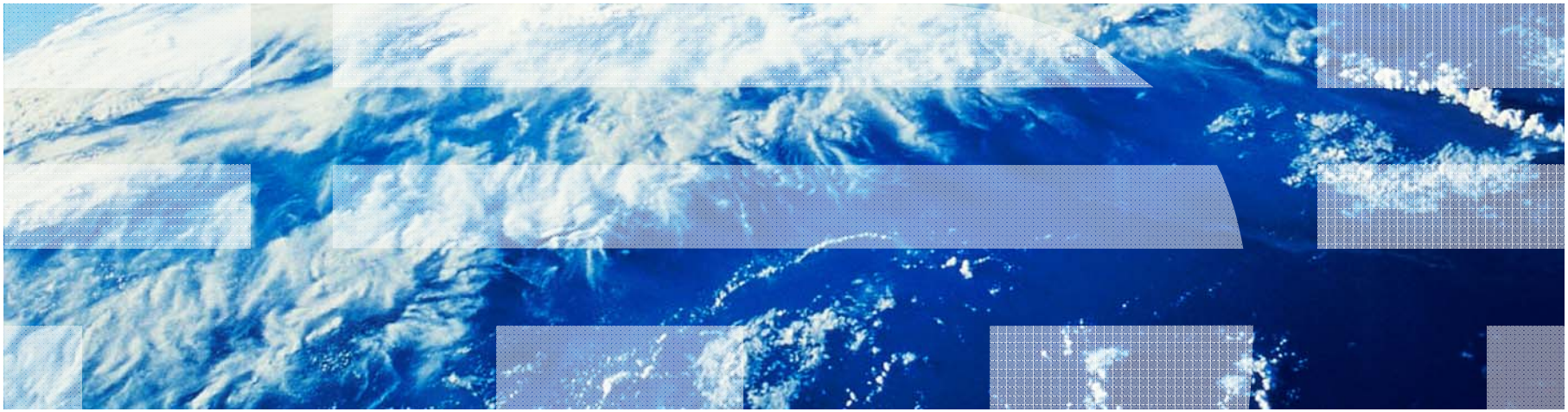
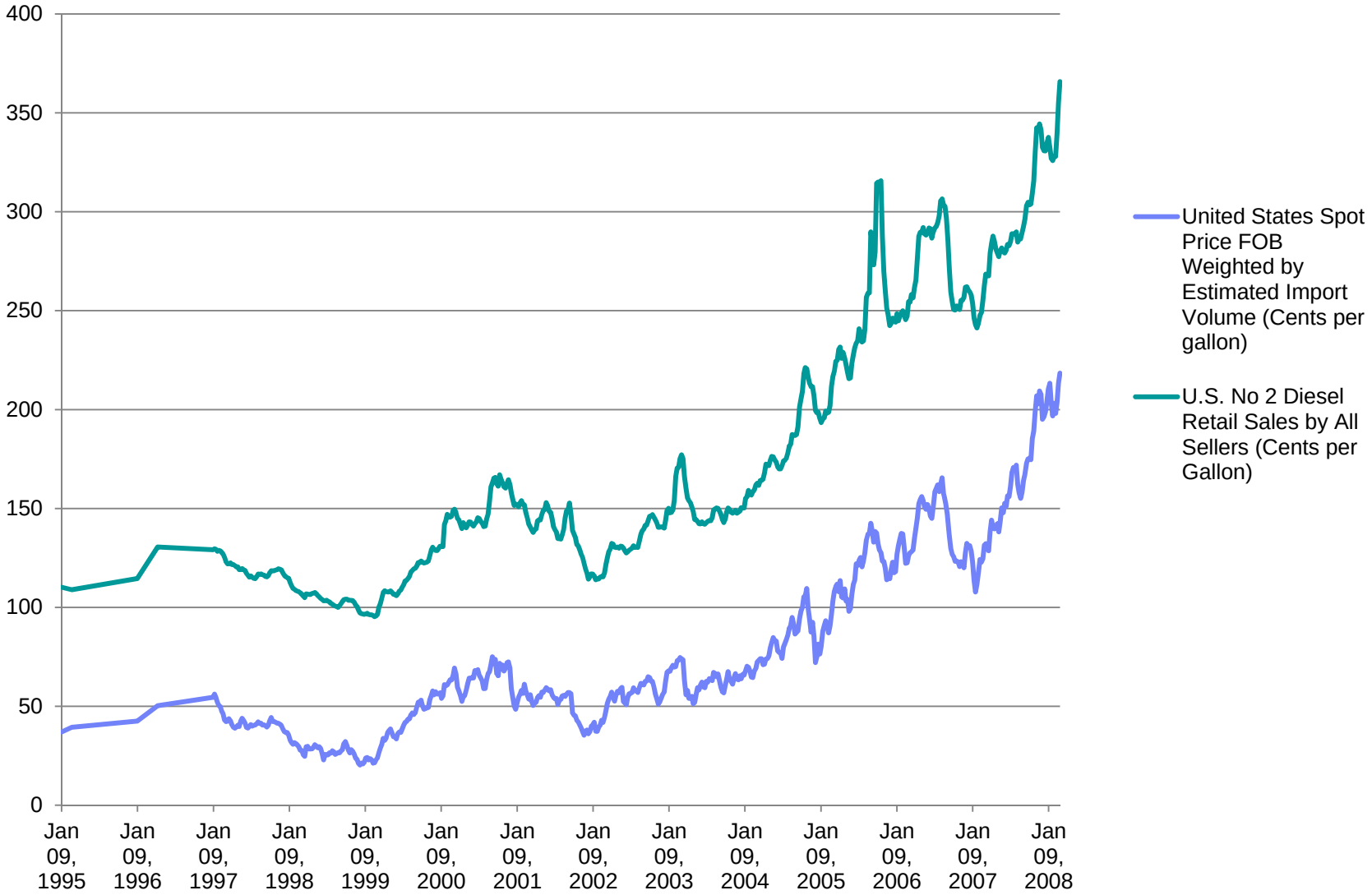
2011

IBM ILOG Oil Case Study



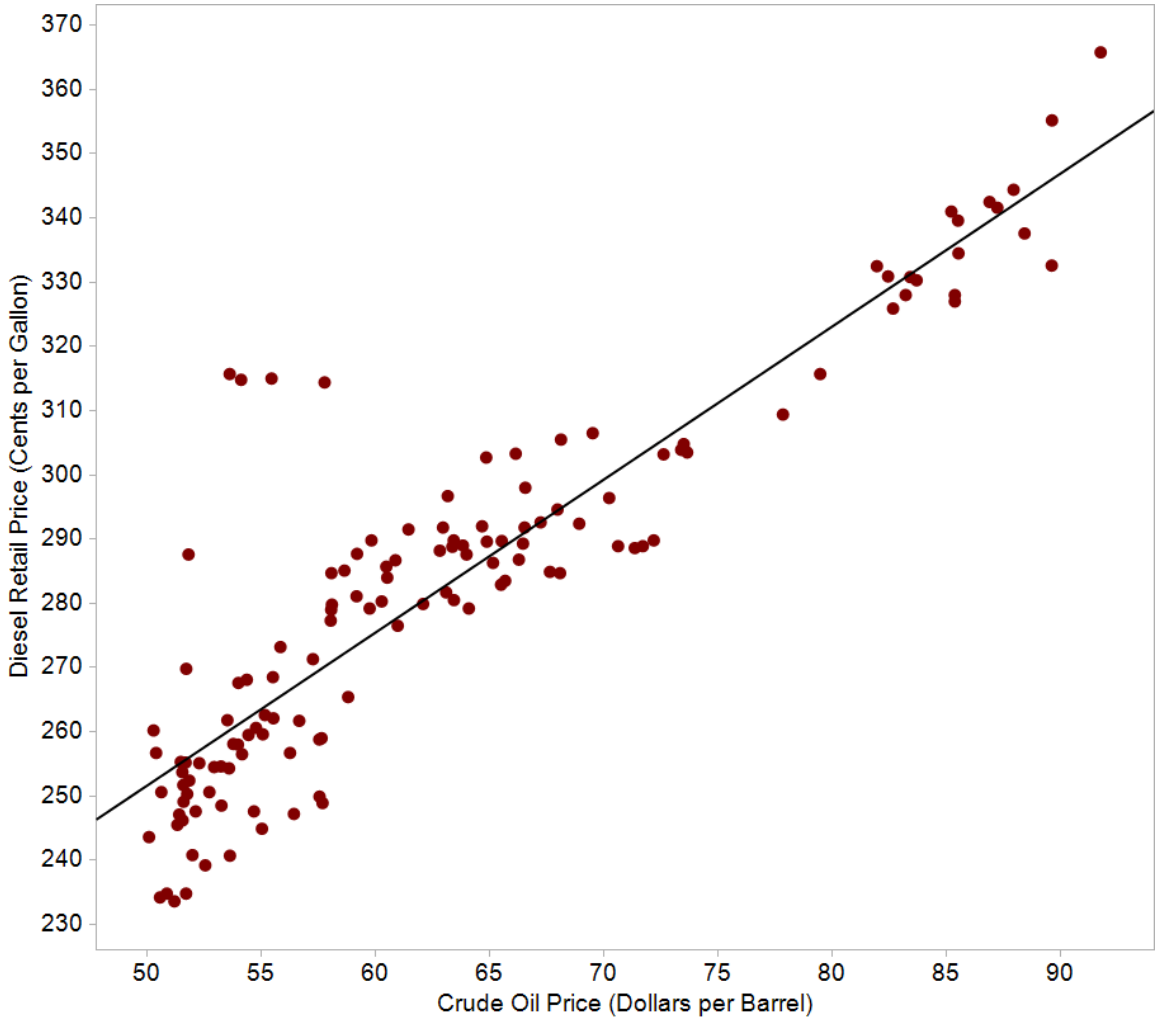
US Diesel and Crude Oil Prices over time



Relationship between Crude Oil price and Diesel Fuel Price (filtered above $50/barrel)

Trend Line Model

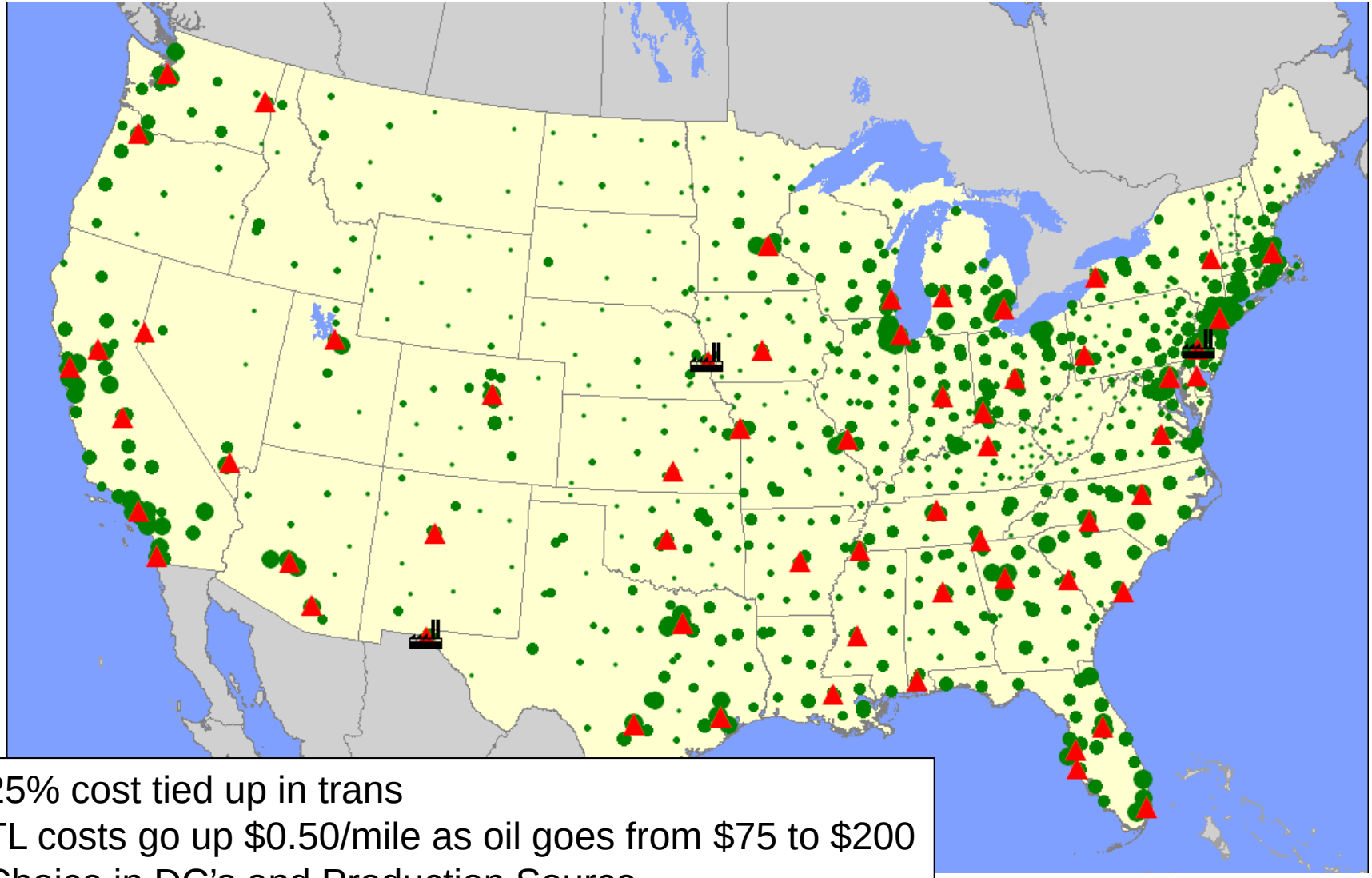
Diesel Retail Price(Cents per Gallon) = 2.38515*Crude Oil Price($/barrel) + 132.292



Implications on crude oil price to transportation rates

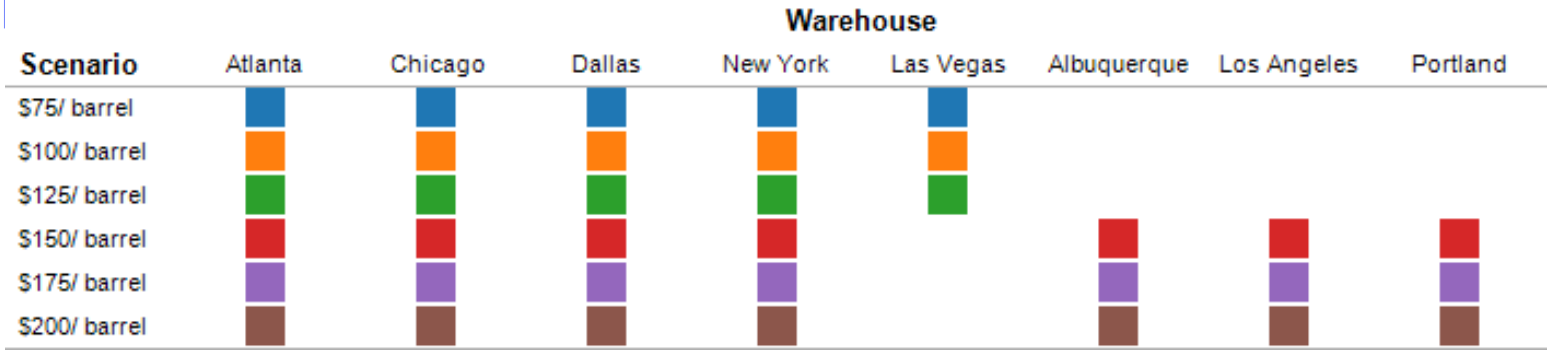
- Given the relationship in the previous slide, we see that a $10/barrel increase in crude oil will result in ~$0.24/gallon increase in diesel fuel
- Standard fuel surcharge methodology is to increase surcharge $0.01/mile for every $0.06 increase in diesel fuel
- Therefore we conclude that for every $10 increase per barrel of crude oil price, we will see an additional $0.04/mile increase in transportation rates.

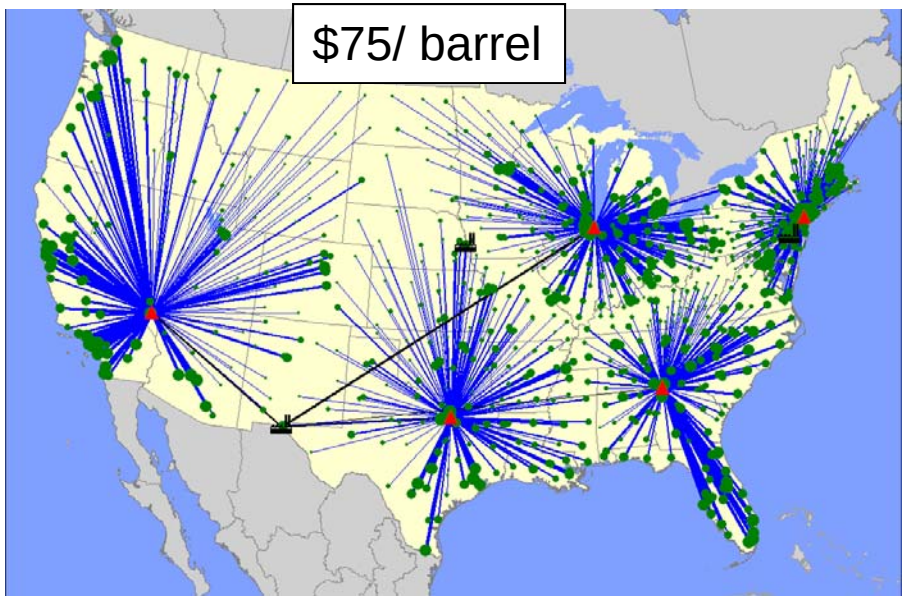
Sample Impact on Network

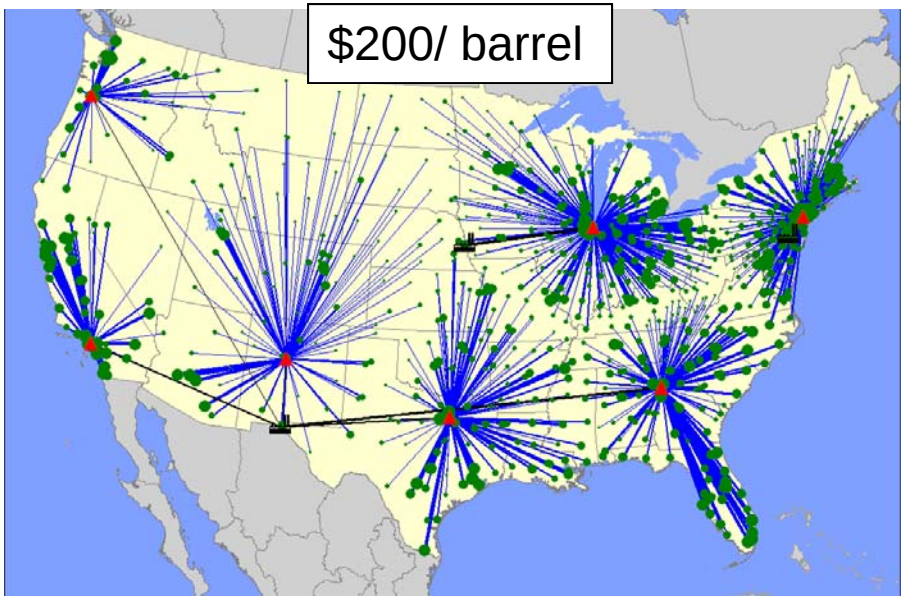


-25% cost tied up in trans
-TL costs go up $0.50/mile as oil goes from $75 to $200
-Choice in DC's and Production Source

Impact on Warehouse Locations

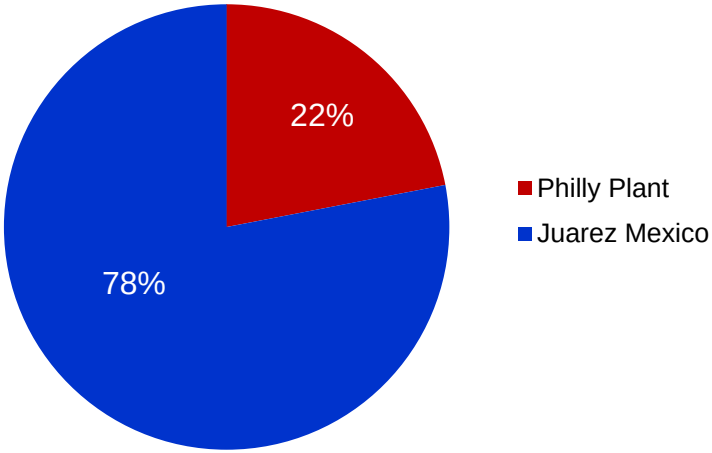






Impact on Production Sourcing

$75/ barrel



$200/ barrel