The Freight Shuttle System: Automated-Secure Trade a Privately-Financed Freight Transportation Option

Committee on International Trade And Intergovernmental Affairs

March 22, 2013
The Freight Shuttle System

- **Current Cross-border Transportation Challenges:**
  - Congestion and Managing Uncertainty
  - Security and Risk Management
  - Capacity – Need for Greater Productivity
  - Regional Air Quality
  - Rising Transport Costs
The Freight Shuttle System
The Freight Shuttle System

- **Automated Freight Shuttles**
  - Hybrid system; best features of truck and rail
  - Single-container transports
  - Steel-on-steel
  - Linear induction motors (LIMs)
  - Dedicated, small footprint guide way
  - To be built within existing highway ROW

24/7 operations offer an option that may overcome throughput, capacity, and impact issues affecting freight transportation
Port of Entry Security
Secure Trade with the Freight Shuttle System

FEATURES:
• 10-mile System
• Serving Regional Manufacturing
• Eliminate Border Wait Times
• Lower Total Costs

El Paso

Zaragoza Bridge

Ciudad Juarez
Parallel Scanning Stations Allow for 100% Inspection Using High-Energy Scanning Equipment
Freight Shuttle System Business Model

- **Shippers**
  - Lower Cost of Goods

- **Public Sector**
  - Reduced Road Maintenance
  - Lower Congestion
  - Improved Safety
  - Cleaner Air

- **DOT**
  - Lease Fees
  - ROW Leasing

- **Private Investors**
  - ROI
  - Investment

- **Benefit Stream**
  - Financial Flow
  - Transactions

- **Transportation Fees**

Lower Cost – Higher Performance Transportation Service
HDD Truck vs. FSS (per VMT comparison)

$\text{NO}_x$

<table>
<thead>
<tr>
<th></th>
<th>Freight Shuttle</th>
<th>Heavy-Duty Diesel Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x} Generated Per VMT</td>
<td>2.35%</td>
<td>100.00%</td>
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Cruise Energy

<table>
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</thead>
<tbody>
<tr>
<td>Cruise Energy Per VMT</td>
<td>35.93%</td>
<td>100.00%</td>
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Note: NO\textsubscript{x} emission factor of 11.89 g/VMT was used to estimate HDD truck emissions. An efficiency rating of 5.9 mpg was used to estimate HDD truck cruise energy.
HDD Truck vs. FSS
(NO$_X$ required to service the same volume)

NO$_X$ COMPARISON - 97.5% REDUCTION

Texas A&M Transportation Institute
HDD Truck vs. FSS

(CO$_2$ required to service the same volume)

CO$_2$ COMPARISON - 83.8% REDUCTION
Next Steps

• Finalize Roadmap:
  • Market Analysis
  • Technology Demonstration
  • Continue Refinement with CBP
  • Financing Plan
  • Presidential Permit
  • Lease Provisions

Visit: [www.freightshuttle.com](http://www.freightshuttle.com)

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