Truck Harmonization

Jeff Marker
Idaho Transportation Department
July 23, 2018
Overview

- Producer Economics
- Common Truck Configurations
- Truck Size and Weight Differences
Producer Economics

• Many commodities from the PNWER are both fungible and priced on a national or world market.
  – Wheat for example is priced at a particular port or location.

• Prices do not change based on the original producer’s transportation cost.
Producer Economics

- The effect is the producer pays the freight cost either directly or it is deducted from the proceeds.
- The producer cannot adjust its price due to location.
- Inefficient transportation is a significant drag on the potential profits of commodity producers.
**Producer Economics**

- **Missouri DOT Study** - Weigh station delay: $8.68 to pull through for credential check, no inspection
- **Cost to Move One Ton, One Mile**

  Tons: 10,000  
  Distance: 250 miles  
  Ton Miles: 2.5 million

<table>
<thead>
<tr>
<th>Truck Gross Weight</th>
<th>Trips Required</th>
<th>Variable Cost / Per Mile ($US)</th>
<th>As % of 80K Pound Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>80,000</td>
<td>400</td>
<td>.069</td>
<td>100%</td>
</tr>
<tr>
<td>105,000</td>
<td>312</td>
<td>.059</td>
<td>86.5%</td>
</tr>
<tr>
<td>129,000</td>
<td>238</td>
<td>.050</td>
<td>72.4%</td>
</tr>
</tbody>
</table>

Source: Transystems
Five Producers

- Five producers want to ship their products 50 miles.
- Each have produced 100,000 short tons.
- Each has access to a single configuration of truck.

Freight Cost

- Producer “A” uses 80k lb. 5-axle trucks            $775,605
- Producer “B” uses 97k lb. 7-axle trucks             $630,423
- Producer “C” uses 105k lb. 7-axle trucks            $613,551
- Producer “D” uses 129k lb. 10-axle trucks $498,474
- Producer “E” uses 139k lb. 9-axle trucks             $468,724
Common U.S. Configurations

ESAL=2.38
ESAL: Equivalent Single Axle Load

ESAL=2.80
Washington, Oregon criteria: 68’ trailer length set for off-track considerations

ESAL=1.99

Idaho Off-Track:
- 6.5’ (115” configuration)
- or 5.5’ (95’ configuration)
based on road curvature
Weight Differences

- 139.7 K (B Train)
- 139.7 K (B Train)
- 137.5 K (B Train)
- 137.8 K (Interstates)
- Uncapped Formula B (Secondary Routes)
- 129 K (Interstates and Designated Routes)
- 117 K (interstates)
- Uncapped Formula B (Secondary Routes)
- 129 K
- 129 K
- Uncapped Formula B

YOUR Safety  •  •  •  YOUR Mobility  •  •  •  YOUR Economic Opportunity
This slide addresses the jurisdiction’s most efficient vehicles only.
Recommendations

- Identify high volume destinations...then identify appropriate routes for harmonization opportunities.
- Address “other” harmonization issues...flags, escorts, lights, signs.
Discussion

YOUR Safety • • • ➔ YOUR Mobility • • • ➔ YOUR Economic Opportunity