

Staff Report on Arizona Public Service Company Filing for Pre-
Approval of Cost Recovery for Participation in the Kinder
Morgan Silver Canyon Pipeline Project

August 16, 2004

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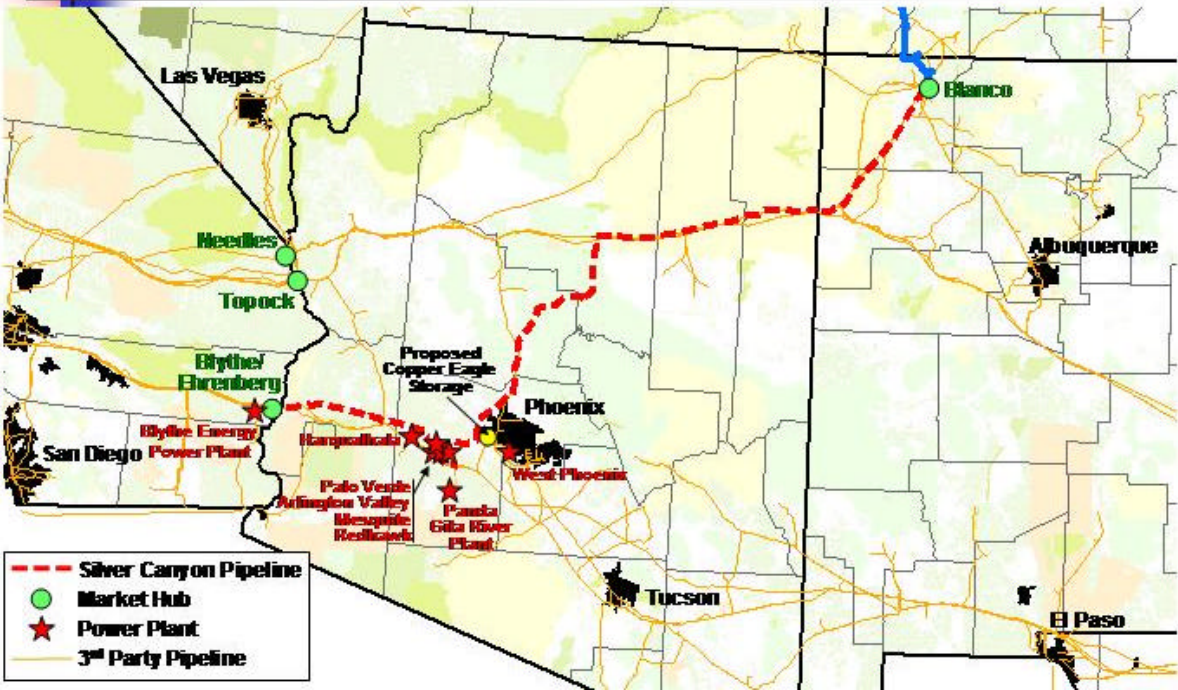
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Introduction

On April 9, 2004, Arizona Public Service Company (“APS” or “Company”) filed for Commission pre-approval of cost recovery for participation in the Silver Canyon natural gas pipeline project. The Silver Canyon pipeline project is a proposed new pipeline which Kinder Morgan Energy Partners (“Kinder Morgan”) would build from the San Juan supply basin in northwest New Mexico to Phoenix and then to the California border at Ehrenberg. APS’ filing is pursuant to the Commission’s on-going Notice of Inquiry on Natural Gas Infrastructure, which the Commission initiated in April, 2003, to consider issues related to natural gas infrastructure and their impact on natural gas service in Arizona. This Staff Report represents Staff’s evaluation and recommendations regarding this APS filing.

Previously Southwest Gas made a similar pre-approval filing related to Silver Canyon pipeline capacity with the Commission in Docket No. G-01551A-04-0192. In Decision No. 67091 dated June 29, 2004, the Commission approved Southwest Gas’ application, subject to a number of conditions. Staff recommends that the Commission approve the APS filing, subject to a number of similar conditions.

Silver Canyon Pipeline



Source: Silver Canyon

Description of Silver Canyon Pipeline Project

The proposed Silver Canyon pipeline project runs southwest from the Blanco hub in the San Juan supply basin in northwest New Mexico to the Window Rock area and then west, roughly paralleling the northern pipeline system of El Paso Natural Gas Company (“El Paso”) to a point east of Flagstaff. The pipeline then runs south to Phoenix, skirting the Phoenix metro area on the north and west sides. The pipeline would then run west to Ehrenberg, roughly paralleling El Paso’s southern system. The pipeline would provide additional direct access to San Juan gas as well as indirect access to gas in the central Rockies area, including possibly the Piceance, Paradox, Green River, Uinta, and Powder River production areas in Utah, Colorado, and Wyoming. The pipeline would have a capacity of 750,000 dth/day or more and would likely interconnect with the El Paso, North Baja, and Southern California Gas pipeline systems. The proposed timeline for the pipeline project is for Kinder Morgan to file with the Federal Energy Regulatory Commission (“FERC”) in the fourth quarter of 2004, construction to begin in the fourth quarter of 2005, and to commence operation in the third quarter of 2006. Kinder Morgan held a binding open season on the Silver Canyon project from January 21, 2003, to April 30, 2003.

Siting of the proposed Silver Canyon pipeline is not at issue in this proceeding, which addresses cost recovery by APS of costs related to the Silver Canyon pipeline capacity. However, to provide a general overview of the siting and related processes, attached as Appendix A is a summary which APS provided to Staff of the various FERC and other processes the proposed pipeline would be subject to, as well as opportunities which Arizona entities would have to provide input in those processes.

Background

Natural gas is a vital fuel for a wide variety of important activities in Arizona, including power generation by electric utilities and others, residential consumption for a number of uses including home heating, and a wide variety of commercial and industrial uses. Virtually all of Arizona's natural gas supplies have been provided through the El Paso pipeline system which accesses the San Juan, Permian, and Anadarko production areas which are primarily in Texas and New Mexico. Until the restructuring of the natural gas industry in the 1980s and early 1990s, El Paso both sold the natural gas commodity to Arizona buyers, and provided the means to transport the natural gas supplies to their destinations in Arizona. Natural gas industry restructuring resulted in El Paso no longer selling the natural gas commodity, but rather consumers such as electric utilities and local distribution companies directly purchasing natural gas supplies from producers and marketers in the supply basins, with El Paso still providing the interstate transportation service. The El Paso pipeline system provides natural gas transportation service to Arizona, New Mexico, western Texas, and much of California. Traditionally natural gas prices in the San Juan supply basin have been lower than prices in the Permian supply basin. And given that most El Paso shippers had system-wide receipt rights, most shippers accessed as much San Juan gas as possible, with Permian gas meeting the rest of the shippers' needs. For many years Arizona shippers, including APS, were full requirements customers of El Paso. Full requirements shippers were able to access the full amount of pipeline capacity needed to meet their usage requirements, with their cost responsibility determined in El Paso rate proceedings, such as those that led to the 1996 El Paso rate proceeding settlement (FERC Docket No. RP95-363, March 15, 1996). Full requirements customers were generally required to take all their natural gas transportation service from El Paso. Such circumstances provided Arizona Shippers reliability of gas supplies, but it appears it might have been difficult for other pipelines to successfully enter the Arizona natural gas market.

The southwestern natural gas market has seen drastic swings in the availability of pipeline capacity in the last decade. In the mid 1990s major California shippers, particularly Pacific Gas and Electric, turned back a large amount of pipeline capacity to El Paso, creating a sizable glut of excess pipeline capacity. The 1996 El Paso settlement addressed this pipeline capacity glut through a variety of conditions. However, within 4-5 years, certain shippers were complaining that El Paso was not providing the amount of firm service contracted for in their transportation service agreements with El Paso. These claims, in combination with the California energy crisis and other factors have led to a great deal of controversy regarding pipeline capacity rights and service on the El Paso pipeline system in the Southwest. Driving factors in the controversy included:

- Significant growth in the demand for natural gas in the Southwest, particularly for electric generation
- Bad Northwestern hydro conditions resulting in much greater natural gas demand in California, particularly in 2000-2001
- The lack of construction of additional infrastructure by El Paso or other entities in the Southwest

APS Rate Proceeding

On June 27, 2003, in Docket Number E-01345A-03-0437, APS filed a general rate proceeding with the Commission. At the time of the preparation of this Staff Report, the rate proceeding is on-going and it is unclear what the final results of the rate proceeding will be. This Staff Report does not address rate case issues, but only notes that the final resolution of certain rate case issues in that proceeding may have direct or indirect relationships to issues under consideration in this pre-approval proceeding. For example, the issue of whether APS has a power supply adjustor (“PSA”) and if so what costs are passed through the PSA and what form the PSA would have are at issue in the rate case. Potentially the pipeline capacity costs for APS of the Silver Canyon project could be passed through the PSA. If the end result of the rate case were to be that there was not approval of a PSA through which pipeline capacity costs were passed through, then the issue of cost recovery of APS’ Silver Canyon pipeline capacity would have to be addressed in some other fashion if the Commission approves APS’ Silver Canyon filing.

Additionally, APS has indicated that its request for pre-approval is not dependent upon APS acquiring the Pinnacle West Energy Corporation (“PWEC”) generating units, because APS will be more dependent upon gas generation in the future and will utilize the Silver Canyon pipeline capacity to supply its own generating units, the PWEC units, or other gas-fired units through some form of tolling arrangement with an electric generator depending on future circumstances and needs. However, the presence or absence of PWEC units could indirectly relate to this proceeding in that it could have some impact on APS’ planning for pipeline capacity and natural gas supplies in the future.

Rather than trying to address issues in this proceeding in ways that would account for all possible outcomes of the rate proceeding, an undertaking that would be speculative, Staff believes that the best way to address any connection of this proceeding with the rate case is to simply have APS make a so-called “clean-up” compliance filing with the Commission after the conclusion of the rate case to ensure that the results of the Silver Canyon proceeding comport properly with the results of the rate case. Such a filing would, at a minimum, address the any cost recovery circumstances for net pipeline capacity costs resulting from the rate proceeding as well as reporting requirements related to the Silver Canyon capacity.

APS Generating Capacity

APS has a variety of peaking, intermediate, and baseload electricity generating units using a portfolio of fuels including uranium, coal, natural gas, water, oil, and solar. This section provides a general overview of APS' generating capacity and how the natural gas fired generating units fit into the overall generation portfolio. The breakdown of the fuel sources in APS current generation portfolio, by MWs of generating capacity, is shown in the table below.

Fuel Type	MWs of Generation Capacity	Percent of Total Capacity
Coal	1712	42.7%
Uranium	1113	27.7%
Natural Gas	695	17.3%
Gas/Oil	413	10.3%
Oil	70	1.7%
Other	9	0.2%

Inclusion of the PWEC generating units in APS' generating portfolio would increase the natural gas component from 695 MW to 2,288 MW, which would then be 40.7 percent of APS' overall generation capacity.

The maximum natural gas consumption per day of the APS and PWEC gas-fired electric generation units are shown in the table below.

Generation Unit ¹	Maximum Daily Consumption (mcf/day)
West Phoenix CC 1	18,500
West Phoenix CC 2	18,500
West Phoenix CC 3	18,500
West Phoenix CT 1	18,100
West Phoenix CT 2	18,100
West Phoenix CC 4 (PWEC)	23,300
West Phoenix CC 5 (PWEC)	90,500
Ocotillo ST 1	27,200
Ocotillo ST 2	27,200
Ocotillo CT 1	18,100
Ocotillo CT 2	18,100
Saguaro ST 1	29,800
Saguaro ST 2	27,200
Saguaro CT 1	18,100
Saguaro CT 2	18,100
Saguaro CT 3 (PWEC)	21,200
Yucca CT 1	6,500
Yucca CT 2	6,500
Yucca CT 3	17,800
Redhawk CC 1 (PWEC)	85,700
Redhawk CC 1 (PWEC)	85,700
Total	612,700

Additionally, on June 1, 2004, APS filed for Commission approval of the acquisition of the Sundance natural gas-fired electric generation facility from PPL Sundance Energy, LLC. If this acquisition continues to fruition, this would present another potential demand for natural gas for APS.

Within APS' overall generation portfolio, APS has indicated that all the existing APS generating units (Ocotillo, Saguaro, West Phoenix, and Yucca) are considered peaking units. Additionally, the PWEC Saguaro 3 unit, and the PPL Sundance unit (if the acquisition is completed) are considered to be peaking units. The PWEC combined cycle units (Redhawk and West Phoenix) currently operate as intermediate units under their current contract with APS, and may be used as baseload units in the future depending on load growth and other issues.

In 2007, APS projects that its generation mix, in terms of MWH, will be 27 percent nuclear, 32 percent natural gas, and 41 percent coal.

¹ Note: CC indicates combined cycle, CT indicates combustion turbine, and ST indicates steam.

Current Uncertainties Related to Natural Gas Service in Arizona

Despite a great deal of opposition from Arizona, New Mexico, and Texas parties, FERC forcibly converted the full requirements customers, including APS, to limited contract demand capacity rights, effective beginning in September 2003. This conversion has led to a great deal of uncertainty regarding the cost, nature, and availability of current and future natural gas transportation service on the El Paso pipeline system for Arizona shippers, including APS. Sources of concern include:

- **Reduced Access to San Juan Gas** – As a result of recent FERC actions, Arizona’s natural gas supply has seen a significant shift away from the San Juan supply basin to the Permian supply basin, with a similarly situated California shipper having greater San Juan access than an Arizona shipper. Traditionally San Juan gas has been cheaper than Permian gas, so a shift away from San Juan gas results in a higher overall gas cost for Arizona. Reduced access to San Juan gas also reduces Arizona’s ability to access Rockies gas, which is the only on-shore supply basin in North America which is projected to grow in production volume in the near future. Further, the El Paso system contains significant constraints on moving gas from the northern El Paso system to the southern El Paso system. This is particularly true for Arizona and other East of California shippers who were put at a disadvantage in acquiring such north-south capacity in recent FERC proceedings, as they were not allowed to move delivery points to the southern system for north system capacity which was assigned to them.
- **Questionable Firmness and Accessibility of Some El Paso Capacity Serving Arizona** – When FERC reallocated pipeline capacity on the El Paso system in the recent RP00-336 docket, Arizona shippers were given a number of different types of capacity. Some capacity was existing firm capacity which can reasonably be relied on for firm service, absent force majeure circumstances. However, other capacity which was allocated to Arizona shippers is of questionable reliability in the short term. First is capacity resulting from El Paso’s Line 2000 power up project. At the time FERC’s reallocation of pipeline capacity took effect, the Line 2000 power up capacity was not in operation and FERC’s capacity pool provision only partially filled the gap until Line 2000 capacity becomes available. However, as of June 11, 2004, the Line 2000 power up project was fully operational and therefore Line 2000 capacity can reasonably be considered fully firm. Second, approximately 30 percent of Arizona shippers’ capacity is Block 2 capacity, which through the end of 2005 is recallable by California shippers. If this Block 2 capacity is recalled by California, Arizona shippers may have a difficult time meeting all their service needs, particularly during peak periods. After 2005, the Block 2 designation disappears and this capacity would reasonably be considered firm, absent any other complications. Lastly, some capacity allocated to Arizona Shippers is San Juan to Topock capacity on El Paso’s northern system. Given that the vast majority of Arizona’s natural gas use is in the vicinity of El Paso’s southern system, such San Juan – Topock rights do not provide firm deliverability to Arizona shippers’ southern system delivery points. Arizona shippers have to accept using this capacity on a less than firm basis, trade the capacity for other capacity (likely less attractive Permian capacity), or find a way to somehow bring the gas from Topock to El Paso’s southern system. One possible

option which would make such capacity available to serve southern system loads would be El Paso's Line 1903 project, if it goes forward.

- Operational Flexibility Issues – Through a variety of actions by El Paso and FERC, Arizona shippers have seen their operational flexibility on the El Paso system significantly reduced in recent years. Examples of such restrictions include the imposition of D-Code deliveries, loss of full requirements service, loss of system-wide receipt point rights, and the looming threat of more strict imbalance requirements (with associated penalties, possibly substantial) on the El Paso system. Attempts to recover such operational flexibility will likely carry additional costs for Arizona shippers. One positive development is the July 9, 2004, announcement by El Paso that it would begin offering bounce service at the California Border service to its shippers, enabling Arizona shippers to acquire gas supplies that have been delivered to the California border and “bounce” them back to meet their needs in Arizona. While such service is likely to be more expensive than typical service to Arizona shippers, such bounce service does provide a degree of additional operational flexibility.
- The Failure of Natural Gas Infrastructure in the Southwest to Grow in Proportion to Natural Gas Demand – While there have been some pipeline capacity additions in the Southwest in recent years, the growth in demand for natural gas, particularly in the case of new natural gas-fired electric generation, has outstripped the existing natural gas infrastructure in the Southwest. According to Energy Information Administration statistics, natural gas delivered to consumers in Arizona grew by 57 percent from 1999 to 2002, including deliveries to the electric power sector growing 166 percent during the same period. Further, a large number of gas-fired electric generation units have been constructed in Arizona in recent years, with the majority located in the proximity of El Paso's southern system. As these generating units gradually come on-line, it is highly questionable that the existing natural gas infrastructure is robust enough to provide the service needed by both these new generating units and other existing natural gas consumers. Additionally, Arizona has no natural gas storage facilities and no such facilities are currently under construction, though there is a developing awareness of the need for natural gas storage. The construction of natural gas storage, particularly in market areas, would likely enhance the ability of all market participants to manage natural gas supplies in Arizona. Recent legislative action provides added uncertainty regarding the development of natural gas storage facilities in Arizona.
- The California Settlement With El Paso Regarding Market Manipulation Allegations – This settlement makes it easier for California shippers to recall Block 2 capacity from Arizona shippers. This settlement also provides for the appointment of a California special master to rule on disputes related to the terms and conditions of the settlement. This development seems likely to add to the complexity and uncertainty of service on the El Paso system in the future.
- Current and Future El Paso Pipeline Proceedings – El Paso currently has a number of matters before FERC which impact service to Arizona shippers, including the Order 637 proceeding, the imbalance services filing, outstanding transportation agreements with converted full requirement shippers, and various tariff and other filings. Additionally, El Paso, under terms of the 1996 settlement agreement, is required to file a rate case with FERC, such that rates would go into effect beginning January 1, 2006. The cost and service implications of this rate proceeding are unclear, but potentially significant. In

combination, all these proceedings create a great deal of uncertainty regarding the cost and nature of service which Arizona shippers will have in both the short term and long term on the El Paso proceeding.

- Current Concentration of Arizona Regulatory Risk at FERC on Natural Gas Matters – Given the dominant position El Paso currently holds in Arizona’s interstate pipeline market, an adverse regulatory ruling at FERC can have an enormous impact on the Arizona natural gas market, as shown in several recent proceedings. To the extent Arizona’s interstate natural gas service is provided by two or more different interstate pipeline operators, rather than a single operator, the impact of an adverse FERC ruling regarding any one pipeline would be much smaller on the aggregate Arizona natural gas market.
- Uncertainty Regarding Future Regional Natural Gas Market Dynamics – There is a sizable amount of uncertainty regarding numerous factors in the Southwestern natural gas markets, including shifts in supply and demand, the construction or lack of construction of other natural gas infrastructure in the region, the extent to which natural gas continues to be the fuel of choice for newly constructed electric generation units, the impact of national energy policy decisions, and the potential for sizable step downs in service on the El Paso system by California shippers and/or others.
- The National Concern Over Natural Gas Supplies and Prices – Most natural gas production basins in North America are mature and reflect declining production volumes, with only the Rockies, Arctic, deep Gulf, and other offshore areas presenting opportunities for enhanced natural gas production. Drilling for natural gas has increased to some extent in response to higher natural gas prices, but even with increased drilling, it appears the exploration and production sector is having a difficult time maintaining current production levels, let alone increasing production. Drilling concerns are increased when it is recognized that most drilling now is secondary drilling in existing fields, rather than new field development, and that decline rates for existing wells have increased. Additionally, there is environmental and other opposition to development of many of the remaining new potential sources of natural gas in North America.

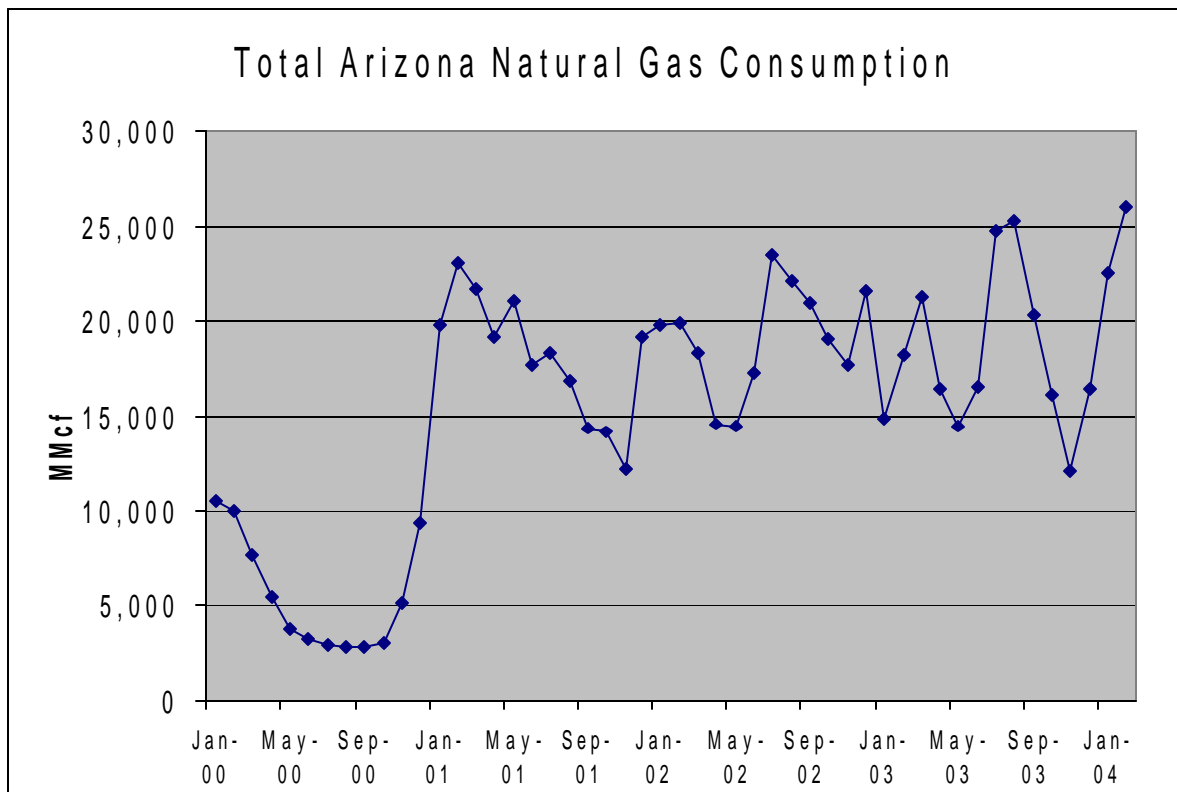
Liquid natural gas (“LNG”) imports are increasingly being looked at as a sizable source of natural gas supplies in the future, though siting issues remain for LNG facilities. At the same time, natural gas demand has increased (though this trend has been stunted by recent high prices). The end result is a disappearance of the “gas bubble” of the 1980s and early 1990s, and a very tight natural gas supply/demand balance. This has resulted in both much higher natural gas prices and unprecedented natural gas price volatility. There is widespread concern nationally regarding the availability and price of natural gas supplies in the future. This concern is exacerbated by doubts as to whether national energy policies reflect the realities of the natural gas marketplace, given that such policies generally encourage additional natural gas consumption, particularly in the electric generation sector, while it is not clear where sufficient future supplies will come from, whether domestic or imported.

The confluence of all these circumstances raises significant questions for Arizona regarding the extent to which its current natural gas infrastructure is sufficient to meet the natural gas needs of Arizona consumers in the near and long term future. Given the importance of

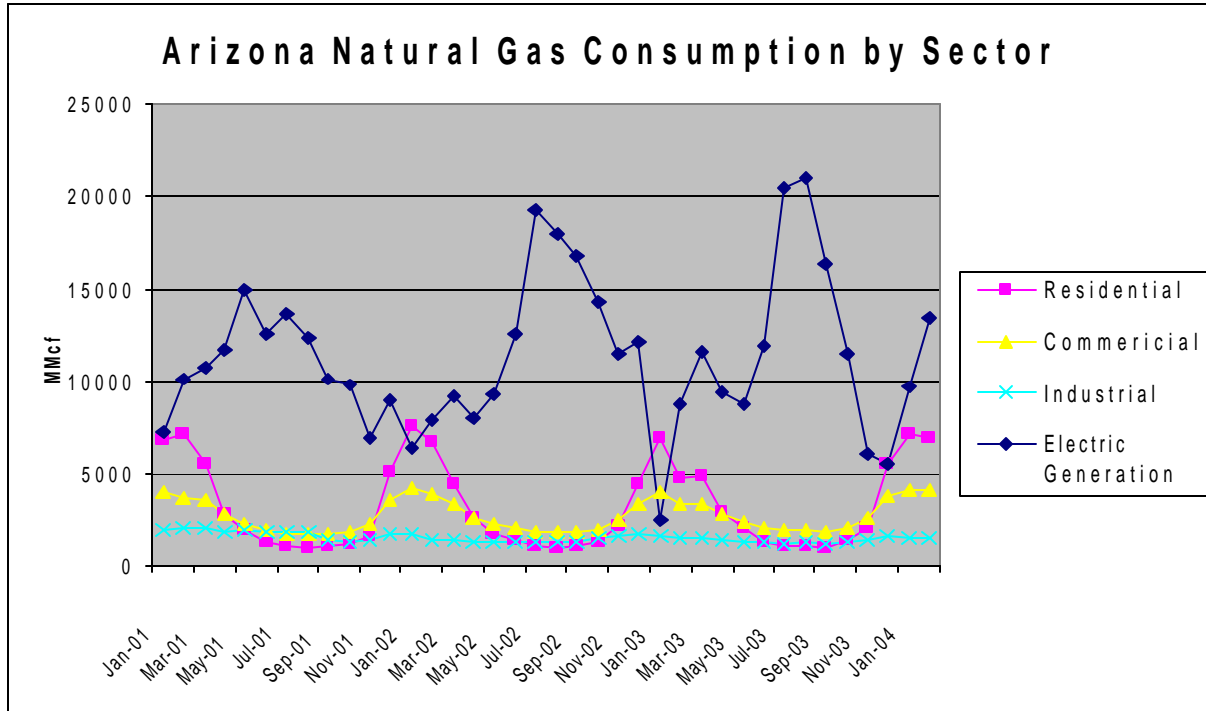
reliable natural gas supplies to the health, safety, and economic well-being of Arizona residents, actions which can enhance Arizona’s natural gas infrastructure must be given careful and thorough consideration.

General Issues Related to Natural Gas-Fired Electric Generation

This Staff Report deals specifically with APS’ application in regard to Silver Canyon pipeline capacity. However, there are a number of electric generation/natural gas related matters worth noting in the context of this discussion, even though such matters are of broader concern than the issues being addressed in the pending APS application. The enormous increase in natural gas fired electric generation in Arizona and its impact on the state’s natural gas consumption as a whole is shown in the charts below:



Source: Energy Information Administration



Source: Energy Information Administration

While residential, commercial, and industrial natural gas consumption has been relatively stable in recent years, electric generation sector natural gas consumption has risen significantly in recent years. Nationally a major topic of discussion is the increasing connections between the natural gas and electric industries, which can have major ramifications for both the price and reliability of utility service.

One general area of discussion is the impact of the higher, more volatile natural gas prices of recent years on the prices seen in electricity markets. In the recent past natural gas prices have generally been much more volatile than the price of other major fuels for electric generation, such as uranium and coal. To the extent a state or region becomes more reliant on natural gas-fired generation, that state or region may see higher and more volatile electricity prices as the price characteristics of natural gas used to generate electricity flows through to the cost of electricity. Arizona is generally recognized as a state where natural gas is the fuel which is used to generate the marginal supply of electricity most of the time, meaning that fluctuations in natural gas prices will likely have a noticeable impact on the market prices of electricity in Arizona. This situation, in concert with other issues related to natural gas costs and supplies, raise broad public policy questions regarding the continued growing reliance on natural gas as the fuel for new electric generation facilities.

At the recent National Association of Regulatory Utility Commissioners (“NARUC”) summer committee meetings, held July 11-14, 2004, in Salt Lake City, Utah, the NARUC board of directors adopted a resolution supporting fuel diversity for electric generation. The resolution notes that since the early 1990s, new electric generation has been predominantly natural gas-fired and that between 2000 and 2003, 187 gigawatts of new electric generation capacity was added,

93 percent of which is natural gas-fired. The resolution urges support of fuel diversity, while recognizing that various local factors are very important in making fuel diversity decisions for a given utility or region.

A second area of discussion is the importance of a reliable natural gas supply in ensuring that electricity service is reliable. In contrast to a fuel such as coal, where a generation facility often has weeks or months of fuel supply on site, natural gas fuel for Arizona's electric generation facilities is provided on a real time basis through the interstate pipeline and local distribution systems. As natural gas fired generation becomes a larger part of the generation portfolio of a utility or region, the reliability of natural gas supplies becomes more and more critical. A further factor is that natural gas-fired electric generation takes natural gas service at high pressure levels off the interstate pipeline system and if natural gas supply pressure drops below certain thresholds, the electric generating unit would trip off. So if the pipeline sees a significant drop in pressure on its system, it appears likely that the natural gas-fired electric generating units would be among the first El Paso shippers to see their service impacted. The loss of natural gas supply to one or more electric generation facilities could have significant ramifications on the reliability of electricity service, particularly in electric load pocket areas such as Phoenix, where virtually all of the in-pocket electric generation is natural gas-fired.

Electric generating units, by their nature, have large swings in demand for natural gas fuel, as they cycle on and off at various intervals to meet the changing demand for electricity. With the growing consumption of natural gas for electric generation in the Southwest in recent years, the impact of such swings in demand on the interstate pipeline systems is a matter worth considering. In recent years, in a variety of forums, El Paso has expressed a concern regarding the future ability of its current system to meet the growing swings in demand, particularly on its southern system where the majority of the natural gas-fired generation in Arizona is located. During the recent Palo Verde outage and Westwing substation fire, El Paso experienced significant unscheduled natural gas pulls on its system, resulting in El Paso issuing Operational Flow Orders, warning that shippers whose deliveries onto the El Paso system did not match their takes off the system would be subject to unauthorized overpull penalties. While El Paso's ability to maintain service to shippers during these recent events highlights the fact that there is some service flexibility in the system currently, the continued growth of electric generation highlights the need to pursue greater means to ensure natural gas service reliability in Arizona.

Two common ways of addressing possible concerns with gas supply reliability and flexibility are the development of natural gas storage, particularly market area natural gas storage, and the ability of natural gas-fired electric generation to have a backup fuel source which it could rely on in cases where natural gas supplies were interrupted temporarily. In Arizona, older gas-fired generating units generally have some form of backup fuel capability, but none of the newer, recently sited gas-fired generating units have any backup fuel capability. Backup fuel capability is especially important in electricity transmission constrained areas such as Phoenix, Tucson, and Yuma, where local electric generation can play an important role in ensuring that reliable electricity service is maintained. The previously mentioned NARUC resolution supporting fuel diversity for electric generation notes that there are economic benefits of gas-fired electric generating units having dual-fuel capability, including the dampening of electricity prices and natural gas demand during peak periods.

The development of natural gas storage has in recent years been widely recognized as an important issue in enhancing the natural gas infrastructure in Arizona. The existing natural gas storage on the eastern end of the El Paso system, such as Washington Ranch, provide system benefits, but it takes several days for natural gas to travel from west Texas to Arizona, so production area storage does not provide the same ability to quickly respond to rapidly changing local conditions in market areas, such as the recent Palo Verde generating station outage or the recent Westwing substation fire. While a number of potential natural gas storage projects have been discussed in recent years, including Red Lake, Desert Crossing, Copper Eagle, and a Unocal project in Pinal County, it is unclear at this time if or when natural gas storage facilities will be constructed in Arizona.

In combination, growing demand for natural gas in Arizona, primarily as a result of its increased utilization for electricity generation, the lack of backup fuel capability at many gas-fired electric generation units and the lack of natural gas storage in Arizona will place the reliability of Arizona's natural gas supplies at risk.

The Commission Notice of Inquiry on Natural Gas Infrastructure

On April 15, 2003, the Commission initiated its Notice of Inquiry (“NOI”) on natural gas infrastructure, issuing a list of questions to solicit input from interested parties. A total of 20 parties provided responses to the NOI questions. On September 10, 2003, the Commission held a workshop regarding the NOI on natural gas infrastructure. Prior to the workshop, Commission Staff had circulated a strawman proposal for discussion at the workshop. Following the September 10, 2003, workshop, the Commission solicited an additional round of comments from interested parties regarding the strawman proposal and other issues discussed at the workshop. Comments were received from 17 parties following the September 10, 2003, workshop.

On December 18, 2003, the Commission issued its Policy Statement Regarding New Natural Gas Pipeline and Storage Costs. In this document, the Commission made specific policy statements about supply/infrastructure diversity, supply/infrastructure planning, the Commission approach to new infrastructure projects, the general Commission approach, individual utility circumstances, and reporting.

The policy statements included in the December 18, 2003, document are as follows:

I. Supply/Infrastructure Diversity

- 1. Diversity in Arizona’s natural gas infrastructure, including interstate pipeline facilities, natural gas storage facilities, and related aspects of natural gas service, is beneficial and should be actively pursued by Arizona utilities as a way of providing greater supply reliability and flexibility and possible lower costs.*
- 2. Arizona utilities as a general principle should pursue a diverse natural gas supply portfolio which takes into account relevant factors including cost, reliability, flexibility, safety, and price stability.*
- 3. Arizona utilities should consider natural gas storage as an integral component of their efforts to develop a diverse natural gas supply portfolio, recognizing the variety of potential benefits of natural gas storage, including enhanced reliability, operational flexibility, more efficient use of pipeline capacity assets, and reduced natural gas price volatility.*
- 4. The current monopoly on interstate pipeline service in central and southern Arizona is not beneficial to the state of Arizona. The Commission encourages development of alternative natural gas supply options, including one or more new interstate pipelines and natural gas storage facilities. Reduction over time of Arizona’s reliance on a single pipeline system reduces the risk to Arizona of operational, regulatory, or other problems which may occur in regard to any given pipeline system.*

II. Supply/Infrastructure Planning

- 1. Arizona utilities should plan for natural gas infrastructure needs on a long term basis, recognizing that some decisions may not necessarily lead to the lowest cost in*

- the short term. Such planning should take into account the lead time necessary to construct and put in service natural gas infrastructure in Arizona.*
- 2. The Commission endorses voluntary efforts to analyze and plan for the present and future natural gas supply needs of Arizona and encourages Arizona utilities and others to actively participate in such activities.*

III. Commission Approach to New Infrastructure Projects

- 1. The Commission, as a general proposition chooses not to endorse specific infrastructure projects. The Commission believes that the region's natural gas consumers and infrastructure developers play a fundamental role in determining how to best address the region's infrastructure needs. The Commission anticipates continued active involvement in FERC proceedings related to Arizona's natural gas infrastructure, as the Commission deems appropriate.*

IV. General Commission Approach

- 1. The Commission NOI on natural gas infrastructure activities recognizes the jurisdiction and central role of FERC in developing new natural gas infrastructure in the Southwest and anticipates the Commission's NOI initiative as being complementary to FERC's activities, recognizing that both state and federal regulators can play a role in Arizona's natural gas infrastructure development.*
- 2. The Commission encourages open, on-going and substantive communication between Arizona utilities and the Commission as Arizona's natural gas infrastructure is developed in the coming years.*
- 3. At this time the Commission believes that the best method for the Commission to address natural gas infrastructure matters is to encourage utilities to file applications, including requests for alternate cost treatment, in order that the Commission can consider specific requests for cost recovery proposals appropriate to the circumstances for each individual application.*

V. Individual Utility Circumstances

- 1. As individual Arizona utilities consider their participation in the development of natural gas infrastructure, the Commission recognizes that each utility's circumstances and needs are unique and participation in natural gas infrastructure projects will vary accordingly.*

VI. Reporting

- 1. Reporting for any additional pipeline services should be consistent with the method and content of current reporting by utilities for their current pipeline services.*
- 2. Reporting requirements for natural gas storage activities will need to be developed, given the lack of current natural gas storage availability in Arizona. Utilities should work with Staff to develop the proper reporting format and content to be included in reports to the Commission, including possibly through existing monthly adjustor reports or other reporting methods as deemed appropriate.*

The document also discusses the Commission's consideration of alternate cost recovery methods, such as pre-approval, as well as the way such costs have traditionally been considered and that the traditional method is the preferred way.

On February 13, 2004, the Commission held another workshop regarding the NOI on natural gas infrastructure. Topics of discussion at the workshop included Arizona natural gas infrastructure issues, updates on pending pipeline and gas storage projects, and the National Petroleum Council study, *Balancing Natural Gas Policy: Fueling Demands of a Growing Economy*, which was issued in September 2003.

APS – Silver Canyon Precedent Agreement

On September 29, 2003, APS entered into a precedent agreement with Silver Canyon Pipeline LLC (“Silver Canyon”), which in effect, and subject to various terms and conditions, commits APS to taking pipeline service from the Silver Canyon project. Exhibit A of the precedent agreement lists the contemplated volume of service to be taken as well as the rates for service. The term of the initial agreement with Silver Canyon would be ten years, beginning July 1, 2006, or the in-service date of the pipeline. The reservation charge would be the lesser of ██████ per decatherm/day (dth/day) or the applicable FERC approved transportation tariff rate for Silver Canyon. The reservation charge is much larger than the other pipeline charges, which include the volumetric rate, the fuel rate, and the applicable surcharges. The volumetric rate is a rate per dth which applies to all natural gas shipped on the Silver Canyon system. The actual volumetric rate has not been determined, but APS estimates that it will be ██████ per dth. The fuel rate is a percentage which reflects the amount of gas which the shipper provides to the pipeline for service on the pipeline. The actual fuel rate has not been determined, but APS estimates that it will be ██████ percent. Because the fuel rate provides the pipeline with a volume of natural gas purchased by and provided by the shipper, the fuel rate becomes more important as natural gas prices increase. Lastly, the applicable surcharges include the Gas Technology Institute (“GTI”) surcharge (which is being phased out and was formerly known as the Gas Research Institute surcharge) and the annual charge assessment (“ACA”), which is the FERC regulatory assessment. The applicable surcharges have not been determined, but it appears that they will likely be generally similar to such charges on the El Paso system and quite small in comparison to the overall Silver Canyon costs.

The precedent agreement contemplates a monthly daily quantity (“MDQ”) which is shaped from month to month, with greater capacity during the summer months when APS experiences its peak demand for electricity. The precedent agreement also provides APS with 1/16 hour service. APS has a given amount of capacity it may use during a given day. 1/16 hour service allows APS to use that capacity during a 16 hour period, in effect enabling APS to use 150 percent of its pipeline capacity volume for 16 hours, as long as it stays within the overall 24 hour capacity allocation. APS can therefore target the use of all of its capacity to the periods of peak need, while not using the capacity during off peak periods. Such flexibility can be of substantial benefit.

The Silver Canyon capacity would originate at the Blanco Hub in the San Juan basin and terminate at Silver Canyon’s interconnect with El Paso’s southern system. If the Redhawk units are transferred to APS, Silver Canyon might provide direct service to Redhawk, without requiring interconnection with El Paso to provide such service. The precedent agreement also contains pressure guarantees. APS has indicated that El Paso will not provide pressure guarantees at new service points. Pressure guarantees are important to electric generators to ensure that the generating units do not trip off due to low natural gas inlet pressure. Such pressure guarantees would only be of direct benefit if APS took service directly off of the Silver Canyon pipeline, as is possibly contemplated at the Redhawk units.

The precedent agreement contains termination rights for both APS and Silver Canyon, such that either party can terminate the project at certain points if various conditions or events

occur or do not occur. If the Silver Canyon project moves forward as contemplated in the precedent agreement, APS would at some future date enter into a transportation service agreement with Silver Canyon.

The following table shows the capacity APS would acquire through its precedent agreement with Silver Canyon, in dth/day.

Month	Volume (dth/day)
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	
Average	

What Does Pre-approval Mean and Why Pre-approve?

APS' application in this matter specifically requests Commission pre-approval of the costs identified in the application for recovery. As stated in the December 18, 2003, Commission Policy Statement Regarding New Natural Gas Pipeline and Storage Costs:

“Traditionally Arizona entities have not sought and the Commission has not granted pre-approval of cost recovery from participation in infrastructure projects or other projects. Rather utilities made their own business decisions on those projects. At a later time the Commission addressed cost recovery in proceedings such as rate cases and adjustor mechanisms. One important reason for this traditional approach has been to ensure that the Commission has a full opportunity to evaluate the actions taken and costs incurred by the utility for prudence and in the best interest of Arizona's utility consumers. This approach provided incentive to utilities to pick the most cost-effective project. This traditional approach to utility participation in infrastructure projects, including natural gas pipeline and storage projects, is still available to utilities that wish to continue using this method.”

While the traditional method should still be the standard way to address participation in such infrastructure or other projects, the unique and extraordinary circumstances present in Arizona's natural gas infrastructure at this time support Commission consideration of new methods which may enhance the state's ability to address natural gas infrastructure concerns in a timelier manner.

One concern that is expressed at times regarding the traditional method is that a utility will have a strong inclination to always pick the least cost option because it is often considered the easiest to justify in the future when the Commission scrutinizes its actions, even if there are strong considerations which indicate that an option other than the least cost option may be a reasonable and viable course of action. Recognizing that each case must be measured on its own merits, there certainly are cases where less tangible benefits may be substantial and outweigh a higher cost, at least in the short term. One can argue that such a case currently exists in considering the development of Arizona's natural gas infrastructure.

For example, it is widely recognized in the natural gas industry that having competition between multiple pipelines to serve a given area is a positive benefit. This harks back to basic economics as a seller of a good in a market with no competitors is not likely to have the same motivation to reduce the price of the good as that seller would have if there was one or more other competing sellers of the same good in the same market. Applying this reasoning to the Southwestern natural gas market, one could make the argument that El Paso does not have the same motivation to reduce the cost of service to its Arizona shippers (with no pipeline competition in Arizona) as it does to reduce the cost of service to its California shippers (who have multiple pipeline options, including the recently concluded expansion of the Kern River pipeline). The introduction of another pipeline to central and southern Arizona, such as the Silver Canyon pipeline, would introduce at least some level of pipeline competition to the major Arizona markets.

Certainly utilities may choose to pursue other pipeline options absent pre-approval of such actions, but taking such action is likely more difficult in the current market with so much uncertainty. Also, it would appear that the financial difficulties being experienced by many entities in the energy business would lessen the industry's appetite as a whole to participate in new infrastructure projects, even if they are needed and beneficial. Given the unique circumstances and needs of the Arizona natural gas market at this time, providing properly conditioned pre-approval in the current circumstance could provide an additional incentive for Arizona utilities to participate in infrastructure projects which at least on an up front cost basis may appear more costly than the existing infrastructure option.

APS' application specifically requests pre-approval to for recovery of the reservation charges, volumetric rate, fuel rate, and applicable surcharges associated with the Silver Canyon project. Other costs APS could incur, such as authorized overrun costs and costs of acquiring released capacity on the Silver Canyon pipeline are not being considered in this proceeding. In the case of APS, the exact method for recovering Silver Canyon pipeline costs is uncertain at this time, due to the on-going rate proceeding. Pre-approval in this case would reflect Commission approval to recover those previously identified specific costs for the ten year period of the initial contract with Silver Canyon. Such costs would not begin to be incurred until such time as the pipeline project is built and APS begins taking service through the pipeline, currently projected to be late 2006. APS is currently incurring similar pipeline capacity costs for its pipeline capacity on the El Paso system. As a general principal, pipeline capacity costs on different pipelines should be recovered in a similar manner to avoid providing an artificial incentive to favor pipeline capacity on one pipeline over another.

However, while pre-approval would provide for the recovery of these costs to ratepayers, it would not in any way reduce the Commission's ability to determine the prudence of the operation and use of APS' pipeline capacity rights, whether on the Silver Canyon pipeline or other pipelines. APS still has a standing obligation to maximize the value of all its pipeline capacity assets for the benefit of the APS ratepayers who pay for the capacity. So if the Commission in the future determined that APS had not prudently managed its Silver Canyon or other pipeline capacity, it could take action to disallow such costs, just as the Commission can do with APS' present pipeline capacity.

It should be noted that even if the Commission provides pre-approval of APS' participation in the Silver Canyon project, the project, for a variety of reasons, could still end up not being constructed. However, it does appear that Commission pre-approval would positively impact the Silver Canyon project's likelihood of moving forward.

Staff Evaluation

Silver Canyon Capacity Versus other Options

The Silver Canyon pipeline project is one of a number of proposed pipeline projects which have been put forward by various parties to provide additional pipeline capacity to Arizona. Other projects in recent years have included the Desert Crossing, Sun Devil Lateral, Picacho, Coronado, El Paso Line 1903, and North Baja projects. The purpose of this discussion is not to assess whether the Silver Canyon project is the best available project, as this would be virtually impossible to ascertain definitively, given the amount of uncertainty entailed by such an analysis. Additionally, it is not the Commission's policy to specifically endorse any given infrastructure project over other projects. Every project has a variety of differing characteristics, many of which are difficult or impossible to accurately quantify if a definitive comparison were to be undertaken. Rather, this discussion considers whether the Silver Canyon project is a viable and reasonable project for APS to participate in, given APS' circumstances.

It is very difficult to compare the rates for service under the precedent agreement on the Silver Canyon project with other proposed pipelines simply because no other pipeline project has moved forward to the point where comparable price data is readily available. Additionally, each pipeline project put forward has different characteristics, such as location, length, operating characteristics, and services offered to shippers, making a direct comparison even more difficult. APS has indicated that other projects were not sufficiently developed that they could be considered likely alternatives. One positive factor for the Silver Canyon project is that Kinder Morgan is generally recognized as being a company with a strong financial position and operates other natural gas pipelines in the United States, factors which indicate the Kinder Morgan would appear to have the resources to undertake the Silver Canyon project.

The area where a comparison of some sort can be undertaken is with service on the El Paso system. The table below shows a comparison of the various charges currently in effect on the El Paso system with the projected costs on the Silver Canyon system.

Rate Element	Current El Paso Service	Silver Canyon Service
Reservation Charge (\$/dth)	\$0.25975	██████████ ²
Volumetric Rate (\$/dth)	\$0.0202 (San Juan) \$0.0230 (Permian) \$0.0310 (Anadarko)	██████████ ³
Fuel Rate	3.20 %	██████████ ³
Surcharges	\$0.000 - 0.0040 (GRI) ⁴ \$0.0021 (ACA) ⁵	Likely similar to those on the El Paso system

² If the FERC approved rate is below ██████████, APS may choose to accept the FERC approved rate.

³ Estimated by APS

⁴ GRI refers to the Gas Research Institute (now known as the Gas Technology Institute). This surcharge is being phased out and should not be in effect by the time the Silver Canyon project becomes operational.

⁵ ACA refers to the annual charge assessment, which is the FERC regulatory assessment

Despite lower fuel and volumetric rates, the higher reservation rate, which is by far the largest rate element, results in a higher cost when directly comparing the proposed Silver Canyon project's rates with the current El Paso rates. However, a number of factors complicate this comparison. First, El Paso has a pending rate proceeding before FERC, the first since 1995, such that new rates will go into effect beginning January 1, 2006. There are a variety of uncertainties regarding what the outcome of the upcoming El Paso rate case will be, but it appears likely that the rates paid by Arizona shippers will increase from those currently shown in the above table.

APS, in supporting documents, provided comparisons of its projected annual total natural gas fuel costs in 2007 and 2015, comparing a scenario where they continued to rely on El Paso for all capacity and a scenario where they had the Silver Canyon capacity and a lesser amount of El Paso capacity. The tables below summarize the scenario results reported by APS.

2007 Scenario	Fixed Costs	Variable Costs	Commodity Costs	Total Costs
El Paso Only ⁶	\$24,145,822	\$30,991,934	\$268,191,597	\$323,329,353
El Paso and Silver Canyon ⁷	██████████	██████████	██████████	██████████
Difference	██████████	██████████	██████████	██████████

2015 Scenario	Fixed Costs	Variable Costs	Commodity Costs	Total Costs
El Paso Only ⁸	\$55,283,493	\$55,064,346	\$433,191,993	\$543,539,832
El Paso and Silver Canyon ⁹	██████████	██████████	██████████	██████████
Difference	██████████	██████████	██████████	██████████

Given the total cost of natural gas service, the variances between the El Paso and the El Paso/Silver Canyon scenarios are relatively small and variations in things such as basin differentials and unanticipated rate changes on the El Paso system could be much larger than the differentials shown above.

Second, given the age of the El Paso pipeline system and therefore its high level of depreciation, it is highly unlikely that any new pipeline project, lacking such a level of depreciation, would be able to have directly competitive rates. But at the same time, a new pipeline would be less likely to have the amount of maintenance and other issues associated with

⁶ 2007 El Paso Only case assumes a daily average capacity of ██████████ MMBtu, annually.

⁷ 2007 El Paso and Silver Canyon case assumes a daily average capacity of ██████████ MMBtu on the El Paso system and ██████████ MMBtu on the Silver Canyon system, annually.

⁸ 2015 El Paso Only case assumes a daily average capacity of ██████████ MMBtu, annually.

⁹ 2015 El Paso and Silver Canyon case assumes a daily average capacity of ██████████ MMBtu on the El Paso system and ██████████ MMBtu on the Silver Canyon system, annually.

a much older pipeline and would effectively reduce the overall age of the region's infrastructure as a whole. According to a presentation at the recent NARUC winter committee meetings, 88 percent of United States pipeline capacity was constructed prior to 1970. Third, Silver Canyon's ability to offer seasonal capacity and significant daily flexibility provides significant benefits which are not directly captured in a simple comparison of the rates, but provide flexibility which would likely require APS to incur additional costs on the El Paso system to duplicate. In the current circumstances, with the number of uncertainties facing Arizona shippers, a comparison of relative costs, while still important, should not be relied on too heavily in decision-making, as a variety of factors, many of which are difficult or impossible to accurately quantify, will have a large impact on the nature, quality, and cost of service which APS will end up incurring on the Silver Canyon pipeline or other pipeline.

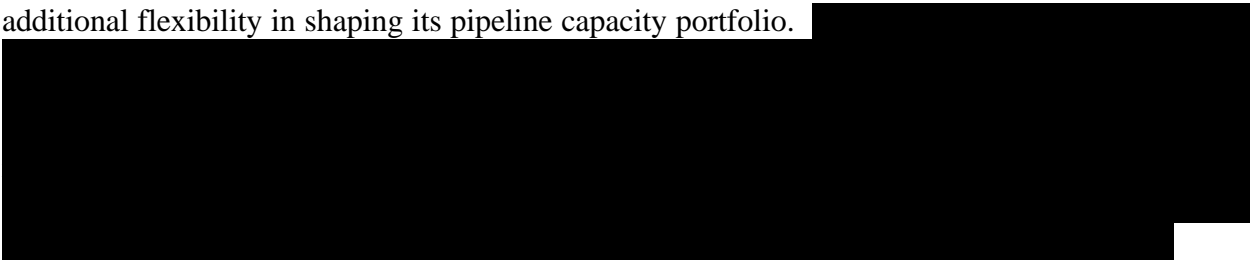
In the first year of service from Silver Canyon, APS would pay approximately [REDACTED] million in reservation charges. Charges related to the volumetric rate and fuel rate are dependent on the volume of throughput. Assuming a hypothetical 75 percent load factor, a volumetric rate of [REDACTED] per dth, a fuel rate of [REDACTED] percent, and a gas price of \$5.00 per dth, results in annual volumetric charges of approximately [REDACTED] and annual fuel charges of roughly [REDACTED], for a total approximate annual cost for Silver Canyon service of [REDACTED] million. APS would likely incur some additional costs for taking short haul service on El Paso lines, which APS estimates could be approximately [REDACTED] per dth. Such short-haul costs could at least be partially avoided if APS acquires the PWEC Redhawk units and the Silver Canyon pipeline connects directly to the Redhawk facilities.

In an era of much higher natural gas prices, the cost of pipeline capacity becomes a much smaller piece of the overall cost of acquiring natural gas supplies for a company like APS. While higher natural gas commodity prices unfortunately lead to a higher overall cost of natural gas to Arizona consumers, the higher commodity prices overwhelm small changes in pipeline capacity costs and also provide more incentive to develop natural gas infrastructure which may help reduce the high commodity costs. [REDACTED]

[REDACTED] Further, if APS did not acquire the Silver Canyon capacity, it would have to acquire a similar amount of capacity from some other source, which would likely at least approach the cost of the Silver Canyon capacity.

An important factor in APS' overall natural gas pipeline capacity portfolio is that APS has step-down rights in its contracts with El Paso. Step-down rights allow the shipper to turn back capacity if they choose to do so at certain points in time. APS' contracts allow APS to step down capacity on El Paso in August 2006, September 2008, and September 2013 (when their contract with El Paso expires). APS is required to provide El Paso with a minimum notice of one year, and there are other terms and provisions for step-downs. With the various types of capacity APS has been allocated in the recent proceedings at FERC, APS has a sizable number of separate contracts with El Paso now. While having a large number of such contracts can be

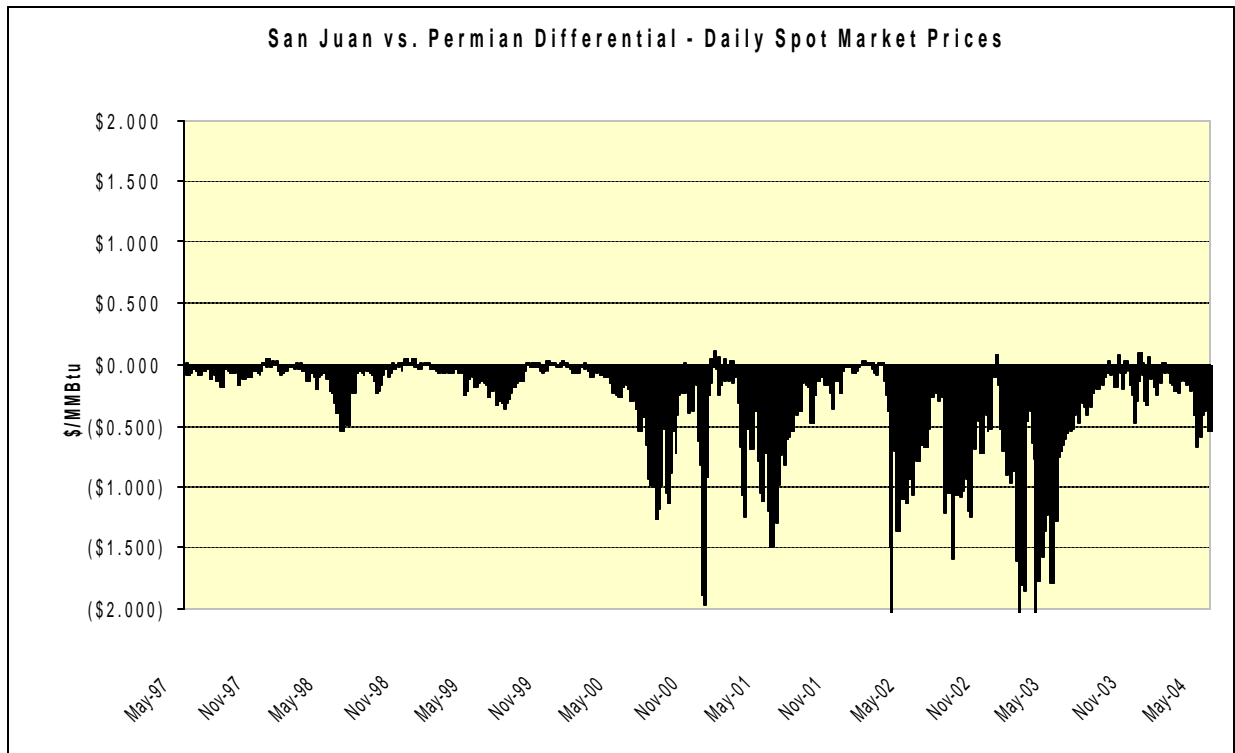
operationally cumbersome, they provide the shipper with greater flexibility in choosing which contracts to pursue a step-down on. In summary, the step-down rights provide APS with additional flexibility in shaping its pipeline capacity portfolio.



San Juan/Rockies Versus Permian Gas

One long-held principal in Southwestern natural gas markets is that San Juan gas is cheaper than Permian gas, so gas buyers generally pursue San Juan gas when possible. This principal has generally held true, though the basin differential has fluctuated to some extent over time. It has also been generally true that when there are price spikes, Permian spot market prices rise much more quickly and much higher than San Juan prices, which is not surprising, given the greater eastern market access of Permian gas. A number of factors impact the basin differential between San Juan and Permian gas, including pipeline operational circumstances, regional demand fluctuations, growth or decline in supply development in each basin, access to other markets including the eastern and Midwestern markets, and the development of additional pipeline capacity in the region. Some market participants believe that the basin differential between San Juan and Permian gas will largely disappear in the long term, while others believe that there will continue to be a price premium paid for Permian gas in comparison to San Juan gas. Whether a basin differential will be maintained and what size the differential will be are hard to ascertain and given the many variables, reasoned arguments can be made both ways. Given historic pricing patterns, it does seem likely that at least under certain circumstances San Juan supplies would continue to have at least a small price advantage over Permian supplies, at least in the short term.

The chart below shows the differential between the daily spot market prices at the El Paso-Non Bondad (San Juan) and El Paso Permian pricing points, as reported in Gas Daily, since June 1997.



Source: Gas Daily

Over the period shown in the chart above, the basin differential generally increases when natural gas market prices are displaying a high level of volatility and to date, the differential between the supply basins has continued. The graph also demonstrates the high level of variability in the basin differential between the San Juan and Permian basins.

The table below shows the average daily spot market basin differential for each month at the El Paso-Non Bondad (San Juan) and El Paso Permian pricing points, as reported in Gas Daily, since June 1997.

		January-99	-\$0.080	January-01	-\$0.167	January-03	-\$0.239
		February-99	-\$0.079	February-01	-\$0.175	February-03	-\$1.165
		March-99	-\$0.079	March-01	-\$0.189	March-03	-\$0.400
		April-99	-\$0.079	April-01	-\$0.295	April-03	-\$0.905
		May-99	-\$0.084	May-01	-\$0.409	May-03	-\$0.739
June-97	-\$0.055	June-99	-\$0.087	June-01	-\$0.485	June-03	-\$0.439
July-97	-\$0.050	July-99	-\$0.095	July-01	-\$0.428	July-03	-\$0.355
August-97	-\$0.095	August-99	-\$0.096	August-01	-\$0.271	August-03	-\$0.359
September-97	-\$0.072	September-99	-\$0.094	September-01	-\$0.258	September-03	-\$0.349
October-97	-\$0.063	October-99	-\$0.091	October-01	-\$0.252	October-03	-\$0.339
November-97	-\$0.063	November-99	-\$0.088	November-01	-\$0.253	November-03	-\$0.323
December-97	-\$0.054	December-99	-\$0.085	December-01	-\$0.245	December-03	-\$0.315
January-98	-\$0.056	January-00	-\$0.085	January-02	-\$0.240	January-04	-\$0.297
February-98	-\$0.051	February-00	-\$0.085	February-02	-\$0.251	March-04	-\$0.288
March-98	-\$0.048	March-00	-\$0.082	March-02	-\$0.233	April-04	-\$0.288
April-98	-\$0.051	April-00	-\$0.087	April-02	-\$0.261	May-04	-\$0.315
May-98	-\$0.064	May-00	-\$0.091	May-02	-\$0.192	June-04	-\$0.316
June-98	-\$0.092	June-00	-\$0.101	June-02	-\$0.295		
July-98	-\$0.093	July-00	-\$0.105	July-02	-\$0.330		
August-98	-\$0.088	August-00	-\$0.469	August-02	-\$0.322		
September-98	-\$0.094	September-00	-\$0.257	September-02	-\$0.496		
October-98	-\$0.092	October-00	-\$0.157	October-02	-\$0.448		
November-98	-\$0.088	November-00	-\$0.156	November-02	-\$0.303		
December-98	-\$0.084	December-00	-\$0.332	December-02	-\$0.321		

The previous graph showed that there were small blips where San Juan gas was more expensive than Permian gas, but as this table shows, there isn't a single month since June 1997 where on average San Juan gas has not been cheaper. The monthly averages vary from a low of \$0.048 per dth in March 1998 to a high of \$1.165 in February 2003, which is reflective of the major short term price spike seen at that time.

Similar to San Juan gas is gas from the Rockies supply basin, which is the main domestic production basin where natural gas supplies have grown significantly in recent years. Rockies gas at times in the past has shown a significant discount in price to natural gas supplies from other production basins. The basic reason for this is that there has been more production available in the basin than there was takeaway capacity on pipelines. Then when additional takeaway pipeline capacity was built into the supply basin, such as the Kern River pipeline expansion in May 2003, the differential between that basin and other basins is reduced. A good example of this is when the Kern River pipeline expansion began service in May 2003, increasing takeaway capacity out of the Rockies supply basin. When the Kern River pipeline expansion went into service, the price of Rockies gas immediately shifted upward to be much closer to other western supply basins. It would then be expected that absent additional takeaway

capacity, the basin differentials would begin to grow again as more supplies come online in the Rockies area.

It is important to illustrate the impact basin differentials can have when comparing the cost effectiveness of various pipeline options. A simple sensitivity analysis can be done comparing the savings from purchasing San Juan gas instead of Permian gas with the costs of taking service on a given pipeline, varying the San Juan/Permian differential. Using estimated total cost numbers contained in the previous section, which indicate APS' service on the Silver Canyon pipeline will be approximately [REDACTED] million annually, the following estimated savings under different basin differential scenarios can be compared.

Estimated Silver Canyon Pipeline Annual Service Cost	Hypothetical Annual Volume (dth)	San Juan – Permian Basin Differential (\$/dth)	Annual Savings From Basin Differential
[REDACTED]	34,432,500	\$0.02	\$688,650
[REDACTED]	34,432,500	\$0.05	\$1,721,625
[REDACTED]	34,432,500	\$0.10	\$3,443,250
[REDACTED]	34,432,500	\$0.20	\$6,886,500
[REDACTED]	34,432,500	\$0.50	\$17,216,250

As shown in the table above, even a relatively small basin differential of \$0.10/dth (which equals just \$0.01 per therm) can have a major influence over the actual total cost of gas to APS of taking service over one pipeline in comparison to another. [REDACTED]

Acquisition of the Silver Canyon capacity will significantly increase the percentage of APS' capacity with San Juan access, with the exact percentage dependent upon an number of factors [REDACTED]

Given the increased reliance on Permian gas as a result of recent FERC actions, a case can be made for acquiring additional San Juan and/or Rockies capacity from a diversity standpoint. And to the extent San Juan and/or Rockies gas prices do maintain a price advantage over Permian gas, this provides additional motivation to access non-Permian gas supplies.

Impact on an APS Customer Bill

Given the estimated annual cost of the Silver Canyon pipeline capacity of [REDACTED] million and APS' total retail sales in 2003 were 24,562,305,000 kwh¹⁰, the direct cost to APS ratepayers of the Silver Canyon pipeline capacity would be approximately [REDACTED] per kwh. An average APS residential customer consumed 8,722 kwh in 2003 (727 kwh per month) according to APS' FERC Form One. An average residential customer would pay approximately \$8.72 annually for the Silver Canyon pipeline capacity. However, this cost should be kept in the context that if APS

¹⁰ Based upon APS' 2003 FERC Form One.

were not acquiring Silver Canyon capacity, it would likely need to acquire additional capacity elsewhere to meet its growing demand.

APS costs comparisons of the El Paso Only versus El Paso and Silver Canyon scenarios showed additional costs of ██████████ in 2007 and ██████████ in 2015. The annual impact on an average residential customer would be \$2.78 in 2007 and \$1.13 in 2015, based upon average residential consumption in 2003. And to the extent there are greater savings through increased San Juan access compared to buying more Permian gas, the costs of the Silver Canyon capacity to a typical residential customer could be reduced. In summary, while there may be a small additional incremental cost to APS customers for the Silver Canyon capacity, this amount of cost appears to be outweighed by the long term benefits of this additional natural gas infrastructure in Arizona.

APS' Participation in the Silver Canyon Project in Light of the Commission's December 18, 2003 Policy Statement

The Commission's December 18, 2003, policy statement addressed a number of policy issues related to new natural gas infrastructure in Arizona. This section of the Staff Report considers how APS' application conforms to the Commission's December 18, 2003, policy statement.

Section one of the policy statement addresses supply/infrastructure diversity. APS' Silver Canyon capacity would provide additional natural gas infrastructure diversity, would enhance Arizona's access to San Juan and Rockies gas, and would help reduce the current monopoly pipeline service situation existing in central and southern Arizona.

Section two of the policy statement addresses supply/infrastructure planning. APS' participation in the Silver Canyon project does represent an effort to undertake long term planning for APS' natural gas needs, recognizing that a great deal of uncertainty exists regarding pipeline service in the Southwest in the coming years.

Section three of the policy statement addresses the Commission's approach to new infrastructure projects. As previously noted, the Commission in this proceeding is in no way providing a specific endorsement of the Silver Canyon pipeline project in comparison to other projects, but is rather assessing the individual circumstances represented in APS' filing.

Section four of the policy statement addresses the general Commission approach. APS' application is consistent with the Commission's indication that it would consider specific requests by utilities for cost treatment of new infrastructure costs.

Section five of the policy statement addresses individual utility circumstances. APS' application is reflective of the individual pipeline capacity and service needs of APS and its customers through such features as seasonal capacity focused on summer cooling season months as well as daily operational flexibility.

Section six of the policy statement addresses reporting requirements. APS has indicated a willingness to provide information to the Commission regarding its Silver Canyon capacity.

In summary, APS' filing addresses a number of the policy issues which the Commission's December 18, 2003, Policy Statement identifies for Arizona natural gas consumers.

The Silver Canyon Capacity as Part of APS' Overall Pipeline Capacity Portfolio

APS' current pipeline capacity portfolio on the El Paso system contains pipeline capacity with a variety of features, including differing supply basin receipt rights, differing firmness, differing delivery points, and other terms and conditions. The capacity on the El Paso system is also seasonally sculpted, with the majority of APS' capacity concentrated during the summer months when air conditioning demand drives APS' peak usage.

The table below summarizes APS/PWEC's¹¹ current pipeline capacity on the El Paso system. Volumes are shown for August, the month when APS/PWEC holds the most capacity, as APS/PWEC's capacity volumes vary by month.

Description of Capacity ¹²	Volume of Capacity (mcf/day) ¹³
Block 1 – Permian to PG&E Topock	1,718
Block 2 - Permian to PG&E Topock (recallable to California)	43,303
Block 2 – San Juan to PG&E Topock (recallable to California and constrained north to south)	74,968
Block 3 – Permian to Ehrenburg	2,604
Current Agreements – San Juan to Arizona Delivery Points	67,172
Current Agreements – Permian to Arizona Delivery Points	39,559
Line 2000 Conversion - San Juan to Arizona Delivery Points	38,542
Line 2000 Conversion – Permian to Arizona Delivery Points	22,722
Line 2000 Power Up – Permian to Arizona Delivery Points (phase 3 in service as of June 11, 2004)	85,257
Total (including Anadarko)	375,845

APS projects that its peak annual natural gas demand will grow from approximately [REDACTED] MMBtu/day in 2007 to [REDACTED] MMBtu/day in 2015.

¹¹ [REDACTED]

¹² APS also holds a very small amount of Anadarko supply basin capacity, approximately 42 mcf/day.

¹³ Note that for purposes of discussing capacity in this report, 1 mcf = 1.023 dth. One mcf is a thousand cubic feet of natural gas. In contrast, dth (as well as Btus) is a measurement of heat content and 1 dth = 1 MMBtu.

It is possible that APS will either need to acquire additional capacity if demand growth is quicker than expected, or APS could have more capacity than it needs if demand growth is less than projected. APS has a variety of options which can help it align the amount of pipeline capacity it holds with its expected demand, including purchasing and selling capacity on the release market, turning back capacity (consistent with the step-down terms of any given contract), and acquiring additional capacity on a pipeline.

Impact of Pre-approval on APS' Level of Risk

APS, as a public service corporation providing electricity service in Arizona, is subject to a variety of risks as it conducts its business. As a general principal, utilities such as APS attempt to reduce the level of risk they face, as a reduced risk level is looked upon favorably for a variety of reasons. APS' risk is typically one factor which is considered in certain Commission proceedings, including general rate proceedings. Pre-approval of the cost of acquiring a given asset, would seem to shift some level of risk from the company to the ratepayers. In this case, if the Commission grants pre-approval of APS' acquisition of Silver Canyon capacity, it would seem to reduce APS' risk in relation to this particular asset. The question of what this apparent reduction of risk means to APS' overall level of risk is a more difficult question, as APS faces a variety of different risks, both in its gas supply acquisition activities, and in various other segments of its business. APS has indicated that it does not believe that Commission pre-approval of the acquisition of Silver Canyon capacity has a discernable impact on APS' level of risk. Whether there is a discernable impact on APS' risk and if so, what the proper treatment of the shift in risk would be are issues which are more properly considered in future APS rate proceedings, when risk and other matters are considered in setting APS' rates. In such future rate proceedings, all parties can review this issue and make recommendations as to the proper treatment of any shift of risk resulting from Commission pre-approval in this proceeding. Therefore, Staff recommends that any effect pre-approval of this project may have on APS' risk be determined in a future rate proceeding.

Conclusions and Recommendations

It appears likely that a good deal of uncertainty will continue to exist regarding natural gas supply issues in Arizona and the southwest, given current circumstances in the region. However, there is little doubt that given the burgeoning natural gas demand in Arizona and elsewhere in the southwest that additional natural gas infrastructure will be needed to ensure continued reliable natural gas service. While the Commission traditionally has not pre-approved recovery of costs related to the acquisition of pipeline capacity, the present, serious conditions existing in regard to Arizona's natural gas infrastructure argue for action beyond the normal course of business at the Commission. APS' acquisition of Silver Canyon capacity can play a role in moving toward a more robust natural gas infrastructure in Arizona and reducing the possibility of natural gas supply disruptions in the future. Further, APS' acquisition of Silver Canyon capacity will likely only have a minimal upward impact on APS' customers and could, under certain circumstances, actually reduce the overall cost of gas either short and/or long term.

Given the many variables currently at play, it is difficult if not impossible to make a definitive statement regarding whether a specific course of action will in fact be the best course of action. However, a reasonable assessment of the information available can at least enable decision makers to reach an informed conclusion for assessing possible courses of action.

APS' participation in the Silver Canyon project addresses many of the policy statements contained in the Commission's December 18, 2003, policy statement. Staff believes that APS' participation in the Silver Canyon project is reasonable given the information available at this time. Staff recommends that the Commission pre-approve APS' specific costs (reservation charges, volumetric rate, fuel rate, and applicable surcharges) discussed herein related to the proposed Silver Canyon pipeline project.

Proposed Conditions to Pre-approval:

1. The Commission retains full authority to review APS' gas procurement activities, including its management of all pipeline capacity and related activities, recognizing that the Commission is pre-approving the underlying acquisition of the Silver Canyon capacity during the initial ten year term of the agreement with Silver Canyon. The pre-approval being granted in this proceeding would expire upon completion of the initial 10 year term.
2. The impact, if any, on APS' risk profile resulting from pre-approval of costs related to Silver Canyon pipeline capacity would be considered within the context of future APS rate proceedings.
3. APS shall file a status report on the Silver Canyon project and APS' participation in the project with the Commission every six months until either APS begins taking service from Silver Canyon or APS' participation in the project is terminated.

4. APS shall notify the Commission when the exact volumetric and fuel rates are set for the Silver Canyon pipeline, within ten days of such rates being set.
5. APS shall notify the Commission within ten days of when the Company knows with certainty that it will participate in the pipeline capacity volumes identified in the application.
6. APS shall notify the Commission within ten days of each of the following events regarding the Silver Canyon project: Silver Canyon filing with FERC for approval of the pipeline, FERC granting approval of the pipeline, Silver Canyon beginning construction of the pipeline, Silver Canyon completing construction of the pipeline, and APS beginning to take service from the Silver Canyon pipeline.
7. APS shall notify to the Commission if at any time either APS or Silver Canyon exercise termination rights pursuant to the precedent agreement or any other events significantly impact APS' participation in the Silver Canyon project, within ten days of any such action.
8. Pre-approval of the specific costs related to APS' acquisition of capacity on the Silver Canyon pipeline is granted based upon the specific and unique conditions considered in this application and will in no way commit or predispose the Commission regarding any future considerations of pre-approval of costs. Rather, the standing presumption would be that the Commission would not grant pre-approval in future proceedings, absent a careful consideration of unique, serious, and important circumstances which would require such action.
9. None of the pre-approved costs will be passed on to APS' ratepayers until all of the following occur:
 - The Silver Canyon pipeline is built and operational.
 - APS is receiving service on the Silver Canyon project consistent with the precedent agreement and this order.
 - APS' filing in compliance with condition number 10 is approved by the Commission.
10. APS shall meet with Staff and RUCO within 60 days of the final order being issued in the current APS general rate proceeding to identify any issues in this proceeding that may be impacted by actions taken in the rate proceeding and shall submit a compliance filing with the Commission within 120 days after the final order addressing any such issues identified. Such issues may include, but are not limited to, the cost recovery mechanism for Silver Canyon pipeline capacity costs (net of savings) and the reporting requirements related to Silver Canyon pipeline capacity.

Staff, APS, and RUCO have met a number of times to discuss this matter. It is Staff's understanding that both RUCO and APS generally support the Staff Report and the

accompanying proposed order, based on discussions with those parties. Staff has sent an e-mail to all parties on the e-mail distribution list for the Commission's Notice of Inquiry on Natural Gas Infrastructure, indicating that APS has made the filing in this proceeding. Staff has placed the APS application on the Commission's website to facilitate public access and contemplates placing further documents related to this proceeding on the Commission's website. Staff will also notify parties on the NOI e-mail distribution list as matters develop further in this proceeding.

Appendix A – Summary of Processes Related to Siting of The
Proposed Silver Canyon Pipeline

**ARIZONA CORPORATION COMMISSION STAFF SECOND SET OF DATA
REQUEST IN THE MATTER OF THE APPLICATION OF
ARIZONA PUBLIC SERVICE COMPANY
FOR DETERMINATION OF PRUDENCE AND APPROVAL OF
RATEMAKING TREATMENT RELATING TO NATURAL GAS
INFRASTRUCTURE TO ARIZONA PUBLIC SERVICE COMPANY
E-01345A-04-0273**

BG 2-37 Please describe the permitting process that the Siler Canyon pipeline project would go through at FERC. Please also describe any other approvals required from any other agencies. Describe any and all opportunities for public involvement by interested Arizona entities in any of the processes discussed in this response.

RESPONSE:

The Silver Canyon Pipeline will be required to meet all the permitting requirements of the FERC under the Natural Gas Act (“NGA”). The process leading to a NGA Section 7C filing at FERC requires extensive environmental and cultural resource impact evaluations and many opportunities for stakeholder input.

The following description of the process has been provided to APS by Kinder Morgan.

Silver Canyon Pipeline Project

- I. The permitting process for the Silver Canyon Pipeline Project before FERC would most likely follow the following process:
 1. Request the use of the NEPA Pre-Filing Process with the FERC.
 2. Regulatory /Environment will contact all Federal, State, & Local elected officials and agency representatives for purpose of introducing project and to open avenues of communication
 3. Hold a pre-filing meeting between representatives of Silver Canyon and the FERC Staff.
 4. Land & ROW will develop a landowner list of all affected owners from county tax roll records, covering an approximate 300’ wide corridor along the proposed pipeline route. Affected owners include those whose land will be affected by the right-of-way, access roads, temporary workspace, pipe storage or contractor lay down yards, and those parties residing within ½ mile of a proposed new compressor station site. Company contacts landowners for permission to survey, then conducts field surveys, agency consultation and public outreach meetings.
 5. FERC consults with other cooperating federal agencies.
 6. FERC Staff conducts public scoping meetings to determine environmental issues.

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7. Application is filed with the FERC pursuant to Section 7(c) of the Natural Gas Act requesting a certificate of public convenience and necessity to construct and operate the Silver Canyon Pipeline Project. Land & ROW must provide final landowner list within 3 days of filing, typically will also have a ROW office established with single contact; 800 telephone number established to receive comments enabling landowners & stakeholders to have open lines of communication with Company.
 8. Application is noticed in the Federal Register explaining the application and indicating the deadline for filing comments, protests and/or interventions in the proceeding.
 9. FERC issues a preliminary determination of need based on non-environmental factors.
 10. FERC Staff issues Draft Environmental Assessment (“DEA”) or Draft Environmental Impact Statement (“DEIS”) for public comment.
 11. Resolve environmental issues and/or respond to environmental comments.
 12. FERC Staff issues Final EA or EIS.
 13. FERC issues final order approving the application and granting the Certificate of Public Convenience and Necessity.
- II. Approvals required from any other agencies:
Permits or some degree of consultation may be required from each of the following agencies:
1. FERC
 2. US EPA
 3. US Army Corps of Engineers
 4. US Fish and Wildlife Service
 5. National Marine Fisheries
 6. US Department of Transportation
 7. Advisory Council on Historic Preservation
 8. Bureau of Land Management
 9. Bureau of Indian Affairs
 10. Affected Indian tribes (Fort Mojave, Hopi, Navajo Nation)
 11. Agencies in each state responsible for implementation and permitting of NPDES water discharges including stormwater, trench dewatering, and hydrostatic test.
 12. Agencies in each state responsible for permitting water well drilling and withdrawals

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13. Agencies in each state responsible for permitting air emission sources
14. State Historic Preservation Office in each state
15. Division of Natural Resources or equivalent in each state
16. State Department of Transportation in each state
17. Department of Fish and Game in each state
18. Local tribal offices - The cultural resources consultation process required by FERC requires that Native American tribes that may have a historic interest in the properties must be notified of the proposed project. FERC requires an initial written consultation with the tribes. If no response from the tribes is received within 30 days, then a second consultation is required. Companies are required to document reasonable attempts to solicit comments on the proposed project from the potentially affected tribes.
19. County Commissions
20. County and local public works agencies
21. Railroads where crossing is required
22. Irrigation ditch operators
23. Flood control agencies
24. Navajo Nation Department of Natural Resources – Tribal Resource Committee consent to BIA right of way grant and easement consideration.
25. U.S. Department of the Interior; Forest Service. Special Use Permit for the right-of-way across Prescott & Coconino National Forests.
26. New Mexico State Land Department
27. Arizona State Lands Department: Right of way grant across State Trust Land.
28. Salt River Project (SRP) – To determine if any part of project is within their jurisdictional area near Phoenix.
29. New Mexico Department of Transportation
30. Arizona Department of Transportation: when either U.S. or State roads are crossed.
31. Railroads (when crossed)
32. Various County & Municipality Planning & Zoning Boards (Generally in the form of a franchise, Special Use or Conditional Use Permit)
33. County Commission, Engineer and/or Local Transportation Departments; for road crossing permits
34. Foreign Utilities (power, sewer, water, canals, irrigation ditches, flood control ditches, to determine crossing requirements for each)

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III. Opportunities for public involvement by interested Arizona entities would include the following events:

1. Accessing and inspecting all public documents associated with the proposed project,
2. Providing comments during survey permission process,
3. Making concerns known in writing during the processing of the application to the FERC and its Staff. Contact FERC Hotline; 1-800 number, Landowner brochure distributed by FERC "An Interstate Natural Gas Facility on My Land? What Do I Need To Know?"
4. Participating in open house meetings conducted by Silver Canyon and held in the vicinity of the proposed project area,
5. Participating in NEPA scoping meetings conducted by FERC Staff;
6. Participating in site visits in the vicinity of the proposed project area; Landowners are notified that an EA or EIS will be prepared which seeks comments normally within 30 days; typically, a draft EA or EIS is issued which allows for comments over an additional 45 day period. Comments are addressed in the Final EA or EIS.
7. Filing comments on draft EA or EIS,
8. Provide feedback during the local "Permit Review Process". Public notice is provided through public hearings held at various County and Municipal Planning & Zoning Commission levels in both Arizona and New Mexico. Notice of such hearings is provided to landowners, fire & school districts, neighborhood associations, and other interested parties. Special note to the "Citizen Review Process" in Phoenix, AZ.
9. Provide comments during actual right-of way acquisition by communicating openly and honestly with Company's field land agents.
10. Public comment periods prior to issuance of air permits;
11. Becoming an "intervener" or "party" in the proposed project; and
12. Having the FERC decision reviewed in federal court (must be an intervener to do this).

Additional information on the permitting process can be found at the FERC website at <http://www.ferc.gov/industries/gas/enviro/stakeholder.pdf>.