

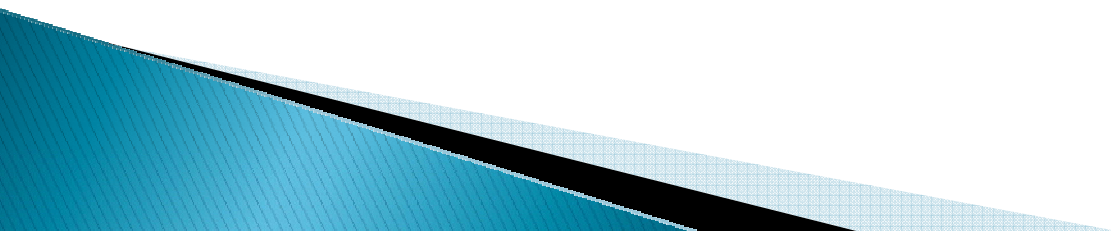
# Policy Options for Truck User Charging

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# Outline

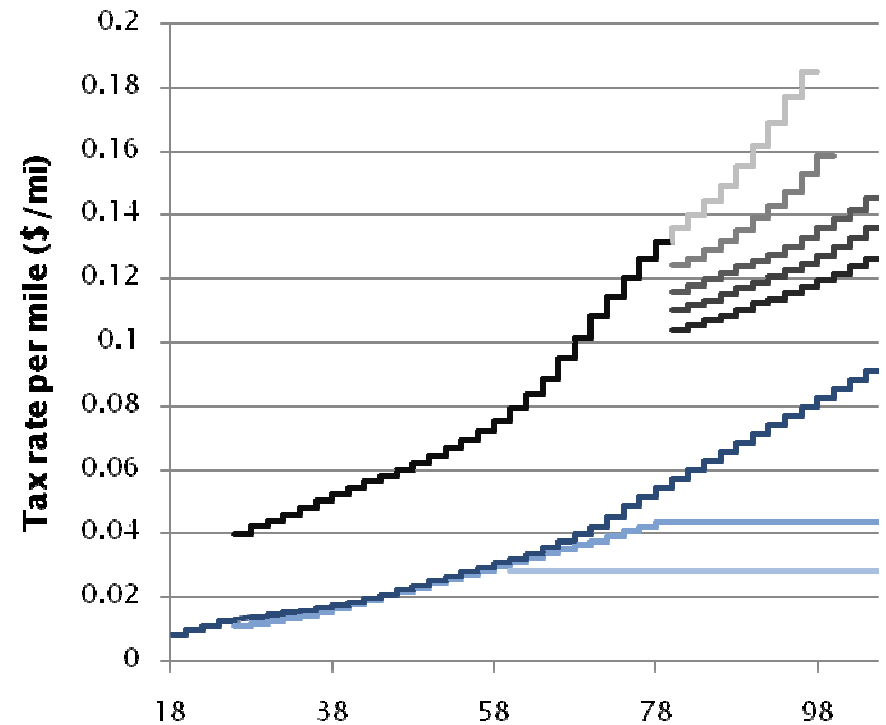
- ▶ Current US User Fees
  - ▶ Recent US Policy Changes
  - ▶ Advanced Charging Mechanisms in the US
  - ▶ Recent EU Policy Changes
  - ▶ International Charging Mechanisms
  - ▶ Conclusions
- 

# US Federal User Fees

Type of Tax	Rate
<b>Fuel Taxes</b>	
Gasoline	18.4 cents per gallon
Diesel and Kerosene Fuel	24.4 cents per gallon
Liquefied Petroleum Gas	13.6 cents per gallon
Liquefied Natural Gas	11.9 cents per gallon
Other Special Fuels	18.4 cents per gallon
Neat Alcohol	9.25 cents per gallon
Compressed Natural Gas	4.3 cents per gallon
<b>Sales Taxes</b>	
<b>Tires sold by manufacturers, producers, or importers</b>	
Bias Ply or Super Single Tires	4.725 cents per 10 lbs of maximum rated load capacity over 3.5 kips
All Other Tires	9.45 cents per 10 lbs of maximum rated load capacity over 3.5 kips
<b>Trucks, Tractors, and Trailers</b>	
Tractors and Trucks	12 percent of retailer's sales price on tractors and trucks over 33 kips GVW
Trailers	12 percent of retailer's sales price on trailers over 26 kips GVW
<b>Annual Tax</b>	
<b>Heavy Vehicle Use Tax</b>	
Trucks 55 to 75 kips GVW	\$100 plus \$22 per kip (or fraction thereof) over 55 kips
Trucks over 75 kips GVW	\$550

# State User Fees

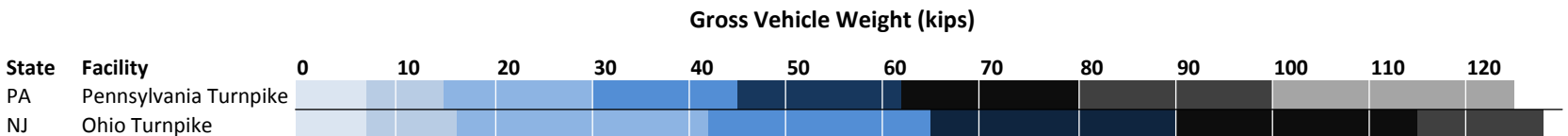
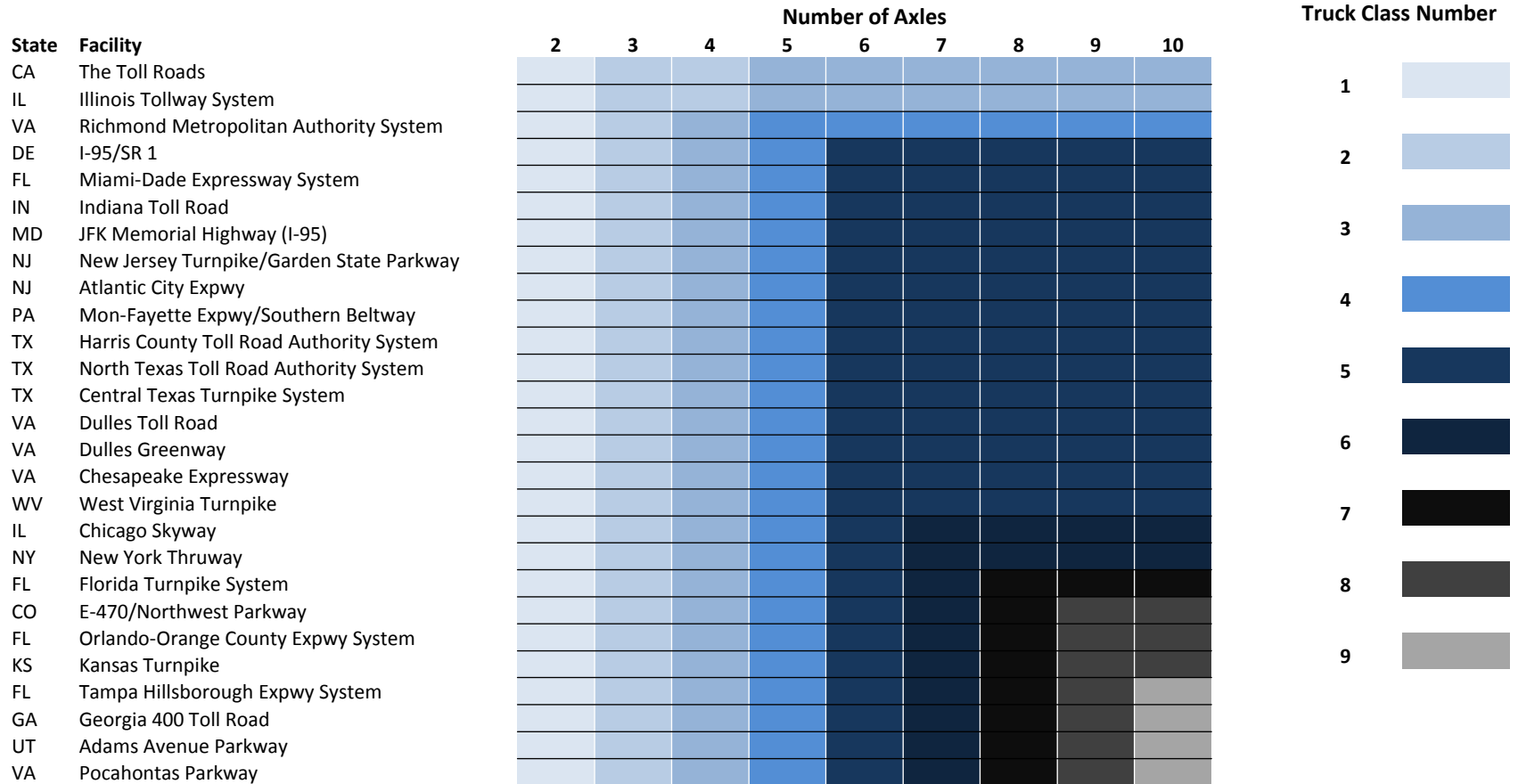
- ▶ Fuel Taxes
- ▶ Registration Fees
- ▶ Fixed Rate Permits
- ▶ Vehicle-Mile Taxes

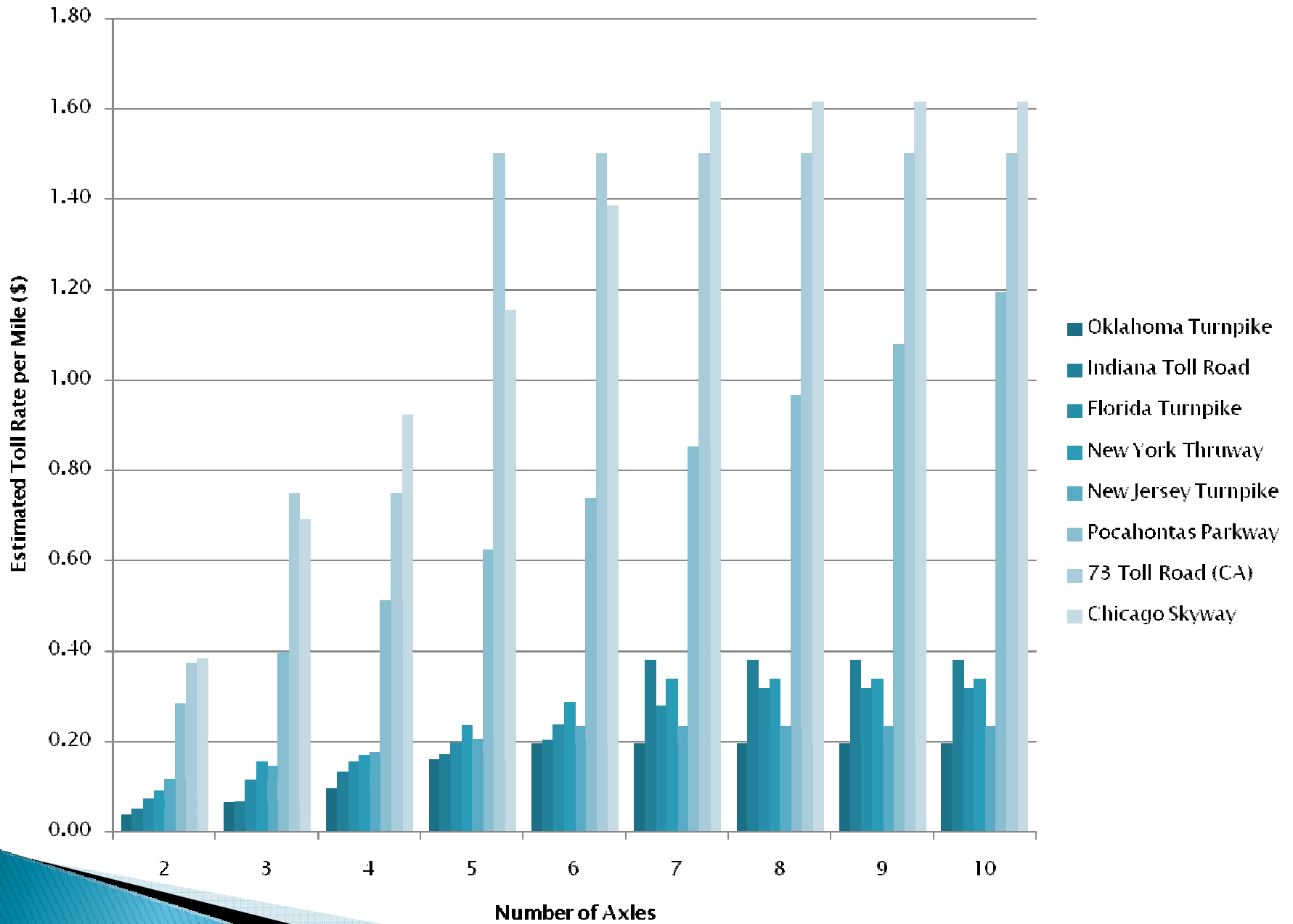


## Gross Vehicle Weight (kips)

- Kentucky HUL
- New Mexico WDT
- New York HUT
- Oregon HUT, All Trucks
- Oregon HUT, 5 Axle Trucks
- Oregon HUT, 6 Axle Trucks
- Oregon HUT, 7 Axle Trucks
- Oregon HUT, 8 Axle Trucks
- Oregon HUT, 9 Axle Trucks

# US Toll Road Rate Structures





# US Policy

- ▶ SAFETEA–LU provisions for increased tolling and technology testing
  - Washington, Oregon, Iowa VMT Studies
  - National Surface Transportation Policy and Revenue Study Commission
    - Cost–based pricing
    - Replace gas tax with distance–based fee
    - Cost should reflect consumption for heavy vehicles
- ▶ Toll Road/Express Lane/HOT Lane construction and PPPs at state and local level

# Advanced Charging Mechanisms

## Facility

### Toll Roads with Variable Truck Rates

Chicago Skyway  
Illinois Tollway  
New York Thruway

### Toll Roads with High Speed ETC

### Dynamically Tolled HOT/Express Lanes

### US Open Toll Roads

SH 121 (TX)  
Loop 49 (TX)

### International Open Toll Roads

Santiago System  
Toronto 407  
Trans-Israel Highway  
Melbourne CityLink

## Truck Classes

Number-of-Axles, Discounted Overnight  
Number-of-Axles, Discounted Overnight  
Number-of-Axles, "Incentivized pricing"

Number-of-Axles

Currently No Trucks

Number-of-Axles  
Single Unit or Multi-Unit Trucks

Single Unit or Multi-Unit Trucks  
Single Unit or Multi-Unit Trucks  
Single Unit or Multi-Unit Trucks  
Light Trucks (< 4500 kg), Heavy Trucks



# EU Policy (Trans-European Network)

## ▶ Directive 1999/62/EC

- User charges “shall be in proportion to the duration of the use made of the infrastructure”
- “Weighted average tolls shall be related to the cost of constructing, operating, and developing the infrastructure network concerned”
- Rates can vary by emissions class or time-of-day

## ▶ Directive 2006/38/EC

- “Tolls shall be based on the principle of the **recovery of infrastructure costs only**. Specifically the weighted average tolls shall be related to the construction costs and the costs of operating, maintaining, and developing the infrastructure network concerned. The weighted average tolls may also include a return on capital or profit margin based on market conditions.”
- Also allows rate variations for “combating environmental damage, tackling congestion, minimising infrastructure damage, optimising the use of the infrastructure concerned, or promoting road safety.”
- Prohibits excess revenues
- Requires use of emissions criteria by 2010

# Congestion Charges

	Bergen	London	Oslo	Singapore	Stockholm
<b>Rate Variables</b>					
GVW	X		X	X	
# Axles					
Vehicle Type					
Distance					
Time of Day	X	X	X	X	X
Emissions Class					
Duration					
<b>Policy Goals</b>					
Improve Access	X	X	X	X	X
Reduce Congestion	X	X	X	X	X
Improve Multi-Modal Efficiency	X	X	X	X	X
Charge External Users	X	X	X		X
Recover Truck Costs					
Improve Environment	X	X	X	X	X

# Emissions Charges

	London	Milan
<b>Rate Variables</b>		
GVW	Min	
# Axles		
Vehicle Type		
Distance		
Time of Day		X
Emissions Class	X	X
Duration		
<b>Policy Goals</b>		
Improve Access		
Reduce Congestion		X
Improve Multi-Modal Efficiency		X
Charge External Users		
Recover Truck Costs		
Improve Environment	X	X

# Time-Based Vignettes

Bulgaria Eurovignette Poland Romania Slovakia

## Rate Variables

GVW	Min	Min	X	X	X
# Axles	X	X		X	
Vehicle Type					
Distance					
Time of Day					
Emissions Class			X	X	
Duration	X	X	X	X	X

## Policy Goals

Improve Access					
Reduce Congestion					
Improve Multi-Modal Efficiency					
Charge External Users	X	X	X	X	X
Recover Truck Costs	X	X	X	X	X
Improve Environment			X	X	

# Weight-Distance Charges

	Austria	Czech Republic	Germany	Switzerland
<b>Rate Variables</b>				
GVW	Min	Min	Min	X
# Axles	X	X	X	
Vehicle Type				
Distance	X	X	X	X
Time of Day				
Emissions Class		X	X	X
Duration				
<b>Policy Goals</b>				
Improve Access				
Reduce Congestion				
Improve Multi-Modal Efficiency	X	X	X	X
Charge External Users	X	X	X	X
Recover Truck Costs	X	X	X	X
Improve Environment		X	X	X

# Conclusions

- ▶ Policy changes in US and EU indicate shift toward cost-based pricing
  - ▶ Real-time data collection technologically feasible
    - Axle weights and distances
    - Traffic conditions
    - Emissions
  - ▶ Many challenges to real implementation exist
    - Additional necessary changes in policy
    - Privacy concerns
    - Structuring pricing to reflect variables necessary for policy goals while remaining transparent
  - ▶ Pricing as a tool to meet industry needs should be further explored
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# Questions?

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