Past, Present, and Future*, 42 FORDHAM URB. L.J. 869, 876 (2016).

²⁴ Thornton, *supra* note 16, at 263–65.

²⁵ See e.g., *Lacey v. Winn*, 3 Pa. D. 811, 811 (1894) (determining negligence and stating a bicycle is a vehicle with the same rights upon the highway as other vehicles); *Myers v. Hinds*, 68 N.W. 156, 156, 157 (Mich. 1896) (determining bicyclist negligence and stating a bicycle is a vehicle); *Thompson v. Dodge*, 60 N.W. 545, 546 (Minn. 1894) (stating that a bicycle is a vehicle).

²⁶ MIONSKE, *supra* note 12, at 6.

²⁷ *Id.*

²⁸ *Mercer v. Corbin*, 20 N.E. 132, 132 (Ind. 1889) (explaining that the defendant bicyclist struck a pedestrian on a sidewalk). See Ross D. Petty, *The Impact of the Sport of Bicycle Riding on Safety Law*, 35 AM. BUS. L.J. 185, 195 n.41 (1998) (citing *Mercer*, 20 N.W. at 134) (explaining that the court had ruled to allow bicycles on sidewalks, but subsequently two of the judges were struck by bicyclists and the court changed the judgment).

sidewalks.³⁰ Bicycle accidents could be serious, considering early bicycles weighed as much as forty to fifty pounds.³¹ By the twentieth century, the courts had clarified the rights and duties of bicyclists; however, a new vehicle, the automobile, would soon displace all other road users. Automobiles became road users adopting the same legal principles that bicyclists had used decades before.³²

C. Post-automobile Bicycle History

In 1908, the introduction of the first inexpensive, mass-produced automobile in the United States started the decline of the U.S. bicycle industry and the end of the bicycle as an adult means of transportation.³³ Though the first production automobile was German,³⁴ it was Henry Ford's \$400 Model T that turned the United States into a nation of automobiles.³⁵ The automobile led to a boom of automobile centric infrastructure, which was designed, until the 1970s, without regard for bicycles.

Though the rights and duties for bicyclists as road users were created before the invention of the automobile, the foundation of modern bicycle policies and laws is based upon the interaction between bicycles and automobiles.³⁶ In 1926, the United States drafted the Uniform Vehicle Code (UVC) to revise and update vehicle laws.³⁷ Initially, the first version of the UVC defined bicycles as vehicles;³⁸ however, the 1930 version dropped bicycles from the

²⁹ See e.g., *Holland v. Bartch*, 22 N.E. 83, 85–86 (Ind. 1889) (finding the defendant bicyclist was negligent for injuries suffered from scaring a horse); *State v. Yopp*, 2 S.E. 458, 459 (N.C. 1887) (stating that evidence submitted proved that a bicyclist scared numerous horses).

³⁰ *Commonwealth v. Forrest*, 32 A. 652, 654 (Pa. 1895) (fining the defendant bicyclist for riding on a sidewalk).

³¹ BRUCE D. EPPERSON, *PEDDLING BICYCLES TO AMERICA: THE RISE OF AN INDUSTRY* 85 (2010).

³² Mionske, *supra* note 20.

³³ HERLIHY, *supra* note 15, at 325–26.

³⁴ *Company History*, DAIMLER, <https://www.daimler.com/company/tradition/company-history/1885-1886.html> (last visited Oct. 23, 2017).

³⁵ HERLIHY, *supra* note 15, at 325.

³⁶ See MIONSKE, *supra* note 12, at 8–14 (covering the conflicts and legal resolutions between bicycles and other vehicles).

³⁷ Ryan Seher, *I Want to Ride My Bicycle: Why and How Cities Plan for Bicycle Infrastructure*, 59 BUFF. L. REV. 585, 605–06 (2011).

³⁸ McLeod, *supra* note 23, at 877.

UVC, and did not add them back in until 1975.³⁹ These new regulations were influential because they were largely adopted by all of the individual states.⁴⁰ It was during this period from 1920 to 1970 that the United States grew from an agrarian, rural society, to an industrial, urban one;⁴¹ however, this growing infrastructure largely excluded bicycles.⁴²

The advent of inexpensive automobiles led to the rise of automobile culture.⁴³ However, this was not true of all countries: in the 1930s, Europe had seven bicycles for each automobile, whereas the United States had seventeen automobiles for every bicycle.⁴⁴ For nearly seventy years, the federal government's framework for a modern automotive infrastructure developed without regard for bicycles.⁴⁵ This began to change in the 1970s, specifically when the 1973 oil embargo changed attitudes towards environmental and alternative forms of transportation, leading to a bicycle resurgence.⁴⁶

II

MODERN BICYCLE POLICIES AND INFRASTRUCTURE

A. Federal Policies, Infrastructure, and Funding

The 1970s bicycle boom led to current bicycle infrastructure funding.⁴⁷ Initially, states used a variety of funding sources to build bicycle infrastructure. One of the most popular sources of funding was the Land and Water Conservation Fund, which was used to link new bicycle infrastructure to that existing inside parks and conservation areas.⁴⁸ However, it was the creation of the Federal Aid Highway Act of 1973 that provided a consistent federal funding

³⁹ *Id.*

⁴⁰ Seher, *supra* note 37, at 605–06.

⁴¹ U.S. CENSUS BUREAU, MEASURING AMERICA: OUR CHANGING LANDSCAPE (Dec. 8, 2016), <https://www.census.gov/content/dam/Census/library/visualizations/2016/comm/acs-rural-urban.pdf>.

⁴² Seher, *supra* note 37, at 595.

⁴³ HERLIHY, *supra* note 15, at 325.

⁴⁴ *Id.* at 328.

⁴⁵ Seher, *supra* note 37, at 595.

⁴⁶ *Id.*; see also Bruce Epperson, *The Great Schism: Federal Bicycle Safety Regulation and the Unraveling of American Bicycle Planning*, 37 TRANSP. L.J. 73, 74 (2010).

⁴⁷ Seher, *supra* note 37, at 595.

⁴⁸ Epperson, *supra* note 46, at 81.

mechanism for states to build bicycle infrastructures using federal roadway funds.⁴⁹

Apart from these initial funding sources, it wasn't until 1991 when the Intermodal Surface Transportation Efficiency Act (ISTEA), the first major federal funding source since the 1970s, was signed into law.⁵⁰ The ISTEA requires each state receiving highway funds to (1) create a bicycle and pedestrian coordinator position who promotes non-motorized transport, including bicycle and pedestrian planning, into the state's long term transportation plans;⁵¹ and (2) develop a metropolitan planning organization (MPO).⁵² The Oregon bicycle and pedestrian coordinator ensures compliance across the state with the Bicycle Bill.⁵³ The coordinator is an advocate for bicycling and walking infrastructure within the government system, providing guidance and valuable advice to local and state government officials.⁵⁴

With these new developments, between 1990 and 2009, the funding for bicycle and pedestrian infrastructure increased from a mere \$6 million to nearly \$783 million, or from 0.5% to 2.1% of the available total federal transportation fund.⁵⁵ Further, the 2009 American Recovery and Reinvestment Act (ARRA) provided over \$400 million in one-time funding in fiscal year (FY) 2009 for bicycle and pedestrian projects.⁵⁶ Although federal transportation funding for the construction of bicycle and pedestrian infrastructure has slowly increased since the ISTEA was enacted, the amount of federal funding is still disproportionately low when one compares the number of total trips, using all forms of transportation, to the total trips taken

⁴⁹ *Id.*; Seher, *supra* note 37, at 595.

⁵⁰ Intermodal Surface Transportation Efficiency Act of 1991, Pub. L. No. 102-240, 105 Stat. 1914, § 1033fp (1991) (codified as amended at 23 U.S.C.A. § 217 (West 2017)).

⁵¹ 23 U.S.C.A. § 217(d) (2012).

⁵² *Id.* §§ 134, 135.

⁵³ BICYCLE PLAN, *supra* note 2, at F-2.

⁵⁴ Telephone Interview with Sheila Lyons, Or. Pedestrian and Bicycle Program Manager, Or. Dep't. of Transp. (Dec 09, 2016).

⁵⁵ PEDESTRIAN AND BICYCLE INFO. CTR. ET AL., THE NATIONAL BICYCLING AND WALKING STUDY: 15-YEAR STATUS REPORT 5 (2010) [hereinafter 15-YEAR STUDY] (FY 2009 funding does not include the \$400 million from ARRA which was a one-time distribution. FAST Act funding is also not included because at the time of this writing, it is unknown how much of the proposed financing will be spent on bicycle infrastructure.).

⁵⁶ *Id.*

by bicycling and walking.⁵⁷ Today, current funding levels account for only about 2% of all federal transportation spending,⁵⁸ while bicycling and walking account for almost 12% of all trips⁵⁹ and 14.9% of all traffic fatalities.⁶⁰

The most recent federal bill to address national transportation projects is the Fixing America's Surface Transportation (FAST) Act.⁶¹ Though the bill does not specifically target bicycle infrastructure, it does provide numerous benefits to it.⁶² First, the FAST Act provides a bicycle infrastructure policy framework for fiscal years 2016 through 2020, allowing for five years of consistent funding.⁶³ Second, because bicycle funding is included in highway funding, any increases in highway funding also increases funding for bicycles. The law increases highway funding by 15%, totaling \$305 billion in spending.⁶⁴ The FAST Act also provides \$835 million a year for fiscal years 2016 and 2017, and \$850 million for fiscal years 2018 through 2020 for surface transportation projects,⁶⁵ a subset of highway funding that includes bicycle infrastructure.

The FAST Act not only added increased funding for bicycle infrastructure, but it also improved access to funding sources. The FAST Act modified title 23, section 109 of the United States Code to require federally funded highway projects consider alternative modes of transportation.⁶⁶ This allows cities with a population of over 200,000 to now access funding directly from the federal government rather than only through their state agencies.⁶⁷ Although the formula for distributing funds to the states is still the same,⁶⁸ under the FAST

⁵⁷ ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 104.

⁵⁸ *Id.*

⁵⁹ *Id.* at 12–13 (indicating that walking encompasses 10.4% and biking 1%).

⁶⁰ *Id.* at 14.

⁶¹ See Fixing America's Surface Transportation Act of 2015, Pub. L. No. 114-94, 129 Stat. 1312 (2015) (clarifying support for bicycle infrastructure projects, grants to reduce bicycle fatalities, and police education for bicycle safety).

⁶² *Id.*

⁶³ Joe Lindsey, *What the \$800-Million FAST Act Means for Cyclists*, BICYCLING (Dec. 9, 2015), <https://www.bicycling.com/culture/advocacy/what-the-800-million-fast-act-means-for-cyclists>.

⁶⁴ *Fast Summary of the FAST Act*, TOOLE DESIGN GROUP, <http://www.tooledesign.com/resources/news/fast-summary-fast-act> (last visited Oct. 24, 2017).

⁶⁵ 23 U.S.C.A. § 133(h)(1)(A) (Westlaw through Pub. L. No. 115-68).

⁶⁶ 23 U.S.C.A. § 109(c)(1)(D) (Westlaw through Pub. L. No. 115-68).

⁶⁷ *Id.* § 104(f)(3)(A) (Westlaw through Pub. L. No. 115-68).

⁶⁸ TOOLE DESIGN GROUP, *supra* note 64.

Act funding, the state and local governments can now bundle expensive projects, like bridge building, with bicycle infrastructure.⁶⁹ Additionally, this makes it easier to meet the funding thresholds: \$50 million for state projects, \$25 million for rural projects, and \$10 million for local projects.⁷⁰

While the FAST Act made significant changes to the funding requirements, the Act also ties this funding to requirements for safer bicycle infrastructure.⁷¹ The FAST Act added requirements for street and road design standards, and contains specific provisions for the protection of non-motorized transportation traffic.⁷² As an incentive to decrease bicycle fatalities involving motor vehicles, the FAST Act also provides a safety grant to states.⁷³ The implementation of safer design standards will allow state and local projects the flexibility to construct bicycle infrastructure relevant to the area, whether it is on-street bicycle lanes that share the road with vehicles, on-street protected bicycle lanes that don't share a lane with vehicles or dedicated off-street bicycle paths only for bicycles and pedestrians.⁷⁴

Even with these significant improvements, funding fluctuates annually because the federal funds are tied to a variety of agencies, incentives, and programs.⁷⁵ The majority of federal funding comes from the United States Department of Transportation (DOT) and is tied to transportation enhancement activities spread over eleven different programs.⁷⁶ In an attempt to coordinate the federal, state, and local agencies receiving transportation funding, the DOT issued a policy in 2010 aimed at assisting “local, MPO [Metropolitan Planning Organization], and State planning processes” in developing comprehensive transportation plans.⁷⁷ The DOT policy states that “[e]very transportation agency . . . has the responsibility to improve conditions and opportunities for walking and bicycling and to

⁶⁹ 23 U.S.C.A. § 144(j) (Westlaw through Pub. L. No. 115-68).

⁷⁰ TOOLE DESIGN GROUP, *supra* note 64.

⁷¹ 23 U.S.C.A. § 109(m) (Westlaw through Pub. L. No. 115-68).

⁷² *Id.*

⁷³ 23 U.S.C. § 405(h) (Westlaw through Pub. L. No. 115-68) (effective Oct. 1, 2016).

⁷⁴ Lindsey, *supra* note 63.

⁷⁵ See ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 120 (listing various agencies and programs funding projects).

⁷⁶ See *id.* at 120–21 (listing eleven federal programs and the specific activities funded).

⁷⁷ U.S. DEP'T. OF TRANSP., PEDESTRIAN AND BICYCLIST ROAD SAFETY ASSESSMENTS SUMMARY REPORT 23 (2015).

integrate walking and bicycling into their transportation systems.”⁷⁸ The DOT policy is a positive step towards developing a coordinated federal policy to create a nationwide bicycle infrastructure.

However, even with the recent infrastructure funding policies, bicyclists currently lack a tax policy that rewards riders without causing them to lose other tax benefits. Currently, the only program dedicated to bicyclists is the Emergency Economic Stabilization Act of 2008,⁷⁹ which created a \$20 per month reimbursement fringe benefit for employers who reimburse their employees that bicycle to work.⁸⁰ The problem is that the bicycle fringe benefit is not combinable with other fringe benefits, such as the \$255⁸¹ per month reimbursement for transit passes or for parking.⁸² Whereas employers can combine, or aggregate, transit pass and parking benefits up to \$255 per month, bicycle commuters cannot aggregate, and will only receive the \$20 limit.⁸³ This creates a disincentive for anyone who wishes to utilize multi-modal forms of transit, such as bicyclists who ride from their house to a public transit station or wish to drive and park during inclement weather. Bicyclists should not have to choose between receiving \$20 or \$255 per month. To combat this disincentive, the bicycle commuting reimbursement should be raised to the same level as a transit pass and made combinable with other benefits.

B. Oregon Policies, Infrastructure, and Funding

1. Current Oregon Policies

While the federal infrastructure has steadily improved, cities around the country have had to grow their bicycle infrastructure through a “trial-and-error” process because of the absence of any

⁷⁸ *Id.*

⁷⁹ Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, 122 Stat. 3765 (2008) (codified at 12 U.S.C.A. § 5201–5261).

⁸⁰ 26 U.S.C.A. § 132(f)(5)(F)(ii) (Westlaw through Pub. L. No. 115-68) (effective Dec. 18, 2005).

⁸¹ DEP’T OF THE TREASURY, INTERNAL REVENUE SERVICE, PUBLICATION 15-B: EMPLOYER’S TAX GUIDE TO FRINGE BENEFITS FOR USE IN 2017 20 (2016), <https://www.irs.gov/pub/irs-pdf/p15b.pdf> (explaining that aggregate pricing increases each year due to inflation, which is why the \$255 is not \$175 as stated in 26 U.S.C. 132(f)(2)(C)).

⁸² 26 U.S.C.A. at § 132(f)(2).

⁸³ *Id.* § 132(f)(2)(C) (providing that the code specifically limits the exclusion to the \$20 bicycle community reimbursement). *See also id.* § 132(f)(2)(F)(i)(iii)(II) (expressly preventing aggregation if a person uses the bicycle transportation fringe benefit).

overarching federal policy.⁸⁴ Oregon leads the nation on this front and has built a thriving bicycle infrastructure and culture through forty years of investment. The original advocate for Oregon's bicycle legislation was State Senator Don Stathos.⁸⁵ He developed the idea for the bill after he and his daughter were forced to ride alongside the road in gravel because cars were passing too closely to safely ride on the main road.⁸⁶ He wanted a safer way for people to ride bikes without fear of being injured by cars.⁸⁷ Oregon thus became the first state to pass a bicycle and pedestrian bill on June 19, 1971,⁸⁸ nearly two years before the federal government passed the Federal Aid Highway Act.⁸⁹ The "Bicycle Bill," Oregon Revised Statute (ORS) 366.514, specifically addressed the inclusion of pedestrians and bicyclists in transportation planning.⁹⁰

The Bicycle Bill led to the development of the statewide Oregon Bicycle and Pedestrian Plan (Bicycle Plan) in 1995, which was designed to provide the Oregon Department of Transportation (ODOT) with a policy for coordinating transportation projects.⁹¹ The Bicycle Plan states that "[b]icycle and pedestrian networks are recognized as integral, interconnected elements of the Oregon transportation system that contribute to our diverse and vibrant communities and the health and quality of life enjoyed by Oregonians."⁹² The Bicycle Plan, which is part of the larger Oregon Transportation Plan, applies to ODOT and all counties and cities in the state.⁹³ Further, the Bicycle Plan provides that bicycle and pedestrian infrastructure must be constructed whenever a street or road is built or rebuilt.⁹⁴ The Bicycle Plan also includes a decision-making framework for integrating transportation projects within Oregon.⁹⁵

⁸⁴ Epperson, *supra* note 46, at 83.

⁸⁵ Jeff Mapes, *Oregon Bicycle Bill*, THE OREGON ENCYCLOPEDIA, https://oregonencyclopedias.org/articles/oregon_bicycle_bill/#.WeaV10yZNsN (Dec. 11, 2016).

⁸⁶ *Id.*

⁸⁷ *See id.*

⁸⁸ *Id.*

⁸⁹ *See* Epperson, *supra* note 46, at 81; Seher, *supra* note 37, at 595.

⁹⁰ BICYCLE PLAN, *supra* note 2, at 13.

⁹¹ *Id.*

⁹² *Id.* at 6.

⁹³ *Id.* at 14.

⁹⁴ *Id.*

⁹⁵ *Id.* at 5.

The Bicycle Plan allows for three exceptions to building bicycle or walking infrastructure: safety, cost, and absence of need.⁹⁶ ODOT assumes that bikeways are needed on 100% of highways in the urban growth boundary; currently 60% are in place.⁹⁷ Therefore, ODOT applies these exceptions strictly, allowing for public review, and requiring detailed evidence to support the claim that infrastructure is not required.⁹⁸ Oregon has recognized the benefits of a bicycling culture and has built policies and goals to match that culture.⁹⁹

Since its inception, Oregon has designed the Bicycle Plan around several key benefits: economic growth, health and mobility, and an environmentally friendly alternative to automobiles.¹⁰⁰ The Bicycle Plan creates a uniform policy within the Oregon Transportation Plan for bicycle guidance, funding, and infrastructure to help people walk and bicycle safely.¹⁰¹ The Bicycle Plan, as a whole, is more beneficial than its parts because of the interconnectivity of its benefits.

Oregon's bicycle infrastructure adds value to the economy in direct and indirect ways. The bicycle-orientated infrastructure directly adds economic value by creating jobs through construction of infrastructure along with support of the bicycle industry from bicycle sales, repair shops, and tourism.¹⁰² A 2008 study found that for every million dollars spent on bicycle infrastructure projects in Eugene, OR, 9.15 jobs were created.¹⁰³ Furthermore, in 2014, bicyclists who rode the Oregon Scenic Bikeway spent over \$12 million, and supported over 150 jobs.¹⁰⁴ Even though bicyclists spend less per trip, they make more trips per month, and thus, spend more over the whole month shopping than those who drive.¹⁰⁵ There are also direct benefits to households whose members bicycle; they save money on fuel,

⁹⁶ *Id.* at 13.

⁹⁷ *Id.* at C-2.

⁹⁸ *Id.* at 13.

⁹⁹ *Id.* at 9.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 5.

¹⁰² *Id.* at 9, 14.

¹⁰³ HEIDI GARRETT-PELTIER, U. OF MASS. AMHERST POLITICAL ECON. RESEARCH INST., PEDESTRIAN AND BICYCLE INFRASTRUCTURE: A NATIONAL STUDY OF EMPLOYMENT IMPACTS 13 (2011), https://www.peri.umass.edu/fileadmin/pdf/published_study/PERI_ABikes_October2011.pdf.

¹⁰⁴ DEAN RUNYAN ASSOCS., THE ECONOMIC SIGNIFICANCE OF CYCLING ON OREGON SCENIC BIKEWAYS 1, 6, 13 (2015), http://www.deanrunyan.com/doc_library/OregonScenicBikeways.pdf.

¹⁰⁵ ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 94.

insurance, and automotive maintenance by not driving a car for trips under four miles.¹⁰⁶

Indirect economic benefits include increased property values, higher worker productivity, and lower health costs for individuals and the state. Areas that have a higher walkability score¹⁰⁷ have higher property and rental values.¹⁰⁸ Bicycling also decreases absenteeism in workers,¹⁰⁹ benefits people without cars who rely upon bicycles or public transit to get to work,¹¹⁰ and makes Oregon a more desirable place to live.¹¹¹

Additionally, Oregon's bicycle infrastructure positively impacts the health and mobility of its citizens by providing healthy transportation alternatives. The number of obese adults in the United States is growing and is attributable to a lack of physical exercise.¹¹² Almost half of Oregonians do not engage in the Centers for Disease Control and Prevention's (CDC) recommended thirty minutes of exercise, five days per week.¹¹³ The improvement of Oregon's bicycle infrastructure can positively affect the health of the citizens by removing barriers that prevent them from bicycling.¹¹⁴ Adults benefit from improved personal health, increased life expectancy, and increased mobility.¹¹⁵ Oregon is encouraging healthy lifestyles for children by providing safe routes to schools, which connects access to education and parks while protecting the next generation of bicyclists.¹¹⁶

The most vulnerable Oregonians—individuals without an automobile, those living in poverty, the elderly, and the disabled—can lead improved lives through a multimodal transportation system tied

¹⁰⁶ *Id.* at 97 (citing reports by Sierra Club and the American Automobile Association).

¹⁰⁷ See generally WALK SCORE, <https://www.walkscore.com/> (last visited Jan. 28, 2018). This website allows users to input their address and will provide a number that correlates to the walkability of neighborhoods; the higher the score, the easier and safer one can walk to shops, work, public transit, etc.

¹⁰⁸ ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 95 (citing a study by the Brookings Institute).

¹⁰⁹ *Id.* (citing a study by the London School of Economics).

¹¹⁰ BICYCLE PLAN, *supra* note 2, at 2.

¹¹¹ *Id.*

¹¹² Merav W. Efrat & Rafael Efrat, *Tax Policy and the Obesity Epidemic*, 25 J.L. & HEALTH 233, 233–34 (2012).

¹¹³ BICYCLE PLAN, *supra* note 2, at 10 (citing a study by Oregon Department of Human Services).

¹¹⁴ *Id.* at 3.

¹¹⁵ *Id.* at 10.

¹¹⁶ *Id.* at 12.

together with a bicycle infrastructure that allows them access to medical, civic, and educational opportunities.¹¹⁷ Increasing transportation options for individuals with disabilities, and those without automobiles, leads to better mental and physical health, and helps prevent isolation.¹¹⁸

While bicycling improves health and mobility, it is also an environmentally friendly commuting choice that helps Oregon achieve its many environmental goals and manage air quality. Bicycles provide a zero-emission form of transportation, which aligns with Oregon's Statewide Transportation Strategy to reduce state greenhouse gases (GHG) to a level 75% less than the 1990 level by 2050.¹¹⁹ For every mile that is not driven, nearly one pound of carbon dioxide is prevented from entering the atmosphere.¹²⁰ Because the highest concentrations of pollutants emitted by vehicles are found on the roadway,¹²¹ reducing the number of vehicles on the road reduces stop-and-go traffic and congestion, which in turn decreases air pollution and leads to better air quality.¹²² Commuting via bicycle also indirectly benefits bicyclists by affording contact with nature that is unavailable to automobile drivers.¹²³ Bicyclists engage the environment with all of their senses—sight, sound, smell, and touch—whereas automobiles restrict drivers to only their sight.

Despite these benefits, people will only switch to bicycling as a form of commuting if the infrastructure to support it exists. Appropriate bicycle infrastructure is a fluid concept, which changes over time and with exposure to different designs. It must also make riders of all competency levels feel safe.¹²⁴ Improperly designed bicycle infrastructure will discourage riders and result in excess

¹¹⁷ *Id.* at 11–12.

¹¹⁸ *Id.*

¹¹⁹ OR. DEP'T OF TRANSP., OREGON STATEWIDE TRANSPORTATION STRATEGY: A 2050 VISION FOR GREENHOUSE GAS EMISSIONS REDUCTION 19 (Mar. 20, 2013), http://www.oregon.gov/ODOT/Planning/Documents/Oregon_Statewide_Transportation_Strategy.pdf.

¹²⁰ BICYCLE PLAN, *supra* note 2, at 11 (citing data from EPA).

¹²¹ U.S. ENVTL. PROTECTION AGENCY, NEAR ROADWAY AIR POLLUTION AND HEALTH: FREQUENTLY ASKED QUESTIONS 1 (2014), https://www.epa.gov/sites/production/files/2015-11/documents/420f14044_0.pdf.

¹²² *Id.* at 2; ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 95–96.

¹²³ Holly Doremus, *Shaping the Future: The Dialectic of Law and Environmental Values*, 37 U.C. DAVIS L. REV. 233, 258 (2003).

¹²⁴ See CITY OF DAVIS, BICYCLE ACTION PLAN: BEYOND PLATINUM 45 (2014), <http://cityofdavis.org/home/showdocument?id=1073>.

construction costs.¹²⁵ When bicycle infrastructure is incorporated into street design, injuries involving motorists are reduced up to 50% over streets without bicycle infrastructure.¹²⁶

Oregon's current bicycle infrastructure construction guidelines, provided for in the Oregon Department of Transportation's 2011 Bicycle and Pedestrian Design Guide, meet or exceed the American Association of State Highway and Transportation Officials' (AASHTO) "Guide for the Development of Bicycle Facilities."¹²⁷ The design guide should be used to incorporate bicycle infrastructure from the onset of a transportation project.¹²⁸ Construction must estimate street use twenty years into the future, and new bridge projects fifty years into the future, with designers anticipating future use.¹²⁹ It must also anticipate land use patterns, site design, and urban development, and consider differences between various uses.¹³⁰ Streets must be designed to ensure the safety of all users, including bicycles, automobiles, and pedestrians.¹³¹

2. *Funding Oregon's Bicycle Infrastructure*

Oregon has been successful in building its bicycle infrastructure because the state has provided a funded mandate for its construction.¹³² The Bike Bill creates a spending minimum, or floor, for pedestrian and bicycle infrastructure of 1% of the State Highway Trust Fund (SHTF).¹³³ Any time SHTF funding is utilized for highways, roads, and streets, "[f]ootpaths and bicycle trails, including curb cuts or ramps . . . shall be provided . . ."¹³⁴ This criteria does not limit the funding to 1%: the state only requires the use of "reasonable

¹²⁵ OR. DEP'T OF TRANSP., OREGON BICYCLE AND PEDESTRIAN DESIGN GUIDE I-1 (3rd ed. 2011).

¹²⁶ Conor CO Reynolds, et al., *The Impact of Transportation Infrastructure on Bicycling Injuries and Crashes: A Review of the Literature*, 8 ENVTL. HEALTH 47, 52, 59 (2009).

¹²⁷ OR. BICYCLE AND PEDESTRIAN DESIGN GUIDE, *supra* note 125, at I-6.

¹²⁸ *Id.* at I-1.

¹²⁹ *Id.* at I-4.

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² OR. REV. STAT. ANN. § 366.514(1) (West 2017).

¹³³ *Id.* § 366.514(3).

¹³⁴ *Id.* § 366.514(1).

amounts” with 1% being the minimum.¹³⁵ In addition to the SHTF, funding comes from a variety of sources including federal programs, local, state, and private investments in various combinations.¹³⁶

Historically, federal highway funding grants for states mainly came from the Highway Trust Fund (HTF).¹³⁷ The HTF is primarily funded through fuel taxes.¹³⁸ Currently the gasoline tax is frozen at 24.4 cents per gallon, the same as it was in 1993.¹³⁹ If the gas tax was paired to the consumer price index, the tax would be around thirty cents.¹⁴⁰ Since the per gallon tax has not been raised, per capita miles driven are decreasing, and fuel efficiency is increasing,¹⁴¹ HTF outlays have exceeded revenue by \$52 billion between 2004 and 2014.¹⁴² The HTF receives tax revenue totaling about two cents per mile but needs approximately ten cents per mile to meet the fund’s demands.¹⁴³

Additionally, critics argue the HTF should only fund highways and bridges, and funds should not be diverted to other projects such as bicycle and pedestrian projects.¹⁴⁴ The refusal to increase the HTF requires federal lawmakers to periodically appropriate funds from the General Fund of the Treasury to the HTF to prevent the HTF from becoming insolvent.¹⁴⁵ The Congressional Budget Office has suggested several alternatives, but the current HTF remains funded at

¹³⁵ *Bicycle Transp. All. v. City of Portland*, 133 Or. App. 422, 426, 891 P.2d 692, 695 (Or. Ct. App. 1995).

¹³⁶ BICYCLE PLAN, *supra* note 2, at 48.

¹³⁷ CONG. BUDGET OFFICE, THE HIGHWAY TRUST FUND AND THE TREATMENT OF SURFACE TRANSPORTATION PROGRAMS IN THE FEDERAL BUDGET 1 (June 2014) [hereinafter HIGHWAY TRUST FUND BUDGET], <https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/45416-TransportationScoring.pdf>.

¹³⁸ U.S. GOV’T ACCOUNTABILITY OFFICE, HIGHWAY TRUST FUND, PILOT PROGRAM COULD HELP DETERMINE THE VIABILITY OF MILEAGE FEES FOR CERTAIN VEHICLES 6 (2012) [hereinafter GAO REPORT], <http://www.gao.gov/assets/660/650863.pdf>.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ GAO REPORT, *supra* note 138, at 7.

¹⁴² *Id.* at 1.

¹⁴³ CONG. BUDGET OFFICE, ALTERNATIVE APPROACHES TO FUNDING HIGHWAYS, viii (Mar. 2011) [hereinafter HIGHWAY FUNDING ALTERNATIVES], <https://www.cbo.gov/sites/default/files/112th-congress-2011-2012/reports/03-23-highwayfunding.pdf>.

¹⁴⁴ SEN. TOM COBURN & SEN. JOHN MCCAIN, OUT OF GAS: CONGRESS RAIDS THE HIGHWAY TRUST FUND FOR PET PROJECTS WHILE BRIDGES AND ROADS CRUMBLE 5 (July 2009), <http://atfiles.org/files/pdf/OutofGas730Final0.pdf>.

¹⁴⁵ HIGHWAY TRUST FUND BUDGET, *supra* note 137, at 2–3.

the 1993 level.¹⁴⁶ The result is inconsistent federal funding from the HTF.

Reliance upon inconsistent federal funding inhibits states like Oregon from long-term planning. Federal funding for bicycle programs vary from year to year due to the wide range of funding from different agencies and programs.¹⁴⁷ The last large source of non-transportation related funding came from the American Recovery and Reinvest Act of 2009, which provided \$10 million dollars to Oregon for bicycle and pedestrian infrastructure.¹⁴⁸ The bicycle and pedestrian infrastructure provides a public service, like the streets and highways, but growing federal debt¹⁴⁹ means that states will have to assume a larger share of the budget to construct and maintain infrastructure.

Like the federal system discussed above, the agency responsible for managing the transportation budget, the Oregon Department of Transportation (ODOT), manages the state budget that funds the programs for highway and bicycle infrastructure.¹⁵⁰ The 2011–2013 biennium transportation budget for ODOT was \$4.98 billion, with the motor fuels tax providing the largest share at \$1.1 billion.¹⁵¹ The state biennium budget allocated an estimated \$32 million for bicycle and pedestrian infrastructure.¹⁵² In addition to the SHTF, the transportation budget also receives revenue from motor vehicle registration fees, Oregon state lottery funding, the Statewide Transportation Improvement Program (STIP), and the federal bicycle and pedestrian programs administered by ODOT.¹⁵³

¹⁴⁶ *Id.* at 6–8 (discussing that one proposal of a one cent increase would raise \$1.5 billion over ten years, tying the rate to the consumer price index would prevent inflation impacting revenue, and a one-time increase could return 1993 inflation adjusted levels).

¹⁴⁷ BICYCLE PLAN, *supra* note 2, at 49 (stating that bicycle infrastructure funding is usually a mix of state and federal programs).

¹⁴⁸ OR. DEP'T OF TRANSP., TRANSPORTATION FUNDING IN THE AMERICAN RECOVERY AND REINVESTMENT ACT 1 (Mar. 17, 2009), <http://www.bendoregon.gov/home/showdocument?id=1746>.

¹⁴⁹ U.S. DEBT CLOCK, <http://www.usdebtclock.org/> (last visited Oct. 31, 2017).

¹⁵⁰ OR. DEP'T OF TRANSP., BUDGET 2011-2013 1 (Aug. 3, 2011), <https://digital.osl.state.or.us/islandora/object/osl%3A59336/datastream/OBJ/view>.

¹⁵¹ *Id.* at 4.

¹⁵² BICYCLE PLAN, *supra* note 2, at C-3 (allocating \$16 million for 2013, which is doubled for a biennium estimate).

¹⁵³ *Id.* at 50–52.

Today, the Oregon SHTF is the main source of funding for transportation infrastructure. The SHTF was established in 1942 and updated in 1980 under Oregon Constitutional Article IX Section 3(a).¹⁵⁴ Section 3(a) specifically designates that tax revenue from automobile fuel “shall be used exclusively for the construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, streets and roadside rest areas in this state”¹⁵⁵ The language specifically prevents the fund from being raided for non-public highway uses and limits the use to automobile activity.¹⁵⁶ However, as discussed above, the original Highway Fund was modified in 1971 by the Bicycle Bill, ORS 366.514, which required a 1% spending floor on pedestrian and bicycle infrastructure along highways, streets, and roads that are being constructed or reconstructed.¹⁵⁷ While this funding floor has helped Oregon create extensive bicycle infrastructure, the SHTF suffers from the same drawbacks as the Federal Highway Fund; decreasing revenues are neither sufficient for the current highway system nor to build a world-class bicycle infrastructure.¹⁵⁸

If Oregon is to continue improving its bicycle infrastructure, it will need to find new ways to fund construction and maintenance. One way to raise revenue is a road use tax on electric and hybrid vehicles. In 2016, Oregon was the first state in the country to implement a road use tax for electric and high fuel efficiency vehicles.¹⁵⁹ Revenue from the new program is deposited into the Oregon SHTF through a road use tax or mileage-based user fee.¹⁶⁰ The system is based on the principle of road users paying based upon miles driven rather than gallons of fuel used.¹⁶¹ The Government Accounting Office found that “[m]ileage-based user fee initiatives . . . can lead to more equitable

¹⁵⁴ *Rogers v. Lane County*, 307 Or. 534, 540–43, 771 P.2d 254, 256–58 (Or. 1989) (describing history and purpose of highway funds).

¹⁵⁵ OR. CONST. art. IX, § 3a, cl. 1 (2016).

¹⁵⁶ *Rogers*, 307 Or. at 540–41, 771 P.2d at 257.

¹⁵⁷ OR. REV. STAT. ANN. § 366.514(3) (West 2017); *Bicycle Transp. All. v. City of Portland*, 133 Or. App. 422, 425–27, 891 P.2d 692, 694–95 (Or. Ct. App. 1995).

¹⁵⁸ OR. DEP’T OF TRANSP., THE STATE OF THE SYSTEM: 2016 REPORT ON OREGON’S TRANSPORTATION SYSTEM 38 (Jan. 2016) [hereinafter STATE OF THE SYSTEM], <http://www.oregon.gov/ODOT/About/Documents/2016-State-of-the-System.pdf>.

¹⁵⁹ S.B. 810, 77th Leg., Reg. Sess. (Or. 2013) (codified at Or. Rev. Stat. §§ 319.883–947 (2017)).

¹⁶⁰ OR. DEP’T OF TRANSP., *Frequently Asked Questions*, <http://www.myorego.org/frequently-asked-questions/> (last visited Nov. 13, 2017).

¹⁶¹ *Id.*

and efficient use of roadways by charging drivers based on their actual road use and by providing pricing incentives to reduce road use.”¹⁶² The Oregon road use tax program, called OReGO, will charge 1.5 cents per mile driven, with all revenue collected deposited into the SHTF.¹⁶³ ODOT will distribute the funds for state and local transportation projects, including bicycle infrastructure.¹⁶⁴ The road use tax is projected to provide an additional \$340 million over the next ten years.¹⁶⁵ By finding creative new funding sources, Oregon is helping local municipalities fund their own infrastructure projects.

For most SHTF funding, a local match of 10.27% is required.¹⁶⁶ This is usually derived from the local government's general fund or through various fees and charges.¹⁶⁷ The legislature has granted certain local areas¹⁶⁸ the ability to levy additional taxes to raise revenue to allow for transportation projects.¹⁶⁹ This creates disparities between areas that have taxing authority and those that do not. Those with taxing authority can raise revenue through additional taxes on gasoline sales.¹⁷⁰ Those without taxing authority must rely upon bonds and loans to finance the local share of the budget infrastructure improvements. This forces all local taxpayers to pay for the infrastructure rather than solely the users of the infrastructure. This disparity leads to lower funding and investment in rural areas, which leads to gaps in the infrastructure. It also forces rural local governments to make difficult decisions about whether to build up funds over a period of years for infrastructure, forego construction of the infrastructure, or only fund the maintenance of infrastructure currently in place.¹⁷¹ Additional tax strategies should be implemented

¹⁶² U.S. GOV'T ACCOUNTABILITY OFFICE, HIGHWAY TRUST FUND, PILOT PROGRAM COULD HELP DETERMINE THE VIABILITY OF MILEAGE FEES FOR CERTAIN VEHICLES 17 (2012), <http://www.gao.gov/assets/660/650863.pdf>.

¹⁶³ STATE OF THE SYSTEM, *supra* note 158, at 41.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 5.

¹⁶⁶ BICYCLE PLAN, *supra* note 2, at 53, C-3.

¹⁶⁷ *Id.* at 52.

¹⁶⁸ OR. CONST. art. IX, § 3 (providing that “No taxes shall be levied except in accordance with law”).

¹⁶⁹ BICYCLE PLAN, *supra* note 2, at C-7.

¹⁷⁰ See, e.g., Jim Redden, *10-cent Portland gas tax takes effect on Jan. 1, 2017*, KOIN (Dec. 29, 2016, 11:03 AM), <http://koin.com/2016/12/29/10-cent-portland-gas-tax-takes-effect-on-jan-1-2017/>.

¹⁷¹ Bicycle Plan, *supra* note 2, at 55.

to avoid interruptions in bicycle infrastructure coverage due to funding disparities.

While Oregon's infrastructure policy is successful, the lack of a formal, unifying federal policy fosters an inefficient and inconsistent system for distributing federal funds supporting bicycle infrastructure. The federal government should form a single overarching transportation policy that incorporates all types of anticipated transportation, not just vehicles. This could potentially decrease costs at the state and federal level by removing duplicitous administrative tasks. It would also streamline the application process, allowing for better oversight and transparency. A single policy could provide guidance to each state for the application of funds while still allowing states the freedom to choose the programs that would meet its unique needs. If a single policy incorporated long term funding sources, then that would allow states the ability to plan for long-term infrastructure construction.

III

TAX CHANGES TO INCREASE INFRASTRUCTURE FUNDING

Pigouvian taxation is a tax theory advanced by A.G. Pigou and F.P. Ramsey.¹⁷² Pigouvian taxes are not only a way to raise revenue but also a way to modify behaviors to benefit society.¹⁷³ Through the creation of tax disincentives, a tax code can be created that would increase the costs of harmful behavior, while tax incentives lower the cost to individuals whose behavior would benefit society.¹⁷⁴ The current tax code is the antithesis of Pigouvian taxation: it fosters harmful behavior by encouraging commuting by automobile,¹⁷⁵ an activity that increases traffic congestion and air pollution.¹⁷⁶ The current tax code allows the two highest automobile tax breaks to be combined while preventing bicyclists from combining the one benefit they receive; this effectively forces bicyclists to lose a \$225 benefit to receive a \$20 benefit. Oregon could link its bicycle infrastructure to

¹⁷² Maureen B. Cavanaugh, *On the Road to Incoherence: Congress, Economics, and Taxes*, 49 UCLA L. REV. 685, 688 (2002).

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ See I.R.C. § 132(f)(1) (West 2017) (explaining that the tax code subsidizes parking at \$225 per month whereas bicycle commuters can only claim \$20 per month, effectively encouraging automobile use over bicycle use).

¹⁷⁶ Cavanaugh, *supra* note 172, at 685. See Roberta F. Mann, *On the Road Again: How Tax Policy Drives Transportation Choice*, 24 VA. TAX REV. 587, 616 (2005).

Pigouvian tax funding to discourage harmful behaviors while encouraging beneficial ones, or allow bicyclists the ability to combine benefits in the same manner as other commuters.

Historically, Oregon bicycle infrastructure has been financed through a combination of funding sources. As discussed above, the Bicycle Bill created a minimum funding percentage from the SHTF.¹⁷⁷ By tying bicycle funding to state highway funding, Oregon has guaranteed that the bicycle infrastructure is partially funded each year. However, there are drawbacks to this funding model. Improving automotive fuel efficiency standards creates a double-edged sword. On one side, improved fuel efficiency lowers fuel consumption thereby creating less pollution and saving consumers money. On the other side, lower fuel consumption leads to lower tax revenues for the highway trust funds.¹⁷⁸ Also, the reliance upon federal funding creates funding inconsistency that hinders long-term planning.¹⁷⁹ Oregon should modify its bicycle infrastructure tax policies to provide additional state and local funding, thus minimizing the State's reliance on federal funds and encouraging employers to participate in the construction of the bicycle infrastructure.

There are several tax policy options to increase bicycle funding and bicycle ridership, many of which have already been implemented across Europe and the United States. First, states and local governments can use Pigouvian taxes to reduce the demand for driving through tax policies that discourage the use of automobiles and encourage the use of bicycles. Second, governments can provide incentives to bicycle users. And third, governments can provide employers with tax incentives to encourage employees to use bicycles.

One method to reduce demand for driving in high traffic areas is through congestion pricing.¹⁸⁰ The 2017 passage of HB 2017-A established a traffic congestion relief program, specifically for the Portland metropolitan area, and provided the Oregon Transportation

¹⁷⁷ BICYCLE PLAN, *supra* note 2, at 48.

¹⁷⁸ See STATE OF THE SYSTEM, *supra* note 158, at 38.

¹⁷⁹ BICYCLE PLAN, *supra* note 2, at C-3.

¹⁸⁰ Phillip A. Hummel, *Next Stop - A Cleaner and Healthier Environment: Global Strategies to Promote Public Transit*, 35 TRANSP. L.J. 263, 288 (2008).

Commission with the ability to add other areas in the state.¹⁸¹ The revenue collected is specifically designated for traffic congestion relief programs.¹⁸²

One problem not addressed in HB 2017-A is the efficient collection of tolls. Current tolling methods involve Radio Frequency Identification (RFID) toll tags placed inside the vehicle, with expensive roadside infrastructure to read the tags.¹⁸³ Advances in electronic tolling through license plate reader technology, cell phone, or satellite based systems could reduce infrastructure construction elements.¹⁸⁴ This would, in turn, remove the required, expensive, toll tags currently used in most states.¹⁸⁵ These advances would allow a greater portion of the toll revenue be reinvested in bicycle infrastructure and other traffic congestion relief projects instead of being used to pay for roadside infrastructure.

HB 2017-A provides a starting point for congestion pricing in Oregon; however, the biggest hurdle to this type of project overcoming resistance by the local population to paying for road use.¹⁸⁶ To be successful, the public must believe there is a serious problem to be overcome and that road user changes will positively impact the issue.¹⁸⁷

A vehicle age registration fee is another tax alternative that could increase funding to the State Highway Trust Fund. Older vehicles tend to contribute more GHG and typically have lower fuel efficiency.¹⁸⁸ By taxing older vehicles, the government would create an incentive to purchase newer, more fuel-efficient vehicles, while using the additional funds to remove barriers to automotive alternatives, such as bicycles. The disadvantage is that low-income and minority users typically drive older, more fuel inefficient

¹⁸¹ H.B. 2017-A, § 120 (2017), <https://olis.leg.state.or.us/liz/2017R1/Downloads/MeasureDocument/HB2017/Enrolled>, (detailing the Congestion Relief Program's toll locations and requirements).

¹⁸² *Id.* This author hopes to see that a portion of the funds will go to bicycle infrastructure projects.

¹⁸³ See KHALI PERSAD ET AL., TOLL COLLECTION TECHNOLOGY AND BEST PRACTICES 8, 16–17 (2006).

¹⁸⁴ See *id.* at 14–19.

¹⁸⁵ See *id.* at 4.

¹⁸⁶ *Id.* at 2 (the report uses the term Cordon Tolling).

¹⁸⁷ See CAMBRIDGE SYSTEMATICS, INC., ASSESSMENT OF CONGESTION PRICING AND HB 2001 ES-2 (NOV. 9, 2009) (citing a European study on road user pricing schemes).

¹⁸⁸ See HIGHWAY FUNDING ALTERNATIVES, *supra* note 143, at viii.

vehicles.¹⁸⁹ However, this can be remedied by offering a tax credit to partially offset the fee for those owners below poverty income levels.

Oregon should also link bicycle infrastructure funding to carbon emitting sources to help the state meet its goal of reducing GHG emissions to 75% of the 1990 levels by 2050.¹⁹⁰ Bicycles reduce greenhouse gases in two ways. First, the bicycle is a zero-emission form of transportation. Second, replacing cars with bicycles decreases gas consumption and the production of GHG caused by driving.¹⁹¹ Tying bicycle infrastructure to GHG funding through a cap and dividend program would provide the construction revenue needed to build the bicycle infrastructure.¹⁹² Though the original cap and trade bill did not specifically link funding to bicycle infrastructure, later versions could link revenue to bicycle infrastructure projects. Since the revenue would decline as GHG emissions declined, the tax would be ideal for the construction of bicycle infrastructure, leaving the lower maintenance costs to the SHTF or future equivalents. Unlike a cap and trade system, a cap and dividend system has lower administrative costs because all the funds submitted to the state are not through a third party. Further, because the proposed cap and dividend program is not a tax, the Oregon constitution would not require a ballot initiative for implementation.¹⁹³ However, it would need to pass the legislature with a 50% approval and be signed into law by the Governor.¹⁹⁴ The disadvantage to the cap and dividend program is it is poorly understood by the public and would require outreach to educate the public to the benefits of such a system. The current cap and dividend bill does not specifically designate the revenue for bicycle infrastructure,¹⁹⁵ but it does provide a basis for future funding options.

Finally, Oregon could correct the tax credit flaws by providing tax credits for employers who promote bicycling. For example, an

¹⁸⁹ *Id.*

¹⁹⁰ OR. DEP'T. OF TRANSP. & THE LAND CONSERVATION & DEV. COMM'N, OREGON SUSTAINABLE TRANSPORTATION INITIATIVE 1 (2014), <https://digital.osl.state.or.us/islandora/object/osl%3A9186/datastream/OBJ/view>.

¹⁹¹ BICYCLE PLAN, *supra* note 2, at 11.

¹⁹² See Climate Protection Act, H.B. 3250, §§ 2, 4 (2015).

¹⁹³ Michael Anderson, *Biking Would Win Big Under Oregon Climate Carbon Tax Plan*, BIKE PORTLAND (Feb. 26, 2015, 11:27 AM), <http://bikeportland.org/2015/02/26/biking-win-big-oregon-climate-carbon-tax-plan-two-reasons>.

¹⁹⁴ *Id.*

¹⁹⁵ See Climate Protection Act, H.B. 3250 (2015).

employer who provides on-site bicycle storage would encourage bicycle commuting by providing end-point bicycle infrastructure, and thus, should receive a tax incentive. The lack of adequate bicycle infrastructure at commuting end points is a major reason people do not commute regularly to work.¹⁹⁶ However, Oregon's mild climate would allow bicycle riders to ride all year if only facilities were available to store foul weather gear and bicycles. Individuals do not want to store dirty bicycles or wet clothes in their workspace or office. Thus, having these types of facilities at work or nearby would remove significant barriers that prevent people from riding frequently.¹⁹⁷ Secure bicycle storage are one-time purchases that could be easily tracked by state tax authorities for tax credit purposes.¹⁹⁸ State and federal tax credits for the installation of bicycle storage areas in high bicycle traffic zones would encourage ridership, particularly if integrated into the public transportation system. People would be more inclined to use multi-modal forms of transportation if bicycle facilities were available.¹⁹⁹ Bicyclists could ride to a public transportation hub, securely store their bicycles, ride public transit to their end destination, and return the same way. Given that tax credits have few disadvantages, particularly if the tax authority can balance administrability with fraud prevention, these credits can provide the necessary incentives to create a better bicycle infrastructure.

Additionally, Oregon's tax policy should modify the current bicycle fringe benefit in two ways. First, riders should be allowed to combine the bicycle fringe benefit with the transit pass benefit. Allowing this would benefit both systems, encourage bicyclists to ride more frequently, specifically between their homes and more convenient public transit stations, and public transit would receive additional riders. Second, the bicycle benefit should be raised to parity with the transit pass; \$255 is a more realistic value on the activity and the benefit to society. Bicycling provides numerous health and environmental benefits, far more than the current benefit amount would suggest. An increased amount that is combinable with a transit pass would create a financial incentive that would benefit society.

¹⁹⁶ See ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 169.

¹⁹⁷ See BICYCLE PLAN, *supra* 2, at 38–39 (encouraging land use policies to support bicycling).

¹⁹⁸ Green Routes to Work Act, H.R. Res. 3271, 111th Cong. §§ 8, 10 (2009) (tax credits up to \$10,250 to provide bicycle access and remove barriers to bicycle access).

¹⁹⁹ See ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 169.

Though Oregon has taxes across a wide range of categories benefiting bicycle infrastructure, what is lacking is a unified tax policy. A Bicycle Tax Policy similar to the Bicycle Bill and the Bicycle Plan would link the various tax policies in a manner that would benefit bicyclists, employers, and road users, while generating sufficient revenue necessary to create a world-class bicycle infrastructure.

CONCLUSION

Bicycle riding is a “pollution free and healthful mode[] of transportation” well suited to Oregon.²⁰⁰ Oregon’s bicycle infrastructure is one of the best in the United States and has the highest percentage of bicycle commuters in the United States at 2.4%.²⁰¹ Urban areas boast an even higher percentage of bicycle commuting; Corvallis, with the highest in the United States, at 10%,²⁰² Eugene at 8.5%,²⁰³ and Portland at 6.1%.²⁰⁴ Oregon has made an accessible bicycle infrastructure, made bicycling easier and safer, and reduced barriers that prevent people from bicycling, but more could be done. Oregon must increase funding to fill the gaps and build the necessary infrastructure to allow commuters alternative options to cars.

The Bicycle Plan lays out the necessary steps needed to build out Oregon’s bicycle infrastructure. By funding the bicycle infrastructure at \$108 million per year, Oregon could close the gaps in the infrastructure, grow the infrastructure with Oregon’s increasing population, and link multimodal transportation systems.²⁰⁵ A fully funded bicycle infrastructure would allow Oregon to create a world-class bicycle infrastructure.

Oregon has several funding options that could increase revenue, specifically targeting the bicycle infrastructure. Some, such as congestion pricing, could allow improvement in localized high traffic

²⁰⁰ Mann, *supra* note 176, at 616.

²⁰¹ BICYCLE PLAN, *supra* note 2, at 15.

²⁰² *Id.* at 14 (citing an ODOT case study of Corvallis).

²⁰³ ALLIANCE FOR BIKING & WALKING, *supra* note 1, at 62 (ranking Eugene third, behind Davis, CA at 19.1% and Boulder, CO at 10.2%).

²⁰⁴ *Id.* at 43 (ranking Portland first for large city bicycle commuters, nearly double the second place city of Minneapolis, at 3.6%).

²⁰⁵ *Id.* at 62–63 (stating that a fully funded bicycle infrastructure program would achieve all the objectives, including link walking, biking, and driving connections).

areas. Whereas creative new options, such as mile-driven taxes, could future-proof the system as our society decreases petroleum consumption. Various combinations of these taxing strategies could provide the necessary funding to fully implement Oregon's Bicycle Plan. Increasing the annual budget from \$23 million to \$108 million would create numerous benefits to the people of Oregon through improved health, clean air, decreased medical costs, and reduced traffic. Currently, infrastructure spending is a "hot button" topic, which should allow Oregon to create a beneficial bicycle infrastructure for everyone. Oregon can create a point-to-point infrastructure blending together bicycling, walking, and public transit. By reducing the need to drive, saving users money, and helping the environment, Oregon can have a truly world-class bicycle infrastructure.