

MBUF 101

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Reason



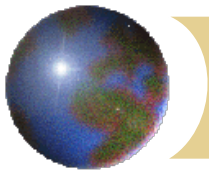
Interstate system needs reconstruction & modernization

- ✦ Many corridors at or near 50-year design life.
- ✦ Many corridors need more lanes.
- ✦ Many don't meet current design & safety standards.
- ✦ About 200 major bottleneck interchanges need redesign and replacement.
- ✦ Also a need for some new routes.



Transportation Funding Crossroads

- ❖ US Transportation programs are in serious jeopardy (even after MAP-21)
- ❖ The Highway and Transit Trust funds have required Federal General Fund supplements
 - ❖ There is no support for increasing the gas tax
 - ❖ There are many competing goals at the national level
- ❖ Many States are addressing funding shortfalls at their level



HIGHWAY TRUST FUND PROJECTIONS

Based on CBO Score of MAP-21 (June 2012)

Highway Account

Fiscal Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning-of-year Balance	\$14	\$8	\$4	\$4	-\$6	-\$15	-\$24	-\$33	-\$42	-\$52	-\$62
Revenues and Interest	\$33	\$33	\$33	\$34	\$35	\$36	\$36	\$36	\$36	\$37	\$37
Intragovernmental Transfers	\$2	\$6	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Outlays	\$42	\$43	\$44	\$44	\$44	\$45	\$45	\$46	\$46	\$47	\$47
End-of-year Balance	\$8	\$4	\$4	-\$6	-\$15	-\$24	-\$33	-\$42	-\$52	-\$62	-\$72

Mass Transit Account

Fiscal Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning-of-year Balance	\$7	\$5	\$5	\$1	-\$3	-\$7	-\$12	-\$16	-\$20	-\$24	-\$29
Revenues and Interest	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5
Intragovernmental Transfers	\$0	\$0	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Outlays	\$7	\$8	\$8	\$9	\$10	\$10	\$10	\$9	\$9	\$10	\$10
End-of-year Balance	\$5	\$5	\$1	-\$3	-\$7	-\$12	-\$16	-\$20	-\$24	-\$29	-\$33

TOTAL HTF BALANCE	\$13	\$9	\$5	-\$9	-\$22	-\$36	-\$49	-\$62	-\$76	-\$91	-\$105
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The Gas Tax

- ⊕ The gas tax revenue model has served us well!
- ⊕ Fuel consumption is declining due to less travel, increased vehicle fuel efficiencies, economic issues and change in driver behavior
- ⊕ In the short run we will need to rely on gas tax, short run alternatives have their own issues
- ⊕ Subsets such as indexing have value but are limited
- ⊕ Fairness an increasing problem with gas tax

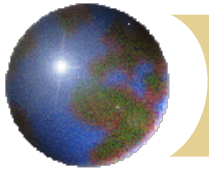


State and Federal Gas Taxes Paid Annually

(taxes per year)	Light Duty Truck (20 mpg)		Passenger Car (30 mpg)		Hybrid (40 mpg)		Electric Vehicle (non-gas powered)	
	State Tax *	Federal Tax **	State Tax *	Federal Tax **	State Tax *	Federal Tax **	State Tax *	Federal Tax **
20,000 miles/year	\$280	\$184	\$187	\$123	\$140	\$92	\$0	\$0
15,000 miles/year	\$210	\$138	\$140	\$92	\$105	\$69	\$0	\$0
10,000 miles/year	\$140	\$92	\$93	\$61	\$70	\$46	\$0	\$0
Equivalent cents/mile	1.40	0.92	0.93	0.61	0.70	0.46	0	0

* Minnesota tax on gasoline is \$0.28 per gallon as of publication.

** Federal tax on gasoline is \$0.184 per gallon as of publication.



Future Revenue Collection

- ⊕ The current U.S. system relies on fuel taxes
- ⊕ We have seen a marked decline in revenues
- ⊕ Two National Commissions have called for short and long-term solutions
- ⊕ MBUF collection systems have come to the forefront of options to consider
- ⊕ States engaged in VMT include: Oregon DOT, Nevada DOT, Washington DOT, Minnesota DOT, Colorado DOT, Texas DOT, North Carolina DOT, Florida DOT, I-95 Coalition, City of New York Department of Transportation

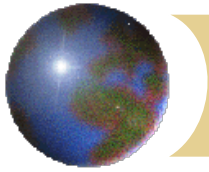
Matrix of Surface Transportation Revenue Options

(All revenue estimates in \$ millions)

Funding Mechanisms	NSTIFC Score*	Mechanism Yield (2012)	Current Rate	Illustrative Rate	Revenues 2011	Avg Revenues 2012-2017	Total Revenues 2012-2017
Existing Mechanisms							
Truck/Trailer Sales Tax Increase	3.665	1% of Sales = \$ 162	N/A	5.0%	\$ 812	\$ 1,359	\$ 8,152
Tire Tax on Light Duty Vehicles	3.640	\$1.00 Fee = \$ 1,862	N/A	\$3.00	\$ 5,585	\$ 5,881	\$ 35,284
Diesel Tax Increase	3.575	1¢/gal = \$ 386	24.4¢/gal	15.0¢	\$ 5,786	\$ 6,226	\$ 37,356
Diesel Tax Indexing	3.575		N/A		\$ -	\$ 585	\$ 3,512
Gas Tax Increase	3.575	1¢/gal = \$ 1,327	18.4¢/gal	10.0¢	\$ 13,272	\$ 13,303	\$ 79,818
Gas Tax Indexing	3.575		N/A		\$ -	\$ 1,370	\$ 8,218
Share of US Customs Revenues	3.540	1% of Receipts = \$ 277	N/A	1.0%	\$ 277	\$ 360	\$ 2,161
Truck Tire Tax Increase	3.365	100% Increase = \$ 346	N/A	10.0%	\$ 35	\$ 45	\$ 270
Annual Registration Fee (Light Duty Vehicles)	3.320	\$1.00 Fee = \$ 248	N/A	\$10.00	\$ 2,482	\$ 2,614	\$ 15,682
Annual Registration Fee (Trucks)	3.320	\$1.00 Fee = \$ 9	N/A	\$15.00	\$ 129	\$ 131	\$ 787
HVUT Increase	3.315	100% Increase = \$ 944	N/A	15.0%	\$ 142	\$ 141	\$ 844
Container Tax	3.300	\$1 per TEU= \$ 391	N/A	\$15.00	\$ 5,866	\$ 6,401	\$ 38,408
Imported Oil Tax	3.270	\$1.00/Bbls = \$ 3,528	N/A	\$1.00	\$ 3,528	\$ 3,528	\$ 21,171
Sales Tax on Diesel	3.250	1.0% of Sales = \$ 850	N/A	10.6%	\$ 9,013	\$ 10,862	\$ 65,172
Sales Tax on Gas	3.250	1.0% of Sales = \$ 3,347	N/A	8.4%	\$ 28,112	\$ 34,108	\$ 204,647
US Freight Bill -- All Modes	3.140	1% of Sales = \$ 7,612	N/A	1.0%	\$ 7,612	\$ 8,452	\$ 50,713
US Freight Bill -- Truck Only	3.140	1% of Sales = \$ 6,608	N/A	1.0%	\$ 6,608	\$ 7,338	\$ 44,028
Sales Tax on New and Used Light Duty Vehicles	3.110	1.0% of Sales = \$ 2,619	N/A	1.0%	\$ 2,619	\$ 2,619	\$ 15,715
Sales Tax on New Light Duty Vehicles	3.110	1.0% of Sales = \$ 1,625	N/A	1.0%	\$ 1,625	\$ 1,625	\$ 9,752
Harbor Maintenance Tax	3.090	0.1% Tax = \$ 1,236	N/A	0.5%	\$ 6,181	\$ 6,745	\$ 40,472
Annual Drivers License Surcharge	2.985	\$1.00 Surcharge = \$ 214	N/A	\$5.00	\$ 1,072	\$ 1,116	\$ 6,694
Dedicated Income Tax - Business	2.940	0.1% of current taxes = \$ 198	N/A	1.0%	\$ 1,984	\$ 4,291	\$ 25,745
Dedicated Income Tax - Personal	2.940	0.1% of current taxes = \$ 956	N/A	1.0%	\$ 9,560	\$ 15,429	\$ 92,576
Sales Tax on Auto-related Parts & Services	2.925	1.0% of Sales = \$ 2,327	N/A	1.0%	\$ 2,327	\$ 2,613	\$ 15,680
Future Potential Mechanisms							
Annual Highway Miles Traveled Fee (All Light Duty Vehicles)**	4.140	1¢/VMT = \$ 6,499	N/A	2.0¢	\$ 12,998	\$ 13,475	\$ 80,851
Annual Highway Miles Traveled Fee (All Trucks)**	4.140	1¢/VMT = \$ 908	N/A	3.0¢	\$ 2,723	\$ 2,823	\$ 16,936
Ton-Mile Freight Charge -- All Modes	2.995	1¢/ton-mile = \$43,497	N/A	0.5¢	\$ 21,748	\$ 24,150	\$ 144,898
Ton-Mile Freight Charge -- Truck Only	2.995	1¢/ton-mile = \$12,731	N/A	0.5¢	\$ 6,365	\$ 7,068	\$ 42,409
Ton Freight Charge -- All Modes	2.855	1¢/ton = \$ 164	N/A	25.0¢	\$ 4,111	\$ 4,565	\$ 27,389
Ton Freight Charge -- Truck Only	2.855	1¢/ton = \$ 113	N/A	25.0¢	\$ 2,835	\$ 3,148	\$ 18,890

* "NSTIFC Score" refers to revenue mechanism evaluations conducted by the National Surface Transportation Infrastructure Financing Commission based on revenue stream, economic efficiency/impact, implementation/administration, and equity considerations.

** VMT fee estimates refer to miles traveled on the Interstate System.



Federal Outlook – Moving Forward

- ✦ In December, Rep. Earl Blumenauer (D-Ore.) introduced a bill (H.R. 6662) that would require the Treasury Department to study the viability of raising new federal highway funds by taxing cars for each mile they drive
- ✦ GAO Report (Dec 2012) : “Mileage Fee Could Be More “Equitable and Efficient” Than Gas Tax”
- ✦ House T&I Committee Chairman Bill Schuster: “There’ll be a shorter-term fix, but longer-term, vehicle miles traveled may be the only way to stop the decline.”
- ✦ Secretary Foxx on Monday: The politics are still a considerable issue, seeing the states experimenting is encouraging.



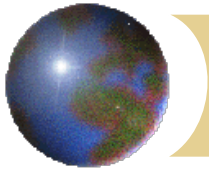
Why is vehicle miles of travel-VMT- the preferred basis for new fee?

- ✦ Fairness—proportional to extent of use.
- ✦ Applies regardless of propulsion source.
- ✦ Will grow along with VMT, as economy and population grow.
- ✦ Should be indexed for inflation.
- ✦ Could be higher for costly highways, lower for local streets & roads (unlike fuel tax).
- ✦ Would restore the original users-pay/users-benefit principle on which fuel taxes used to be based.



VMT charge vs. VMT tax

- ⊕ *VMT charge:*
 - ⊞ Per mile, type of road, vehicle class.
 - ⊞ Basically a 21st-century toll.
 - ⊞ Purpose: to fund highways adequately.
- ⊕ *VMT tax:*
 - ⊞ Per mile, time of day, fuel used, # passengers, GHG emissions, etc.
 - ⊞ Purpose: reduce driving, shift to greener cars, shift freight to rail, fund alternative modes.
- ⊕ DOTs mostly want a highway user fee.
- ⊕ Planners, greens want an anti-driving tax



Technology for metering miles

There are options

- Odometer. Periodic inspections determine fee.
- Simple OBU. On board data collection, with periodic transmission.
- OBU with cellular location. On board determination of jurisdiction of travel.
- OBU with GPS. Fine grained travel data.
- Smartphone application. On board data collection with GPS and cellular communications for metering and reporting.



Privacy

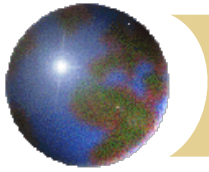
Context of privacy debate has shifted with recent scandals.
Trust is a bigger issue.

Privacy entails both:

- ✦ Protection from government misuse of data
- ✦ Protection against information breaches for malicious intent

Four approaches to privacy can work in concert

- ✦ Tech that does not transmit data other than \$ owed.
- ✦ Using a trusted third party to protect and secure private data
- ✦ Tech where user controls privacy settings
- ✦ Privacy legislation that sets rules and accountability

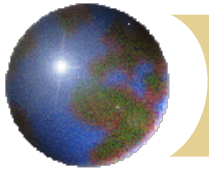


Data Sharing Tradeoffs

Finer grained data from MBUF systems can provide amenities for drivers.

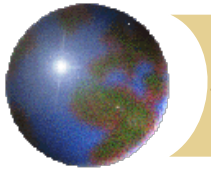
- ❖ Safety features a la OnStar
- ❖ Travel services a la Garmin
- ❖ Connected to toll payment and parking payment systems
- ❖ Hands free communications
- ❖ Pay as you drive auto insurance

At the same time, the system will create data that can be anonymous and valuable to transportation agencies and may lead to trade between agencies and users.



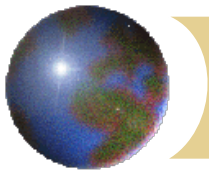
Data Exchange and Money Exchange

- ⊕ How often to collect information on miles?
- ⊕ How often to collect payments?
- ⊕ Roles of public and private entities in managing accounts and collecting payments?
- ⊕ Options for methods of payment?



Enforcement

The system has to include ways of detecting cheaters, clear punishments for evasion or tampering, and means of verification of data and dispute resolution.



Collection Costs

On its face, an MBUF system is more complex and seems likely to be more expensive to collect than current fees and taxes.

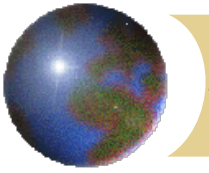
Recent Reason research shows that:

- ✦ The FULL cost of collecting fuel taxes, including indirect and opportunity costs, is at least 5% of revenue
- ✦ The most efficient AET systems have collection costs of about 5% of revenue.



Likely Success Factors

- ✦ Understand contentious issues and address them up front. Build trust.
- ✦ Include choices for participants, so they are in control.
- ✦ Tackle privacy head on involve privacy advocates.
- ✦ Conduct trials and educational outreach. Include elected officials, media, and stakeholders in the trials.
- ✦ Start simple and add on layers over time.
- ✦ Build a system that is flexible and easy to adapt and add on and can integrate with other systems.
- ✦ Involve private sector and use competition



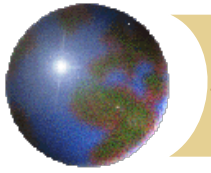
Questions?

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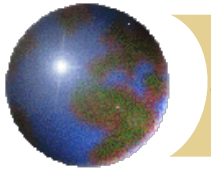
Mileage Based User Fee Association

www.mbufa.org



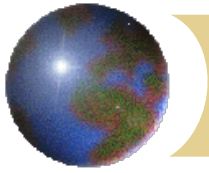
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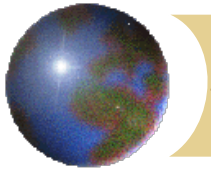
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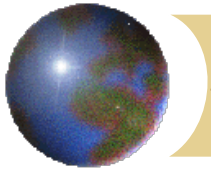
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