Potential Transit and Highway Revenue Options

Symposium on Transportation Long-Range Funding Solutions

June 24, 2009

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Outline

- Scope
- Factors Influencing Transit and Highway Revenues
- Scenarios
- Revenue Options

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Scope

- Primarily State of Minnesota with some Local and Regional considerations

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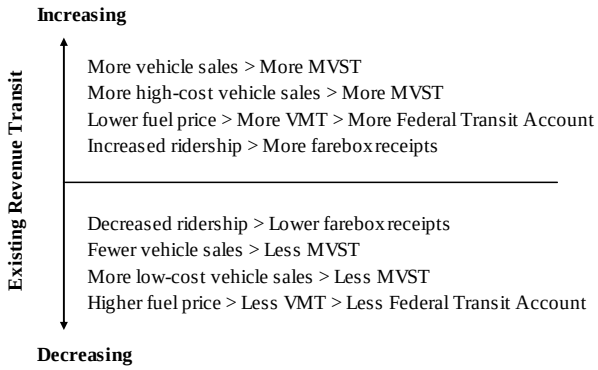
Factors Influencing Transit Revenue under Current Tax Structure



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Transit Revenue/Demand Conundrum under Current Tax Structure

- Increasing fuel price results in:
  - Higher transit ridership, increasing transit capital and operating costs
  - Fewer vehicle purchases, decreasing MVST
  - Lower VMT, reducing Federal Transit Account

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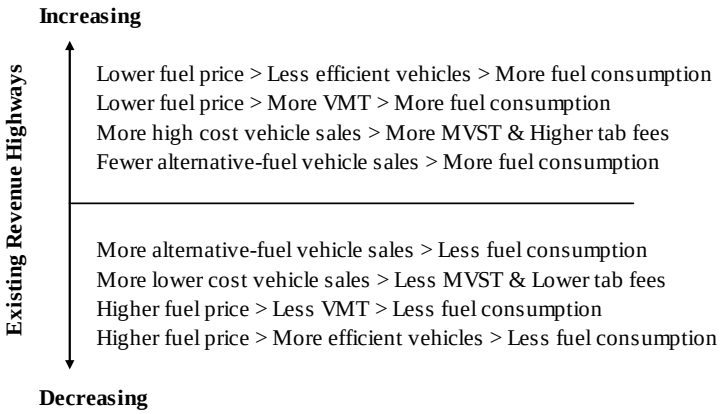
Factors Influencing Highway Revenue under Current Tax Structure



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Scenario: More Electric Vehicles

- Reduced Motor Fuel Tax collections
- Electric vehicles may be more expensive resulting in higher Motor Vehicle Sales Tax and Motor Vehicle Registration Tax collected
- Per year change slow (~6% new vehicles each year)

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Scenario: Higher MPG Vehicles

- Reduced Motor Fuel Tax collections for same VMT
- Less expensive vehicles may result in reduced Motor Vehicle Sales Tax and Motor Vehicle Registration tax collections
- Per year change slow (~6% new vehicles each year)

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Scenario: Lower-cost vehicles

- Reduced total Motor Vehicle Sales Tax
- Reduced total Motor Vehicle Registration Tax

-or-

- May result in more vehicle sales (accelerated fleet turnover)

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Revenue Options

- Significant previous study
  - Local and Regional Funding Mechanisms for Public Transportation, Transit Cooperative Research Program Report No. 129, Transportation Research Board, 2009
  - Transportation for Tomorrow: Report of the National Surface Transportation Policy and Revenue Study Commission, December 2007
  - Future Financing Options to Meet Highway and Transit Needs, National Cooperative Highway Research Program Report No. 20-24(49), December 2006

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Revenue Options

- Desirable Characteristics:
  - Stable
  - Adequate
  - Promotes positive environmental outcomes
  - Equitable
  - Acceptable to Public
  - Technical feasibility
  - Low administrative costs (efficient)

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Organization of Revenue Options Matrix

- Existing Revenue Sources
- Modifications to Existing Revenue Sources
- Potential Revenue Sources
- Other Potential Revenue Sources

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Organization of Revenue Options Matrix (cont.)

- Effect of increase in fuel economy
- Effect of increased availability of alternative modes
- Effect of extreme volatility in fuel prices
- Public acceptance of tax method
- Tax equity
- Geographic applicability
- Ability to alleviate congestion
- Ability to reduce greenhouse gas (GHG) emissions
- Implementation complexity
- Stability of revenue generation method
- Revenue generation potential

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Subjective Evaluation of Existing and Potential Highway and Transit Revenue Sources

Options	Effect of Increase in Fuel Economy		Increased Availability of Alternative Modes		Extreme Fuel Price Volatility		Public Acceptance		Equity		Geographic Applicability		Alleviation of Congestion		Greenhouse Gas Emission Reduction		Implementation Complexity		Stability of Revenue Generation Method		Revenue Generation Potential		Highway Comments	Transit Comments
	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit	Highway	Transit		
Existing Revenue Sources																								
1. Motor Fuel Tax	D		D		D		H		N		State		N		N		L		N		H		Declining fuel use per vehicle given increased fuel economy and alternative fuel vehicles (electric)	
2. Motor Vehicle Sales Tax	D	D	D	D	D	D	H	H	N	N	State	State	N	N	N	N	L	L	L	L	N	N	Current trend is towards smaller, less expensive vehicles	Used for both Greater Min and Metro transit
3. Motor Vehicle Registration Tax	N		D		D		H		P		State		N		N		L		H		H		Vehicle fleet is likely to get older	
4. General Funds		D		D		D		H		N		State		N		N		L		H		N		Used for both Greater Min and Metro transit
5. Local Option Sales Tax		D		D		D		H		R		Local		N		N		L		H		H		Five Metro counties have authorized
6. Property Taxes	N	N	N	N	N	N	H	H	R	R	Local	Local	N	N	N	N	L	L	H	H	H	H	Only as Local participation in State Highways	Local share of Greater Min transit
7. HOT Pricing	N	N	D	D	I	I	H	H	N	N	Corridor	Corridor	H	?	L	?	L	L	N	N	L	L	Tolling excess capacity of HOV lanes	Excess after admin costs to transit
8. Value Capture	N		N		N		N		N		Project		N		N		L		N		L		Only as Local participation in State Highways	
9. Wheelage Tax	N		D		D		N		R		Local		N		N		L		H		L		Generates funds to address local transportation needs	
10. Transit Fare Box Revenue		N		I		I		H		R		Local		?		?		L		H		N		Significant in Metro area transit
Modifications to Existing Revenue Sources																								
11. Indexed Motor Fuel Tax	D		D		N		?		N		State		N		N		L		N		H		Helps with construction inflation but declining (see 1.)	
12. Motor Fuel Sales Tax	D		D		N		?		R		State		N		N		L		N		H		Net increase but same issues as 1.	
13. Motor Vehicle Registration tied to emission level	N		D		D		?		N		State		N		D		L		H		?		Higher GHG emitters pay higher registration tax	
Potential Revenue Sources																								
14. Mileage Based Tax																								
a. Flat rate	N		D		D		?		N		State		N		N		H		H		H		Implement at State or National level	
b. Tiered by emissions level	N		D		D		?		N		State		N		N		H		H		H			
c. Time of day and location (congestion pricing)	N		D		D		?		N		State		H		H		HH		H		H		Complex technology	
d. Indexed to inflation	N		D		D		?		N		State		N		N		H		H		H			
15. Tolling																								
a. Existing Lanes	N		D		D		?		N		Corridor		H		H		N		N		HH		Revenue and reliability focused	
b. New Lanes	N		D		D		?		N		Corridor		H		H		N		N		L		User pays for reliability	
c. Congestion Pricing	N		D		D		?		N		Corridor		H		H		N		N		N		Congestion price signal	
16. General Sales Tax	N	N	N	N	N	N	?	?	R	R	State	State	N	N	N	N	L	L	H	H	?	?	Could dedicate a share to highways or compete (General Fund)	Could dedicate a share to transit
Other Potential Revenue Sources																								
17. Value Capture																								
a. Land Value Tax	N		N		N		?		N		Project		N		N		H		L		N	N		Could also be used for transit projects
b. Tax Increment Financing	N		N		N		?		N		Project		N		N		H		L		N	N		
c. Special Assessments	N		N		N		?		N		Project		N		N		H		L		N	N		
d. Transportation Utility Fees	N		N		N		?		N		Project		N		N		H		L		N	N		
e. Negotiated Exactions	N		N		N		?		N		Project		N		N		H		L		N	N		
f. Developer Impact Fees	N		N		N		?		N		Project		N		N		H		L		N	N		
g. Joint Developments	N		N		N		?		N		Project		N		N		H		L		N	N		
h. Air Rights	N		N		N		?		N		Project		N		N		H		L		N	N		
18. Cap and Trade (skim 10% for Transit)										N		State					H	H		N		?	Declining revenue as emissions decrease	
19. Low Carbon Fuel Standard (life cycle)										N	State	State					H	H	?	?	?	?	Implement at State or National level	Complicated to measure
20. Cordon Pricing	N		D		D		L		R	R	Local		H		H		H	H	N	N	L	L		
21. Advertising Revenue		N		N		N		H		N		Local		N		N		L		L		L		Not a significant revenue source
22. Concession Revenue		N		N		N		H		N		Local		N		N		L		L		L		Not a significant revenue source

I = Increases N = Neutral D = Decreases P = Progressive R = Regressive H = High N = Neutral Lr Low

Study of Transportation Long-Range Funding Solutions DRAFT June 22, 2009

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Existing
1. Motor Fuel Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		Increasing fuel economy, availability of alternative modes, and fuel price volatility all tend to reduce revenue.
Acceptance, Equity	Used since 1920s with periodic rate adjustments.	Regressive tax. Historically difficult to raise rate.
Congestion, GHG Emission	Higher consumer (GHG emitter) pays more tax.	No connection to congestion.
Complexity, Stability, Revenue Gen	Simple and established collection.	Revenue growth dependent on increased consumption. No inflation adjustment.

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Existing
2. Motor Vehicle Sales Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Auto oriented development patterns ensure mode split that favors autos.	Increased use of alternative modes may reduce auto sales.
Acceptance, Equity	Same rate paid regardless of vehicle value.	General aversion to new taxes. Same rate paid regardless of vehicle value.
Congestion, GHG Emission		No connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen	High yield during good economy.	Revenue tracks general economy. Future smaller, less costly vehicles may be less expensive.

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Existing
3. Vehicle Registration Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		Increased use of alternative modes may reduce auto sales.
Acceptance, Equity	Familiar. Generally accepted.	Based on value of vehicle.
Congestion, GHG Emission		No connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen	Easy to administer. More stable and predictable due to slow change in fleet.	Predictable but declining.

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Existing
4. General Funds

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity		Competes with other needs such as education, health care, etc.
Congestion, GHG Emission	Higher General Fund investment in transit may increase ridership reducing both congestion and GHG emissions.	
Complexity, Stability, Revenue Gen	Relatively stable and predictable.	Tax code complex. Subject to change by legislation.

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Existing
5. Local Option Sales Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	Implemented at Local (County) level so fair acceptance. Available in all counties (not implemented in all).	General aversion to taxes. Everyone pays same tax rate.
Congestion, GHG Emission	Revenues currently directed to transit so tends to reduce both congestion and GHG emissions.	No direct connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen		Sensitive to general economy.

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Existing
6. Property Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	Generally accepted.	Difficult to increase.
Congestion, GHG Emission		
Complexity, Stability, Revenue Gen	Stable and generally predictable.	

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Existing
7. HOT Pricing

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		Increased transit and car pool use decrease space for toll customers
Acceptance, Equity	Modest, but loyal customer base.	Regressive in that everyone pays same toll.
Congestion, GHG Emission	Price tied to HOT lane demand (Congestion Pricing). Toll payer receives near real time congestion price signal.	
Complexity, Stability, Revenue Gen	Stable thus far (only a few years experience).	Complex to operate. Revenue generation pays for operation only.

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Existing
8. Value Capture

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	Benefit (TIF) districts target specific beneficiaries.	Can divert local revenues from other needs.
Congestion, GHG Emission	Can be used for Transit Oriented Development	No connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen	Generate part of funding for specific projects.	Complex. Project specific. No statewide application.

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Existing
9. Wheelage Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	Implemented at Local (County) level so fair acceptance.	Regressive. All vehicles pay the same amount.
Congestion, GHG Emission		No connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen	Collected with State Vehicle Registration Tax. Stable in tied to number of registered vehicles.	Modest amount currently authorized for counties.

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Existing
10. Transit Fare Box Revenue

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Increased availability may increase ridership.	Increased fuel economy may reduce transit ridership.
Acceptance, Equity	Well accepted.	Everyone pays the same fare.
Congestion, GHG Emission	Increased ridership reduces congestion and GHG emissions.	
Complexity, Stability, Revenue Gen	Simple, tracks ridership.	Ridership fluctuation. Fare increases.

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Modified Existing
11. Indexed Motor Fuel Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Tracks fuel price increases.	Tracks fuel price decreases.
Acceptance, Equity		Marginal public acceptance where used.
Congestion, GHG Emission	Higher consumer (GHG emitter) pays more tax.	
Complexity, Stability, Revenue Gen	Collection system in place.	Less stable. Rates and revenues change more rapidly.

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Modified Existing
12. Motor Fuel Sales Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Increased travel results in increased revenue.	Increased fuel economy will reduce revenues.
Acceptance, Equity		Amplifies retail price volatility. Regressive.
Congestion, GHG Emission		Not tied to congestion or GHG emission.
Complexity, Stability, Revenue Gen	Psuedo indexed. Revenue increases as fuel price increases.	Less stable. Rates and revenues can change rapidly with wholesale fuel price.

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Modified Existing
13. Vehicle Registration Tax (by emission level)

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	All vehicles pay.	Availability of alternative modes may shrink total number of vehicles over time.
Acceptance, Equity		Lower emission vehicles may be more expensive.
Congestion, GHG Emission	Strong GHG emission price signal.	Not likely to influence congestion.
Complexity, Stability, Revenue Gen	Easy to administer. More stable and predictable due to slow change in fleet.	

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Potential Sources
14a. Mileage Based Tax (flat rate)

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Immune to fuel economy changes.	Alternative mode availability and fuel price volatility may reduce VMT.
Acceptance, Equity	Likely to be phased in with new vehicles (slow changeover).	Public resistance to change? New winners and losers. Out-of-state travel.
Congestion, GHG Emission		Not tied to congestion or GHG emission.
Complexity, Stability, Revenue Gen	Could be as simple as an annual odometer reading. As stable as motor fuel.	Will require new collection method(s). Significant administration costs.

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Potential Sources
14b. Mileage Based Tax (emission level)

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Immune to fuel economy changes.	
Acceptance, Equity		
Congestion, GHG Emission	Good GHG signal to driver.	No congestion price signal.
Complexity, Stability, Revenue Gen		Will require new collection method(s). Complex.

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Potential Sources
14c. Mileage Based Tax (time and location)

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Immune to fuel economy changes.	Might increase use of alternative modes and reduce revenues.
Acceptance, Equity	Simple to understand.	Privacy concerns.
Congestion, GHG Emission	Strong congestion price signal. May result in lower VMT and lower congestion and GHG emissions.	
Complexity, Stability, Revenue Gen	Could generate sufficient revenue and repalce the existing motor fuel tax.	Most complex of Mileage Based options.

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Potential Sources
15a. Tolling Existing Lanes

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	MnPASS successful.	Take away. Already paid for.
Congestion, GHG Emission	Tends to reduce travel therefore reduces congestion and GHG emissions	
Complexity, Stability, Revenue Gen		

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Potential Sources
15b. Tolling New Lanes

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	Better accepted than existing lanes.	
Congestion, GHG Emission		
Complexity, Stability, Revenue Gen		May not generate significant revenue.

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Potential Sources
15c. Tolling Congestion Pricing

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	MnPASS successful.	Only applicable / practical in congested areas (Twin Cities).
Congestion, GHG Emission	Good congestion price signal.	
Complexity, Stability, Revenue Gen		Complex to administer. Price signal may reduce VMT / revenue.

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Potential Sources
16. General Sales Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		High fuel prices may reduce other spending.
Acceptance, Equity	Generally accepted.	Regressive tax.
Congestion, GHG Emission		No connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen	Administratively simple.	Revenues track with overall economy.

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Other Potential Sources
17a. Value Capture - Land Value Tax

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity		
Congestion, GHG Emission	May encourage denser more compact development (less travel)	No connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen		Modest potential for Local revenue generation.

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Other Potential Sources
17d. Value Capture – Transportation Utility Fees

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol		
Acceptance, Equity	Already in use for stormwater.	Not currently authorized in Minnesota.
Congestion, GHG Emission		No direct connection to congestion or GHG emissions.
Complexity, Stability, Revenue Gen	Rate tied to trip generation.	Modest potential for Local revenue generation.

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Other Potential Sources
18. Cap and Trade (Skim 10% for Transit)

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	May accelerate availability of alternative modes.	
Acceptance, Equity		Revenue source is non-transportation (electric generation and industrial).
Congestion, GHG Emission	Reduces GHG emissions from non-transportation sources and thru shifts to alternative modes.	
Complexity, Stability, Revenue Gen		Revenue stability unclear. Zero revenue if completely successful. Complex to implement.

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Other Potential Sources
19. Low Carbon Fuel Standard (Life Cycle)

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Encourgages fuel economy	Fuel user has limited control over fuel source.
Acceptance, Equity		
Congestion, GHG Emission	Should reduce GHG emissions	
Complexity, Stability, Revenue Gen		Complex. Stability not clear.

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Other Potential Sources
20. Cordon Pricing

Factors	Pros	Cons
Fuel Econ, Alt Mode Avail, Fuel Price Vol	Encourages alternative mode use.	
Acceptance, Equity		
Congestion, GHG Emission	Strong congestion price signal	No connection to GHG emissions.
Complexity, Stability, Revenue Gen		

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Conclusions

- Broad and growing range of revenue options available
- Some better suited to achieving specific goals
- May take multiple options to cover all goals

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Next Steps

- Policymakers establish goals
- Technical folks develop approach(es) to meeting established goals

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