ON THE MOVE

Southern California Delivers the Goods

Comprehensive Regional Goods Movement Plan and Implementation Strategy

UC Davis Freight Policy Forum
Sacramento CA
May 10, 2013

Annie Nam
Manager of Goods Movement & Transportation Finance
Southern California Association of Governments
What is SCAG?

- Nation’s largest Metropolitan Planning Organization (MPO) and Council of Governments (COG)
- 6 counties, 191 cities, and over 18 million residents
- Governed by a Regional Council of 84 local elected officials
- $1 trillion economy (15th largest in the world)
- 21,690 miles of highways and arterials
- 470 miles of passenger rail
Regional Goods Movement System

- 6 Commercial Airports
- 2 largest U.S. container ports (Long Beach/Los Angeles) and Port of Hueneme
- Extensive network of freeways and arterials
- 2 Class I rail-roads (BNSF/UP)
- 3 international border crossings
- Abundant warehousing facilities
- Large internal market
Goods Movement is Critical to Southern California Economy

**Economic Contributions**
$249 billion GRP, 2010

**Employment Contributions**
2.9 Million Jobs, 2010

Goods movement-dependent industries include manufacturing, retail trade, wholesale trade, construction, transportation, and warehousing sectors.
SCAG region is the third largest manufacturing center in the country

* Includes Counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura
A number of factors could alter future demand

- Increased use of import warehouses increases demand
- Warehouse space utilization efficiency gains reduce demand
- More rapid inventory turns reduce demand (but increase transportation system demand)
- Need to monitor future developments
Growing Volumes

Trucks

Trains

<table>
<thead>
<tr>
<th>Line Segments</th>
<th>Type</th>
<th>2010</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNSF San Bernardino Subdivision Hobart–Fullerton</td>
<td>Passenger</td>
<td>54(28)</td>
<td>77(51)</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>BNSF San Bernardino Subdivision Atwood–W. Riverside</td>
<td>Passenger</td>
<td>26(24)</td>
<td>42(40)</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>49</td>
<td>99</td>
</tr>
<tr>
<td>BNSF San Bernardino Subdivision W. Riverside–Colton</td>
<td>Passenger</td>
<td>10(8)</td>
<td>42(40)</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>67</td>
<td>147</td>
</tr>
<tr>
<td>BNSF Cajon Subdivision San Bernardino–Silverwood PLUS</td>
<td>Passenger</td>
<td>2(0)</td>
<td>2(0)</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>93</td>
<td>147</td>
</tr>
<tr>
<td>UP Mojave Subdivision</td>
<td>Passenger</td>
<td>13(12)</td>
<td>21(20)</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>52</td>
<td>98</td>
</tr>
<tr>
<td>UP Los Angeles Subdivision East LA–Pomona PLUS</td>
<td>Passenger</td>
<td>13(12)</td>
<td>21(20)</td>
</tr>
<tr>
<td>UP Alhambra Subdivision Yuma Jct.–Pomona</td>
<td>Passenger</td>
<td>13(12)</td>
<td>21(20)</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>51</td>
<td>109</td>
</tr>
<tr>
<td>UP Yuma Subdivision Colton–Indio</td>
<td>Passenger</td>
<td>1(0)</td>
<td>1(0)</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>45</td>
<td>93</td>
</tr>
</tbody>
</table>
The Southern California Air Quality Challenge

NO$_x$ is the biggest challenge

- 80% reduction from current NO$_x$ levels by 2023
- 90% reduction by 2032
- Mobile sources contribute 80% of regional NO$_x$
- In 2023 trucks will be 20% of mobile NO$_x$ emissions

PM$_{2.5}$ is also a concern with new EPA thresholds expected

NO$_x$ by Goods Movement Source
A Vision for A World Class System

Goods Movement Vision Statement

A world class, coordinated Southern California goods movement system that accommodates growth in the throughput of freight to and from the region and nation in ways that support the region’s economic vitality, attainment of clean air standards, and quality of life for our communities.
Goods Movement Projects and Benefits

Goods Movement Investments

Nearly $60 Billion

- East-West Freight Corridor
- Port access
- Freight rail capacity
- Grade separations
- Truck mobility improvements
- Intermodal facilities
- Emission reduction strategies
Regional Clean Freight Corridor System

- **58 Miles from Ports to I-15**
  *including I-710 and East West Freight Corridor*

- **Infrastructure could provide charging systems**
  *that could extend the range of various technologies, allowing vehicles to exit and enter corridor to serve local markets*

- **Screening criteria**
  *included market demand including proximity to industrial areas, warehousing and distribution centers; ROW constraints including impact on residential areas; safety; and traffic congestion relief*
## Regional Clean Freight Corridor System

<table>
<thead>
<tr>
<th>Category</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobility</strong></td>
<td>• Truck Delay reduction of approximately 11 percent</td>
</tr>
<tr>
<td></td>
<td>• All traffic delay reduction of approximately 4.3 percent</td>
</tr>
<tr>
<td></td>
<td>• Reduces truck volumes on general purpose lanes – <strong>up to 82 percent reduction on SR-60</strong></td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>• Reduced truck / automobile accidents (up to 20-30 per year on some segments)</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>• 100 percent zero-emission truck utilization removes: 4.7 tons NO\textsubscript{X}, 0.16 tons PM\textsubscript{2.5}, and 2,401 tons CO\textsubscript{2} daily (2.7 percent to 6 percent of region’s total)</td>
</tr>
<tr>
<td><strong>Community</strong></td>
<td>• Preferred alignment has least impact on communities</td>
</tr>
<tr>
<td></td>
<td>• Reduces traffic on other freeways</td>
</tr>
<tr>
<td></td>
<td>• Zero- and/or near-zero emission technology reduces localized health impacts</td>
</tr>
</tbody>
</table>
Serving Regional Markets

- Infrastructure provides wayside power and can serve multiple truck types.
- The mobility provided by trucks is required; fixed guideway is not an option.
- Facilities within a 5 mile range can be served in zero-emission mode.
Goods Movement Environmental Action Plan

Targeted Deployment Dates
- 2015-2020 for drayage trucks
- 2017-2035 for all regional trucks
- 2018-2035 for advanced rail technologies
Near-Term Zero-Emission Technology Demonstration and Initial Deployment

- The 2012 RTP/SCS includes a project to test zero emission trucks using wayside power with extended zero emission range.
- Project Cost: $35 million
  - Includes construction of infrastructure, design and build of demonstration trucks, and acquisition of a small fleet for initial operational deployment.
- Potential Funding Partners:
  - AQMD to lead effort
  - Others may include local transportation agencies and the ports.

Photo courtesy of Siemens
Status Update: Near-Term Zero-Emission Technology Demonstration

- Project includes:
  - overhead catenary system provided by Siemens
  - up to five demonstration trucks provided by Volvo, Transpower, and potentially others.
- Tentative site selected for 1 mile demonstration track along Alameda Street in the City of Carson
- Initial funding approved by AQMD on April 4, 2013. Other participating agencies to bring funding request to their boards this month.
- Assumption of 12-15 months for planning and permitting and an additional 12 months for construction.
Paving the Path Forward

- Explore innovative strategies for project financing
- Support technology advancement and transformative technology applications
- Advance implementation of the regional clean freight corridor system
- Develop new strategies to address changing global supply chains
Thank you!

www.scag.ca.gov/goodsmove