



Renewable Fuels: Supply, Import & Distribution

Transportation Committee Workshop on Transportation Fuel Infrastructure Issues

Transportation Committee Workshop

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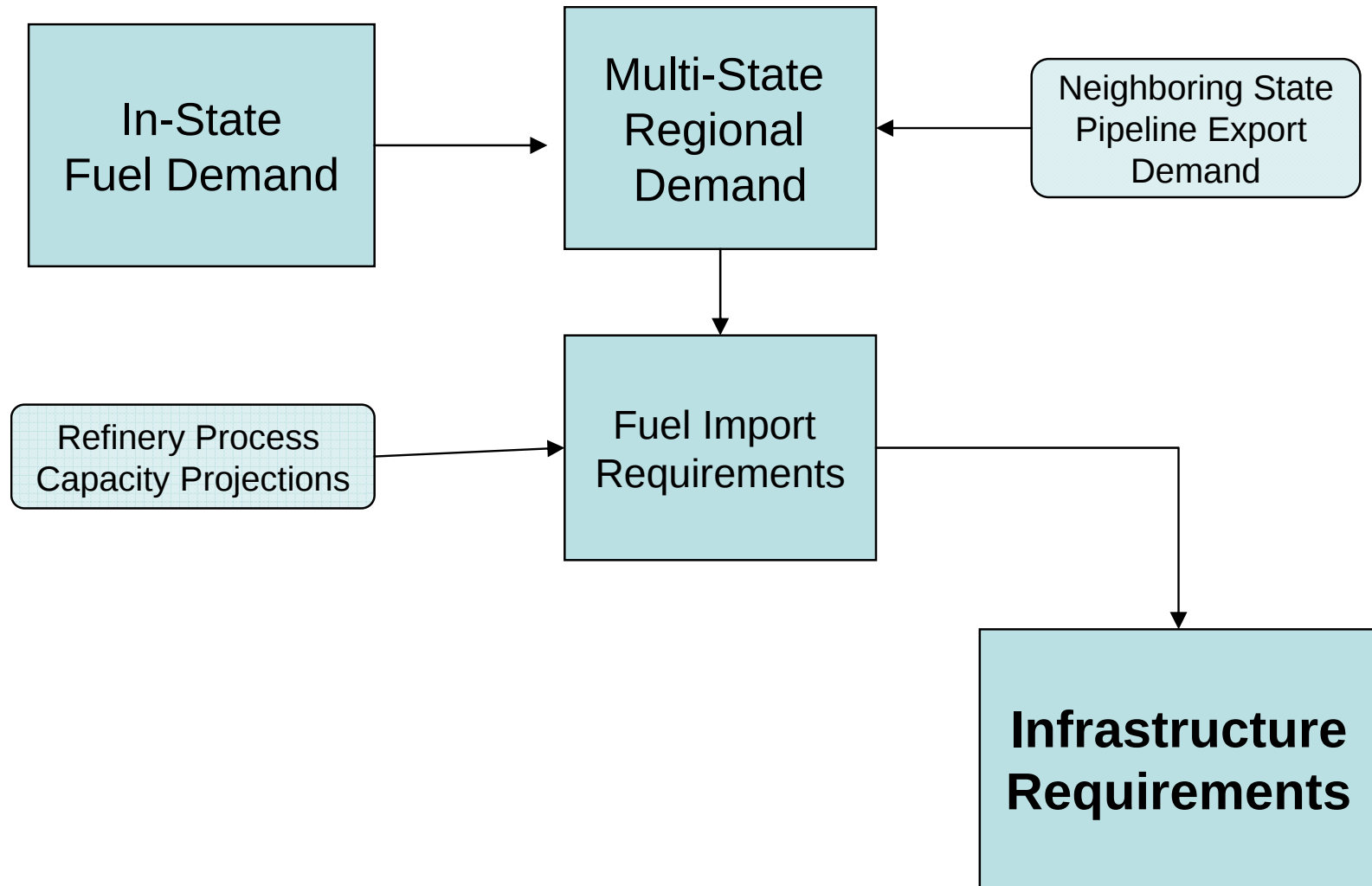


Transportation Energy Demand Infrastructure Assessments



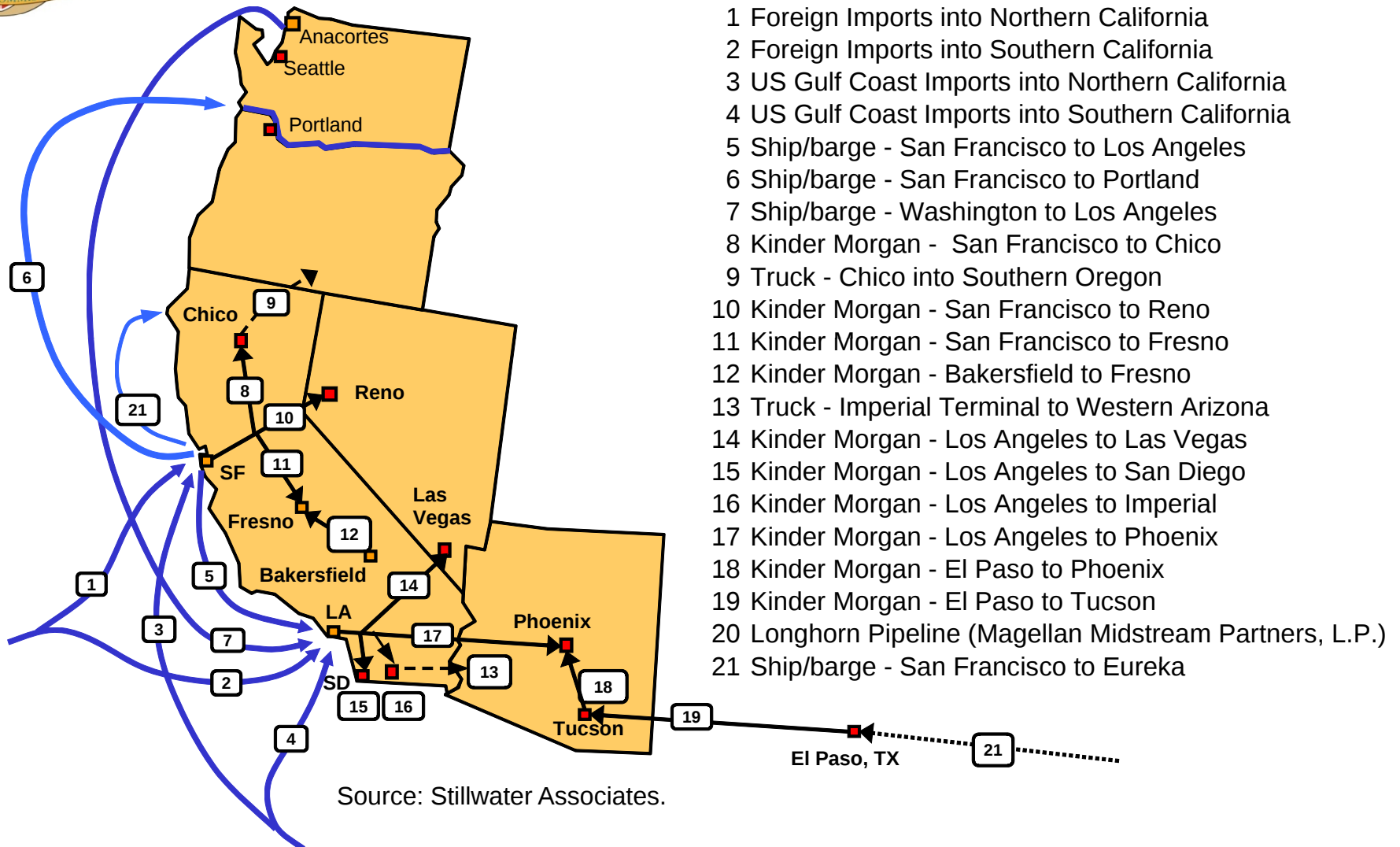


Fuel Import Forecast - Methodology





Western States – Fuel Flows



Distribution infrastructure needs assessment – imports, terminals & retail.



Incremental Imports - Approach

- Changing levels of petroleum & renewable transportation fuel imports through the marine infrastructure in California will be influenced by the following primary factors:
 - Change in California fuel demand
 - Increased use of renewable fuels
 - Degree of increased or decreased California refinery output
- Changing levels of transportation fuel exports to AZ and NV will be influenced by:
 - Change in AZ & NV fuel demand
 - New pipeline infrastructure – UNEV system
- Identify potential issues that need to be addressed over the near and mid-term



Infrastructure – Regional Demand Forecast

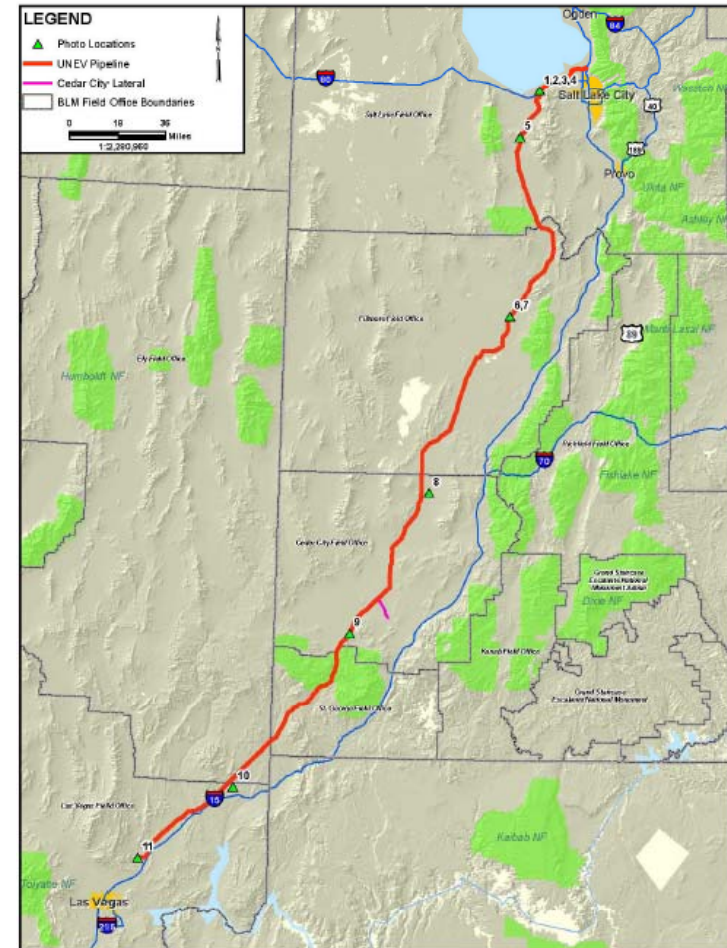
- Fair share obligations for Renewable Fuels Standard will be calculated
- This information will be used in conjunction with demand forecasts to calculate incremental change of imported volumes of renewable & petroleum transportation fuels





Infrastructure – Regional Pipeline Projects

- UNEV pipeline could become operational as early as the 2nd Q of 2011 with an initial pumping capacity of 30,000 BPD
- Over time, the pipeline system could be expanded to a maximum pumping capacity of up to 118,000 BPD
- Will displace an undetermined portion of the forecasted pipeline deliveries to Las Vegas from California
 - Initially 15,000 BPD of gasoline and diesel fuel





Marine Infrastructure Issues

- Marine Oil Terminal Engineering & Maintenance Standards (MOTEMS) part of California Business Code – Chapter 31F
 - Require upgrades to existing marine terminals to reduce the risk of spill related to earthquakes and tsunamis
- Most, if not all, marine oil terminals with medium or high risk of a potential spill have completed their safety audits
 - Include assessments of work that needs to be completed to achieve compliance with the standards
- Timing impacted by discussion over who pays
- It is possible that some facilities will not be upgraded and their leases not renewed
 - Forecast for imports (both crude oil and transportation fuels) will have a direct role in this debate



Marine Infrastructure Issues

- Key Questions
 - Will there be sufficient capability to import renewable fuels via marine terminals if California refiners require significant quantities of Brazilian ethanol to help meet LCFS obligations?
 - What is the status of projects and capabilities outside of California to receive and transfer biofuels from foreign sources to rail cars?
 - Would this newly-created infrastructure be able to supply the majority of California's forecasted needs for foreign-sourced biofuels?



Distribution Terminal Infrastructure

- More than 50 distribution terminals in California are used to load tanker trucks that are primarily destined for a retail station
- Ethanol and biodiesel are normally delivered to these terminals via tanker truck
- Key Questions
 - What is the status of biodiesel storage capability at terminals?
 - What are the expectations for renewable hydrocarbon (“drop-in”) fuel production, either produced in-state or imported from other sources?
 - Do renewable diesel imports via rail cars have unresolved distribution issues?
 - What is the supply potential for renewable natural gas & what issues remain unresolved?