

The Private Sector's Growing Role in Highway Infrastructure

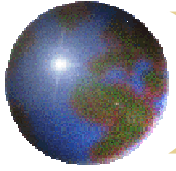
by

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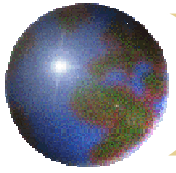
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Overview of Presentation

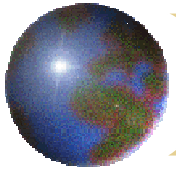
- ✚ Why *finance* highway development?
- ✚ What does the private sector have to offer?
- ✚ Growth of highway privatization
- ✚ Future prospects



1. Why Finance

Highway Development?

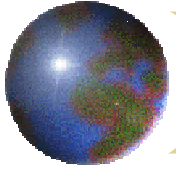
- ❖ Fairness: those who benefit from the roadway pay for it as they use it, over its useful life.
- ❖ Benefits sooner: needed projects put into service years or decades sooner.
- ❖ Backlog catch-up: excellent way to catch up with unmet needs.



GAO on toll finance's advantages:

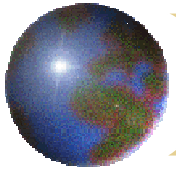
- ✚ Provides new revenues;
- ✚ Promotes more effective investment strategies;
- ✚ Better targets spending for new and expanded capacity;
- ✚ Leverages existing revenue sources, via private-sector investment.

Source: GAO-06-554, June 2006



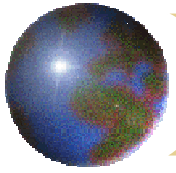
Major Funding Shortfall

- **FHWA Conditions and Performance Report, every 2 years**
- **Latest one (2004) shows the following:**
 - **Annual capital spending: \$68 billion**
 - **Investment needed to maintain asset value: \$74 billion (\$6B/year shortfall)**
 - **Investment needed to maintain performance: \$119 billion (\$51B/year shortfall)**



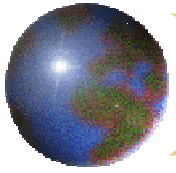
Key part of the backlog: more urban capacity to reduce congestion

- Traffic congestion costs America \$168 billion per year (US DOT Chief Economist).
- New Reason Foundation study:
 - What would it take to eliminate all severe (LOS F) congestion by 2030, via expanded urban capacity?
- Findings:
 - Need 104,000 new lane-miles;
 - Cost totals \$533 billion (over 25 years);
 - Equals 10-15% of already planned highway spending.



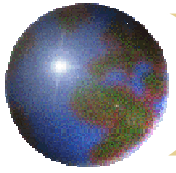
Types of projects needed for urban congestion relief

- HOT lanes
- Express toll lanes
- HOT/Bus Express Toll Networks
- Missing links in freeway system
- New suburban toll roads, where growth is occurring



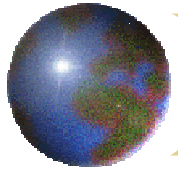
Another major need is goods movement projects

- ❖ Two types of toll truckway project:
 - ❑ Short-haul port connectors.
 - ❑ Long-haul, multi-state corridors.
- ❖ Truckers seem willing to pay for:
 - ❑ More “turns”/shift in short-haul setting.
 - ❑ Greater payloads in long-haul setting.
- ❖ Keys to trucking industry support:
 - ❑ Voluntary usage.
 - ❑ Value-added, in exchange for tolls.



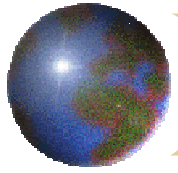
2. What does the private sector have to offer?

- Why not just use public toll authorities?
- Private concession model offers:
 - Large pool of new capital
 - Ability to raise more for a given project
 - Risk transfer
 - Multi-state potential
 - More commercial approach
 - Innovation



New sources of capital:

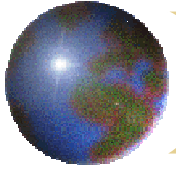
- Taxable debt market
- Bank financing
- Equity
 - Corporate/sponsor equity
 - Public share offerings
- Institutional investors (pension funds, insurance companies, buyout firms)



Large sums in recent transactions:

- ❖ 1999 IPOs of Autostrade (\$6.7B) and BRISA (\$2B)
- ❖ 1999: Toronto 407 (\$2B)
- ❖ 2003: ENA (\$1.8B), Spain
- ❖ 2004: Chicago Skyway (\$1.8B)
- ❖ 2005: 3 French toll firms (\$17.8B)
- ❖ 2006: Indiana Toll Road (\$3.8B)

Plus, *over \$25B* in proposed new PPP toll roads.



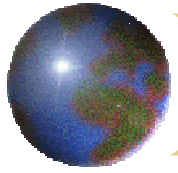
*Concessions can raise more funding
from a given toll revenue stream:*

Traditional toll agency finance:

- ❑ 30-year tax-exempt bonds
- ❑ Stringent coverage ratios

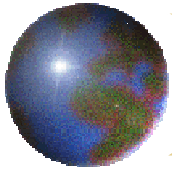
Global toll finance model:

- ❑ Equity
- ❑ Bank loans
- ❑ Taxable long-term debt
- ❑ Depreciation benefits

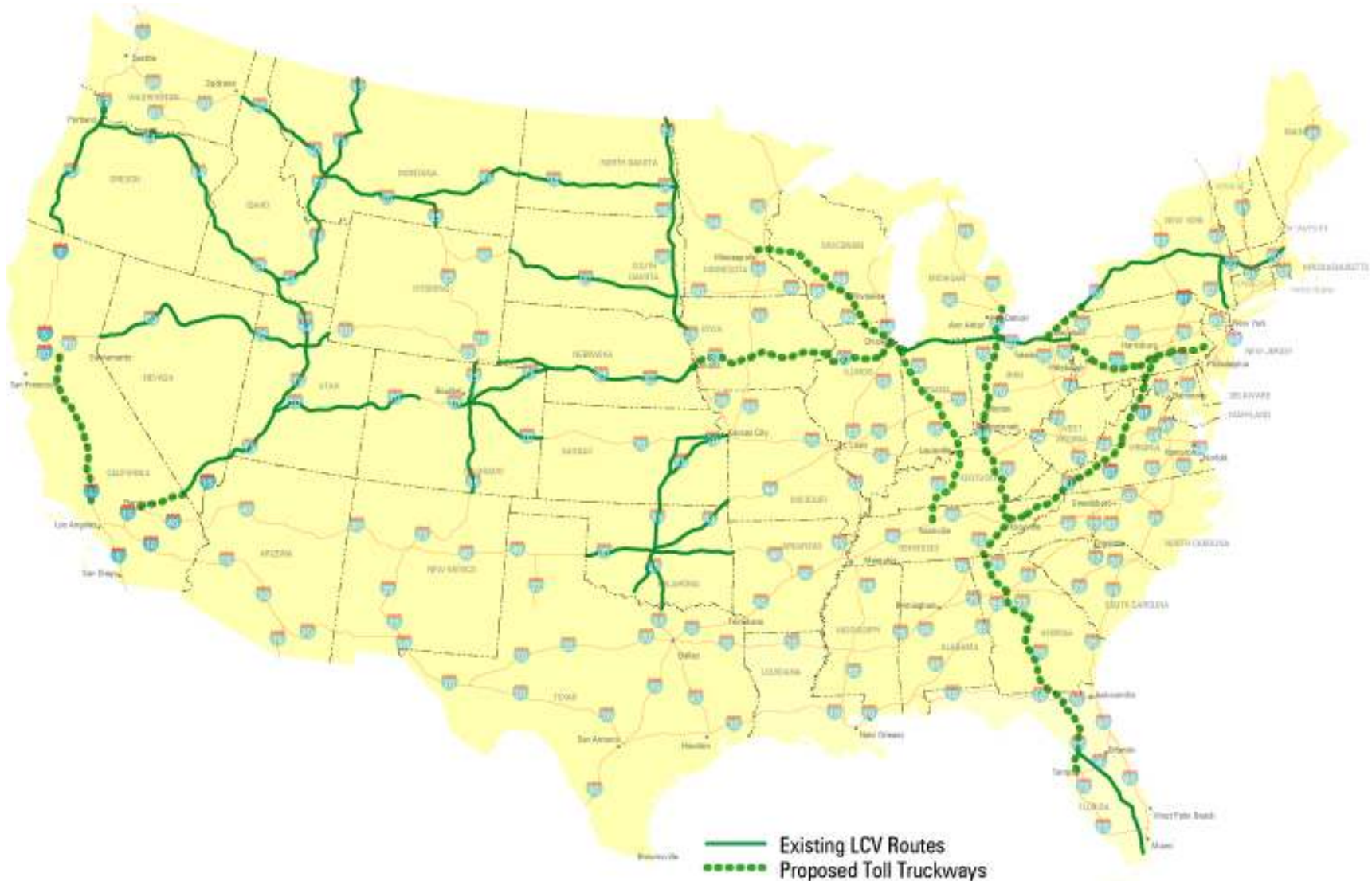


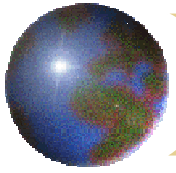
Risk transfer (from taxpayers to investors)

	Traditional	Long-Term PPP
Funding Source	Highway trust funds	Toll revenue bonds, equity
Procurement Process	Design-Bid-Build	Design-Finance-Build-Operate
Cost Overruns?	Taxpayers	Investors
Schedule Slips?	Drivers	Investors
Traffic Risk?	Taxpayers	Investors
Maintenance Funds	Annual appropriations	Toll revenues
Maintenance Incentive	Public complaints	Asset value



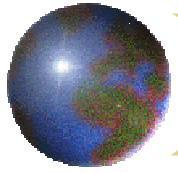
Multi-state projects (toll truckways)





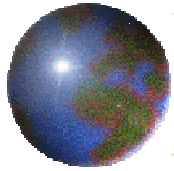
A more commercial approach:

- ✚ Replacing patronage with professionals
- ✚ Unlocking in-house talent
- ✚ Paying for top talent
- ✚ Controlling costs
- ✚ Integrating new technology (ideal fit for ITS)

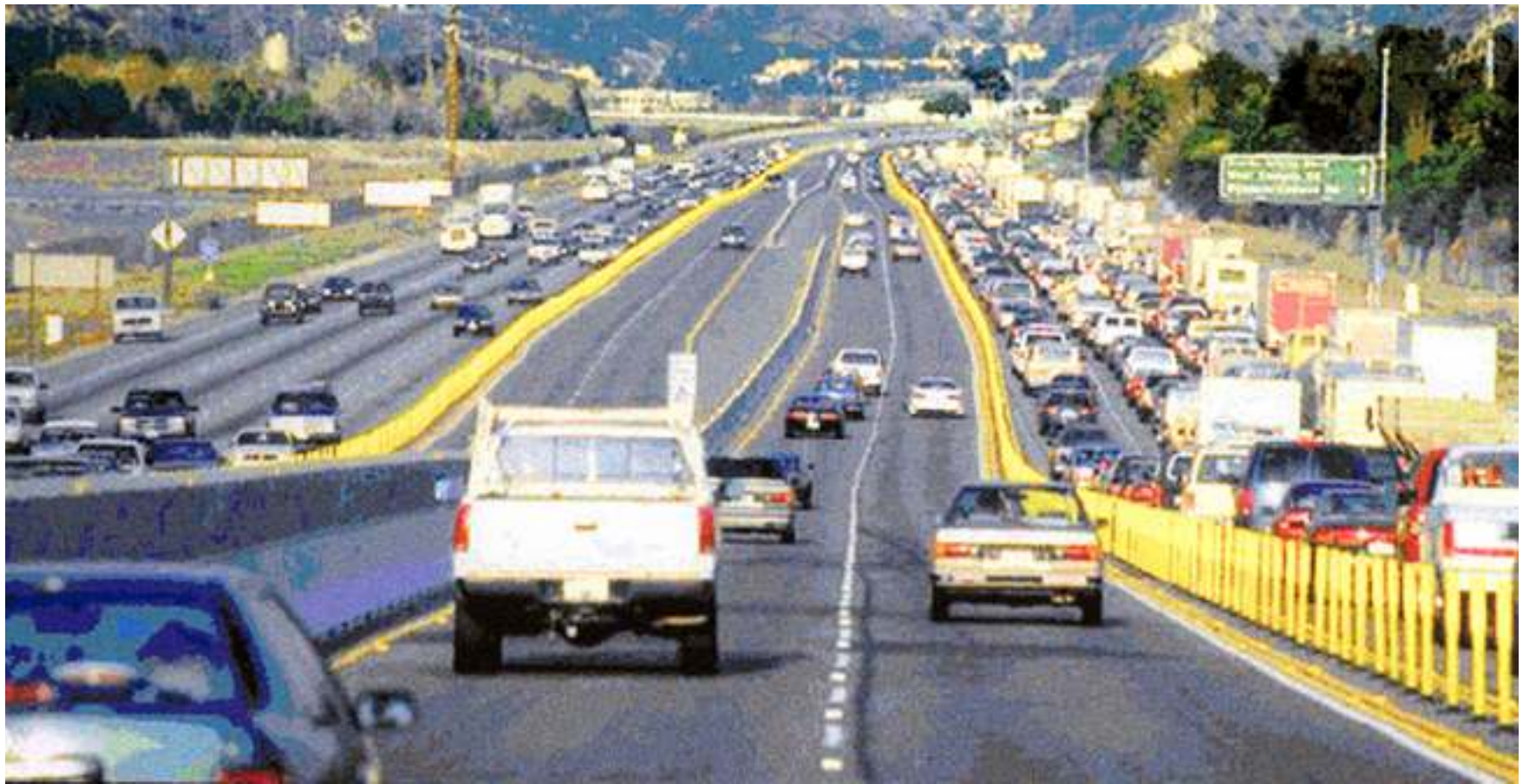


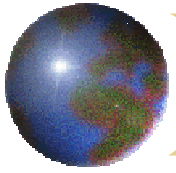
Innovation to solve difficult problems

- ✚ Value pricing (91 Express Lanes)
- ✚ Value engineering (Beltway HOT lanes)
- ✚ Missing links (A86 tunnel)
- ✚ Elevated expansion (Tampa)
- ✚ Noise solutions (CityLink)



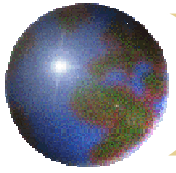
*91 Express Lanes,
Orange County, California*





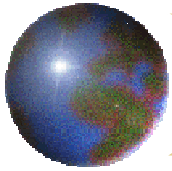
Value-engineering the Washington, DC Beltway HOT Lanes

- VDOT plan to add 2 lanes each way to SW portion of Beltway: \$3B, opposition
- Private concession proposal:
 - Eliminated a pair of breakdown lanes
 - Reduced number of access points
 - Replaced Jersey barriers with pylons
 - Slashed number of property takes
- Bottom line: \$1B + community support

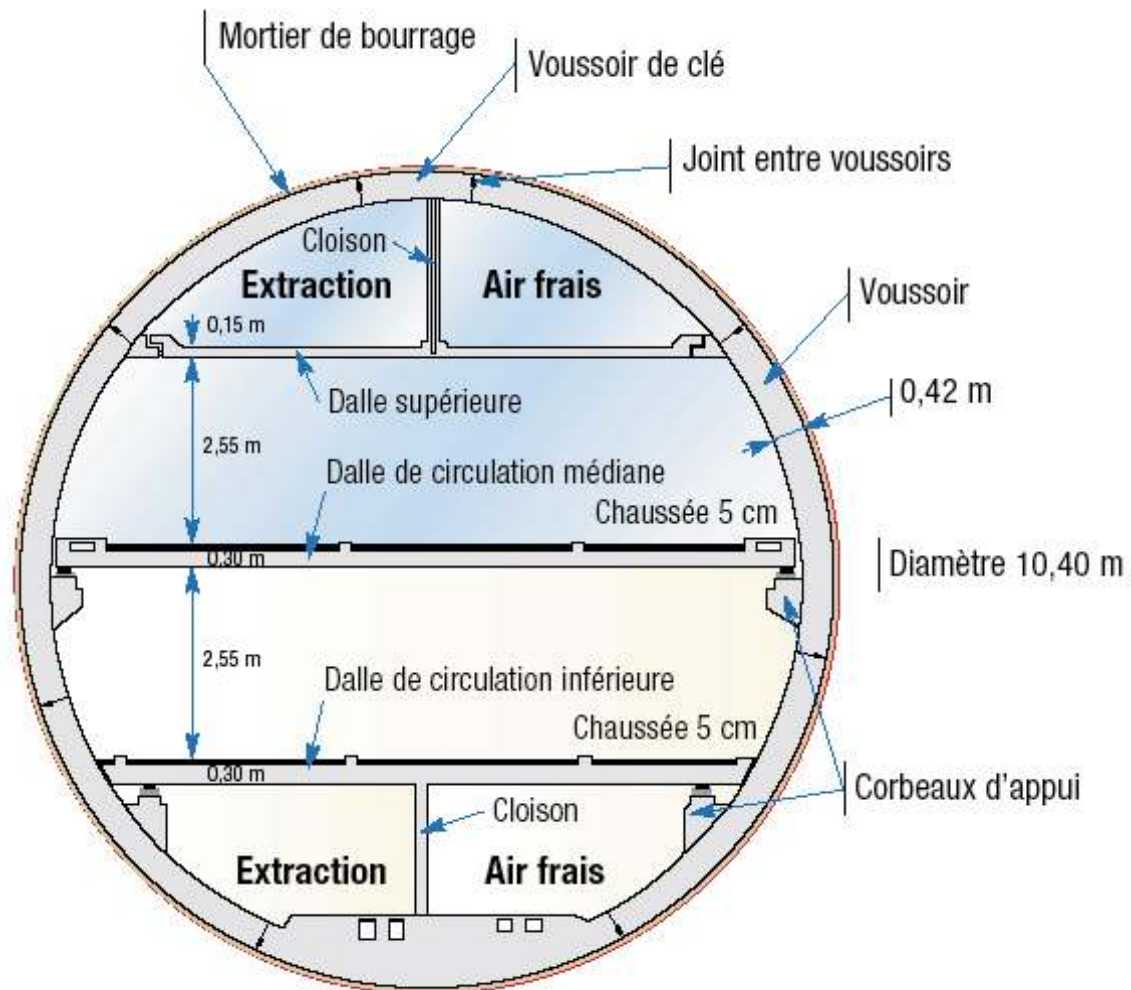


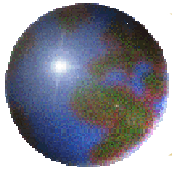
Missing Link on Paris A-86 Ring Road: Toll Tunnels





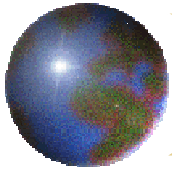
Double-Deck, Cars-Only Tunnel Slashes Cost





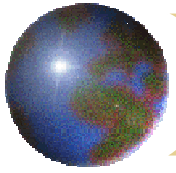
Tampa's elevated express toll lanes





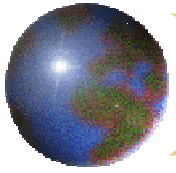
Elevated Tollway with Sound Tube (Melbourne)





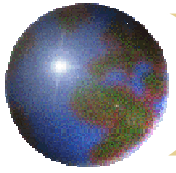
3. Long history of private concessions

- ✿ UK and US pre-automobile (turnpikes)
- ✿ Pre-WW2 toll bridges (Detroit, SF Bay)
- ✿ Post WW2 Europe toll motorways:
 - ▣ France
 - ▣ Italy
 - ▣ Spain
 - ▣ Portugal



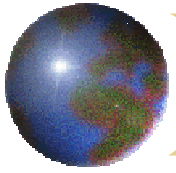
1990s renaissance:

- ✿ Australia's urban toll motorways
- ✿ Mexico and South American toll highways
- ✿ 91 Express (CA) and Dulles Greenway (VA)
- ✿ Nearly 2 dozen state enabling laws by 2006 (about 6 really workable ones)



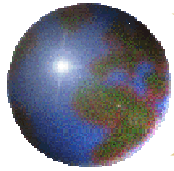
Early 21st century developments

- ❖ Long-term leases of existing tollways
 - ❑ Chicago Skyway, Indiana Toll Road, Pocahontas Parkway, maybe others
- ❖ TTC-35 proposal in TX (\$7.2B)
- ❖ Large-scale toll/PPP efforts in FL, GA, TX, VA, perhaps others.
- ❖ New tools in SAFETEA-LU



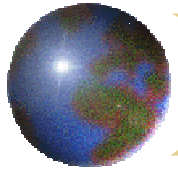
4. Possible Future: Highways as Investor-Owned Utilities

- ❖ Limited-access roadways easy to toll.
- ❖ Fuel tax viability in long-term decline.
- ❖ Need for major post-Interstate investments:
 - ❑ HOT/Bus Networks in urban areas
 - ❑ Toll truckway system for long-haul corridors



Telecoms vs. Highways: A Provocative Comparison

	Telecom System	Highway System
Structure	Interconnected network, multiple providers	Interconnected network multiple providers
Ownership	Private sector investors	Public sector
Revenues	User charges	User taxes
Investment criteria	Return on investment	Political process
Pricing	Demand-based	Virtually non-existent
Response to congestion	Raise price, add capacity	Discourage use
Incentive for maintenance	Risk of decline in asset value	When appropriations permit
Response to new technology	Entrepreneurial	Cautious



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