

1 Question 1

a) The price will be the price in region B minus the cost to transport the gas there. $\$6 - \$1 = \$5$

b) The effect of the price cap will be to reduce the amount of gas that is supplied in region A. The size of the reduction is related to the elasticity of the supply of gas in Region A. The more elastic the supply curve the greater the reduction will be. Now in Region B the gas is sold to distributors who can now charge a much higher price to consumers than the $\$4 + \$1 = \$5$ that was paid for the gas. The price charged will be the price which equates the quantity demanded with the amount supplied from region A with the price cap. The more elastic the supply in region A the higher this price will be.

2 Question 2

a) For such a price pattern to emerge Los Angeles must get its gas from somewhere other than Henry Hub. The price in Henry Hub is greater than that in Los Angeles so there must be a cheaper source of gas which is going to Los Angeles to explain this price differential. Prices differ between regions due to differing extraction costs of the gas used in each region and/or (if the gas comes from the same source) differing costs of transporting the gas from the point of extraction to the point of use.

b) The incentives for expanding pipeline capacity from the production areas in the west to the consuming areas in the east are provided by the price differences between the two areas. If prices are high in the east and low in the west a pipeline connecting the two can arbitrage this price difference by buying gas in the west and selling it at a profit in the east. This profit must be great enough to warrant the expenditure on the pipeline infrastructure for it to be economically viable.

3 Question 3

a) So things to consider here are firstly when to use the SPR? The reserve is 700 million barrels so attempting to offset long term changes in world oil supplies is unrealistic, such as manipulating the world oil price for an extending period of time. In terms of world oil supply the reserve is not such a significant player in comparison to the nations in OPEC. Potential uses for the reserve however are to offset short term supply shocks or to potentially smooth out a transition after a long term shock. This is a welfare improving strategy if we think that there are frictions in the economy which make it difficult for it to adjust to sudden changes in oil prices and supplies. Policies governing the release of oil from the reserve should consider the type of shocks which occur and how long they will last. Now depending on the length of the shock the policy then needs to specify some sequence of releases from the reserve to either completely offset the shock if it is short term or a sequence to smooth the transition to higher prices.

b) The timing and use of the reserve must certainly consider any response that would come from other oil producing countries. If the policies of the SRP are going to be completely offset or even partially offset its effectiveness will be completely/greatly mitigated. The use of the reserve must therefore take into consideration the form of competition in the world oil supply market and how the objectives of those players are aligned or not with those of the SRP.