



Arizona Transportation Fuels and Pipeline Supply

California Energy Commission
Joint Integrated Energy Policy Report
Workshop on Transportation Fuels Infrastructure
“Regional Pipeline Operations & Supply Shifts”
April 15, 2009

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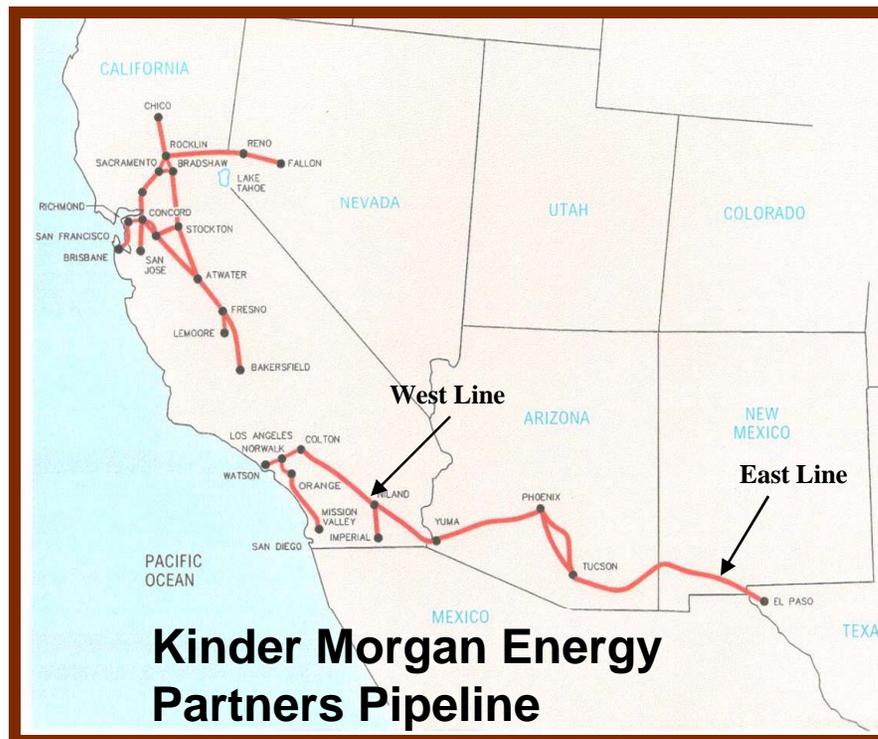
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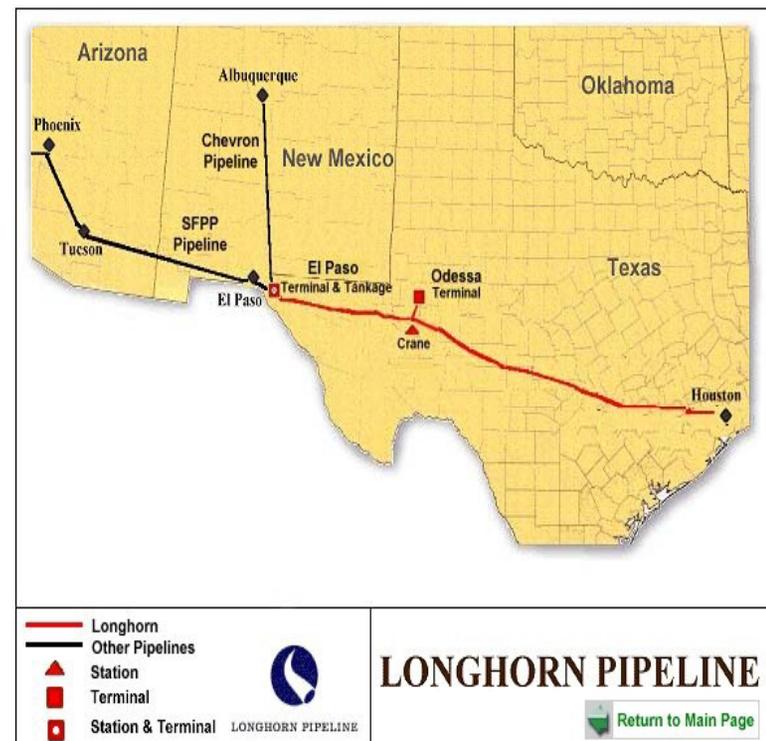
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Pipeline Configuration

Kinder Morgan East and West Line



Longhorn: Gulf Coast to El Paso





Timeline

- July 2003: Kinder Morgan's East pipeline from El Paso to Tucson ruptures.
- Arizona's supply of Cleaner Burning Gasoline (CBG) from the east line is shut down, causing a significant supply problem in Phoenix and retail-level panic buying.
- The Governor establishes a task force to look at the pipeline supply system and make recommendations.



Timeline (continued)

- The task force recommends that the state support an expansion of the Kinder-Morgan (KM) east line's capacity while making repairs. KM agrees, but warns Arizona: "be careful what you wish for."
- KM develops a two-phase expansion plan for the east line. The first phase increases line size and adds breakout tankage in El Paso.
- Phase 2 adds pumping capacity.
- At about the same time Arizona saw a larger number of CBG batches coming in on the Longhorn Pipeline from El Paso.
- This is clear evidence that the CBG market is attractive to east line refineries.



Time Line (continued)

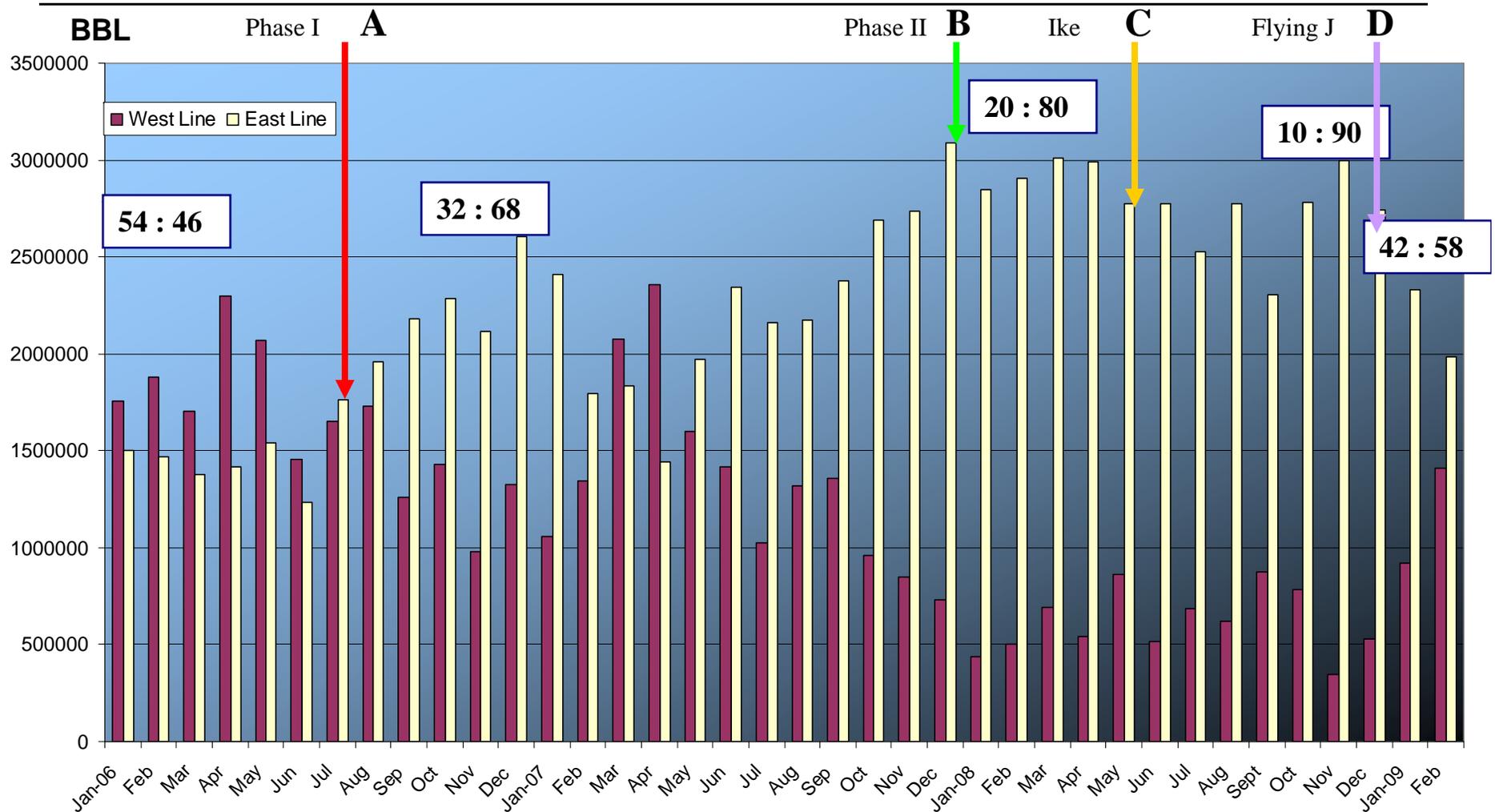
- Phase 1 was completed in July 2006
- Phase 2 was completed in December 2007

Shift in Supply Distribution Over Time

With each expansion, more of Arizona's CBG came from the east line.

Date	West Line %	East Line %
July 2003: East Pipeline fails	53%	42%
November 2006: Arizona see the impact from Phase I completion.	32%	68%
January 2008: Arizona see the impact from Phase II completion.	20%	80%
December 2008: Flying J files for chapter 11 protection	10%	90%
Distribution as of February 2009:	42%	58%

CBG Pipeline Distribution from 2006, through Year-to-Date





Supply Issues that resulted from this shift

KM was right.

The east line expansion created new problems.

- ❑ Clearly the Arizona Market is attractive to east line refineries.
- ❑ Before the shift, Arizona received supplies from eight refineries on the west line.
- ❑ In November of 2008, 90% of its fuel comes from three refineries and a registered supplier on the east line.
- ❑ Now CBG supplies are far more sensitive to problems at the refinery and pipeline levels.

Registered CBG Suppliers and their Location





More Supply Issues that resulted from the shift

- Arizona saw transit time on the west line increase by more than 3 days.
- CBG can no longer be transferred to storage in Tucson, which reduces flexibility.
- There is more volatility in price and supplies.

The shift created unique issues for the Longhorn Pipeline

- ❑ Longhorn brings product out of the Gulf Coast into tanks in El Paso.
- ❑ Transit times used to be 30 days.
- ❑ After the shift, transit took only 14 days at the peak of the increase.
- ❑ With any delay in transit times, you could end up with product that does not meet specifications.





Supply Issues (Continued)

Arizona's increased sensitivity to supply has been seen on several occasions.

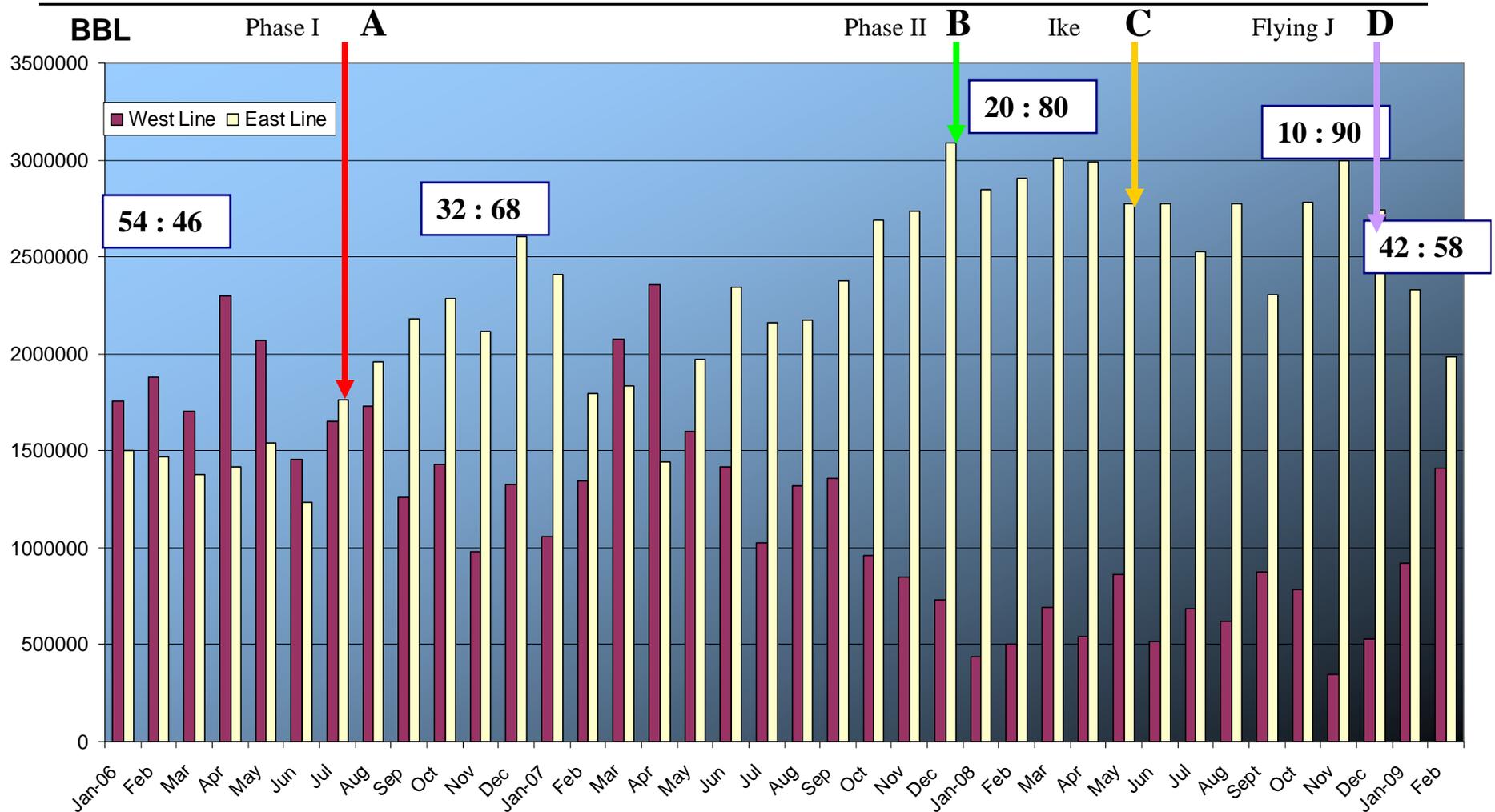
- ❑ On May 7, 2008, The Navajo Refinery went down unexpectedly.
- ❑ During 2008 Hurricane Ike impacted Arizona fuel supplies coming out of the Gulf Coast.
- ❑ On December 22, 2008, Flying J filed for chapter 11 protection. This had a significant impact on Arizona fuel supplies.



Supply Issues (Continued)

- When the economics shifted, supply followed.
- All but one of the previously referenced issues led to higher retail prices.
- At the same time, there was an increase in the number of BBLs coming from the west line.
- For example: Flying J

CBG Pipeline Distribution from 2006, through Year-to-Date





Potential Solutions

- ❑ Boost the amount of fuel coming from the west line.
- ❑ Increase the number of Gulf Coast registered suppliers.
- ❑ Expand Phoenix Storage capacity to mitigate prolonged supply problems.
- ❑ Arizona has told west line refineries about the problems in a hope they would overlook profitability and consider it a cost avoidance.
- ❑ Gain Local refining capacity: Can Arizona Refinery provide supply within the state?



Arizona's Current Economy

- We have seen:
 - A decrease in demand, which artificially increased storage capacity.
 - Lower demand has allowed refineries to operate at a decrease throughput rate. This allows excess capacity to be used to back fill demand when an east line refinery has a problem.
 - CBG supply is now being met not only by refineries, but also by so-called “marketer blenders.”
 - In January 2009 Arizona supplies rose – due in part to an increase in deliveries by rail.
 - All of these mitigation measures are temporary. Once Arizona's economy recovers these issues will reappear.