BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

In the Matter of the Application of Kansas Power)	
Pool for a Certificate of Convenience and Authority)	
to Transact the Business of an Electric Public Utility in the State)	Docket No. 18-KPPE-343-COC
of Kansas for Transmission Rights Only)	
to Cross Service Territory of Southern Pioneer Electric)	
Company and Ninnescah Rural Electric Company)	

DIRECT TESTIMONY

PREPARED BY

JUSTIN T. GRADY

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

July 9, 2018

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18 19	I.	Introduction, Qualifications, Purpose of Testimony	
20	Q.	Please state your name and business address.	
21	A.	My name is Justin T. Grady and my business address is 1500 Southwest Arrowhead	
22		Road, Topeka, Kansas, 66604.	
23	Q.	By whom and in what capacity are you employed?	
24	A.	I am employed by the Kansas Corporation Commission (KCC or Commission) as the	
25		Chief of Accounting and Financial Analysis.	
26	Q.	Please summarize your educational and employment background.	
27	A.	I earned a Master of Business Administration degree, with a concentration in General	ral
28		Finance which includes emphases in Corporate Finance and Investment Management, fro	m

the University of Kansas in December of 2009. I also hold a Bachelor of Business

Administration degree with majors in Finance and Economics from Washburn University.

I have been employed by the KCC in various positions of increasing responsibility within the Utilities Division since 2002. I have been employed in my current capacity since May 2012.

While employed with the Commission, I've participated in and directed the review of various tariff/surcharge filings and rate case proceedings involving electric, natural gas distribution, water distribution, and telecommunications utilities. In my current position, I have supervisory responsibility for the activities of the Commission's Audit section within the Utilities Division. In that capacity, I plan, manage, and perform audits relating to utility rate cases, tariff/surcharge filings, fuel cost recovery mechanisms, transmission delivery charges, alternative-ratemaking mechanisms, and other utility filings which may have an impact on utility rates in Kansas including mergers, acquisitions, and restructuring filings.

Q. Have you previously submitted testimony before this Commission?

A. Yes. I have submitted written and oral testimony before this Commission on multiple occasions regarding various regulatory accounting and ratemaking issues. This work includes testimony filings in 53 dockets, including this one. A list of the other dockets that encompass this experience is available upon request.

Q. What is the purpose of your testimony in this matter?

A. In the testimony that follows, I will discuss Staff's review of the Economic Evaluation of Kingman Transmission Service Alternatives, which is attached as Exhibit LWH-3 to the Direct Testimony of Kansas Power Pool (KPP) witness Larry W. Holloway. Mr. Holloway's discussion of this economic evaluation is contained within pages 17 through

22 of his testimony. In the testimony that follows, I will discuss the nature of the review I performed of this economic evaluation and the conclusions that I have been able to draw from that review.

II. Executive Summary

A.

Q. Please provide an executive summary of your testimony.

Staff reviewed of Exhibit LWH-3 to evaluate the reasonableness of the assumptions and methodology KPP used to analyze the economics of various options for transmission service from the perspective of the City of Kingman (Kingman) and KPP. Based upon our review, Staff's position is that the economic evaluation presented in LWH-3 is a reasonable method for evaluating the economic impact to KPP and Kingman of the different alternatives available for transmission service to Kingman. However, Staff recommends a range of different discount rates be used to discount future nominal costs and benefits to the present in order to determine the net present value of the different alternatives. Additionally, Staff recommends a few changes to the assumptions made in the economic evaluation, which are discussed in detail below. Nonetheless, these assumption changes and different discount rates do not change the overall conclusion of the economic evaluation, which is that the Kingman Direct Connection transmission service project is a more economical solution for Kingman and KPP then the Southern Pioneer Electric Company (Southern Pioneer) project in the form that was presented in this evaluation.

III. Introduction to Exhibit LWH-3

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- Q. What methodology was used to perform the economic evaluation of different transmission service arrangements in Exhibit LWH-3?
- 5 A. The economic evaluation contained within Exhibit LWH-3 calculates the net present value 6 of costs and benefits to KPP and Kingman associated with three different alternatives 7 relative to Kingman's current limited transmission service. The first alternative is to 8 simply do nothing, that is, KPP would neither pursue the Kingman Direct Connection 9 project or the Southern Pioneer substation upgrade project. The second and third alternatives are the two aforementioned transmission projects. The analysis relies on 20 10 11 years of projected costs and benefits of each alternative, as stated in nominal dollars of the 12 year in which they occur from 2020 through 2039, then discounted back to the year 2019 using a 2% discount rate (estimated inflation) in order to determine the net present value 13 of each alternative. The categories of costs and benefits that are included in the economic 14 evaluation are as follows: 15
 - Southern Pioneer project-related bond payments of KPP:
 - Kingman Direct Connection bond payments of KPP;
 - O&M Costs associated with the Kingman Direct Connection;
 - Local Access Charges (LAC) for Southern Pioneer service with 6MW import limit;
 - LAC charges with no import limit;
 - Increase in capacity payments from Kingman to KPP (associated with the elimination of import limitations);
 - Kingman loss savings due to being metered at 115kV instead of 34.5kV;

1		• Kingman generation savings due to lack of a requirement to run these units due to
2		import limitation; and
3		• Kingman capacity sale revenue potential revenue for sale of capacity from
4		Kingman generators.
5		In the testimony below I will discuss the analysis performed on each of these elements,
6		including whether Staff believes the assumptions and methodology employed in the
7		analysis are reasonable and whether Staff recommends any changes to the assumptions or
8		methodology employed in performing the economic evaluation.
9	Q.	What were the results of the economic evaluation of the different transmission
10		alternatives evaluated in Exhibit LWH-3?
11	A.	Table 2, as it appears in Mr. Holloway's Direct Testimony, is as follows:

Table 2 - Results of NPV Analy	sis of the Three Alternati	ves	
,			
	SPEC Project		
	2019 Net Present Value of Costs (Benefits)		
	Kansas Power Pool	City of Kingman	
Bond Issue Payments	\$2,302,492	\$0	
Bond Reserve Refund	(\$183,168)	\$0	
LAC charges	\$11,624,627	\$0	
Increased Capacity Payments	(\$2,186,469)	\$2,186,469	
Kingman Generation Savings	\$0	(\$2,374,793)	
Kingman Capacity Sale Lost Opportunity	\$7,529,412	\$0	
Total	\$19,086,892	(\$188,324)	
	Do Noth	ning	
	2019 Net Present Value of Costs		
	(Benef		
	Kansas Power Pool	City of Kingman	
LAC charges	\$9,395,727	\$0	
Kingman Generation Costs	\$0	\$2,374,793	
Kingman Capacity Sale Lost Opportunity	\$7,529,412	\$0	
Total	\$16,925,139	\$2,374,793	
and the second s			
	Kingman Direct		
	2019 Net Present		
	(Benefits) Kansas Power Pool City of Kingma		
Bond Issue Payments	\$4,365,099	\$0	
Bond Reserve Refund	(\$347,254)	\$0	
O&M Costs	\$1,424,180	\$0 \$0	
	マエ, マムナ, ふりい	ب	
Control Contro		\$2 186 469	
Increased Capacity Payments	(\$2,186,469)	\$2,186,469 (\$1,292,015)	
Control Contro		\$2,186,469 (\$1,292,015) (\$2,374,793)	

Essentially, Mr. Holloway's analysis suggests that the Kingman Direct Connection project creates \$15.8 million of benefits for KPP and nearly \$1.3 million in benefits for Kingman,

1 compared to the Southern Pioneer project. Additionally, Mr. Holloway's analysis shows 2 that the "do nothing" alternative is less costly for KPP and Kingman than the Southern 3 Pioneer project.

IV. **Discount Rate Used to Determine Present Values**

A. Staff's Position on the Proper Discount Rate

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- Does Staff agree with the use of a 2% discount rate to convert the value of future year Q. costs and benefits into present values in the economic evaluation?
- 9 No. Mr. Holloway's analysis discounts future "nominal" values (expressed in dollars that A. are valued as of the year that they occur in the future) back to present or "real" values as 10 11 of 2019. While Staff agrees that is important to consider inflation in the context of a 12 discount rate, it is the beginning point of the analysis, not the only factor to be considered. 13 What must also be considered is the time value of money generally. In other words, a 14 future dollar of benefit or cost is not valued the same as a current dollar of benefit or cost, 15 therefore, future values must be discounted to the present value at an assumed discount 16 rate. This universal principle of finance is just as applicable to a municipal energy agency
- or a citizen of Kingman as it is to an investor-owned utility or regional transmission 18 operator when performing cost/benefit analyses by utilizing the net present value
- calculation methodology. 19
 - What discount rate does Staff recommend be used in the analysis? Q.
- Staff recommends that the analysis be presented using a range of discount rates with 4.5% 21 A. 22 as the low end of the range and 8% representing the high end of the range. This range

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1	represents KPP's projected cost of borrowing at the low end and the discount rate used by
2	SPP to convert future costs/benefits into present-day values at the high end.

Q. Why does Staff recommend these two particular discount rates as the lower and upper end of the range?

When performing a net present value calculation, the discount rate chosen should represent the degree to which an entity or an individual values a dollar today versus a dollar one year from now. While this is often a theoretical exercise to determine, in the case of a specific entity, it is possible to calculate. For example, because KPP's cost of borrowing is estimated to be 4.5% in the economic evaluation, that is one possible discount rate to use. This is because a dollar earned today can be used to pay off debt that would incur an interest rate of 4.5% if not paid off. Likewise, if KPP had a dollar today, it wouldn't have to borrow it for a year at the cost of 4.5%. Another way to think of this is that KPP should be indifferent between receiving \$95.69 today versus \$100 one year from today.

Another possible discount rate to use is a higher discount rate of 8%, which is used by SPP to discount future costs and benefits to the present day for purposes of a net present value determination. This higher discount rate might be applicable if you consider the perspective of the retail customers of Kingman or KPP's other members and the degree to which they value money today versus some future time period. The rationale for using this higher discount rate would be if KPP or Kingman can save a dollar today, then it doesn't have to collect that dollar from its customers. Therefore, its customers are free to utilize that dollar to pay off their own personal debts or invest the dollar in an interest bearing account or personal retirement savings, etc. Determining the proper discount rate to use that reflects the degree to which individual retail ratepayers value money is not an exact

- science, and there would likely be several opinions about what the correct rate should be.

 Staff suggests using 8% as the maximum discount rate of the range because it is the current discount rate used by SPP, which gives that particular discount rate an element of credibility and familiarity.
- B. Results of Changing Discount Rates in Economic Analysis

 How do these different discount rates affect the results of the economic analysis?

 Holding all other assumptions constant, if we assume a discount rate of 4.5% in the economic analysis presented in Exhibit LWH-3, the results change as follows:

Table 2 - Results of NPV Ar	nalysis of the Three Alte	rnatives		
	SPEC Project			
	2019 Net Present Value of Costs (Benefits)			
	Kansas Power Pool City of Kingr			
Bond Issue Payments	\$1,831,685	\$0		
Bond Reserve Refund	(\$183,168)	\$0		
LAC charges	\$8,981,534	\$0		
Increased Capacity Payments	(\$1,719,403)	\$1,719,403		
Kingman Generation Savings	\$0	(\$1,859,652)		
Kingman Capacity Sale Lost Opportunity	\$5,896,128	\$0		
Total	\$14,806,775	(\$140,248)		
	Do No:	thing		
	Do Nothing 2019 Net Present Value of Costs (Benefi			
	Kansas Power Pool City of Kin			
LAC charges	\$7,259,183	\$0		
Kingman Generation Costs	\$0	\$1,859,652		
Kingman Capacity Sale Lost Opportunity	\$5,896,128	\$0		
Total	\$13,155,312	\$1,859,652		
	Kingman Direc	t Connection		
	2019 Net Present Valu	· · · · · · · · · · · · · · · · · · ·		
	Kansas Power Pool	City of Kingman		
Bond Issue Payments	\$3,472,535	\$0		
Bond Reserve Refund	(\$347,254)	\$0		
O&M Costs	\$1,115,246	\$0		
Increased Capacity Payments	(\$1,719,403)	\$1,719,403		
Kingman 115 kV Metering Loss Savings	gs \$0 (\$1,009,71			
Kingman Generation Savings	\$0 (\$1,859,652			
Total	\$2,521,124	(\$1,149,968)		

1 With a 4.5% discount rate, the benefit to KPP and Kingman decreases to \$12,285,651 and

\$1,009,719, respectively. At an 8% discount rate, the results are as follows:

Table 2 - Results of NPV Ar	nalysis of the Three Alte	rnatives		
	SPEC Project			
	2019 Net Present Valu	ue of Costs (Benefits)		
	Kansas Power Pool	City of Kingman		
Bond Issue Payments	\$1,382,521	\$0		
Bond Reserve Refund	(\$183,168)	\$0		
LAC charges	\$6,519,771	\$0		
Increased Capacity Payments	(\$1,279,036)	\$1,279,036		
Kingman Generation Savings	\$0.	(\$1,375,038)		
Kingman Capacity Sale Lost Opportunity	\$4,359,633	\$0		
Total	\$10,799,721	(\$96,002)		
	Do Nothing			
	2019 Net Present Value of Costs (Benefits)			
	Kansas Power Pool	City of Kingman		
LAC charges	\$5,269,502	\$0		
Kingman Generation Costs	\$0	\$1,375,038		
Kingman Capacity Sale Lost Opportunity	\$4,359,633	\$0		
Total	\$9,629,135	\$1,375,038		
	Kingman Direc	ct Connection		
	2019 Net Present Valu	ie of Costs (Benefits)		
	Kansas Power Pool	City of Kingman		
Bond Issue Payments	\$2,621,005	\$0		
Bond Reserve Refund	(\$347,254)	\$0		
O&M Costs	\$824,620	\$0		
Increased Capacity Payments	(\$1,279,036)	\$1,279,036		
Kingman 115 kV Metering Loss Savings	\$0	(\$744,891)		
Kingman Generation Savings	\$0	(\$1,375,038)		
Total	\$1,819,335	(\$840,894)		

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As can be seen above, the benefit to KPP and Kingman from the Kingman Direct

Connection, as compared to the Southern Pioneer project, falls to \$8,980,386 and

\$744,891. These results are summarized here:

Summary Comparison of Net Benefits for Kingman Direct Connection vs.

Southern Pioneer Project at Different Discount Rates

	2019 Net Present Value of Benefits		
	Kansas Power Pool	City of Kingman	
2% Discount Rate	\$15,831,336	\$1,292,015	
4.5% Discount Rate	\$12,285,651	\$1,009,719	
8% Discount Rate	\$8,980,386	\$744,891	

V. <u>Costs and Benefits Evaluated in LWH-3</u>

A. Financing and Construction Costs

Q. Please discuss how the costs associated with financing and constructing the projects were evaluated in the analysis presented in Exhibit LWH-3.

This evaluation is contained within pages four and five of Exhibit LWH-3. The analysis considers the costs associated with financing the construction of the Kingman Direct Connection versus the Southern Pioneer SemCrude substation expansion project. To do so, Mr. Holloway estimates the cost of the construction of each project using previous construction cost estimates, inflated to current period dollars using the PPI index most closely related to transmission costs. Additionally, the analysis considers the interest expense, required bond reserve, and issuance costs associated with the anticipated municipal bond funding necessary to finance the construction costs. Staff has reviewed the assumptions and methodology behind this analysis and finds it reasonable.¹

¹ Staff has not updated this analysis to include the results of Staff Data Request No. 14, which contains Southern Pioneer's estimates of the cost of the Kingman Direct Connection and the Southern Pioneer Substation Upgrade. These revisions can easily be made in the model if the Commission desires during this proceeding.

1 B.	0&M	Expense	for	Kingman	Direct	Connection
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Q. Please discuss how the O&M costs associated with the Kingman Direct Connection have been considered in the analysis presented in Exhibit LWH-3.

This analysis is contained on page 12 of 17 of Exhibit LWH-3. To estimate O&M costs, Mr. Holloway evaluated O&M expense as a percentage of Net Plant in three independent transmission company formula rate filings before the Federal Energy Regulatory Commission (FERC). The average percentage of O&M as a percentage of Net Plant was 1.79% for these three entities. Mr. Holloway's analysis assumes 3%, which appears to be conservative using this data, and therefore reasonable from Staff's perspective.

C. Southern Pioneer Local Access Charge Exposure

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Q. Please discuss the process used to estimate KPP's exposure to Southern Pioneer Local
Access Charges under both the "Do Nothing" alternative, and the "Southern Pioneer
Project" alternative.

This analysis is contained in pages six through eight of Exhibit LWH-3. The purpose of the analysis is to estimate KPP's exposure to the Southern Pioneer's Local Access Charge (LAC) going forward under a scenario where KPP continues to receive third-party local access service from Southern Pioneer. This is a cost under the "Do Nothing" and "Southern Pioneer Project" alternatives, and it is a benefit under the Kingman Direct Connection. Under the "Do Nothing" alternative, Mr. Holloway estimates that KPP will continue to be billed at the 6MW import limit during the projected time frame used in the analysis. For the scenario in which KPP begins to take unlimited LAC service after tying into Southern Pioneer's SemCrude substation, Mr. Holloway estimates Kingman's contribution to the monthly Coincident Peak (CP) demand using the City's load readings for the last three

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years. The analysis assumes that this contribution to the Southern Pioneer CP demand stays static for all 20 years of the analysis.

Each of the above scenarios requires an estimated LAC rate to multiply by the estimated billed demand. In order to estimate the future LAC rates, Mr. Holloway assumed that the current LAC rate will grow at 25% of the average growth rate that the LAC has exhibited from 2011 through 2018. Mr. Holloway calculates a Compound Annual Growth Rate (CAGR) of 15.07% for this charge during that time frame, which is obviously unsustainable over the long-term. Therefore, Mr. Holloway chooses to use a growth rate of 3.77%, which is 25% of the calculated CAGR identified above.

Q. Does Staff agree with the 3.77% projection for the LAC rate over 20 years?

No. While Staff agrees that the 15.07% CAGR is not a sustainable growth rate and Staff doesn't expect Southern Pioneer's LAC rate to grow anywhere near that fast over the long-term, there is no support given by Mr. Holloway for the assumption that the growth in this charge will be 25% of the total CAGR over the last seven years, or 3.77% specifically. A more reasonable assumption would be that the LAC will grow at a rate averaging inflation over the long-term. For example, this is the growth rate that KPP has estimated for its own rates after 2027. After changing this assumption in the analysis, that changes the costs/benefits of the three transmission service alternatives to KPP and Kingman as follows:

Summary Comparison of Net Benefits for Kingman Direct Connection vs.

Southern Pioneer Project at Different Discount Rates

	2019 Net Present Value of Benefits		
	Kansas Power Pool	City of Kingman	
2% Discount Rate	\$13,701,625	\$1,292,015	
4.5% Discount Rate	\$10,739,390	\$1,009,719	
8% Discount Rate	\$7,958,301	\$744,891	

1		D. Increased Capacity Payments from Kingman to KPP
2 3	Q.	Please discuss the process used to estimate the increase in capacity payments from
4		Kingman to KPP in the event that the current import limitation to Kingman is
5		resolved via either the Kingman Direct Connection or the Southern Pioneer project.
6	A.	This analysis is discussed on pages 10 and 11 of Exhibit LWH-3. This approach estimates
7		the level of additional capacity demand that KPP would bill Kingman in the event that the
8		import limitations present on the Southern Pioneer system were to be alleviated by either
9		an upgrade to Southern Pioneer's system or the Kingman Direct Connection. ² To do so,
10		Mr. Holloway evaluated the actual kW demand by Kingman over the last three years and
11		compared it to the demand that KPP actually billed Kingman. This average annual kW
12		demand increase of 11,338 kW/month was assumed to be constant throughout the 20 year
13		time period. This estimated billed demand is then multiplied by KPP's estimated capacity
14		rate to arrive at the increase in capacity payments from Kingman to KPP. This amount is
15		treated as a cost to Kingman and a benefit to KPP in the analysis.
16		Staff notes that while the estimated increased capacity billing demand is estimated to be
17		flat for the 20 years, there is some evidence that this is a conservative estimate. On page
18		two of six of Appendix B, attached to Exhibit LWH-3, it is mentioned that the expected
19		peak demand of Kingman is expected to grow from 12 MW to 15.2 MW by 2027. If that
20		occurs, there will also be a corresponding increase in the capacity billing demand for
21		Kingman. While Staff did not adjust the assumptions made in this portion of the analysis,
22		it is worth noting that this component is likely understated.

² Currently, because of the import limitations on Southern Pioneer's system, KPP is not able to deliver all of the KPP capacity resources to Kingman and, therefore, KPP doesn't bill Kingman for a capacity demand charge on all of its load.

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E	. Loss	Savings for	or Kingman	Due to 2	115kV N	Aetering

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3 Q. Please discuss the estimation of loss savings for Kingman due to the change from

4 metering at 115kV from 34.5kV.

- 5 This analysis is discussed on pages eleven and twelve of Exhibit LWH-3. Mr. Holloway A. 6 discusses that currently KPP bills its members to account for the losses on the 34.5kV 7 system as they are billed from Mid-Kansas Electric Company (MKEC). These losses are 8 1.86% and are in excess of any losses incurred on the SPP transmission system. Mr. 9 Holloway explains that in the event that Kingman's load is no longer metered on the 10 34.5kV system, it will not incur losses of 1.86% on its metered load. This impact is then 11 forecasted for 20 years based on the expected avoided KPP demand rates during this time 12 frame. Staff reviewed this analysis and agrees with the results.
 - F. Kingman Generation Savings

Q. Please discuss the estimation of generation cost savings associated with the elimination of Kingman's requirement to self-generate above the 6 MW import limit.

A. This analysis is discussed on pages 12 and 13 of Exhibit LWH-3 and estimates the costs to Kingman of running its own generation during the summer as a result of the 6 MW import limitation currently on the Southern Pioneer system. In order to calculate the cost of Kingman running its generators instead of purchasing the energy from KPP, at KPP's energy costs, Mr. Holloway evaluates the amount of generation MWh that Kingman produced over the last three summer seasons but that were not billed to KPP (MWhs generated due to import limitations are not billed to KPP). These MWhs were then multiplied by the difference between Kingman's estimated cost of generation and KPP's

- cost for energy, to arrive at an annual excess cost of generation. This estimated excess cost of generation was then inflated at 2% per year during the study time frame of 20 years.

 While there are several assumptions in this analysis that Staff did not evaluate exhaustively,
- 4 the methodology itself is reasonable to calculate this savings.

G. Capacity Sale Revenue (from Kingman Generators)

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- Q. Please discuss the estimation of additional capacity sales revenue from Kingman Generators.
- 9 A. This analysis is discussed on pages thirteen and fourteen of Exhibit LWH-3. Mr. Holloway 10 explains that Kingman currently has 16MW of environmentally compliant, SPP IM 11 registered, generation available for sale through bilateral capacity sales throughout SPP. 12 However, given the cost to KPP of paying for first mile local access service over the 13 Southern Pioneer 34.5 kV facilities, this capacity cannot currently be sold outside of the 14 MKEC footprint (because the LAC is in excess of the market value of the capacity). In the 15 Kingman Direct Connection alternative, in which KPP would not pay Southern Pioneer 16 LAC rates, Mr. Holloway estimates the value of this lost capacity revenue at \$2 kW-month, 17 or nearly \$384,000 a year in 2020. This value is inflated at 2% per year for the 20 year time period. 18

Staff views this estimated value of the Kingman capacity as reasonable. Staff is aware of capacity contracts within SPP that are commensurate with this value, which corroborates this capacity value estimate.

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VI. **Summary/Conclusion**

- 3 O. Please provide a summary of your review and the conclusions you've reached as a 4 result.
- 5 Staff has performed a limited review of the economic analysis of the different A. 6 transmission service alternatives considered by KPP prior to its decision to pursue the 7 Kingman Direct Connection project. Generally, Staff agrees with the study methodology 8 and assumptions, with a few exceptions. First, Staff recommends that the cost benefit analysis be performed using a range of discount rates between 4.5% and 8%, as opposed 9 10 to the rate of inflation of 2% used as the discount rate in Exhibit LWH-3. As discussed above, this approach over estimates future costs and benefits and doesn't properly 12 account for the time value of money generally. Second, Staff recommends a more gradual estimated growth in future Southern Pioneer LAC rates, as there is nothing in the record to suggest that 25% of 15.07% (3.77%) is a better estimate than the rate of 15 inflation (2%) which is used to estimate most other costs and benefits throughout the 16 study. After accounting for those two revisions, the following table summarizes the results of the NPV of benefits to KPP and Kingman for the Kingman Direct Connection project versus the Southern Pioneer alternative project:

Summary Comparison of Net Benefits for Kingman Direct Connection vs. Southern Pioneer Project at Different Discount Rates

	2019 Net Present Value of Benefits	
	Kansas Power Pool	City of Kingman
2% Discount Rate	\$13,701,625	\$1,292,015
4.5% Discount Rate	\$10,739,390	\$1,009,719
8% Discount Rate	\$7,958,301	\$744,891

- Does that conclude your testimony? 20 Q.
- 21 Yes. A,

STATE OF KANSAS)
) ss
COUNTY OF SHAWNEE)

VERIFICATION

Justin T. Grady, being duly sworn upon his oath deposes and says that he is Chief-Accounting and Finance, Utilities Division, of the State Corporation Commission of the State of Kansas, that he has read and is familiar with the foregoing *Direct Testimony* and that the statements contained therein are true and correct to the best of his knowledge, information and belief.

Justin T. Grady

Chief-Accounting and Finance, Utilities Division

State Corporation Commission of the

State of Kapsas

Subscribed and sworn to before me this 9th day of July, 2018.

PAMELA J. GRIFFETH
Notary Public - State of Kansas
My Appt. Expires 08-17-2019

Notary Public

My Appointment Expires: August 17, 2019

CERTIFICATE OF SERVICE

18-KPPE-343-COC

I, the undersigned, certify that a true and correct copy of the above and foregoing Direct Testimony Prepared by Justin T. Grady was served by electronic service on this 9th day of July, 2018, to the following:

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