

Summary of Alternatives

Objective: Manage gas supply to provide safe and reliable gas service for customers.

Criteria	1 – No Action	2 – FERC	3 – Re-Orificing
Safety – Ensure gas supplies delivered to customers will burn safely and efficiently	<ul style="list-style-type: none"> Unacceptable risk to customers 	<ul style="list-style-type: none"> Resolves safety concerns 	<ul style="list-style-type: none"> Resolves safety issue for Utah County south only
Reliability – Ensure sufficient gas supplies and transport capacity are available to meet customer demand	<ul style="list-style-type: none"> The gas customers receive will not be compatible with their appliances 	<ul style="list-style-type: none"> System reliability maintained 	<ul style="list-style-type: none"> Seriously jeopardizes system reliability and flexibility
Implementation – Factors that impact the ability to successfully implement the alternative	<ul style="list-style-type: none"> Simple to implement 	<ul style="list-style-type: none"> Unlikely Substantial objection by shippers and potential financial impact to QGC 	<ul style="list-style-type: none"> Difficult to implement in 3 years System operations jeopardized
Cost -			
Total engineering estimate	Little or no initial cost	\$0	\$20 million
1 st Year Annualized COS		\$0-18 million, 15 ^o HDP \$1.5 million CO2 removal	\$6.7 million
Transition costs required	None	Yes, 2 years	Yes, 3 years
Affiliate Recognition –			
Does a conflict exist?	No	Yes	\$20 million
With which affiliate?		QPC, QGM, Wexpro	QPC
Minimize the Conflict			
Prioritize Customers First			
No undue influence			

Criteria			
	4 – Producer Shut-In	5 – Gross Blending	6 – Shut-In Gates
Safety – Ensure gas supplies delivered to customers will burn safely and efficiently	<ul style="list-style-type: none"> Resolves safety concern for southern system only 	<ul style="list-style-type: none"> Will not ensure interchangeable gas supply on southern system 	<ul style="list-style-type: none"> Safe for nter-changeability Potential environmental and safety hazards
Reliability – Ensure sufficient gas supplies and transport capacity are available to meet customer demand	<ul style="list-style-type: none"> Southern system reliability maintained 	<ul style="list-style-type: none"> Cannot ensure reliability under normal operating conditions 	<ul style="list-style-type: none"> High probability curtailments and outages
Implementation – Ability to successfully implement the alternative	<ul style="list-style-type: none"> Very difficult to accomplish 	<ul style="list-style-type: none"> Easy to implement 	<ul style="list-style-type: none"> Easy to implement
Cost - Total engineering estimate 1 st Year Annualized COS Transition costs required	\$5.7 million \$11.7 million Yes, 1 year	\$1.4 million \$0.3 million None	\$7.7 million \$1.8 million Yes, 1 year
Affiliate Recognition – Does a conflict exist? With which affiliate?	No	Yes QPC	Yes QPC
Minimize the Conflict			
Prioritize Customers First			
No undue influence			

Criteria	7 – Precision Blending	8 – Propane Injection	9 – CO ₂ Removal
Safety – Ensure gas supplies delivered to customers will burn safely and efficiently	<ul style="list-style-type: none"> Provides interchangeable gas the majority of the time 	<ul style="list-style-type: none"> QGC and its customers have safety issues Safety and security concerns at facility 	<ul style="list-style-type: none"> Provides interchangeable gas
Reliability – Ensure sufficient gas supplies and transport capacity are available to meet customer demand	<ul style="list-style-type: none"> Reliable supply of gas for the majority of the time But only works in conjunction with other alternatives 	<ul style="list-style-type: none"> Lack of sufficient supply of propane Operational challenges 	<ul style="list-style-type: none"> Proven history of reliability
Implementation – Ability to successfully implement the alternative	<ul style="list-style-type: none"> Complex concept Reasonable to implement 	<ul style="list-style-type: none"> Very difficult to permit 	<ul style="list-style-type: none"> In place
Cost -			
Total engineering estimate	\$5.7 million	\$36.2 million	
1 st Year Annualized COS	\$1.3 million	\$7.3 million (without propane) Yes, 2 years	\$6.7 million
Transition costs required	Yes, 1 year		None
Affiliate Recognition –			
Does a conflict exist?	Yes	Yes	Yes
With which affiliate?	QPC	QPC	QPC, QTS
Minimize the Conflict			
Prioritize Customers First			
No undue influence			

Criteria			
	10 – Kern River Supply	11	12
Safety – Ensure gas supplies delivered to customers will burn safely and efficiently	<ul style="list-style-type: none"> Provides interchangeable gas 		
Reliability – Ensure sufficient gas supplies and transport capacity are available to meet customer demand	<ul style="list-style-type: none"> Concerns with unavailability of no-notice service and contracting for long-term gas supplies 		
Implementation – Ability to successfully implement the alternative	<ul style="list-style-type: none"> Potential difficulty for permitting and right-of-way 		
Cost - Total engineering estimate 1 st Year Annualized COS Transition costs required	a. \$23.2 million b. \$28.7 million c. \$12.2 million d. \$27.2 million a. \$10.2 million b. \$11.3 million c. \$8.0 million d. \$9.0 million Yes, 1-3 years		
Affiliate Recognition – Does a conflict exist? With which affiliate?	Yes QPC		
Minimize the Conflict			
Prioritize Customers First			
No undue influence			